



Conference Abstracts

Fifth IP & Innovation Researchers of Asia Conference

Nanyang Technological University

1 - 3 March 2023

HYBRID

Conference Abstracts

In Alphabetical Order by Surname (in Capital Letters)

**** ALL Abstracts for IN-PERSON and ONLINE Sessions Are Included in this Document**

Muhammad Zaheer ABBAS, Faculty of Business and Law, Queensland University of Technology

A Review of CAMR and its Potential to Address Public Health Problems

The current COVID-19 pandemic has highlighted the significance of the export-oriented compulsory licensing mechanism for countries lacking domestic manufacturing capacity. Article 31bis, the first amendment to the World Trade Organization (WTO) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement), is aimed at giving effect to the WTO General Council Decision 2003, which waived the domestic market requirement of compulsory licensing. In 2005, Canada became the first country to amend its patent laws to provide for Canada's Access to Medicines Regime (CAMR) as enabling legislation to implement the WTO General Council Decision 2003. Canada clearly described its regime as a humanitarian initiative aimed at helping developing countries that lack sufficient drug and/or vaccine manufacturing capacity of their own and rely upon imports to address their public health problems. The legislation was compromised, however, by the conflicting desire to protect the corporate interests of patent-holding corporations. The CAMR system is thus incapable of delivering on its promises because of the unnecessarily added extra layers of complication, restrictions, and regulatory requirements to the requirements of Article 31bis, which is itself too onerous to invoke for resource-poor countries. This research paper also evaluates Canada's efforts to reform CAMR and suggests an overhaul of the export-oriented compulsory licensing mechanism to provide a functional and expeditious one-license solution workable for importing countries and acceptable to generic drug companies.

Mohammed ABDUL-FAZI, King Fahd University of Petroleum & Minerals

Intellectual Property Policies of Universities Located in the Arab Region: A Critical Review

Scientific innovation is essential to the progress of the nation's knowledge economies. Many oil and gas-producing countries from the Arab region are investing extensively in knowledge-intensive activities such as Research and Development to advance their global position in scientific innovation and come up with innovative solutions to complex scientific challenges and promote entrepreneurial mindset among their citizens. National universities play an important role in bringing newly developed technologies to market through the efficient technology transfer process either in the form of licensing deals or from the creation of technology-based start-ups. Most research universities increase their scientific impact and provide opportunities for financial gain by strengthening their Intellectual Property (IP) portfolio to protect new inventions.

The success of a technology transfer process is strongly linked to robust university IP policies that provide guidelines related to the ownership of IP derived from research collaborations, procedures for identifying, evaluating, protecting, and managing IP, procedures for cooperating with industrial and academic partners, guidelines for revenue sharing with inventors from successful commercialization, and mechanisms to ensure respect for third-party IP rights. This study will critically examine the IP policies of the major research universities located in the Arab region and will compare it with IP Policy template for universities and

research institutions drafted by WIPO. The study will identify the major research universities from the Arab region based on their patenting and commercialization activities. The key findings from this research work will be shared with the university stakeholders who are responsible for managing the university IP policies with the observed recommendations.

Kiyoshi ADACHI, National Graduate Institute for Policy Studies

Pay-for-Delay: How East Asian Countries Are Approaching the Issue

This research project examines the approaches taken by courts and competition authorities in China, Japan and Korea when dealing with pay-for-delay cases in the pharmaceutical sector. ‘Pay-for-delay’ refers to the practice of pharmaceutical patent owners agreeing to pay a generic manufacturer to refrain from introducing a competing product for a certain period of time or to refrain from litigation to challenge the validity of the originator’s patent. Most disputes involving pay-for-delay, also referred to as ‘reverse-payment’ because the cash flow is the opposite of a typical patent license, have to date occurred in the United States and in Europe, and have involved challenges to the underlying agreement under applicable competition legislation. The principal concern in such cases is the potential anti-competitive effect of a pay-for-delay agreement in the event that market exclusivity is maintained to the detriment of earlier entry of generics.

A number of East Asian countries with advanced pharmaceutical manufacturing capacity such as China and the Republic of Korea have, however, begun to see cases involving pay-for-delay agreements. In addition, Japanese competition authorities also appear to be aware of the potential for such cases in the country. This research project will examine the approaches used by the respective judicial and policymaking authorities of these countries in assessing the validity of pay-for-delay agreements in the pharmaceutical industry.

Methodologically, the research will analyze actual pay-for-delay cases from China and Korea, and will also involve an examination of policy responses to pay-for-delay cases in China and Japan, which are attempting to minimize such cases through patent linkage systems. Finally, the project will attempt to draw lessons from these examples, with a view to informing other Asian jurisdictions on possible means to approach the issue, given their domestic capabilities and priorities.

Adekola TOLUPE, School of Law, University of Queensland

The Bourgeoning mRNA Technology Patent Landscape- Implications for Innovation and Concerns Regarding Technology Underutilisation

The messenger ribonucleic acid (mRNA) technology has been hailed as a major scientific breakthrough in biosciences. Although scientists have been researching the technology for about three decades, its full potentials were realized during the COVID-pandemic with Moderna, Pfizer/BioNTech, CureVac and Arcturus developing mRNA-based vaccine candidates with an unprecedented speed. Apart from COVID-19 vaccines, mRNA technology has shown huge promises in clinical studies in facilitating the development of effective vaccines and therapeutics for communicable and non-communicable diseases such as HIV, Hepatitis C, diabetes, cancers, malaria, tuberculosis etc. Following basic scientific discoveries in this field and the realisation of the technology as a game changer, the past years have witnessed the emergence of university spin-offs, raising millions of dollars in funding for research on basic and follow-on innovation. While measures to disseminate patented mRNA technologies (compulsory licences, waivers, etc.) are often discussed, how the proliferation of patents in this field might produce a stifling effect on technology

diffusion and follow-on innovation has received rare attention. The past three years has witnessed the mRNA technology patent landscape being described as a ‘tangled web’ with complex networks of overlapping and follow-on technologies owned by different patent holders. The United States, China, and the World Intellectual Property Organization (WIPO) have been found to have the largest number of mRNA patents with 2,121, 1,136, and 1,071 patents, respectively, followed by Japan, the European Patent Office (EPO), and Australia. However, a high concentration of patents in a given field might have a discouraging effect on technology diffusion and follow-on innovation. For example, in August 2022, Moderna filed a patent infringement lawsuit against Pfizer and BioNTech in the United States District Court for the District of Massachusetts and the Regional Court of Düsseldorf in Germany claiming that Pfizer and BioNTech's COVID-19 vaccine Comirnaty infringes patents Moderna filed between 2010 and 2016 covering Moderna's foundational mRNA technology. This is one out of the many patent infringement cases revolving around the basic and follow-on innovation stemming from the technology in the past three years. Although the existence of patent rights in enabling technology, even if fragmented, should not be automatically equated with technology underutilisation, of critical importance is how usage rights are allocated and the aptness of the patent law and policy to support and promote innovation in the field. Against this backdrop, the paper will examine the concerns of mRNA technology underutilization in view of the expanding mRNA patent landscape. Furthermore, the paper will examine the legal determinant of access to mRNA technology in the context of cumulative innovation, focusing on the World Health Organisation’s global mRNA technology transfer hub which have recently been established in six African countries to support local manufacturing of mRNA vaccines and therapeutics.

Caleb ADELOWO, Faculty of Economic and Management Sciences, North-West University

Level of Support and Motivation for Academic Patenting in Nigerian Universities

Technology transfer office (TTO) plays critical roles in the collation, management and commercialisation of research outputs from knowledge institutions, including universities. The establishment of technology transfer offices (TTOs) has gained momentum in Sub-Sahara African countries today than when the initiative started two decades ago. There is vast literature on the role, functions and involvement of TTO in research management in the developed and newly industrialising economies. However, empirical evidence of how TTOs support academic patenting is limited in Africa. For academics who defile all odds in Africa to create intellectual property assets in the universities, it is important to examine their motivation and key supports received from the TTOs so as to design appropriate policy/strategy to stimulate innovation in the research system. Nigeria, the largest economy in Africa started initiated the establishment of TTOs in research-intensive universities in 2006 and has now grown to forty-six across the country today. This study examines the level of support provided to academic inventors by the TTOs and the motivation to file patent in selected universities across the country. Data were collected from one hundred and sixty-seven (167) academic inventors from fifty-five (55) universities through the use of a validated questionnaire. The results show that TTOs in the universities provided wide range of support services to academic inventors including patent search, patent drafting, intellectual property training and payment of patent application fees. Although, the level of these supports is fairly above average, suggesting that inventors expect the TTOs to do more for them. On motivation for patent application among the inventors, prior knowledge of intellectual property, career advancement, recognition and fame are dominant factors. Other important motivation includes monetary expectation from commercialisation, promotion and the fact that they are very much aware of intellectual property in the universities and the need to contribute to community development. The study concludes that universities and all stakeholders need to strengthen the TTOs to improve their support to inventors and the transfer of those inventions for industrial use. Practical implications of the results are also highlighted to improve innovation in the universities.

Sheikha AL-AKHZAMI, College of Agricultural and marine science, Sultan Qaboos University

Intellectual Property Rights and Economic Growth in the Sultanate of Oman: An Empirical Analysis

During discussions of the 1995 Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), which required members of the World Trade **Organization** to comply with a set of minimum standards of IPR, there was widespread concern that stronger IPR would limit the ability of local firms to imitate and build upon the advanced technologies of foreign firms, thereby potentially retarding economic development. However, stronger IPR could encourage multinational corporations to extend their operations and develop technologically goods for IPR-reforming nations (Branstetter et al., 2011).

Failure to conclude the Doha Rounds after almost a decade of largely fruitless negotiations has generated a considerable degree of frustration and dissatisfaction among the major industrialized countries. With negotiations in WTO on intellectual property rights faltering, these countries have turned to bilateral and regional dealings to advance their national economic interests and obtain higher levels of intellectual property protection commitment from developing countries. Hence, bilateral trade and investment agreements, particularly FTAs, typically contain extensive intellectual property protection provisions which are used to establish TRIPS-plus standards and which work to remove or reduce the flexibilities provided for in TRIPS. They can also establish protection in new areas of intellectual property rights which go beyond the parameters of TRIPS.

Oman joined the World Intellectual Property Organization (WIPO) as a member state in 1997 and entered into 14 trade agreements after the year 2000 that have been signed and ratified with Oman on a bilateral or multilateral basis. In the case of Oman, higher protection standards of IPR is consequences from the FTAs with the United States (Price, 2012).

Since 2002, when Oman began accepting patent filings, the number of patent applications has increased. However, there is no correlation between patent applications and Oman's GDP and foreign direct investment concurrent with an increase in patent filings throughout the same time frame. In contrast to the findings of Chen & Puttitanun (2005), there is no U-shaped link between IPRs and economic development levels in the case of Oman.

Moreover, the analysis possibly corroborates that in emerging economies, where innovation is predominantly promoted by overseas multinational corporations (MNEs) and foreign direct investments (FDI), patenting activity-related decisions come from outside the country and relatively less as a response to economic developments within the country (Benoliel & Gishboliner, 2015).

Rahi Samuel ALHAT (AJABE), Symbiosis International University

Patentability of Human Embryonic Stem Cells in India

The hESC research with recent developments has become one of the most desirable research fields for scientists. The reason behind such an approach is basically the great potential to treat and cure the human race of very incurable diseases. Countries around the world have amended their policies with regards to stem cells in such a way as to enhance the advantage as the stem cell market is a trillion-dollar market. The research procedure involving patentable invention is time-consuming and requires many expenses, so the investor is always keener to know if they will get any monetary benefit. Though the medical field promises about the importance of stem cell and biotechnological research, there are concerns in some countries, such

as India, about potential policy implications that would affect the patenting innovations in this industry. As India lacks a coherent legislative policy regarding stem cell patenting, it is creating more confusion for research in stem cell research. Often, researchers do not want to be involved in the said research because India lacks any specific laws in said fields apart from so-called guidelines provided in 2017 with an amendment to Drug and Cosmetic Act in 2019. Patent laws play a vital role in industrial advancement, thus helping a country's economy. To enter the race of development, countries worldwide have developed their patent laws so that they achieve maximum benefits out of it. In India, with patent laws, moral, cultural and religious beliefs also play a vital role in granting a patent, specifically in the Human Embryonic Stem Cell patent. The Article discusses topics that a researcher must be familiar with when discussing patentability issues. A few of these topics include the morality debate, stem cell and biotechnological research, and Stem cell research's patentability. Additionally, this Article identifies the discrepancies between the laws governing stem cell research within India.

Mohammad ALJORATLE, Faculty of Law, Albaath University, and Amal SHARBA, Faculty of Law, University of Damascus

Patent Litigations: A Case Study Between France and Syria

Many countries still try to find an effective mechanism with respect to patent disputes in order to achieve the legal and economic stability due to the increase in technological complexities and the multiplicity of conflict parties who race to file a lawsuit or join it. This paper tries to present the historical evolution regarding patent litigation especially (the competent court, who can file the lawsuit, who can join to the proceedings and the granting of interim measures) in France and Syria. Moreover, this paper will discuss the possibility of filing the invalidity of patent before the administrative court and the applicable procedures to initiate the case in the first instance, and the possibility of lodging to appeal of administrative court of first instance decision. Additionally, we will discuss whether the plaintiff has the option to choose civil or commercial avenue in his action against the infringement or only civil ordinary avenue. Finally, we will conclude to the what is the most efficient legal system in addressing the patent litigations in various degrees of litigations and for parties.

David Felipe ALVAREZ-AMEZQUITA, University of Tolima

Regulating Freedom of Contract for Copyright in Latin America, a New Trend for the International Landscape?

Based on the approach suggested by Kretschmer, this proposal aims to analyze the recent evolution of copyright creators' contracts in some of the Latin American countries in parallel with the transposition of the EU Directive 2019/790 (Articles 18 to 23) in some European countries. While contractual freedom would perhaps be the desirable path for general commercial law, copyright laws around the world seem to have initiated a path to regulate creator contracts. The recent Directive 2019/790 shows the EU's interest in harmonizing this area. The process of transposition of Articles 18 to 23 of the Directive, still ongoing, shows some interesting developments. For example, the French transposition has been declared insufficient by the Conseil d'Etat with particular attention to Article 18 of the Directive. Latin American countries are following this trend to regulate creators' contracts. Interestingly, recent Ecuadorian and Panamanian reforms to their copyright laws, which focus on a more protective approach for creators, are attracting attention in the region. Moreover, these developments need to be evaluated in view of the fact that article 18.67.b, footnote 81 of the CPTPP inserts the possibility for the member country to regulate precisely this area. A review of recent

developments in some of the EU countries that had implemented the Directive, and the parallel development of copyright contract laws in some other Latin American countries, will show possible overlaps and divergences. This initial study will create the basis for further research into the effects of a complex number of copyright contract regulations as they relate to international private law. The reason for this concern is based on the nature of some of these regulations that have been identified as public policy, therefore, unwaivable for international contracts.

Shubham ANAND and Karuna JAIN, IIT Bombay

Managing Traditional Knowledge Protection: Role of Technology as a Catalyst

Culture is the lifeblood of a vibrant society possessing a great number of intrinsic values to mankind. Culture also provides important social and economic benefits. With improved learning and health, increased tolerance, and opportunities to come together, culture enhances the quality of life and increases overall well-being for individuals and communities. The pandemic of COVID-19 has reflected on intrinsic values that human civilization treasures in preserving, professing, and protecting intergenerational culture and traditions in several forms. On the technological front, the contemporary age of the 21st century has contributed to key innovations resulting in the development of ICT. The interface of technological development with culture and tradition possesses several complexities. One such form of cultural content is known as traditional knowledge (TK). This knowledge belongs to the indigenous people and local communities practising and preserving the same for generations. These communities regularly keep innovating such content to inhibit the contemporary taste. The idea of innovation brings in the role of Intellectual Property (IP). IP is a protection system which grants exclusive rights over a work of the human intellect. While considering these types of work out of human intellect, the IP system faces challenges. These contents signify productivity from entire indigenous communities rather than mere individual output. IP domain faces shortcomings in such regard to which *sui generis* system of protection may be the answer. There are multiple forums where active deliberations over TK are taking place including WIPO and UNESCO. For instance, World Intellectual Property Organization- Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (WIPO-IGC) has been deliberating and discussing these subject matters for more than two decades, but still, no consensus has been achieved among the concerned stakeholders. WIPO acknowledges the fact that there is yet no accepted definition of TK at the international level. This study is based on secondary data analysis of technological interventions made by institutions like UNESCO and WIPO in capturing and preserving TK. The study takes into account the critical opportunity that technology can play and its adaptation to promote the protection and preservation of TK in the larger interest of indigenous communities, society and the nation. The embarkment of ICT along with other technical development has made cultural heritage vulnerable to certain threats including misuse and misappropriation. Technology certainly asserts its role as both, an enabler as well as a challenger. Guiding the technological intervention as an enabler, it plays a crucial role in advancing the measures to protect the rich old heritage held by local and indigenous communities in form of TK.

Samuel ANDREWS, College of Law, Prince Mohammad Bin Fahd University

Copyright Originality Theories of Saudi Arabia in the Digital Era: Choosing from the Tripartite (Gordian) Knot?

This paper further seeks to explore and analyze the copyright originality doctrine within the Kingdom of Saudi Arabia (KSA) copyright regime, which this author has expressed in a chapter of the forthcoming book

Handbook on Originality in Copyright: Cases and Material. The chapter analyzed the doctrines of copyright originality in Saudi Arabia based on its controlling law, the legislative drafting format and language as a hybridized regime.

This paper will share some thoughts on finding or choosing a prevailing originality theory for the KSA in conceptualizing copyright eligibility standards particularly within the forceful advocacy from the Artificial Intelligence (AI) and Machine Reading movements. The paper also seeks to provide the KSA courts (when the opportunity arises) and the intellectual property (IP) policy regulators an added tool in achieving effective outcomes for an enhanced entrepreneurial creative space. The paper will conclude by recognizing the ongoing de-escalated threshold (and perhaps its inevitability) for creativity in the digital era but will make a case that the human (person) creative forces should be at the center of copyright creativity jurisprudence.

Uchechukwu ANI, Queen Mary Intellectual Property Research Institute, Queen Mary University of London

Calling All Women Authors: Gender Inequality and Copyright in Indian Cinema

India is home to Bollywood, one of the most famous and established film industries in the world, as well as several other successful film industries such as Tollywood, Kollywood, Gollywood, Mollywood, Sandalwood and the Marathi film industry. Combined, the output of Indian national cinema is about 1,600 films annually making it the largest producer of film works, across the globe. However, a recent survey titled *O Womaniya! 2022* by *Ormax Media* and *Film Companion* in collaboration with *Amazon Prime Video* shows that women represent only ten per cent of the heads of the main creative departments across Indian cinema. The survey of fifty-six major theatrical films across eight Indian languages examined the presence of women in directing, design, screenwriting and editing amongst others and found no female directors of any of the films included in the survey.

This lack of female representation behind the screen has implications for on-screen depictions of women, as well as the welfare and economic power of women in Indian cinema as a whole and by extension, the global film industry. This paper argues that the inequality displayed is facilitated by copyright law. The figure of the author is central to the operation of copyright law. However, the author figure in copyright law is a restrictive, exclusionary legal construct that has arisen out of a tradition which serves the interest of privileged parties who control the exploitation of the work, rather than the creators of the works the law claims to protect. Rather than a genderblind project, copyright has notions of the male author baked into its construction. The Indian Copyright Act states that the author of a cinematograph film shall be the producer of the film. This is a legal fiction aimed at simplifying commercial transactions; in reality, a film is the product of collaborations between large teams of creative and technical professionals.

Employing film scholarship, this paper peers behind the fiction at the heart of the law to reveal the many authors behind the screen. In doing so, this paper shall challenge the current structure of copyright law as gendered in its application. This paper shall review this study along with other surveys and studies on gender representation in Indian filmmaking and shall argue that the wholesale adoption of Western perspectives on film authorship and copyright law prevents a more equitable restructuring of Indian cinematic practice. Through a re-examination and redefinition of authorship in film studies and legal parlance through a transhistorical, decolonial feminist lens employing critical legal analysis, the paper will present copyright law as a powerful tool for addressing gender inequality in Indian film industries.

The Future of Metaverse: A Study under Intellectual Property Rights Jurisprudence

Intellectual Property Rights are intangible property rights, extensively based on the principle of granting monopoly rights for tangible manifestations of creative expression of ideas which can be consumed or leveraged by the public in the real time situations. Metaverse, a digital staged reality, on the other hand, is a virtual space platform that teleports its users from physical reality to an extended reality, which is largely intangible. It is a digital reality that combines within its purview aspects from social media, online gaming, augmented and virtual realities that has facilitated trading of digital goods and services in exchange of non-fungible tokens and cryptocurrencies. Metaverse is being considered the future of digital gaming industry in Web 3.0 and it momentarily augments real-life environments to be superimposed over computer-generated stimulated environments using digital technology. The interface and overlap between virtual digital spaces in metaverse on one hand and intellectual properties created, promoted and presented in these virtual spaces, on the other, has made it significant to revisit the jurisprudential underpinnings that justify the grant of an IP, its protection against infringement and, its co-existence in both the real and augmented reality spaces.

The question for determination is whether the virtual reality in Metaverse re-define intellectual property rights and concepts like ownership, licensing, infringement and monopoly rights appended to it in the real world? Is it possible for a user in metaverse to create and/or infringe any intellectual property right while engaging in an experiential interaction with indiscernible digital resources in virtual and augmented reality? If yes, then does the said creator have a right to claim protection for the same in the real world? Further, if the creative work has been recreated by another person in the real world, can the subsequent creator claim priority in respect of its first ever tangible creation, unlike its intangibility in the virtual reality?

Since Metaverse is an immersive digital world that allows people to socialise, work, and even enjoy their daily lives in a virtual world which ceases to exist the moment one takes an exit from it, does this mean that exclusivity in IP can also be sought to be protected only momentarily? Hence, the fact that Metaverse is merely a transient world with superficiality in abundance, questions challenging jurisprudential underpinnings behind grant of intellectual property rights needs to be answered. It is thus the objective of this research to analyse and evaluate the implications of the complex issues which await to transform the future of Intellectual Property in the Meta-(uni)verse.

Agnes AUGUSTIAN, Research Scholar, Inter-University Centre for IPR Studies, CUSAT

Prominence of Personality Right in the Video Games Context

Nowadays, the importance of personality right protection becomes necessary as new technologies have emerged; therefore, new forms of use of persona, such as name, image likeness, etc., have become high. Among different areas currently, the most prominent area in which personality right protection is much needed is the video game context. The video game industry has expanded exponentially over the past few years, leading to increased competition. Consequently, to stand in the competitive market, these companies used the real player feature to attract the consumer attention towards their product, ultimately leading to commercial exploitation of personality rights. Countries like the US, Germany, France, and the Netherlands have their own statutory law for protection, whereas countries like India and UK are still in developing stage for protecting personality rights. As digital games are more prominent in the market today, it's high time to check whether the use of persona creates any positive or negative impact on personality rights. Therefore

this paper check whether video games have become fertile ground for personality claims stemming from the unauthorized use of a celebrity's persona or whether it boosts players' value through such use.

Soorya BALENDRA, Centre for Human Rights and Legal Pluralism, McGill University

Theorizing 'Digital Democracy' - Regulating Digital Platforms in Global South

The regulation of politics has the objective of preserving three fundamental democratic values: liberty, equality, and deliberative political participation. The paradigm shift towards the information technology era changed the entire face of politics and democratic values. The internet, and social media platforms, in particular, have radically altered political participation and changed practices of mobilization and organization. While the nature of political participation, organization, and advocacy has changed profoundly, the laws that regulate these political activities have not. Against this backdrop, this research attempts to study what regulation model is best equipped to deal with these challenges, mainly promoting freedom of expression with certain legal limitations that advocate 'Digital Democracy.' The study anchors an analytical study from a Global South perspective, where the power asymmetry between major digital platforms and countries affected the development of a robust model for regulating these digital spaces.

A comparative study on Regulating digital platforms across Global North countries, such as American jurisdictions, along with International Standards, such as the Universal Declaration of Human Rights (UDHR), will be referred to throughout the research. To what extent do the present models address modern trends and challenges? What can be the most suitable model to uphold Digital constitutionalism? How has the power asymmetry between the Digital platforms and Countries affected regulations? What are the roles of the big tech companies and providers, such as Facebook, Twitter, etc., on these regulations? How can we decentralize and democratize regulatory models? These are some of the questions to be attempted in this in-depth analysis. As the significant outcome of the study, it suggests a regulatory policy framework for digital platforms without stifling Civil Liberties and upholding democracy in the Global South. The overarching question is: *What model of regulation is best equipped to deal with digital platforms in the Global South?* As a methodology, I would like to analyze existing approaches to the model regulations via domestic regulations, Laws, and other case laws from different jurisprudence. International standards, regional instruments, independent research reports, and Scholarly publications too will be referred to as a part of this analytical study.

Rajat BANERJEE, Amity Law School, Amity University

Intermediary Liability in Digitized Orphan Works: An Indian Techno-Legal Standpoint

With the advent of advanced forms of information and communication technology (ICT) and ICT-enabled platforms, a lot of electronic records, both validated and non-validated, are being shared using the digital medium. Digitized orphan works in the form of anonymous blogs and otherwise seem to have flooded the cyberspace. However, in the absence of any designated author of such digitized orphan works, the liability appears to shift from the 'keeper' of such digitized orphan works to the intermediaries for content-related contraventions. In the Indian techno-legal context, despite the statutory protection of the keepers under Section 31A of the Copyright Act (CA), 1957, the intermediaries tend to become liable, in the absence of true owners of the digitized orphan works. Although a purposive reading of Section 31A of the CA indicates that published digitized orphan works may qualify for compulsory licensing, it is seemingly not clear whether Section 31A would increase intermediary liability in cases of content-related contraventions. The

exemption granted to intermediaries vide Section 79 of the Information Technology (IT) Act, 2000 appears diluted and overridden by intermediary liability contemplated under Section 67C of the IT Act. The demarcation line between intermediary liability and intermediary exemption has debatably reached a vanishing point. The main aim of this paper is to reassess the liability regime that befalls on intermediaries in the fast-changing digitized orphan works landscape. The main argument of the paper is that for content-related contraventions, the intermediaries must not be made squarely liable and that the exemptions granted to the intermediaries under Section 79 of the IT Act must have an overarching effect especially in the context of content-related contraventions relating to published digitized orphan works. The paper employs a doctrinal method to search for tangible results.

Siti BAQIURATUL, Inti International University and Colleges, and Zinatul ZAINOL, National University of Malaysia

Graphical Representation for Registration of Non-Traditional Trademark in Malaysia and the UK

The Malaysian Trademark Law has undergone substantial changes due to the accession to the Madrid Protocol. One of the major changes which is implemented under the new Malaysian Trademark Act 2019 among others is the expansion of protectable subject matter which now recognizes registration and protection of Non-Traditional Trademark. (NTM) The expansion of subject matter protection is inevitable however a deeper examination needs to be addressed in terms of the criteria of registrability particularly on the grounds of graphical representation as it is one of the criteria for registration of NTM under Malaysian Trademark Law. This became imminently vital as the EU/UK has abolished the graphical representation requirement which takes into effect in 2017. This article will examine the rationale of implementation of the graphical representation requirement and the impact of the graphical representation requirement by taking stocks from the EU/UK current and previous approach. This article functions for the purpose of benchmarking on whether the requirement of graphical representation is truly a blessing in disguise or an insurmountable hurdle that will be faced by NTM's applicants, IP Offices and other relevant parties in Malaysia.

Mihai BARSAN, Titu Maiorescu University

Current Trends in Teaching Intellectual Property in European Higher Education

Higher Education Institutions are major suppliers and consumers of Intellectual Property. In this regard, universities must support the legitimate use of intellectual property to enhance teaching, learning and research activities. Higher Education Institutions have the mission and responsibility to address challenges such as copyright compliance, protecting the results of scientific research, as well as regulations governing technology transfer. On the other hand, intellectual property law is mainly taught in law schools. Given the challenges of the information society, as well as accelerated technological progress, it is clear that intellectual property is no longer just a prerogative of the legal system. It represents a vast field, relevant for the entire sphere of Higher Education. Unfortunately, in European Higher Education Institutions, most non-law faculties do not deliver courses in the field of intellectual property, which leads to a decrease in the skills that graduates acquire. Whether we refer to the faculties of literature and humanities or arts, where copyright is relevant, or to the faculties of engineering, where industrial property rights become essential, it is clear that intellectual property is a cornerstone of Higher Education Institutions. Some universities have technology transfer departments, others even have offices dealing with intellectual property issues. Moreover, in some European countries, emphasis is placed on Ethics and Academic Integrity courses, which

mostly include intellectual property principles and norms. Starting with the Directive on Copyright in the Digital Single Market, the European Union has adopted a series of directives, recommendations and public policies, all having a direct impact and launching challenges for higher education. The steps to include intellectual property courses in non-law faculties started through local initiatives, as well as through pilot projects, which aim to develop a unified curriculum, at the European level. The main challenge for these initiatives is to identify the relevant skills and competencies that graduates need, in order to meet the demands of the labor market, both at the European and global level.

Michał BARYCKI, Faculty of Law, Jagiellonian University

Hydrogen Technologies and Patent Policy – Towards Providing New Incentives for Innovation

The use of the hydrogen technology is one of the main topics on the political agendas among the world, aiming to transform the current market of energy to be more environmentally friendly. The current state of science provides many different methods on how to produce hydrogen, however the contemporary global hydrogen production bases mainly on the non-eco-friendly fossil fuels, which are also not renewable. This kind of process composes of steam reforming of methane (SMR). Although such method of production is used globally due to the high cost's efficiency, the quality of hydrogen is lower in comparison with the one produced through new, sustainable energy strategies. Therefore, the nowadays technology trends are trying to change the current system by introducing on a larger scale the production of hydrogen from the water electrolysis. This method enables to produce the eco-friendly hydrogen with the oxygen which is released to the atmosphere. However, such a process requires the high amount of energy and involves more costs for a storage of produced hydrogen. In order to increase the efficiency of water electrolysis and limit the costs, the new models of electrocatalyzers have been developed. It is worth mentioning that the combination of CO₂ and H₂ enables to produce a range of products such as methanol, ammonia, and technologies basing on capturing of CO₂ and N₂. These products can be further used in the energy system basing on renewables.

The current, global market failure in the context of developing technologies using the H₂ technologies, is based on the high investment costs at the beginning phase, which can be hardly recover. The other reasons are related to the non-fully incentivising regulatory environment among the countries. In order to overcome this trend, the German Government launched the H₂Global Founding Programme aiming to establish the global hydrogen production by building the international hydrogen supply chains and introduce the hydrogen-powered technologies into the market. To help overcome the market failure, the Programme founded an intermediary which concludes the long-term purchase contracts on the supply side and short-term sales contracts on the demand side. The differences between supply prices (production and transport) and demand prices are compensated by such intermediary using grant funding from the German government. The first beneficiaries of this Programme are South American and African countries.

Having regard the current trends in developing and incentivising the renewable technologies, aiming to establish a new market based on the hydrogen-powered solutions, the current patent law policies should be taken into consideration. The aim of the presentation is to discuss the results revealed from the examination of the contemporary patent law policies, legal framework and ways of its interpretation addressing such issues, jointly with the description of the current stage and trends in the development of hydrogen technologies which were indicated from the consultations with stakeholders. The presentation will provide a comprehensive review on the question, how the modern patent law can serve as an appropriate incentive for new solutions regarding the hydrogen technologies.

Daniel BENOLIEL, Faculty of Law Haifa University

IP amid Concentration and Inequality

The article upholds how intellectual property (IP) leads to economic centralization and income inequality. Arguably, these findings alone remain insufficient to derive policy to increase innovation-based economic growth. Economic literature and WIPO itself attest to the finding whereby innovation proxied by patenting activity is more concentrated than other economic activities. Economic inequality is dependent, at first instance, on its rate of centralization. Competition law's struggle against monopoly powers, on its part, assumes that over-concentration leads to monopolization. This, in turn, exacerbates economic inequality. Does IP-related concentration increase economic inequality? Is welfare economics apt for regulating inequality-related forms of concentration of IP rights? At least for the latter question, the answer is indistinct. From a policy standpoint, the findings arguably do not always seem sufficiently coherent for regulation purposes. The global economy's transition to a knowledge economy upon its intellectual property policy offers a disturbing case. Firstly, at the firm level, there has been no lack of solid opinion against the concentration of patents in large corporations. Secondly, the question follows whether inequality is caused by industry or regional concentration. That is the concentration at the global level and within rich nations where IP-based goods are heavily concentrated. As concentration-based inequality does not correlate indistinctly to economic growth or lack thereof, the findings may deserve regulatory restraint given economic inequality, complying with the "new economic geography" of the early 1990s, associated with Paul Krugman and others. The latter permit that geographical concentration of economic activities – including innovation-related ones – is inevitable and plausibly desirable.

Abhijit K. BHAND, Kanadlab Institute of IP and Research, and Ansar Mahmood JASPAL, City Law Solicitors & Consultants

Cost of Patent Protection, Maintenance and Enforcement: Challenges and Solutions

Patents are awarded to encourage new and useful technological developments in the society by awarding certain commercial monopoly rights for limited period. Such monopoly rights enables the inventors (and investors too) to earn profit by enjoying limited monopoly market. An ideal patent strategy is usually inline with the business strategy. That means the plans and means for invention commercialisation should be decided in advance before patent protection (or ideally before investing in invention development). Getting a patent, maintaining it and enforcing it requires lots of time, efforts and money. Each of these processes is a complex task and requires both micro and macro level understanding about "cost of the process". Cost of patent protection, maintenance and enforcement is heavy and requires attention of key human resource. 'uncertainty' usually follows every step of patent lifecycle and other steps, which makes the investment in patenting more risky. Especially when it comes to startups, such cost matters considerably. For small businesses and startups, the cost of patenting and enforcement are the major factors to be considered in all decisions associated with invention. Patent protection maintenance and enforcement incurs different types of costs on the owners that are supposed to be paid on predefined timelines. Failure to obey timelines results in patentinability. The major costs of patents are related to consulting fees, specification drafting, translations, different types of application fees, annuities, patent audits, enforcement cost etc. There are many other costs which may be needed and varies case to case.

In this paper we would like to present our research work analysing different legal and administrative aspects of costs associated with patent protection, maintenance and enforcement. The research paper also discusses the cost related challenges faced by patent owners and possible solutions. Understanding these aspects of

costs and solutions to possible problems could help patent owners to prepare an appropriate strategy for patent commercialisation in advance. This paper studies the micro and macro legal, administrative and business aspects associated with cost of patent protection, maintenance, and enforcement. This study of different costs will enable patent owner to make the processes for patent protection, maintenance, and enforcement more efficient and effective. Improved efficiency and effectiveness will save significant costs of the patent owners, contribute to the overall profit and thereby serve the ultimate purpose of patent protection for businesses.

Ananya BHARADWAJ, Amity School of Law, Amity University

Application of Blockchain Technology to Curb Copyright Infringement in Cinematograph Film

One of the ways of copyright infringement of cinematograph film is by piracy. At a very general level, it may broadly be stated that, in India at least the recognition of the value of the copyright and its proprietary nature is poor. When it comes to cinematograph film the level at which piracy is causing a loss to this industry is beyond measure. From the researcher's personal experience, the general public has access to international movies even before their release date in India. Digital Right Management (DRM) tools although can to some extent mitigate piracy issues, still do not provide a perfect solution to it. Sydney start-up Veredictum is using blockchain to solve film piracy and video theft. According to the Australian Content Industry Group (ACIG), the annual value of loss of retail sales to Australian content industries was recorded at \$900 million in 2010. In addition, nearly 8,000 jobs were lost in the content industries sector as a direct result of internet piracy. Another start-up called Custos Media aims to keep track of digital assets like movies, eBooks and other media through blockchain technology through its "imperceptible watermarking technology." Blockchain technology can be a great boon to the film industry helping it out to fight its greatest problem- piracy. While blockchain does not present an end-to-end solution for eliminating piracy but, it can still be used to deter the process of leaking content illegally. The paper shall be focusing on the Laws in India, USA, and U.K. in relation to curbing Copyright infringement. The paper shall be further dealing with the application of Blockchain Technology in curbing Online piracy.

Niharika Sahoo BHATTACHARYA, Rajiv Gandhi School of Intellectual Property Law, IIT Kharagpur

Emerging Trends in Patenting Cosmetics: An Asian Perspective

People's desire to consciously look beautiful in daily life has made cosmetics a huge lucrative industry globally. This is evident from increasing global cosmetics market size from US\$357.5 billion in 2021, to expected size of US\$508.3 billion by 2027, registering a CAGR of 5.95%. The term Cosmetics encompasses a very wide spectrum of products in a variety of product categories, ranging from shampoos, fragrances and hair colours to sunscreens, toothpaste and deodorants to make up products to nail care. The term cosmetic can broadly be defined as any article intended to be rubbed, poured, sprinkled or sprayed on, or introduced into, or otherwise applied to, the human body or any part thereof for cleansing, beautifying, promoting attractiveness, or altering the appearance, and includes any article intended for use as a component of cosmetic. In the ancient times, cosmetics were limited to daily herbal home grown products to natural ingredients easily available at home. People's demand of beauty products paved way for development of beauty sector. There is a shift from natural cosmetics to conventional chemical-based products. Advent of technology further brought new domain of cosmetics in the market where a cosmetic can be categorised both as drugs and cosmetics which are called cosmeceuticals. Alternative terms for cosmeceuticals have

sprung up like performance cosmetics, functional cosmetics, dermoceuticals, active cosmetics. Another class of cosmetics which is in trend is called nutri-cosmetics, which act as nutritional supplements to care skin, nails, and hair natural beauty. They work from the inside to promote beauty from within. Every year, almost 25% of cosmetics in the market are improved versions or completely new. Innovation in the cosmetic industry depends on many factors and the most frequent areas of innovation in the cosmetic industry are related to biotechnology, nanotechnology, the use of pharmaceutical carrier systems, multifunctional products, antiaging products, personalized products, development of in silico methods and 3D printing, Blockchain beauty, AI based skin tracker, cosmeceuticals, nutri-cosmetics etc. So, there is constant burden on industries to originate in order to attract new customers and also to gain advertising lead. While the earlier cosmetic industry was dominated by more of traditional proprietary formulations, the new emerging cosmetic market is flooded with innovations majorly protected through patents which may be paired with trademarks for greater valuation. This sort of protection not only helps the company to commercialize the innovation but assures a greater return on their investment. In this context the present study aims at analysing the current patenting trends and associated challenges in cosmetic segment with special emphasis on Asian countries which are considered as hub for traditional natural cosmetics.

Barasha BORTHAKUR, Queen Mary Intellectual Property Research Institute, Queen Mary University of London

Who Owns What? Patent Landscape of Environmentally Sound Technologies

Climate change is the common concern of humankind which should be dealt efficiently through international cooperation. Innovations and transfer of environmentally sound technologies (“ESTs”) are one of the most effective ways to mitigate climate change which have been the prime focus of multiple multilateral agreements and negotiations. The access to such technologies is vital for all the countries, irrespective of their developmental needs, so as to build a legal regime surrounding technology transfer (“TT”) of ESTs where ESTs are classified as global public good. However, the current claim is that such access is difficult for two reasons: firstly, there is a negligible and inefficient TT of ESTs due to the dearth of international legal instruments; and secondly, the concentration of ESTs lies in the hands of a few countries and/or corporations. Due to this asymmetrical control and ownership of ESTs, many developing countries such as India, demand for a change of intellectual property rights (“IPRs”) since such rules are seen as a barrier to essential ESTs which in turn will help in mitigating climate change. The problem lies in the distinct division of scholarships holding the opposite views and the lack of empirical evidence on these claims. This article, thus, explores and critically analyzes this assumption by focusing on the patent law in relation to ESTs.

In the article I argue why it is vital to understand who generates and possesses ESTs, as well as who are the primary technology recipients, in order to properly evaluate the influence of the global IPR regime on development and transfer of ESTs. The overall consensus in the literature tends to be that EST innovation is centered mostly in developed nations. When it comes to TT of these ESTs, the benefits of the transfers are not equally distributed as the key recipients of the same are only a few developing nations. Since there is a lack of sector and geographic specific empirical research, the article contributes by focusing on the relationship between IPRs, innovation and TTs within sector and geographic specific ESTs and adds to the existing literature in at least three ways. First, in contrast to previous literature done in this field, the current study uses more recent data (using OECD Stats database and INNOGRAPHY (Derwent) database) and time series to investigate the concentration of ESTs; second, the involved ESTs covered by this study reach beyond specific clean energy technologies, covering almost all climate-related ESTs; and third, it uses market mapping to analyze the position of owners of ESTs in the relevant market in question.

Hermenio Jr. B. CABUSOG, College of Administration, Bukidnon State University

The Effects of the Prototype Board Game on Risk Aversion Tendencies and Asset Allocation Strategies among Financial Management Students in a State University: A Quasi- Experimental Study

The background of the study is based from the passion of the researcher in innovative learning through gamification and game-based learning. With this premise the researcher chose to design an investment educational board game to be utilized in teaching some subjects taught in the university. The design of this learning material follows the human-centered design of Prototyping, the rapid prototyping (IDEO.ORG, 2022). The prototyping extends from a few days to months. Such a process undergoes iteration and reiteration until a functional prototype is achieved. An Asset Allocation Strategy Board Game for simulating students' learnings in asset allocation strategy in the Investment Management Course through a competitive game of strategy using the board game. The inventive device includes a standard squared game board and in the board an alternate dark and light color squares sixty-four (64) in total. The plurality of spaces where the plurality of playing pieces move has arithmetical functions which affects the values of the playing pieces as it move along the game board. A plurality of playing pieces are provided to move in a diagonal and perimetrical movement on the square spaces of the game board. The plurality of playing pieces have plurality of values and a plurality of assets it represents, it moves to capture pieces in a diagonal and perimetrical movement on the square spaces of the game board. Aside from the game board and the plurality of pieces, the board game also includes a tally sheet booklet, pencils, and play money up to the amount equal to the highest attainable score in the game.

This prototype goes into a quasi-experimental approach in analyzing its effect on users. Pre-test and Post-test is conducted among Financial Management students who voluntarily participated in this quasi-experimental study. The Pre-test is conducted after the lecture in Asset allocation and risk aversion followed by the Post-test after they played the Board Game. The research instrument was adopted and modified from Reilly, Brown and Leeds (2019) and pilot tested to test its reliability. Statistical analysis using *T-test* to compare means between the tests. Total anonymity and consent is sought to every participant prior to their participation of the study. Results shows that there is a difference between the means indicating that participants became more aggressive in risk taking and more methodical in the hypothetical asset allocation strategy after they played the board game. The significance of the study is to facilitate iteration for the improvement of the prototype and product development, supports the development of new instructional material and support for the patent application. Thus, the quasi-experiment supports any claims on the effectiveness of this novel board game of the use as an Instructional Material in the Classroom and for its patent claims.

Bernardo CALABRESE, Law Department, University of Verona

A Change of "Formula" in the EU Protection of Geographical Indications for Processed and Manufactured Products

As known, the EU regime for protection of Geographical Indications (GI) represents the most advanced (and at the same time debated) model of this *sui generis* intellectual property right on a worldwide scale. This can be noted also in bilateral agreements with various Asian countries (Vietnam, South Korea, Japan, China, Singapore), where the EU pushed for enhanced protection of GI. The current reform undergoing in the EU – strengthening the existing schemes for agri-food/alcoholic products, plus introducing a new parallel scheme for craft/industrial products – is moving forward in that direction, consistently with the expansive policy agenda of the EU at the international level. However, there are some critical aspects also

in such reform proposals. In particular, the new norms on the use of GI for ingredients in case of agri-food processed products, as well as for parts or components in craft/industrial manufactured products, represent a sharp deviation from previous EU guidelines and case law. Apparently, the proposed norms limit the free use of GI by third-party operators in two ways: in case of product name, subjecting the legitimate use of GI to the authorization of the relevant producer group; in case of product description, reserving the legitimate use of GI only to entitled local producers. Whether it is an intentional policy choice or an unhappy normative wording, this change of “formula” raises serious doubts about its consistency and preferability. Actually, it implicates a strong limitation of free competition and movement of goods in connected secondary markets, and it also introduces a discretionary management of GI exploitation by producer groups on a mere voluntarily basis. Without questioning the firm condemnation of any unfair usurpation of geographical reputation, this shift seems undesirable, since it brings the GI regime away from its fundamental principles of open and non-discriminatory access, which are complementary to its functional rationale of quality protection and guarantee. Conversely, the risk is that GI get caught in the fallacy of “prestige”, following the (already controversial in itself) “brand” logic of reputed trademarks. Although the protection of GI as ingredient and components is not expressly provided in bilateral agreements (just resorting to a general clause of “any other use of unfair competition”), this different approach is also relevant for Asian countries and other international partners of the EU: in a direct sense, for products that are intended to entry the EU single market; in an indirect sense, because EU law represents the main reference paradigm for GI protection. Therefore, here it is invoked a correction at the legislative – or at least interpretative – level, so that the EU approach can return to the previous more sound solution of balancing GI protection and third-party interests, providing the legitimacy of GI use in trade names and descriptions subject to objective justification and honest commercial presentation.

Gargi CHAKRABARTI, Dharmashastra National Law University

Breeders’ Rights and Farmers’ Rights at the Crossroad of Plant Variety Protection: Pepsico vs Gujarat Farmers Case Analysis

The interesting case of Pepsico India Holdings (PIH) vs Gujarat Potato farmers had started as an infringement case, where PIH sued nine farmers of Gujarat for infringing their rights of the protected variety FL 2027 in two different Courts of Gujarat in April 2019 seeking permanent injunction and damages of 1-2 Crore Rupees from each of the farmer. Later on, after involvement of Govt. of Gujarat the cases were withdrawn by PIH in May 2019. Then an application for Revocation of the Registration of FL 2027 was filed under section 34 of Plant Variety Protection and Farmers’ Rights Act, 2001 (PVPFRA) in June 2019 and after careful consideration by the Plant Variety and Farmers Rights Authority, it was decided that the Registration of FL 2027 should be revoked; hence the registration is revoked in Dec 2021. This case unfolded several important factors pertaining to PVPFRA, 2001. PIH applied for registration of FL 2027 as a New Variety, but the variety changed as a suo moto action by Plant Variety Registry of India (PVR) to Extant Variety and Registration Certificate provided as Extant Variety. The issue here is whether such change of variety is acceptable as a suo moto action and if yes, what would be the necessary basis and communication regarding this. Also the ‘date of first sale’ mentioned by the breeder was 17 Dec 2009 in India, which was less than two years from the date of application (18 June 2011), but later during revocation proceedings it was found that actual date of first sale was 28 Oct 2002 in Chile, which is more eight years, and which makes the variety ineligible as a New Variety. It was also found during the revocation proceedings that the applicant is neither the ‘breeder’ nor a ‘bonafide assignee’ of the actual breeder, which makes them ineligible for application. Detailed analysis on proper understanding of different varieties, prerequisites for different varieties, and the qualification for an applicant of registration is needed in this respect.

Regarding the process of registration, the assignee of a breeder can apply for registration, provided that he has submitted necessary proof of right to apply within 6 months from the date of application, which was missing in present case [Sec 18(3) PPVFR Act, 2001 read along with Rule 27 of PPVFR Rule, 2003]; without such necessary documents the application was advertised in the Plant Variety Journal on 1 Apr 2015; also farmers missed the chances of opposition within 3 months of the advertisement. This highlights the negligence from the Registrar of Plant Variety Registry and the lack of legal awareness of the farmers. It was claimed the revocation application that the farmers' rights to save, use, sow, re-sow, exchange, share, or sell his farm saved seeds by virtue of sec 39(1)(iv) of PPVFR Act, 2001 is superseding the provisions of breeders' rights on their protected varieties. This issue is not discussed at length, but clarifications are urgently needed. The aim of PPVFR Act, 2001 is two-fold, to safeguard the private rights of the breeders on their protected varieties, and at the same time to safeguard the interests and livelihood of the traditional farmers without prejudicial circumstances. In the present case 9 farmers and their families suffered from loss of time, money and energy to defend their interest and also mental harassment due to burden of huge damages on them.

The fact cannot be disregarded that India is an agriculture-based economy, traditional farmers of India perform their best by using traditional methods of breeding, and traditional farmers are largely unaware about the existence of legal regimes and their rights and duties as per such legal regime in relation to plant variety protection. It is the duty of government and policy makers to balance the interests of breeders as well as farmers as per the provisions of PPVFR Act, 2001 and to ensure the empowerment of the traditional farmers to protect their own interests. This paper will discuss all the crucial issues at hand in the present case and will find out the way forward to a better comprehension of provisions of PPVFR Act, 2001 where everyone's best interest would be served in an equitable manner.

Shambhu Prasad CHAKRABARTY, University of Engineering and Management, and Ana PENTEADO, University of Notre Dame

Friends with Benefits: Fair and Equitable Benefit Sharing to Indigenous Knowledge, an Interdisciplinary view on Harmonisation of Multilateral Agreements

On the one hand, intellectual property is an asset of economic nature and cultural importance for First Nations and local communities. In aligning the economic and cultural aspects of ecological assets, a myriad of agreements, conventions, declarations, and treaties provided incentives to States to alleviate the misappropriation of ideas created by vulnerable populations in their lifestyle choices and experience with Nature, namely Indigenous Knowledge. Nonetheless, the challenge to accommodate intellectual property eligibility to Indigenous Knowledge is still in progress, albeit the crucial role of multilateral organisations and other stakeholders supporting a clear harmonisation of sustainability with innovation to include disenfranchised indigenous, tribal peoples and local communities in the transfer of technology to promote capacity building for First Nations. One of these aspects is the mechanisms that would be efficient to accrue benefit-sharing in scientific collaborations with the active partnership of Indigenous Peoples. Sharing ecological ideas involves disclosing most of the times Indigenous Knowledge with third parties for the commercialisation of natural resources, most of them of endemic nature. We examine the nature of non-economic benefit-sharing represented by technology transfer and capacity building for First Nations in the context of the environment and intellectual property conventions' guidance, as well as the exclusion of patentability of genetic material accrued from plants and microorganisms in selected jurisdictions.

Ankita CHAKRABORTY, Delhi School of Economics, University of Delhi

The Quintessential Consequence of Development Attributed to Geographical Indications: Place that Matters: A Case Example of Darjeeling Tea

Geographical Indications (GIs), a constituent of Intellectual Property Rights, help identify and preserve goods from a specific territorial origin. The first GI to get registered in India is the Darjeeling Tea. The objectives of this paper are to understand the GI registrations in the country, to trace the tradition behind the granting of the GI tag to Darjeeling, to comprehend the place attachment of Darjeeling Tea, to apprehend the current scenario of practices for the sustenance of Darjeeling Tea GI, and to analyse the impact of GI on Darjeeling Tea. This study thus aims to document and describe the nitty-gritty of Darjeeling Tea GI and look into the role of Geographical Indications in giving a unique spatial identity and aiding in preserving the same.

Avishek CHAKRABORTY, School of Law, CHRIST (Deemed to be) University

Protection of Trademarks in the Metaverse: An Exploratory Study of the Issues and Challenges

Protection of intellectual property (IP) is vital for promotion of economic activity as it provides incentives to inventors and creators for innovation which leads to economic growth. Digital technologies have contributed immensely in furtherance of effective protection of IP. In this respect, non-fungible tokens (NFTs) are used to authenticate ownership of digital assets generally and have the capacity to significantly reduce infringement of rights and strengthen protection of intellectual property rights because the sequence of an asset's activity can be tracked on an immutable and public ledger or by way of a permissionless blockchain. Recent emergence of 'metaverse' and related technological innovations are developing a virtual world. Companies developing metaverse are focusing on features that enable users to interact with each other digitally. Metaverse is evolving as an omniverse economy where physical goods and digital items are traded in the same marketplaces. It is considered as a new platform for businesses to reach a wider range of consumers, expand their digital footprint and increase revenues. The crypto community of blockchains, cryptocurrency and NFTs are the key players in development of metaverse.

Looking at the impact which metaverse has on commercialisation of goods and services, it becomes pertinent for businesses to protect their IP in the domain of metaverse, specifically in respect of the use of trademarks. Obtaining trademark protection for a virtual product name in Metaverse provides the owners with exclusive rights to use and apply the mark and consequently restraining others from using a name or mark that is same or similar. Brands are taking advantage of the increased consumer engagement by launching projects like Nike's Nikeland and Balenciaga's 'Afterworld.' Recently, Adidas and Prada launched Adidas: Prada, Re-Source, a collaborative NFT art project. There are several companies who are applying for registration of trademarks in metaverse. Companies like McDonald's, Puma, Crocs, L'Oréal, Walmart, etc. have filed application for trademarks registration in respect of 'downloadable virtual goods.' Consequently, use of trademark in metaverse has resulted in raising new legal issues, including the process of protecting a company's trademarks in such virtual platform.

Simultaneously, with the increasing usage of trademarks in virtual space, bad actors are attempting to usurp the rights of trademark owners in the metaverse with the pre-emptive filing. There are growing instances of bad faith application filings are a major challenge for owners of trademarks as contesting such bad faith applications involve potentially huge legal fees as well as a drain on corporate resources. Therefore, problem related to trademark squatting is rising and policing brands are getting harder in the metaverse. In this

backdrop, this study intends to explore the issues and challenges posed by metaverse in respect of the law and policy of trademark infringement, trademark dilution and the related legal causes of action of false endorsement and false designation of origin.

Shih-Eei CHAO, University of California, Berkeley

The Promise of Platform Patent Adjudication

Platforms are beginning to undertake resolving patent infringement disputes, but are participants and courts satisfied with this emerging “platform adjudication”? How might we further regulate to increase platform adjudication’s viability as a channel for patent alternative dispute resolution? Heightened awareness toward patent enforcement has urged e-commerce platforms to receive and act on patent owners’ infringement complaints. Some platforms disclaim any role in the technical endeavor of deciding infringement, but this itself implies siding with the allegedly infringing seller. Other platforms have developed sophisticated adjudication programs, with Amazon’s Patent Evaluation Express being a notable example. However, platform adjudication in its current state can frustrate both patent owners and sellers. There is promise in it becoming a way around the massive cost of court litigation – but not before discerning and addressing its pitfalls.

Court cases involving platform adjudication highlight some of its inadequacies. In some cases, the patent owner sues in court after failing to obtain platform remedy. These cases reveal how platforms might not be meticulous enough in their adjudication, if there is substantial adjudication at all. In others, the allegedly infringing seller seeks a preliminary injunction or temporary restraining order mandating that the patent owner refrain from seeking platform adjudication, attempting to halt the double pressure of losing significant platform sales revenue while litigating in court. These cases demonstrate platform adjudication’s devastating consequences – courts that grant such injunctive relief have acknowledged that injury to seller rankings and platform goodwill can be irreparable.

Court cases, however, do not address the fundamental asymmetry in platforms’ procedures. I argue that platform adjudication’s most glaring issue is that the patent owner carries far too little risk for the powerful remedies available. In patent law, there have long been attempts to create institutions offering alternative dispute resolution faster and cheaper than court litigation. The common theme of these institutions is that they offer the patent owner a choice – opting for one of them requires sacrificing some arguments he may bring or remedies he may obtain, in exchange for the efficiency benefits. Inter partes review at the Patent Office only allows section 102 and 103 invalidity arguments, while the proposed Patent Small Claims Court may impose limits on damages or injunctions. Platform adjudication is most comparable to proceedings at the International Trade Commission, where though damages are unavailable, the potential injunctive relief remains potent. Yet even ITC proceedings permit the alleged infringer’s invalidity arguments, which are not an option in platform adjudication. The patent owner loses nothing by seeking platform adjudication, while it is the seller who bears all the risk.

I argue that patent owners need to incur more of a sacrifice when they make infringement complaints on private platforms. Considering operability, I believe the best way is to limit platform patent takedowns to literal infringement, or where the patent owner has an identical product. This can be incentivized through safe harbor regulations tied to infringement liability.

Aishwarya CHATURVEDI, Jindal Global Law School

Digital Libraries, Copyright, Controlled Digital Lending and COVID-19

I have authored the paper titled “Digital Libraries, Copyright, Controlled Digital Lending and COVID-19.” The paper aims to bring to the fore copyright issues related with digital libraries and is a comparative study of the copyright law of India and the United States. Accordingly, I analyse the situation in two jurisdictions- India and the United States to understand if and how the situation changed for digital libraries during the COVID-19 pandemic. I look at some key concepts such as publication, distribution, reproduction, controlled digital lending, fair use, fair dealing, public interest, exhaustion, and copyright infringement. I analyse the role and impact of each of these concepts in the universe of digital libraries, specifically in times of the pandemic, and further aid our understanding by looking at it from the perspectives of law librarians in India and the United States.

To understand the practice of digital lending in India and controlled digital lending in the United States I interviewed a few librarians from both countries and learnt about the challenges faced by librarians to facilitate digital lending. I also learnt that while librarians in the United States practice controlled digital lending, librarians in India do not; they practice only digital lending. Testimonies of librarians and analysis of the present law and precedents in India and the United States led me to understand that there is no concrete law on digital lending or digital libraries at present in the two jurisdictions. Accordingly, this paper discusses the utility and necessity of digital libraries in the present times, as also that of controlled digital lending.

Apoorv CHAUDHARY, National Law School of India University

Criminal Enforcement of Copyright in India: Need for a Relook?

It is generally agreed that the central feature of the civil law, unlike criminal law, is to provide a remedy to the victim for invasion of protective interests. However, this demarcation between criminal and civil offences is not an airtight one. The law of copyright is a perfect example of ‘interweaving and blurring of legal forums.’ While infringement of copyright is liable for a civil action, the same is also punishable by law. Lord Williams of Mastyn, on behalf of the Government of the United Kingdom, had summarised five factors to be kept in mind while criminalising an act against the law. These include seriousness, alternative remedies, enforceability, legal soundness and proportionality of the penalty with the offence.

This article attempts to look at criminal enforcement of intellectual property in India from the point of view of these factors. The first part of the article would look at seriousness, proportionality of the penalty and legal soundness of making copyright infringement a criminal offence. The seriousness of criminal offences for copyright infringement would be examined by looking critically at the economic and non-economic rationale for the same. The examination of proportionality would be done in the light of a recent judgement of the Supreme Court of India which made the offence of copyright infringement a cognizable and non-bailable offence. The legal soundness of the offence would be analysed through looking at the possible misuse(s) of the law. The second part looks at the enforceability of this offence by looking at the data on criminal enforcement of copyright provided by the National Crime Records Bureau for the period of 2018-20. The final part examines if criminal enforcement of Intellectual Property is needed in the form that it is being interpreted and applied today by the Indian criminal justice system.

Jacopo CIANI, Faculty of Law, University of Turin

Data Collection via Web Scraping: Different Approaches, Similar Outcomes?

Normally, data transfer between programs is accomplished using data structures suited for automated processing by computers. Very often, these transmissions are not human-readable at all. Many website provides for convenient XML feeds in order to connect its market place with the online distribution network. When these mechanisms for data interchange are not available, mainly because of conflicting interests of the data owner, data scraping is done to interface to a third-party system. Web scraping systems simulate the human processing that occurs when viewing a webpage to automatically extract useful information. This automated process is carried out by bots, web crawlers or web spiders. There is an entire 'underground world' inhabited by these screen scrapers. Possible uses are online price change monitoring and price comparison, product review scraping (to watch the competition), website change detection, web data integration. All these functions are usually pursued by metasearch engine (or search aggregator), taking input from a user and querying search engines for results. Search engine data is gathered, ranked, and presented to the users. The operator of the third-party system will often see screen scraping as unwanted, due to reasons of overload of bandwidth and server resources as well as loss of advertisement revenue and/or loss of control of the information content. This has caused an ongoing battle between website developers and scraping developers. The submission aims to provide an overview of landmark rulings across multiple jurisdictions over three continents (EU, North America and Asia), answering the question whether the common practice of data "web scraping" should be held unlawful. This overview aims to give evidence that different jurisdictions tackle the data scraping issue from very different perspectives and angles. While most of the cases involve IP law, in particular copyright law and database producer's right; data protection, unfair competition and even public or criminal law can all address data scraping operations to a certain extent. Notwithstanding such different approaches, a common trend towards ruling out the unlawfulness of such common practice may be detected.

Nandini CP, Damodaram Sanjivayya National Law University

Incentives in Justification of Intellectual Property: Moral and Economic Right Expression in Contrast to Utilitarianism: A Philosophical Appraisal

Since the age of Locke, the Labour- interest theory has been the main reason for the protection of IP rights, as labour goes into the creation of IP. The Hegelian view of Personality and personhood, slowly marched its way as another reason for the IP protection. The personhood theory ultimately led to control over the IP rights as a private property for the creator. Then the Kantian- Autonomy theory that supports creators' self-motivation to carry forward their work as a justification of IP right also merges into one format for protection. These theories are incentives under the moral and economical rights. On the other side of the rhetoric was constantly evolving Utilitarian Theory that intensely insisted on entitlement in favour of larger public interest. While the Utilitarian theory profoundly thrived for maximizing benefit to the society, as public interest protection became the primary obligation for the law makers as perceptible in many domestic laws. However, the personhood theory with private property rights became more broader than the moral rights. It also raised beyond the labour-desert theories and utilitarianism. At times the tussle between the creators' rights and public interest i.e., benefit of the society has continued to be the norm in the IP Protection disputes. The author in this paper would attempt to understand this contrast from classical justification that are understood through consequentialist and non-consequentialist view. The paper would also highlight on the evolution and overlapping of moral and economic rights in IP Protection with its extended protection for benefit of public interest under the Utilitarian Theory.

Rani Mol.DABSTER, Inter University Centre for IPR Studies, Cochin University of Science and Technology (CUSAT)

Implications of NFTs in Trademark Law

NFTs are supposed to be our next trendsetters for the future. The developments in NFTs have already cringed into intellectual property law, affecting copyright, patent, and trademark law. It will, in much lesser time, make a higher impact in the area of trademark law. The future will make us well-versed with the term "metaverse"-the world in which each of us might have a separate and unique virtual identity. For the time being, the metaverse represents a virtual world in which certain trading activities or businesses occur. But soon, it will represent yet another world just like ours. People might have different identities. They might be doing some activities just like here. And also, they might be using several entities or products necessary in their daily virtual life. Here are the brands. Another set of brands might be developing in the metaverse, creating several legal issues that may or may not be similar to the real world.

NFTs have already stepped into the digital platform and will soon take the lead in most transactions in the virtual world. The influence of NFTs on trademark law can be studied by analyzing the implications of NFTs in trademark law, how brands deal with the dilemmas caused by the metaverse, how brands try to establish themselves in the virtual reality platforms etc. Activities in the Metaverse have already invited controversies concerning trademarks' use. It would be interesting to look at how the concept of trademark dilution plays a role in metaverse activities. Whether metaverse activities can cause consumer confusion within the virtual world or even in the physical (real world) is a question. Using a famous mark in NFT digital art or games can cause blurring or tarnishing. NFTs and metaverse have not fully settled that they do not have appropriate rules and regulations to deal with the issues it creates with trademark law. Another question is whether the trademark law is equipped to meet the discrepancies in the metaverse world concerning the use of trademarks. NFTs can infringe or dilute an existing trademark by integrating the mark into an expression (like animation, videos, images, etc.) linked to the NFT. Many case laws project the intricacies of the implications of NFTs in trademark law. Whether the defense of parody, comment, or artistic fair use stands in these lawsuits is yet to be seen. In some cases, the NFT brands are more expensive and sold for greater money than their physical (real) version. The NFT value in the metaverse goes beyond the value of its physical version. Undoubtedly, the future of NFTs will pose several challenges to trademark law.

Naama DANIEL, Federmann Cyber Security Research Center, Hebrew University

Transnational Competition: From Enforcement of Foreign Unfair Competition Judgments to Global Trademarks

The intersection between intellectual property (IP) and private international law has never been livelier or busier, yet countries may drift through it unaware of important stop-signs. This paper exposes, for the first time, important and urgent stop-signs emerging from the possible application of the recently-concluded Convention of 2 July 2019 on the Recognition and Enforcement of Foreign Judgments in Civil or Commercial Matters, to unfair competition judgments. The Convention was already acceded to by the European Union, whose Member States will do well to address these stop-signs when implementing the Convention by its entry-into-force date on September 1, 2023. Other countries, whether they already signed the Convention like the United States or consider signing it, will also have to contemplate these stop-signs. Analyzing the interplay between unfair competition, IP law, tort law, and private international law, using

the prism of international instruments and developments, this paper exposes the threats to national trade, competition, and IP policies concealed within the Convention. The paper highlights that while the Convention excludes the enforcement of foreign IP judgments from its scope, mainly to avoid undermining the principle of territoriality that is fundamental to IP rights, the Convention does apply to foreign tort judgments, the enforcement of which is obligatory under the Convention. Therefore, the paper examines the nature of the protection against unfair competition to determine whether it can be classified as a tort. The paper argues that classifying unfair competition judgments as tort judgments, thereby obligating Member States of the Convention to enforce such judgments, will *de facto* bypass the exclusion of IP from the scope of the Convention. Considering the overlap between unfair competition and IP rights, as well as the use of unfair competition causes of action to *de facto* broaden the scope of IP rights by national courts, the enforcement of such foreign judgments undermines national IP, competition, and trade policies. This outcome is further aggravated by the challenges of determining the place of infringement, damage, or act in a global online market, especially taking into account cases in which national courts granted extraterritorial and even global injunctions in the realm of IP. The paper argues that an obligation imposed upon Member States of the Convention to enforce extraterritorial or global injunctions stemming from unfair competition claims will not only undermine national policies, but will also pave the way to the creation of global IP rights such as global trademarks. The paper concludes by contending that while unfair competition is better classified as a tort rather than as an IP right, the intention of the Convention and the risks emerging from the possible enforcement of unfair competition judgments should drive Member States of the Convention to use the tools granted to them by the Convention to refuse the enforcement of foreign unfair competition judgments. Member States must seriously consider the possible risks, and set explicit and public policies on the matter when implementing the Convention, in order to maintain and protect their national trade, competition, and IP policies.

Paramita DASGUPTA, West Bengal National University of Juridical Sciences

Health Equity & IP Monopoly in a Post-Pandemic Reality – Viability of an Open-Source Vaccine Development Model

Poised as we are, at the cusp of yet another new decade, ravaged by unprecedented upheavals, both in terms of nature, and magnitude, – this new millennium has indeed evolved into not just a knowledge and information driven economy, but an intimately and inextricably interdependent new world, where the ethos of sharing of knowledge has not only come to assume an indubitably vital role in positively influencing the culture of thought, but in constructively reshaping the very intellectual zeitgeist of the day. It is based on this premise, and in the wake of the global coronavirus pandemic and all its sobering lessons, that one feels it time to revisit the jurisprudential and philosophical fundamentals to which the patent regime of today owes its ideological origins, to re-examine the true nature & motivations of the pharmaceutical patent regime as has been borne out over the last couple of years, specifically focussing on the prospect of open source vaccine development, whilst asking the question as to whether the present-day interpretation of the fundamental principles, ethos and jurisprudence together underpin the core rationales underpinning intellectual propertification – be accepted as still holding good against the real-time backdrop of the stark healthcare & vaccine inequity that the world witnessed when confronted with a global pandemic? – to then proceed to deliberate upon whether be justifiable to advocate for a suitably fresh perspective with which to approach intellectual propertification and knowledge monopoly, and to then make such recommendations as may be best suited to usher in a fresh perspective and thereby encourage an inclusive and collaborative ethos of innovation, research and development, by proposing policy imperatives so as to be able to appropriately reframe the very tonality of the intellectual property protection discourse in the field of open source vaccine development, where the outcome is unquestionably a public good, and the unequivocal goal,

– in keeping with the mandate of Universal Health Coverage and the United Nations Sustainable Development Goals, – is to help bring about a just, fair, inclusive, equitable and sustainable age of knowledge generation, dissemination, sharing and mutual support for the greater collective welfare.

Lipsa DASH, AND Sambhabi PATNAIK, KIIT University, School of Law

Intellectual Property and Greenwashing: Ethics and Practice

Across sectors and several jurisdictions, we have realised that companies manage their Intellectual Property through different strategies after portfolio analysis. They adhere to different eco-advertising standards and green marketing campaigns to attract their target audience, which makes them believe that they are contributing to the environment by making eco-friendly choices. Humans have a tendency of being inclined towards the product and services through advertisement of environment-friendly attributes attached to the product or service. The companies try to lure customers through slogans, trademarks, performance claims or various other marketing practices which are attached in the hearts and minds of people all over the world. Due to the rise in consumer consciousness of making environment friendly choices, companies have adopted new marketing strategies for the same. “Greenwashing” is the intellectual property marketing strategy which makes false and misleading claims to the customers that their products or services are environment friendly and do not contribute to climate change. The millennials globally expect brands to resonate with sustainable development goals, their values and care about the environment, produce products responsibly without harming natural resources, and at the same time uplift the vulnerable communities. The presenters will explore the regulation of greenwashing with respect to intellectual property laws. The research addresses the effect, affect, ethics and the real-life practices by brands who use their trademark to deceive and mislead consumers. This paper shall highlight that greenwashing is not typically false communication rather the companies choose non-disclosure of negative information and selective disclosure of positive information about their environmental or social issues attached to their product or service. The degree of falsehood of information however is immaterial for environment social governance. Currently, lacking specific laws, especially current environmental laws and trademark laws about greenwashing in different jurisdiction has brought the attention of the courts and climate change activists to ensure and prevent such unethical practices. The ancillary laws like advertising law, consumer protection law, competition law, and unfair trade practices however may come to rescue for resolving this unanswered issue of greenwashing by brands.

Artha DERMAWAN, University of Lapland

Text and Data Mining Exceptions in the Development of Creative Artificial Intelligence Systems: Should the EU Learn from the Japanese ‘Non-Enjoyment’ Purposes?

The European Union (EU) text and data mining (TDM) provisions are a progressive move, but the horizon is still uncertain for both creative Artificial Intelligence (AI) researchers and developers. To drive innovation and further the commitment to the digital single market, during the national implementation, the EU Member States could consider to take the Japanese broad, all-encompassing and ‘non-enjoyment-based’ TDM as an example. The Japanese ‘non-enjoyment’ purposes, however, are not foreign to the European continental view of copyright. A similar concept can be found under the German concept of “*Freier Werkgenuss*” or enjoyment of the work. A flexible TDM exception built upon the German notion of non-enjoyment purposes could become an opening clause to foster innovation and creativity in the age of creative AI systems. If there is no political will to safeguard “the right to read should be the right to mine” and to provide a welcoming environment for AI researchers and developers, the EU Member States could consider the

following: (1) advocate for 72 hours of response if technological protection measures (TPMs) are preventing TDM, and (2) Robot Exclusion Standard (robot.txt) as a warning when TDM is not allowed on a website.

Rakhmita DESMAYANTI, Faculty of Law, Trisakti University

Digitization of IPR Registration and Recording

Recognition of a work is needed by the creator of the work. After struggling to produce something that is beautiful to the eye or pleasing to the eye or pleasant to read, the producer of the work really wants the result of his thought to be recognized and known to people and also protect the work. Recognition helps creators to continue to work to fulfill personal desires as well as fans. This parable also applies to every business owner who wants the product produced to be widely known by the public. For this reason, efforts are made to introduce the product, whether what is produced is goods and or services. One way to introduce such products is to give a distinctive name that characterizes the product of the manufacturer. This is very important for producers. To obtain trade mark protection must be registered and Copyright needs to be recorded as proof of ownership. In this era of digitalization, the IPR protection process has also changed how to get protection. Applications can be made online. The question arises Whether the request for trademark registration and online copyright recording is effective for the applicant? The goal to be achieved is to get an idea of how far the process of applying for Trademark registration and Copyright Registration online is felt to help applicants spread throughout Indonesia? The results of the analysis of this study are From the research that has been carried out, it can be concluded that the registration of trademarks and the recording of Copyright online are needed to facilitate the parties related to the process. The copyright recording process, which can be said to be fast, is very helpful for applicants. Because there is no need to visit the counter at the Director General of Intellectual Property office for the registration application process. So the change in the trademark registration system and Copyright registration to online is very helpful for interested parties. However, socialization is needed for interested parties to make it easier for all parties to carry out this process. This year the government through the Directorate General of Intellectual Property created a Copyright recording system called POP HC, namely Automatic Approval of Copyright Registration. With this system, the recording certificate comes out in approximately 15 minutes after the Non-Tax State Revenue fee is carried out. This system makes the recording process more effective for applicants. But this system has disadvantages, namely if there is an error in the applicant's data or the creation data cannot be corrected automatically, it still requires data verification and It may take longer for the repair certificate to be issued. Next year, 2023, the government implements a Brand Extension Automatic Approval system abbreviated as Brand POP. This system is to speed up the process of extending brand protection, which is planned to be completed within 10 minutes. It is hoped that the new system created by the Directorate General of Intellectual Property will make the process of recording and extending protection more effective and efficient for rights owners.

Shenali Christina DIAS, Leicester Law School, University of Leicester

The Shifting Sands of e-Commerce and Trade Mark Law – An Exploration of the Implications of e-Commerce in the Metaverse on Trade Marks

The Metaverse, a virtual and immersive reality, is garnering growing interest from the public. In recognition of the multitude of retail opportunities available in the Metaverse, trade mark filings for the Metaverse have also been surging with brands such as Nike, Victoria's Secret and McDonald's taking steps to register trade marks.

The Metaverse poses its own set of unique opportunities and challenges to trade mark law. As the Metaverse parallels our own, there are opportunities for virtual showrooms, virtual demonstrations of customised products and general advertising. This paper explores the implications of e-commerce in Metaverse worlds on trade marks, specifically in light of the underlying artificial intelligence making personalised recommendations to consumers in the Metaverse. It is argued that while Metaverse worlds utilise recommender systems to provide recommendations to potential consumers, this use impacts trade marks used in the Metaverse worlds differently from the use of artificial intelligence on website-based e-commerce platforms. This is primarily due to website-based e-commerce platforms merely providing two dimensional presentations of products and limited opportunities for consumers to interact with the products prior to purchase. The unique characteristics of Metaverse worlds allow for hyper personalised recommendations to be made to potential consumers while simultaneously allowing for greater consumer interaction with the recommended products.

This paper argues that the implications on trade mark law are that traditional trade mark concepts, such as consumer confusion, that were being undermined on website-based e-commerce platforms utilising artificial intelligence find renewed relevance in the context of the Metaverse.

Kay DUNN, Queen Mary Intellectual Property Research Institute, Queen Mary University of London

Tartan vs Tweed: A Divide in Approaches to Scottish Cultural Heritage

For Scotland, a devolved nation, control over its intangible cultural heritage is minimal; the power to do so is retained in Westminster around four hundred miles away. Westminster itself has failed to act to protect intangible cultural heritage, favouring the tangible immovable elements of cultural property, such as Stonehenge and Hadrian's Wall. Whilst the rest of the World is focussed on submitting ICH practices to the UNESCO Convention's list of ICH, the UK has a history of denying ICH even exists within its borders. This is contradicted by the voluminous amounts of intangible heritage alive throughout the UK and especially within the Scottish borders. The northern land of lochs and glens that inspired Scotch Whiskey, Bagpipes and an array of textiles is swollen with intangible cultural heritage in the form of traditional handicraft knowledge, folklore, music, and language. The traditional manufacture of tartan and tweed is one aspect of this, having bolstered a large part of the economy as well as being significant to the identity of the Scottish peoples. Both tartan and tweed have been regulated as part of the living culture of Scotland, both having been synonymous with the Scottish Highlands and Islands for centuries. However, despite regulation they have received very different treatment in the process of safeguarding the knowledge for future generations. This paper looks to explore the discrepancy that has led to Harris Tweed retaining its distinctive nature and value whilst tartan has been appropriated time and again indiscriminately.

Vehbi Umut ERKAN, Faculty of Law, Ankara University

Claim for Material and Immaterial Damages in Case of Infringement of Authors' Rights in Turkish Law

Compensations in case of infringement of authors' rights regulated in Turkish Law on Intellectual and Artistic Works (FSEK) Art. 70, which states that material and immaterial damages can be claimed in case of violation of authors' moral and economic rights. The violations that cause compensation may occur even if there is no contractual relationship between the parties.

According to the regulation, “Any person whose moral rights have been infringed may bring an action for immaterial damages for the moral injury he has suffered. In place of or in addition to such monetary compensation, the court may order another sort of compensation for immaterial damages. Any person whose economic rights have been infringed may claim compensation under the provisions governing torts, if the infringer is at fault. In the cases set out in the first and second paragraphs, the infringed person, apart from the damages, may also claim the profits gained by the infringing party. In such case, any sum demanded in accordance with Art. 68 shall be deducted from this amount.”

This regulation is essentially in parallel with the general provisions of torts, regulated in Turkish Code of Obligations (TBK). In FSEK Art. 70, a distinction is made in compensation claims based on the type of rights violated. Accordingly, claims for material damages will be subject to general provisions and claims for immaterial damages will be subject to different regulations depending on the nature of the rights violated. The person whose moral rights violated may claim immaterial damages according to FSEK (FSEK Art. 70/I). In order to claim compensation, a moral right must be violated, a damage should occur because of the violation, and the existence of the fault must be proved. In order to claim immaterial damages, the violation of personal rights is not necessary. The law states that only immaterial damages can be claimed in case of infringement of moral rights. However, in case of violation of moral rights, material damage may also occur. If a material damage occurs because of the violation of a moral right, these damages can be claimed according to the general provisions of TBK. As a result of the infringement of an economic right, material or immaterial damages may occur. In case of violation of economic rights, the article states that both damages can be claimed within the framework of the general provisions of the TBK regarding torts according to FSEK Art. 70/II. In order for this to be claimed, violation of an economic right, fault, loss, and causality should be proved. Finally, as a result of the infringement of moral and economic rights, the profits gained may be claimed in accordance with the provisions of *negotiorum gestio* according to FSEK Art. 70/III which is regulated by the special provisions of TBK.

Chuqi FENG, Faculty of Law, Ludwig-Maximillan-University Munich

Methodological Reflection on the Chinese Case Guidance System regarding Intellectual Property Law

In July 2021, the Supreme People's Court of China released the twenty-eighth series of Guiding Cases regarding intellectual property protection. The case guidance system in China is a new attempt to improve the law application process and unify trial criteria. The judges must cite the Guiding Cases in their judgments if the Guiding Cases released by the Supreme People's Court are similar to the cases. However, the Guiding Cases are not the source of law and cannot be cited directly as the basis for trials. There are much fewer Guiding Cases concerning intellectual property law than those in other fields of law, and the frequency of their reference is also relatively lower than that in civil law. It is questionable why this system does not work for intellectual property law in China and how to enhance the judicial process concerning intellectual property protection. Most existing studies have adopted an empirical approach for solving the problem mentioned above, which concentrates on statistically analyzing the number and the subject matters of the Guiding Cases and the frequency and methods of reference of each Guiding Case in the subsequent judgments. These researchers have given concrete suggestions for modifications based on the statistical results. However, pure empirical statistics cannot justify normative statements. The methodology for analyzing the legitimacy and effects of the case guidance system should be reexamined. Furthermore, the underlying methodology of the case guidance system has yet to be thematized.

This project aims to comprehend the failure of the case guidance system in the field of intellectual property law by putting the case guidance system under scrutiny from a legal methodological perspective. Analyzing

the specialty of the law application method in intellectual property law will suggest modifications to the current legal framework and methodology. The following questions should be answered: 1. What is the envisaged methodological function of the case guidance system according to the present legal framework? 2. Is this envisaged methodological function of the case guidance system legitimate according to the legal methodological theory? 3. What is the specialty for law application of intellectual property law? Is there an adequate causal link between these specialties and the failure of the case guidance system in IP law? 4. How could the law application regarding intellectual property protection be improved?

The present work argues that the selection and editing of the Guiding Cases constitute an exercise of power, which intervenes illegitimately in the natural process of law application, which bases on the process of comparing judicial precedents through choosing the "tertium comparationis." The legal methodological theory of *Arthur Kaufmann*, a German legal philosopher, about the hermeneutic structure of analogy or equation (*Gleichsetzung*) offers the theoretical basis of this argument.

Vishmi FERNANDO, Faculty of Law, University of Colombo

Reviewing the Monopoly Granted by Patent Legislation in Relation to the Pharmaceutical Industry to Safeguard Public Health Interests: A Comparative Analysis of Sri Lanka, India and the United States of America

The existence of a patent system is said to have three broad justifications. First is based on justice for the inventor, since it is a mechanism to reward the inventor for the labour in pursuing this investigation, where no other has made a similar investment. Therefore, it protects the inventor as much as it incentivises in preventing others from free riding. The second justification is to recognise the broader economic aims of the patent system. The system encourages investment in innovation, and, by way of publishing the patent applications, the dissemination of information aids further innovation and/or competition. Thirdly, the patent system justifies an exchange by which the inventor is given a limited monopoly to exploit the invention for making it public i.e. information that would otherwise be concealed.

With that premise the purpose of my research is to examine the pharmaceutical patent system which seemingly has been created to incentivise the inventors'/pharma manufacturers that invest in research and development to promote innovation whilst ensuring returns on investment. But increasingly companies are manipulating the system using techniques such as 'Evergreening' and 'Thicketing' to extend exclusivity for drugs to prevent generic competition despite the twenty-year monopoly granted. The far-reaching consequences of these manipulative practices on access to healthcare and ways in which the system/prevaling laws could be reformed to reduce this negative impact will be studied by employing qualitative research methodology by giving attention to international conventions and treaties in comparison with the laws of Sri Lanka, India and the United States of America. This will ensure the core issues concerning the public health perspective in view of the TRIPS Agreement that would have to be suitably reflected in the national patent legislation.

The purpose of my study is twofold. First to discern the ethical aspects of a patent to be thought of as a monopoly of the right to the use of an invention (particularly in the pharmaceutical industry) in times detrimental to public healthcare. Second, to examine the available legislation and suggest amendments in order to meet the inventors at an ethical and commercially viable equilibrium.

Orit FISHMAN-AFORI, Striks Faculty of Law, College of Management, and Dalit Ken-Dror FELDMAN, Faculty of Law, University of Haifa

Reconceptualizing Open Access to Theses and Dissertations

The global COVID-19 crisis has turned public attention to the special need for accessing cutting-edge studies that are needed for further scientific innovation. Theses and dissertations (TD) are prominent examples of cutting-edge innovative studies. TD are academic research projects conducted by graduate students to acquire a high academic degree, such as a PhD. They encompass not only knowledge about basic science but also knowledge that generates social and economic value for society. Therefore, access to TD is imperative for promoting science and innovation.

Open access to scientific publications has been in the focus of public policy discourse for two decades, but achievements have been limited. As part of this discourse, there has been no systematic discussion of the special case of TD and of the justification for adopting an open access publication policy toward them. The present study aims to fill this gap. We argue that the essence of TD as unique outputs of academic research merits a special policy mandating the publication of these studies in open access format, subject to certain exceptions. This policy is underpinned by several arguments, which we develop in our study, based on historic and normative analysis. These considerations support the reconceptualization of an open access approach designated particularly for TD, as opposed to other scientific studies.

To better understand current open access policies toward TD, we conducted a limited semi-empirical investigation to collect information. Our findings confirm that despite the growing awareness of the importance of an open access TD policy, no standard policy exists. Therefore, we propose to establish a mandatory global policy and standardization regarding the publication of TD in designated repositories, open to the public, that would generate together an “open world wide web of TD”. Such a global framework would facilitate the progress of science and promote the public good worldwide. In the aftermath of the global COVID-19 crisis, it seems that the time is ripe for such a move at both international and national levels.

Nobuya FUKUGAWA, Graduate School of Engineering, Tohoku University

Determinants of Commercialization Modes of Science: Evidence from Panel Data of University Technology Transfer in Japan

This study analyzes determining factors in the commercialization modes of science in Japan. Based on prior economic models, this study examines how search cost for licensees, post-license development cost, intellectual property (IP) ownership, commercialization skills of established firms, and efficiency of innovation intermediaries affect licenses to large firms and the creation of academic startups. The estimation results of comprehensive panel data (2018–2020) of university technology transfer reveal that entrepreneurship is selected as the commercialization mode when universities intensively engage in basic research and have a lower risk of established firms preempting university IP through joint research. The determinants of licensing to large and small firms differ significantly. Technology licensing offices (TLOs) support licensing to large firms, while university divisions that support university–industry collaboration (UIC) help small firms establish licensing agreements. The results imply that allocating basic research grant to a broad range of universities fosters academic entrepreneurship. The provision of co-ownership of the Japan Patent Law and Japan’s weak entrepreneurial ecosystems combined seem to constrain entrepreneurship. TLOs should bypass the default provision of article 73 of the Patent Law while effort to

strengthen university startup ecosystems must be exerted. Universities adopting university IP ownership should improve the quality of human capital of university-based TLOs and UIC headquarters through job training and the timely recruitment of industrial experts.

Fernanda GALERA SOLER, Law School, University of Sao Paulo - FDUSP

The Assignment of User's Copyright by the Terms of Service

In a sharing economy, how could we apply copyright protection? Although, most of the terms of services of the digital platforms state they protect intellectual property rights. As they try to avoid the share of unauthorized content, and they take down piracy or contrafact products. How about the content created by a user? In some cases, like TikTok, their provisions declare that any content created for its platform belongs to the company and the user licenses it or assigns its rights. But is it possible to assign or license artworks with a terms of service, or even to a standard form contract? - If we understand that the terms of service is a standard form contract. -For some countries, most of them with common law legislation and the protection of copyright arising from the UK law, it may be. However, to most of continental law, which has its legislation similar to the European copyright (author's right as the French model), to assign it copyright the creator should sign an agreement, knowing what is state, and the instrument must follow some requirements demanded from the local copyright law to be lawful. In this sense, the aim of this paper is to discuss and understand if it is possible to assign copyright by a terms of service and how a platform could use that content. To facilitate this analysis, TikTok and its terms will be the case chosen. Also, the main focus of study will be the Directive 2019/790 of the European Union. As it establishes the minimum grounds of copyright protection which should be harmonized by each Member State, not entering in specific legislation, and providing an overview that could be understood and applicable to each country.

Priyanta GANGWAR, ICAFI Law School, IFHE, Hyderabad

Intermediaries Liability in Intellectual Property Infringement: A Critical Analysis

A wide variety of organisations serve as intermediaries for the online flow of data. These consist of internet and telecom service providers, search engines, online shops, payment processors, cybercafés, messaging platforms, and social networking websites. Several intermediaries might be aware of the user-generated content on their platform, whereas many intermediaries are only conduits or storage providers, uninformed of the content being sent or stored on their platform. This begs the question of how much responsibility intermediaries should bear for user-generated information posted on their platform. Intermediaries in India are subjected to safe harbour provision. In accordance with this approach, intermediaries are exempted from all accountability for any illegal user-generated content as long as they adhere to specified conditions. Unless they are aware of the crime and are failing to take necessary action to stop it, the intermediaries are protected from liability. They must remove illegal content in accordance with “duties of care” and “notice and take down” obligations. Some internet platforms have recently taken on a more important role in providing access, facilitating information sharing at scale, and facilitating information exchange. Many internet platforms have transformed from being only information hosts to being organisations that control how content is exchanged and shown online. They also take important actions in the areas of moderation, curation, and recommendation. There have been cases where the content hosted by these intermediaries violated intellectual property rights. As a result, there is growing support for making internet intermediaries more accountable for violating intellectual property rights.

The publication of such content has been self-regulated on some platforms. However, this has sparked worries about the platforms' arbitrary decisions, which may limit freedom of speech and expression. With regard to striking the right balance between strengthening the role of platforms and governments in detection, moderation, and curation, as well as the protection of Intellectual property rights present a significant challenge for the legal framework for intermediaries. India has recently enacted a rule namely, The Information Technology (Intermediary Guidelines and Digital Media Ethics Code), Rules, 2021 directing the social media platforms to follow certain guidelines in order to protect the privacy and content published on these platforms. Whether these guidelines are sufficient and efficient in protecting the content published i.e., protecting the Intellectual Property Rights of the users and how far is protecting these platforms for the user generated content is a point of discussion.

Jianmei GAO and Xin LI, Shanghai International College of IP, Tongji University

Unleash Geographical Indication's Sustainable Potential in China with the Help of Social Enterprises

Geographical Indication (GI) is increasingly valued for its sustainable rural development potential, given that GI roots its production in defined places and relies heavily on local tangible and intangible resources, potentially requiring local producers to utilize local resources sustainably. However, GI belongs to common goods shared by all the local producers, and well-maintained local resources, such as traditional knowledge, belong to public goods. According to economic theory, self-interested individual producers cannot be motivated to contribute a private token to the public pool by conducting costly sustainable practices. Thus public intervention is needed to correct market failures. Public intervention can take the form of introducing product specifications to require the adoption of traditional skills, providing higher protection levels for the sign (never become generic), and directly or indirectly providing subsidies for producers. This article critically assesses how public intervention could unleash GI's sustainable potential in China and provides alternative solutions. It points out, more often than not, public intervention fails in China. The product specifications are criticized as being too rigid, which is burdensome for local producers, and the complicated amendment procedures prevent producers from responding to climate change or consumers' preferences promptly. That is why local producers are keen to apply for GI protection (motivated by application subsidies) rather than use GIs in the market, as shown by empirical research. In practice, Local producers prefer to capture the value of GI by descriptive use of the geographical name, e.g., claiming their products are produced from the protected area without being constrained by the burdensome production requirements as long as they do not use the GI official symbol. Then this paper contends that Social Enterprise (SE) as a relatively new organizational form can help to correct both the market failures and government failures to unleash GI's sustainable potential, given that SE's operational models are designed to provide social, environmental, and economic values. In 2021, China released the draft version of the Rural Collective Economic Organization Law, according to which the Rural Collective Economic Organization (RCEO) owns the collective property, including GI. Against this background, this article suggests that the RCEO can be defined as a kind of social enterprise following the operational model of the SE to unleash GI's sustainable potential in China.

Terry GUAN, Faculty of Law, University of Hong Kong

Intellectual Property Legislation Holism in China

In recent years, China's intellectual property system has received increasing attention from scholars, policymakers, and lawyers. However, when assessing the current state of China's intellectual property

system and forecasting its future development, most commentators focus solely on the laws enacted by China's National People's Congress and the courts' enforcement of those laws to protect intellectual property rights. This Article argues that such an analytical approach can lead to an inadequate understanding of China's intellectual property system because it neglects not only the impacts that the leadership of the Chinese Communist Party, the executive, and local governments have on the formation, operation, and development of China's intellectual property system, but also other important aspects of this system other than the protection of intellectual property rights. An inadequate understanding of China's intellectual property system will diminish the accuracy of commentators' assessments and predictions regarding the system.

To counter this deficiency, this Article provides a framework for comprehensive analysis of China's intellectual property system by systematically sorting through China's legal documents and policies on intellectual property. It demonstrates that (1) the leadership of the Chinese Communist Party has played a decisive role in shaping and developing China's intellectual property system; (2) the executive plays a complementary role to judicial protection of intellectual property rights; (3) local intellectual property laws coexist with central intellectual property laws in terms of coherence and differences (with significant differences in economically developed regions); and (4) in addition to the protection of intellectual property rights, China's intellectual property system also has a profound impact on market players through the regulation of the creation, application, and management of intellectual property.

At the theoretical level, this Article provides an analytical framework that will help commentators gain a more comprehensive and accurate understanding of China's intellectual property system and its direction, as well as China's institutional preferences in participating in global intellectual property governance. At the practical level, it helps firms operating in or associated with the Chinese market choose intellectual property strategies that are beneficial to their growth.

Lucky GEORGE, Tamil Nadu Dr. Ambedkar Law University, and B. MONISHA, KLE Society's Law College

Digital Exhaustion of Copyright: A Balance between Copyright Owner and Copy Holder

The principle of exhaustion or the doctrine of first sale, in Copyright means that once a copy of a work is put to market by the right holder he or she will not be entitled to control the further distribution of that copy. The principle of exhaustion promotes resale and distribution of the used work at low price in the market. Article 6 of the TRIPS Agreement gives the flexibilities to the member nation can follow any mode of exhaustion (International, Regional and National Exhaustion) based on the Nations requirement. It is well settled that Exhaustion principle applies to tangible copies like Books, CDs, DVDs, etc, but its application to the online copies like Kindle edition of the book, iTune music copies etc is controversial.

In the UsedSoft Case, the European Court of Justice nevertheless applied the exhaustion rule of the Computer Software Directive to a situation where 'used licenses' of computer software were passed on to the third parties enabling them to download the software from the right holder's website. In the ReDigi Case, the 2nd Circuit in US held that making a copy in the cloud locker of the ReDigi server is a new copy in a different medium and from there to new user is an another copy is an infringement of the reproduction right of the copyright owner. ReDigi adopted the 'transfer and delete' process while transferring the digital files from original copy holder to cloud locker and to the new user at a time only one copy will be available. The doctrine of first sale is inapplicable because the digital purchases from ReDigi's Cloud Locker were unauthorized digital reproductions, and thus were not "lawfully made" under sec 109. India, supported the

principle of International exhaustion and not the national exhaustion but the Court in John Wiley and Sons Inc., failed to apply the principle to promote the sale of already issued copy. The article discusses the legal premises and the policy implication of the decision in various jurisdiction in the context of digital exhaustion or the doctrine of first sale. Critically analysis how the court tries to maintain the balance between copyright owner and copy holder in promoting innovation and competition.

Rima GHOSH, West Bengal National University of Juridical Sciences

Contour of Intellectual Property Right & Future of Innovation with Special References to Entertainment Industry

As intellectual property is the outcome of human's knowledge and creation in their respective fields of development. To create and to developed any creation or innovation it requires many research and continuous effort of knowledge. In the modernization period of technological era everyone's leisure or free time calls for music or movie in the entertainment industry. It is not wrong to say that the movie that entertainment the masses are full of new innovation in the form of 3D effects actions and many more. It is very hard to see that the fruits of someone's innovation are being exploited and pirated in different medium in the market. Despite of having Intellectual property law it is unable to tackle the real time problem. The online piracy is a something which is every common may be easier because of the advancement of technology or the overlapping gaps arises in the IT Act or IP Law that is unable to target the infringers. The online piracy is growing up in the form of development process with the evolution of the modernization period. The entire online piracy is conducted with the help of technology and then if would see that specially the software that are being used for online piracy are made by the innovators for the development of innovation rather it is been used maximum for the purpose of piracy. In this perspective there is an active role of IT Act and it would not wrong to combine the IP Law with IT Act for the development and stop of online piracy specially in the Entertainment Industry. The motive of this paper is to research the real time problem that occurs in the form of online piracy which is a big cruse to the entertainment industry and more over to make an urge that the fruits of innovation should be recognized with that the cost of enjoying innovation should be make mandatory. The entertainment industry is an industry which is based on new innovative innovation without which is hard to sustain in the market and this industry is highly money investment and profit-making industry and therefore the revenue growth in this industry is increasing day by day. If such practices of piracy go on then it will be a back drop for such a flourishing industry across the globe and the piracy is a massive world problem that is being evolved in different forms of practices and hampering many innovators fruits. Therefore, the researcher is comparing the Laws of developing countries to tackle the real time problem with that of the existing laws of IT & IP. Moreover, the technology and Intellectual property are deeply connected as the development of any innovation needs the protection of IP to secure for further use.

Ruchika GHOSH, W.B. National University of Juridical Sciences

Equitable Access to COVID-19 Vaccine: View from India

The COVID-19 pandemic has left the international community in the doldrums. While everyone is trying to live with the pandemic, there is hope that the vaccines will lead to normalcy. The vaccines are usually analysed from trade and commerce perspective. Nevertheless, they are also a matter of Human rights during the times of COVID-19. In the course of this paper, the researcher will try to analyse whether patents can lead to vaccine inequality. This is a violation of human rights. How can a balance be struck between access

to vaccines and patent protection. The challenge of access to vaccination is the most visible hurdle towards the solving of COVID-19 difficulties. All States are not equally placed for accessing the vaccine. The impediments need to be curbed by the adoption of a convention for access to vaccines in situations similar to the COVID-19 pandemic. The point will be addressed in the last part of this research paper, which will provide recommendations. It will prepare the world for future contingencies if and when they arise. A revised NIEO could be agreed upon by the developed and developing countries if it addresses the problems developed countries had with it. At the same time, it may also work towards the reduction of the global imbalance. It can cover the limitations and the gaps which led to the failure of the original NIEO. This is a basic overview of this research paper. The accessibility of resources, in general, will be analysed from a third-world perspective. This general analysis is further strengthened with specific scrutiny of access to health and medical resources. Thereafter, the existing trends are reviewed to lay down the hurdles faced in access of COVID-19 vaccine. These obstacles are examined from a patents and human rights perspective, and specific recommendations for overcoming these challenges is advanced using human rights and special regime's measures like the WHO. International law is a dynamic concept where multiple factors determine an outcome. The NIEO is a vital declaration for understanding the struggle of the developing countries in the global economy. NIEO was a declaration introduced in the 1970s through the UNCTAD. Access to healthcare and medical resources has been inequitable between and within the powerful and weaker States. WHO has had a significant contribution in ensuring the global right to health. It implemented the 'Health for All' strategy in 1997. This strategy focused on four fronts. Firstly, it saw the right to health to be fundamental. Health is a holistic concept which facilitates in the development of nation and economy. If the people of that nation-state are healthy, then they can contribute to the nation- state. Secondly, it argued towards attaining equitable access to health care resources. The paper will be structured on the above mentioned principles.

Kimani .F. GODDARD, Faculty of Law, Maastricht University

Life - Data: Understanding the Complex Relationship between Cross-Border Data Flows, Intellectual Property, Trade and Privacy

The large-scale use of several classes of data in cross-border transactions, and the transformation of such data into analytics products, highlights the overlapping incoherence between copyright and data privacy laws. Copyright in databases as provided for in the WIPO treaties, along with *sui generis* database rights, available under the EU Database Directive, provide one perspective of the regulatory and analytical framework, for understanding the integration of multiple classes of data, into markets for the creation of analytics products, services, and processes. A role also exists for this regulatory framework in understanding cross-border trade and transfer of the products, services, and processes, created from these different classes of data. While the current regulatory framework for data ownership provides clarity regarding the ownership of databases by legal persons, much less precision is available for the personal data proprietary rights of natural persons. Within the current system, only data privacy rights are provided to natural persons, via the GDPR and various similar pieces of legislation worldwide. This creates a widening gap between the normally interrelated legal concepts of property and privacy. As such, it may be useful to define a broad legal term for data in this context, one which straddles property and privacy, in order to facilitate the creation of a new purpose-built regulatory system.

An understanding of the varied classes of data such as health, financial and social interactions; and the modes of their continuous collection and processing, is therefore necessary. A term which can encapsulate all pertinent issues regarding data relating to natural and legal persons is "lifedata". "Lifedata" can be thought of as the aggregate data store or data footprint, [whether online/digital or off-line] created by a

natural or legal person, in their continuous interactions, in the digital environment and the real-world environment; it is constantly evolving and expanding, over time and different spaces. As an example, the use of digital contact tracing during the COVID-19 pandemic, emphasised the complex legal and ethical issues surrounding data ownership, privacy, and transnational trade and data transfer. In addition to digital contact tracing, the increasing sophistication of data-gathering networked devices, raise ethical questions about copyright in the resulting databases, *sui generis* database rights of the resulting databases, and the functioning or dilution of concepts such as moral rights in copyright law. A mid-way regulatory device between intellectual property, and privacy regulation, could facilitate the creation of a more effective tool, to identify and manage risks associated with the inevitable use and re-use of data, and its incorporation into products, services and processes which are being constantly augmented in real time and traded across borders and markets.

While most countries do not provide data subjects with a proprietary right to their “lifedata”, the copyright laws of the majority of states do provide copyright in databases or *sui generis* database rights to data aggregators. Where the collection of health data and other special data categories related to rights associated with human dignity are concerned, proprietary database rights and confidentiality may be undergoing subtle modifications, due to the manner in which frontier technologies have been deployed at intersection of corporate IP rights and “lifedata”. The question for many governments, is whether privacy regulations and intellectual property law in their current state, adequately address data privacy and property within in the context of digital social and governance realities?

M. M. GOEL and Gunjan SHARMA, Needonomics School of Thought

Relevance of NAW Approach of Needo-marketing for Recession in Global Economy

The stakeholders of the global economy as consumers, producers, distributors and traders have to accept the realities of recession (if not depression) and slow growth rate in the global economy caused by the crisis after crisis including covid. Is there any mantra to fix the problems in the global economy? What we should do to come out of the economic crisis and revive the economy suffering from recession? The objective of this paper is to justify NAW approach of needo-marketing to come out of the global recession. The potential middle class consumers with needo-consumption have the responsibility to uplift producers with needo-production and vice versa. We need to be generous and kind to each other. Economy can be people friendly and socially beneficial only if undertaken in accordance with NAW approach of needo-marketing. NAW stands for need, affordability and worth of the goods and services. The pertinent questions before the people as consumers include ‘Do one need the good or service, which has been so glamorously advertised? Is the good or service affordable? Is the good or service Worth its price?’ The market should satisfy the essential needs of the people, create employment opportunities and be utilitarian. We have to adopt NAW approach of needo-marketing for the goods and services. For earning and spending with mindfulness, we need to create work culture by converting holiday culture in to holy-day culture.

It is firmly believed by the authors that the rate of progress in spiritualism is faster than the rate of progress in materialism, therefore, there is need of accepting spiritually guided materialism (SGM) making a case for ‘needonomics’ which is nonviolent, ethical and spiritual (no to greed ‘greedonomics’) as a solution of various problems in any economy. To make it happen we should adopt an evolutionary approach and should not expect miracles. As stakeholder of the global economy, we need to be diligent more than intelligent which require steps including stopping unbeneficial seeds (anger, fear, despair, discontent, disparities and disappointment), sleep over certain matters beyond control as a seed in store consciousness, invite beneficial seeds to come up and ensure watering, keep the beneficial seeds as long as we can by practising

mindfulness of issues of relevance with seeds of wellbeing (love, compassion, joy and forgiveness).Believe in the citizenry as noble human beings with divine power who can do everything and can express the divinity as soul. Efficacy and esteem should be the belief to shape the economy which calls for zealous (not jealous) stakeholders facing recession . For the revival of the global economy, we need street SMART (simple, moral, action-oriented, responsive and transparent) citizenry as consumers, producers, distributors and traders along with needonomics in the present economic scenario of materialism and consumerism.

Ella GORIAN, School of Law, Vladivostok State University

Innovations as a Lever of Political Influence in a Post-COVID-19 Era

The pandemic era of mankind history has demonstrated the flaws of both international political and legal systems. The race of high-tech giants and the nations they represent marked the official milestone of technological confrontation between opponents in the international political arena. The technological global race and the risks associated with it determine the foreign and domestic policies. Governments in their relations use all available instruments to rocket their chances and to marginalize their rivals. These means include the variety of political, economic and media levers, as well as the certain legal formalities. The Sputnik case is the most notable in this regard. The widespread disregard of Russian anti-COVID vaccine developers' success and the constant refusal to register it due to the dubious formalities demonstrate the dependence of the international bureaucracy on the political agenda. But it failed to prevent the international market launch of Russian vaccine named Sputnik; therefore many states have procured it for the national vaccination. Infringement of a formality during the development of a vaccine, which Russia was reproached for, did not prevent from overlooking such cases with Western developers.

As a result, despite the proven high efficiency of the Russian vaccine, it is still not approved by the WHO, and the Western big pharma blatantly admits the infringements committed during the development of their pharmaceutical products. The technological race is intrinsic not only to the pharmaceutical industry. Artificial intelligence is a factor determining the supremacy in the international relations. The so-called "AI race" emerges a "race" to the AI regulation, which is protectionist by its nature. The government identifies the important vulnerable areas and imposes the relevant rules. This increases legal certainty and promotes the state in the "race". A variety of data, including personal data, is the source of the AI-technologies development; therefore government establishes a strict legal regime for information/data. Such rigidity is subject to the internal logic of protectionism. This explains the ban on the use of Tesla electric vehicles (equipped with AI systems collecting data 24/7) in the summer of 2022 in the location where the politically important meeting of the Chinese Communist Party establishment was held. It's also remarkably how China emphasized its international leadership during the G20 summit by monopolizing the summit support car park with electric cars of its own brand. Innovations can radically change the balance of powers in international relations.

The events of recent years prove that leadership or dominance in key sectors of the economy: finance and banking, intellectual property, the military industry, etc. allow the state to dictate its terms and influence the world order. The unification of international rules becomes a fiction, since their enforcement depends on the interests of a dozen of governments that have monopolized the right to decide the future of humanity. The multipolarity and fragmentation of international rules will make it possible to leverage innovations not selectively, but for the actual needs of all nations.

Sumeet GUHA and Shreya MATILAL, Rajiv Gandhi School of Intellectual Property Law, IIT Kharagpur

Copyright Infringement Liability and Immunity of the Intermediaries in India- A Critical Analysis

In terms of copyright law, intermediaries are seen as beings that connect content users and content owners. The Copyright Act, 1957 specifically addresses intermediary responsibilities and exclusions therefrom in Sections 52(1)(b) and 52(1)(c). Nothing in the Information Technology Act, 2000 stops someone from exercising a right granted by the Copyright Act, 1957, as stated explicitly in the proviso to section 81. The issue relating to the interplay of the two Acts – The Information Technology Act, 2000 and the Copyright Act, 1957 with special reference to sections 79 and section 81 of the Information Technology Act, 2000 came up for judicial scrutiny in *Super Cassettes Industries Ltd v. My Space Inc.* (2011) 47 PTC 49 (Del.), Justice Manmohan Singh in his order considered the issue of liability of the intermediaries from the dimensions of the Information Technology Act, 2000 and the Copyright Act, 1957. Justice Singh held that Information Technology Act 2000 including its safe harbour provision contained in Section 79 shall not be applicable in case of copyright infringement. The order made it clear even if an intermediary complies with Section 79 of the Information Technology Act 2000 by undertaking all due diligence measures it will not be absolved from copyright infringement liability. Being aggrieved, Myspace filed an appeal before the Division Bench of the Delhi High Court. The Bench consisting of Justice Ravindra Bhat and Justice Deepa Sharma did not agree with the analysis of the single bench and preferred a harmonious construction of the two statutes. As the case did not go on appeal to the Supreme Court the issue remains open-ended. The Delhi High Court orders have little value beyond its territorial limits. Given the inconsistent interpretations coming from the trial court and the appellate bench, it will be pertinent to examine which view will be ideal for the prevailing ICT environment in India. Exploring whether any other approach exists that better addresses the problem is also necessary. The Information Technology Act is applied in cases of copyright infringement as per the Information Technology (Intermediary guidelines and Digital Media Ethics Code) Rules, 2021 which is a subordinate legislation while the Information Technology Act, 2000, being a Parent Act states that the Act is not applicable. So, the issue is whether the rules ultra-vires the parent Act. The researcher will investigate the legal ambiguity that exists between the various statutory laws and norms and will compare the position of India with that of the U.S.A and the European Union lastly, the researcher will find a remedy to resolve this discrepancy. The researcher will use the doctrinal method while performing the research.

Tugba GULES, Faculty of Law, Istanbul 29 Mayis University

Artificial Intelligence Technologies and Intellectual Property Protection: Key Considerations and Challenges

Technology improvements in computer power, data, and algorithms are advancing artificial intelligence, which is driving innovation in new ways. Artificial intelligence is developing at a rapid pace and is becoming a general-purpose technology with widespread applications throughout the economy and society. However, rising levels of patent activities raise questions regarding their implications for the future prospects of fundamental research and the advancement of artificial intelligence technologies. The Intellectual Property Protection systems are primarily concerned with providing incentive for innovation and the diffusion of knowledge. On the other hand, within the scientific community the impact of patent protection on the freedom, coordination and basic costs of research are frequently pointed out to be major limitations. Intellectual property laws are not (and cannot be) static, they are frequently reviewed in order to provide formulations to address the challenges brought by recent technological developments, such as advances in

artificial intelligence, to fulfill their duty to encourage human invention and creativity for the benefit of society. In pursuit of these goals, the benefits of the incentive for innovation ought not to outweigh the costs for the diffusion of knowledge and vice versa. This paper examines the challenges in reaching a balanced intellectual property system that can address the tensions between the diverse groups of competing interests, specifically the marketplace and the free flow of ideas in the context of artificial intelligence technology.

Le Thi Thu HA and Luong Thi Dai TRANG, Foreign Trade University

The Relationship between Intellectual Property Management, Innovation, and Firm Performance: Approach from the AIDA Model

During the past decades, intellectual property (hereinafter IP) has evolved as a core value of successful businesses. Moreover, IP management, innovation, and firm performance are widely proved to be closely interrelated. Meanwhile, the extant literature on IP in Vietnam has mainly addressed only legal aspects without touching upon either the economic side or the possible relationship between IP management and firm performance. Therefore, this study aims to examine the role of IP as a driver of innovation and firm performance in Vietnam.

The study examines the empirical interfaces among IP management, innovation, and firm performance. All three variables are measured by use of a five-point Likert questionnaire. To be more specific, IP management is assessed in accordance with four phases: Awareness, Application, Exploitation and Administration, Protection (AIDA model). This is based on existing IP management in the literature and adapted to the context of Vietnam. Meanwhile, innovation and firm performance are dependent on subjective measurement. The questionnaire is sent out to the top leaders/managers of enterprises or a member of the executive board who is knowledgeable about the business's operations. Totally, 294 valid responses are collected from Vietnamese small and medium enterprises.

For data analysis, the partial least square structural equation modeling (PLS-SEM) approach is adopted. Several tests and analysis are conducted such as the standard Cronbach Alpha coefficient, rho-A, and composite reliability coefficient, the mean extracted variance, the standard factor loadings coefficients, AVE's square root, the path analysis, and the indirect effects analysis.

It has been found that each step of the IP management process has a significantly positive impact on its following step, which implies that firms should embark on IP management strategies step by step, starting with raising their awareness. However, unlike the three higher levels, awareness is the only step that is not directly related to innovation. This is to clarify that raising awareness is essential but not powerful enough to bring significant changes in innovation and performance of enterprises. Accordingly, firms should continuously advance their IP management capabilities, strategies, and practices to really improve their business results. Only exploitation and administration have a direct positive impact on firm performance, while the rest does not. This is understandable as exploitation in the form of direct commercialization, licensing/cross-licensing, or selling can create immediate returns for companies. Mostly, each component of the management process has intermediate positive impacts on other components as well as innovation and firm performance. This is to indicate that small movements of firms can finally create a positive impact on their business results in the long run. Also, IP management requires time, effort, expertise, and strategies to be invested in, which may discourage firms, especially when they cannot see the results immediately. Therefore, firms, taking into account their long-term vision and development, should consider establishing and implementing IP management strategies appropriately.

Nargiz HAJIYEVA, UNEC Science Department, Azerbaijan State University of Economics (UNEC)

Legal Documents Review on the Violation of Intellectual Property Rights in the Karabakh Region of Azerbaijan

Modern time is more crucial than ever for goods, services, and other products in terms of the effectiveness of regulating and implementing intellectual property rights by national states. The destiny of trade in many countries depends largely on proper compliance with intellectual property rights laws and regulations. The chosen paper embodies the assessment of the violation of intellectual property and property rights, precisely import and export processes and natural resources misappropriation from the perspective of international law in Azerbaijan's Karabakh and surrounding territories during the occupation. The 30-year-long Karabakh conflict between Armenia and Azerbaijan has always dominated international politics. The Karabakh War II, which lasted 44 days between September and November 2020, resulted in the brokering of a trilateral agreement involving Russia, Armenia, and Azerbaijan.

The article will refer to international legal conventions, WIPO framework documents, reports, and internal documents from various countries regarding violations of property and intellectual property rights that occurred during the occupation of their territories. Due to the lack of attention paid to the arising issue of property and intellectual property rights in occupied territories, this topic has not been researched within academia at the legal level. During the occupation, the products and goods produced in Azerbaijani territories – Karabakh and its seven nearby districts - were limited to the territory of Armenia. There were no measures in place to enforce intellectual property rights in the formerly occupied territories, and Azerbaijan is currently taking concrete steps to improve IPR enforcement in those territories.

In this regard, the study will provide a legal perspective on Armenia's use of property and resource confiscation during the occupation of these territories and an examination of the property and intellectual property rights violations in Karabakh and its nearby districts. The Oxford Manual, legal documents on the Israel-Palestine conflict, national laws of Georgia (Abkhazia and South Ossetia issue) and Ukraine (Crimean affair) on the occupied territories, the UN resolutions, WIPO documents, Geneva and Hague Conventions, and other international legal documents will be used in the study to provide a legal basis for the issue and identify shortcomings and arguments.

Noviana HARSIWI, National Agency for Research and Innovation

Innovation Management for Patent Commercialization: Should it be Prioritized?

Commercialization of patents as research findings in Indonesia is still consider low. According to the WIPO database (2020) the Ministry of Law and Human Rights recorded 8.160 patent applications from residents including; research institutions, Small and Medium enterprises (SMEs), and international institutions. More than 16% are registered by the resident, where research institutions dominating the application by applying 70% of it. However, most of the patent applications are not commercialized and being burden on institution budget. This problem could be address by applying good innovation management in order to support commercialization of patents as research finding from government institutions which also substantial to support economic growth. It has been argued that patent solely can support economic growth (Wurster, 2021). On the other hand, as a consequence of prioritizing patent commercialization, the government should allocate a specific budget to push the escalation. However, economic recovery has some sectors to be prioritized as well, such as education and the creative industries. This allocation will feasible in increasing promotion. Effective promotional system of technology has proven to increase public and industrial

awareness of potential technology from a research institution. This writer has done some research to support this claim. Her research shows that many potential technology eventually sign a contract with the industries according to data collection during Ritech Expo (Research Exhibition held by Ministry of Research, Technology and Higher Education in 2019 in Makassar). Although it is not yet 100% effective, a significant promotional event such as a technology exhibition has led to indirect industrial pitching. In some cases, the allocation of promotional funding which has been distributed in an incentives form, can be used in funding startups-by-research (small companies that do business by manufacturing particular technology made by research institutions) to industrialize the potential invention. While innovation does not always eventually be profitable resources, effective innovation management may lead to effective big database management. Applying big data is a significant development in innovation management. For instance, by applying big data, identifying critical aspects to prepare a research roadmap towards implementation in the market. Analyzing current trends will be essential for proposing a reconciliation of National Research Priority. While prioritizing innovation management in patent commercialization to support economic growth is still debatable, innovation management will increase commercialization by pursuing the government in enacting policy in research utilization. Government policy within Indonesia may impose industries to increase the utilization of domestic components. This is in line with the program for Increasing the Use of Domestic Products to increase the competitiveness and productivity of the national industry. Such as limiting the imported component if the local component is available. The time needed for issuing a patent may take more than two years if all the processes are according to the Law of Patent in Indonesia. In contrast, most patents are granted over a more extended period due to a lack of substantial examiners in the Ministry of Law and Human Rights.

Jiong HE, East China University of Political Science and Law

International Cooperation of IP Protection under the RCEP

By promoting scientific and technological progress, intellectual property plays the key role in achieving sustainable development, boosting post-pandemic economic recovery. Meanwhile, IP rights have continuously become the main subject matter in international trade and investment. As a result, IP dispute has become one of the most important issues in international trade. In order to solve such disputes, provisions concerning international cooperation of IP protection have been frequently addressed in international, regional and bilateral free trade agreements.

The Regional Comprehensive Economic Partnership (RCEP) is often recognized to be one of the most popular and active FTAs among the Asia-Pacific nations. The member states account for approximately 30% of the world's population and 30% of global GDP, making it the largest trade bloc in history. Under the RCEP, IP provisions are highlighted that makes it possible to further strengthen the international cooperation of IP protection among all the RECP member states.

This paper is to analyze Chapter 11 of RCEP, which focuses on IP issues, trying to locate the provisions concerning international cooperation of IP protection. Then this paper will compare the provisions with their counterparts in WIPO treaties, TRIPS Agreement and other relevant FTAs, trying to conclude the specific framework of international cooperation of IP protection under the RCEP. After making such a conclusion, this paper will try to give practical recommendations to RECP member countries to fully take advantage of this framework, so as to achieve the sustainable development among the Asia-Pacific nations.

James HELLER, State University of New York (Empire State College)

Copyright Financing and Copyright Registries

Article 5(2) of the Berne Convention for the Protection of Literary and Artistic Works (the “Berne Convention”) ensures that copyrights arise upon expression and cannot be dependent upon formalities such as registration. The term “formality” in this context means a condition that is necessary for the right to exist. This pragmatic solution made perfect sense during the pre-Internet era. Though, this solution also gives rise to some problems when trying to use copyrighted works as underlying collateral for finance. A major concern in collateralisation of copyrighted works relates to the registration of copyrighted works, which gives rise to constructive notice, allowing for the prioritisation of security interests (Babaian, 2000, p.1205). Few countries maintain voluntary copyright registration systems that provide additional benefits to copyright holders. Thus, many of the world’s copyrighted works are not registered. Consequently, neither constructive notice nor inquiry notice is possible with many of the world’s copyrighted works.

There has been increased interest in establishing an efficient regime for the collateralisation of copyrighted works. “Perfection” is crucial to the collateralisation of copyrighted works (Babaian, 2000, p.1205; Davies, 2004, p.20). Perfection can be defined as “a validation of a security interest as against other creditors, usually by filing a statement with some public office or by taking possession of the collateral” (ibid.). As part of the process for perfection, the lender records its security interest in the appropriate office (ibid.).

Recordation then gives rise to constructive notice indicating that the collateral is already encumbered, and thus prioritizes the security interests as they pertain to that particular collateral (ibid.). So, in the event of a bankruptcy, or when the borrower defaults on the loan, perfection secures the lender against third parties and allows the lender to use the proceeds from the sale of the collateral to satisfy the debt (ibid.) Unregistered copyrighted works make the process for creating security interests more complicated (Davies, 2004, p.23). Current law often makes it difficult for a lender to perfect its security interest in copyrighted works (Babaian, 2000, p.1205). Neither the Berne Convention nor its signatories’ copyright registries were designed to comprehensively handle security interests over copyrighted works.

I will re-evaluate the Berne Convention 5(2) standards and propose updates to the Berne Convention via special agreements by member countries with the aim to improve financing using copyrighted works. I also posit the question, would the copyright industry be better served by setting standards rather than forcing formalities regarding registries?

Jingjing HU, Southwest University of Political Science and Law

Gatekeeper Liability for Online Intellectual Property Infringement in China

The internet is not a place where rules do not apply, and China is further mounting its regulations on internet. In the case of copyright or trademark infringement in the cyberspace, Chinese judicial decisions show that the role of internet service providers (ISPs) is shifting from neutral to a “gatekeeper”. As a result, interests among triple parties (users-ISPs-IP holders) are out of balance: the freedom of speech of users and business freedom of the ISPs are endangered, and IP right holders get overprotection, which may not be necessarily in line with IP law’s objective of encouraging innovation.

In the 1990s, Chinese courts, by referring to the “Safe Harbors” rules from the US law (Section 512 of the

DMCA) and contributory infringement doctrine in tort law, held the ISPs liable for secondary infringement when they fail to act timely to stop infringement when receiving notice from IP holders or in the presence of infringement that is as obvious as “red flag”. While since the early 21st century, China has been implementing a policy for severely cracking down online piracy. Moreover, the speech censorship doctrine in public law is infiltrating into intellectual property (IP) law. Therefore, in many scenarios, ISPs are required to undertake “a higher standard of duty of care”, *i.e.* to proactively detect infringement in their platforms. Such doctrine is reinforced by the growing feasibility of AI filtering technology. Seemingly, ISPs’ technical ability to fulfill the duty of gatekeeping has been used to justify such duty in law.

This approach deserves a second look. First, the general duty of gatekeeping risks the ISPs’ business freedom, due to the additional costs for filtering technology and manual review as well as pressure to change business model. Second, the ISPs are unable to correctly identify copyright or trademark infringement, as infringement is not a mere technical problem in black and white but needs legal evaluation. To minimize liability, ISPs are likely to classify more articles as infringing, threatening users’ freedom of speech. Third, the “good Samaritan” doctrine does not oblige someone to rescue her neighbors. Accordingly, ISPs’ inaction to infringement are not naturally blameworthy. Neutral ISPs should be free from being a “gatekeeper”.

Vicki HUANG, School of Law, Deakin University

Patents and Gender: A Big Data Analysis of 15 Years of Australian Patent Applications

Recent recommended changes to Australia’s patent laws could narrow the scope of patentable inventions. We argue this could have a comparatively bigger impact on female inventors who we find clustered in the life sciences. We examine 309,544 patent applications filed with IP Australia (the majority from international applicants) across a 15-year period (2001–15) and attribute a gender to 941,516 inventor names. Only 23.6% of patent applications in this dataset include at least 1 female inventor. The average overall success rate irrespective of gender was 75.0%, but the odds of success increased with increasing numbers of male inventors on a team. The addition of female inventors to a team did not have the same effect. We propose that the gender disparity could arise from implicit gender effects (examiner or patentee) during patent prosecution.

Imad IBRAHIM, Collge of Law, University of Qatar

A Sandbox Approach to Regulating High-Risk Artificial Intelligence Applications

This paper argues for a sandbox approach to regulating artificial intelligence (AI) to complement a strict liability regime. The authors argue that sandbox regulation is an appropriate complement to a strict liability approach, given the need to maintain a balance between a regulatory approach that aims to protect people and society on the one hand and to foster innovation due to the constant and rapid developments in the AI field on the other. The authors analyse the benefits of sandbox regulation when used as a supplement to a strict liability regime, which by itself creates a chilling effect on AI innovation, especially for small and medium-sized enterprises. The authors propose a regulatory safe space in the AI sector through sandbox regulation, an idea already embraced by European Union regulators and where AI products and services can be tested within safeguards.

Taruna JAKHAR and Nikita KORADIA, Institute of Law, Nirma University

The End of Tussle between Competition Law and IPR – A Tale of Grant Backs

Reading Section 140 of Indian Patent Act, 1970 prima facie prohibits exclusive grant back license clauses in a license agreement. As per Article 5(1)(a) TTBER, 2014 exclusive grant back license agreements fall outside the scope of safe harbour provision, in other words exclusive grant backs require individual assessment and non-exclusive are covered under TTBER.

Section 3 of Competition Act, 2002 provides exception to IPR from anti-competitive agreements but the same cannot be extended to Section 4 that is abuse of dominant position. This is because if IPR were an exception to Section 4 it will be expressly recognised in the legislation. Grant back clauses can be covered under section 3 IPR exception but for aforementioned reason cannot be extended to abuse of dominant position which the original patent holder will be in case of grant back assignment clauses or exclusive grant back license clauses. Therefore, abuse of dominant position can lead to two anticompetitive practices that is exclusionary and exploitative.

The authors will explore the anti-competitive results in the existing state of art caused by grant back clauses in terms of abuse of dominant position by the original licensor. First the exclusionary effects will be caused as there will be reduced choices for technology exploiters and consumers as it is held in hands of one. Second exploitative as prices will be controlled by one entity leading to excessive pricing of the final product for the consumers.

Ansar Mahmood JASPAL, City Law Solicitors & Consultants, Hajar Darwish AL. BLOUSHI, IP Office Sultan Qaboos University, and Aneel SAGAR, Shaukat Khanum Memorial Hospital

Impact of Intellectual Property on the Development of Green Technologies from the Perspective of Developing Countries

Global warming is one of the major threats to the humanity in the present century. Climate changes are causing unprecedented disruption to our natural system and the disasters like Tsunami, climate change and floods had badly affected human life. The recent floods in Pakistan are eye opener for the entire world which have affected one third areas of the country as well as have displaced more than Three million (3m) people.

Time Environmental activists raised their voices to take practical measures to save our beautiful universe. World leaders also realized the critical threats of Global warming to the human life and have taken serious steps to minimize the negative effects of climate changes. Paris Agreement on climate change is a landmark step to limit global warming adopted by 196 Parties at COP 21 in Paris aimed to achieve climate neutral world by mid-century. The National Determined Contribution (NDCs) countries submitted their plans to reduce their Greenhouse Gas emissions in order to achieve the goals to Paris Agreement.

The role of Green Technologies is pivotal which cannot be overlooked in this fight against Global Warming and the importance of Green Technologies has been acknowledged and recognized globally and . World Intellectual Property Organization (WIPO) in its efforts to fight against climate change launched WIPO Green platform to facilitated and connect Owners and Developers of Technologies with individuals interested in Commercializing, licensing and diffusing of Green Technologies. Protection of Intellectual property Rights in Green Technologies play not only a key role in Research and Development (R&D) but also provide incentives to IP owners to generate resources and invest them in further R&D activities. This IP protection provides satisfaction and security to the IP Developers to communicate their innovations

through different modes including Joint Ventures (JV), Partnerships, licensing and collaborating with the developing countries which foster the further development of the world changing Technologies. Developing Countries can benefit and overcome their environmental problems by adopting and utilizing green technologies.

The Sultanate of Oman being one of the oil-based economies of Gulf Cooperation Council (GCC), is committed to be a leader in transforming its oil based economy into alternative resources economy. To achieve the desired targets, Sultanate had initiated a National project namely Oman Vision 2040 to minimize its dependency on Oil based economy until 2040. Oman Vision 2040 Strategy aims at generating alternative resources by replacing traditional Technologies with Green Technologies and is determined to gradually parting its ways with fossil fuels and switching to environmental friendly projects. Sultanate is planning to build world's largest green hydrogen plant powered by 25 Gigawatts of wind and solar energy, scheduled to be start on the Arabian Sea. The project is aimed at utilizing renewable energy to split water in an electrolyzers to produces green hydrogen, which is able to replace fossil fuels without producing carbon emissions.

The protection of new IP to be generated by or under the project shall be of great importance nevertheless the project contains or has IP registered somewhere else. The need is really of registering and protecting those IPs in Oman, from being copied, abused and above all on the registration and ownership of new IPs spun from the original IPs, especially those generated for adaptation needed under Oman's peculiar geographical terrains and climatic environments plus in taking legal requirements for public concerns on safety, cultural, security and other unforeseen circumstances. Additionally, there shall be new innovations emerging from the project that could possibly create shortcuts and operational cost reductions. Sultanate has not only set its targets but also is utilizing available resources to achieve them by Spreading the knowledge and awareness about IP and Green Technologies and Contributing positively in the development of energy-related research and innovation activities at the national level.

Justin JOHARI, Faculty of Law, Multimedia University, and Mohd SYAUFIQ, University Kebangsaan

Music Rights Collective Management Organizations in the Age of Digitalization: An Asian Perspective

Collective Management Organizations or Collecting Societies (“CMOs”) play a crucial role in the world of intellectual property rights, specifically when it comes to music. The laws surrounding CMOs have evolved through time, especially during the digital age, in parallel with the consumption of music that has changed significantly for music users. Rightsholders have also felt the effects of such evolution throughout the recent years, especially with the rapid rise of music download, streaming and advertising platforms which allows access to music like never before. Whilst this looks liberating to more developed markets, the CMOs in the Asian region may have different concerns when it comes to maintaining the traditional role of CMOs, or deciding to adapt to changes in other regions such as the EU.

Asian CMOs face a challenge when the musical works of major labels and publishers are controlled by their respective headquarters and holding companies overseas. Because there are many rights in a piece of copyrighted musical work, it becomes difficult for these rights to be separated when in fact digital service providers requires more rights than one to be offered on their respective platforms such as audio and video simultaneously. This prevents Asian CMOs from having the bargaining power over their catalogues as they do not have rights over songs that are not controlled by the local offices of major labels and publishers.

Another phenomenon that Asian CMOs have to face is the possibility of having a one-stop shop to manage multiple rights that has seen successful models in the UK and Australia. Whilst these examples seem to work so far, Malaysia faced a disastrous failed attempt to have a centralized CMO to manage the rights of authors, labels and performers. The forced marriage resulted in internal disputes and lowest collections seen in years. Hence there may be good results seen elsewhere, for reasons specific to each country, Asian CMOs might not achieve the same results.

With the advent of digitalization of music, we are witnessing a mushrooming of digital licensing hub that are filling the void for the collection of royalties from DSPs globally. These hubs comprise of European and Western CMOs coming together having a very attractive package and technology that can ease the process of documentation and distribution of royalties from DSPs. They are way ahead of their Asian counterparts so much so that these hubs are offering their services to Asian CMOs, eating up from the royalties they collect on behalf of their Asian clients. Naturally, one Asian CMO's digital royalties would not warrant for the use of these hubs, therefore the logically step is to band together before subscribing to the services of their hubs.

With these new developments, Asian CMOs need to act in terms of their legal standing in their countries and to win over control over all rights in their respective countries, to bring back as much royalties as possible to their jurisdiction. This paper will address these challenges and possible solutions based on these two premises.

Teodoro KALAW IV, School of Law of Ateneo de Manila University

Philippine Intellectual Property Strategy: A Midterm Assessment

The current National Intellectual Property Strategy of the Philippines for the period 2020-2025, as launched and coordinated by the Intellectual Property Office of the Philippines (IPOPhil) since 2019, is now at the midpoint of its implementation period. This conceptual roadmap essentially takes a whole-of-society approach in aiming to accelerate the realization of an effective intellectual property system for the country, particularly with regard to increasing incentives for innovation and creativity in all sectors of society by seeking to fulfill five strategic goals:

- Support sectoral advancement thru the use of the IP System;
- Promote innovation and utilization/commercialization of IP assets;
- Elevate the creative and cultural industries;
- Enhance the legal system, institutions, and structures related to IP; and
- Demystify, mainstream, and professionalize IP.

Immediately within the very first quarter of its first year of implementation, however, strategy execution of this roadmap had to address a contingency not previously identified in its planning processes: the onset of the global Covid pandemic. This health crisis brought both challenges and opportunities for IP practitioners, which has yet to be comprehensively and deliberately assessed particularly for lessons learned, more so as global society begins to transition back to post-Covid normalcy.

Other factors make a midterm assessment of this strategy map particularly beneficial. During the implementation period, significant new guidance relating to the application of IP for national competitive advantage – such as the 2020 Intellectual Property Roadmap issued by the International Chamber of Commerce – has been produced that could provide immediate guidance to benchmark and refresh the

strategy map's components. Execution of the strategy map also has to contend with the change in political administrations at its midpoint, as the new regime reviews policies of the former in the context of a potentially impending global economic recession brought about by various factors.

In summary, the presentation of this work-in-progress aims to review the effectiveness of the strategy to date despite previously unidentified contingencies that made its implementation challenging. By doing so, the study hopes to not just provide recommendations as to the feasibility of achieving the strategy's targets within its remaining period for implementation, but also lessons learned as to how to better improve the planning process for IPOPhil's next strategy map that will be implemented beginning in 2026.

Elnur KARIMOV, Graduate School of Law, Kyushu University

Data-Driven Intellectual Property Regulations to Prevent Biopiracy via Social Network Analysis

Traditional communities (TCs) have increasingly been facing the risk of biopiracy of traditional knowledge (TK) and genetic resources (GR). Biopiracy is the stealing of TK and GR without proper consent and/or compensation often accompanied by unauthorized patenting of the TK and GR, or the inventions developed thereupon. To date, except for prior informed consent (PIC) and access and benefit-sharing agreements (ABS) established by the Convention on Biological Diversity and the Nagoya Protocol, the protection against biopiracy has aimed to empower TCs with certain defensive intellectual property (IPR) or *sui generis* rights. However, it not only fails to prevent cases of biopiracy, but also converts TCs into another node in the market that is supposed to chase bio pirates and enforce their *sui generis* rights. Besides, relying on either IPR or *sui generis* exclusive rights of TCs presents a one-size-fits-all approach and fails to represent the diversity of TCs and the need of the countries that host TCs on the one hand, and the way TK and GR disseminate on the other.

To address the missing piece of the puzzle in the regulation of biopiracy - diversity of the networks of dissemination of TK and GR, this paper brings a novel approach to regulation by focusing on the flow of TK and GR from TCs to users within social network analysis (SNA). It argues that an empirically supported SNA theory based on the previous high-profile cases of biopiracy can help prevent future cases of biopiracy by developing actor-oriented regulations in each state. To do this, this paper first conducts the SNA of 20 high-profile cases of biopiracy from different countries, which include the ASEAN countries. Then it compares the node accused of biopiracy (NAB) in each case which is defined by legal terms with the nodes of the centrality in the SNA of each case.

From this comparison, this paper finds a strong correlation between the NAB and the node of betweenness centrality which corresponds to the node which intermediates the flow of TK and GR most of the time among the other nodes. It proves that the strongest intermediaries in the social network of the dissemination of TK and/or GR are actually the nodes that are most likely to commit biopiracy. As a pioneer study that applies the power of computational science to the protection of TK and GR, this paper prognoses that the SNA theory produced by this paper can be used in the regulations by each country. For this purpose, each state would ideally analyze create and analyze their own datasets of ABS of TK and/or GR and invest in the close supervision of the strongest intermediaries - nodes of betweenness centrality - in order to effectively prevent cases of biopiracy. The data-driven intellectual property regulations suggested by this paper that takes the SNA approach are complementary to the other regulations that equip TCs with rights and other tools to fight against biopiracy.

Trade Secrets vis-à-vis India's Intellectual Property System – A Long Wait for a New Dawn

The ability of a Nation to translate knowledge into wealth and social good through innovations will determine its future. Ideas and knowledge are an increasingly important part of trade. The Intellectual Property [hereinafter referred to as the 'IP'] has opened horizons in all fields of human activity, enhanced inventions, promoted technology multiplied production of goods, globalized markets and spread better living standards among all national societies. Imperfect and insufficient IP protection not only stifles innovation, but also hurts job creation, fails to protect consumers, incurs opportunity costs to the government and impedes economic growth. India continues to lag in the critical area of not creating a viable environment for innovation. Further, upcoming innovation and its fruits cannot be realized by the general masses. Trade Secrets [hereinafter referred to as 'TS'] is rapidly becoming the IP of choice due to their advantages of information economy. The companies across the globe use it to gain competitive advantage in the global economy. As TS is the blood stream of the company, a potential threat towards its security will affect the lifeline of its existence. Therefore, eventually with the growth of knowledge economy, there is an ever-increasing need and demand to legally appraise the protection and promotion of TS in the global trade. All forms of IP law except TS have been documented by means of legislation. Article 1 paragraph 2 of the TRIPS Agreement expressly recognises TS as one of the Intellectual Property Rights. Conjoint reading of Article 39 of the TRIPS Agreement and that of the Article 10 *bis* of the Paris Convention obliges the member countries to provide effective protection to TS against unfair competition. In India, the jurisprudence of TS is at *lex imperfect* stage. But countries like United States, Sweden, Thailand, Uganda and Serbia are having *sui generis* legislation for the protection of TS. On par with these countries, European Union has also adopted the 'EU Directive for the protection of Trade Secrets' against their unlawful acquisition, use and disclosure. In this regard, it is distressing to note that India, in complying with the provisions of the TRIPS, has legislated or amended the law on six out of the seven categories of intellectual property but has conspicuously left out TS. Lack of comprehensive legislation has further aggravated the judicial impertinence on this subject matter. Therefore, enacting a *sui generis* legislation by taking into consideration all the relevant factors will provide solutions to all the problems faced by India. Therefore, it is imperative on the part of all stakeholders to render effective and adequate protection to TS as propounded by the Preamble of TRIPS Agreement. In this paper, a serious attempt has been made to evaluate critically the position of India regarding Trade Secrets at the Global level.

Jakub KEPINSKI, Faculty of Law and Administration, Adam Mickiewicz University

The Process of Harmonization of the Law Against Unfair Competition in the EU. Present and Future

Law against unfair competition in various EU Member States has only been partially harmonized. However, the impact of EU law is so significant that it is necessary to take a new look at the basic principles of the law against unfair competition in most of the Member States.

Among the EU legal acts Directive 2005/29/EC on Unfair Commercial Practices of 11 May 2005 (hereinafter referred to as the Directive) plays a key role in all deliberations. This Directive introduced a new approach to the harmonization of EU law on unfair competition. Unlike previous legislation, which was based on the adoption of a minimum standard of protection, the Directive adopted its maximum character. Therefore, during the course of implementing the Directive, it was necessary to verify the existing national regulations to which this Directive applied. This raised a number of questions of interpretation. These were mainly due to the fact that the Directive does not harmonize all the laws on unfair competition,

but only refers to unfair commercial practices undertaken by entrepreneurs in the relation with consumers (*business-to-consumer*, B2C). Harmonization has therefore remained only partial and has created confusion between national rules governing relations between entrepreneurs (*business-to-business*, B2B) and harmonized (at least partially) rules on relations between consumers and entrepreneurs (B2C). The difficulty in separating these relations results from the model adopted in EU law, in which commercial (market) practices are divided into business-to-business (B2B) and business-to-consumer (B2C) practices. However, this division does not take into account who is harmed by these practices. It may be the case that a practice addressed to the consumer may also cause damage to the entrepreneur, and a practice addressed to the entrepreneur may also harm consumers. This leads to overlapping the scope of the particular provisions.

Moreover, when analyzing the work undertaken by the EU legislator, it can be expected that the following years will bring about a more complete harmonization of Member States' legislation in this area. The national legislators will face the task of proper implementation of EU legal acts into their legal system. The experience of recent years shows that this was not an easy process.

Dennis W. K. KHONG, Centre for Law and Technology, Faculty of Law, Multimedia University

Tool Slavery and the Problem of AI Authorship

The artificial intelligence technology known as Generative Adversarial Network (GAN) has opened the ability for artificial intelligence (AI) tools to create high-quality written texts, graphics, animations and music with minimal human intervention or input. Lately, several academic authors and people in the industry have been making calls for these AI creative tools to be given the status of authors in copyright law and inventors in patent law. This paper argues that there is a difference between authorship in fact and authorship in law. Authorship in copyright law is not merely a label applied to a person or entity but entails a series of rights and functions.

One reason why there is a call to recognise AI tools as authors can be explained by the concept of 'tool slavery'. A characteristic of slavery practice of the past is that slave owners claim ownership over the fruits of labour of slaves. Similarly, the proposed concept of 'tool slavery' is that the intellectual property owners of AI tools will lay claim of ownership of creative works created by or with the help of AI tools, since these AI tools cannot yet be considered as legal persons. In other words, the call for recognition of AI tools as authors is nothing more than a ruse for AI tools creators to claim ownership of works created using their AI tools, or alternatively, to allow them to extract payments from users of these AI tools.

This paper also discusses the problems of recognising AI tools as authors in copyright law and why AI tools do not fulfill the typical requirement for law to recognise them as legal persons.

Divya S. KHURANA, CT University School of Law

The Changing Parameters of Indian IPR Regime

In the beginning of 2022 United States Trade Representative (USTR) issued a "Priority Watch List" placing India as one of the nation's lacking to provide adequate IPR protection and enforcement. The USTR though pointed out that India has taken steps to improve the IPR protection, still the concerns raised are not amply dealt with. However, on the Indian side many developments have already started to improve the IPR regime with in the country. In mid-2021, Department Related Parliamentary Standing Committee on Commerce

presented a comprehensive report on “Review of the Intellectual property Rights Regime in India”. The Parliamentary Committee in its report has suggested a major revamp of the Indian IPR regime and has also suggested a review and evaluation of IPR Policy to level it up with the new and emerging trends in spheres of research and innovation. On a similar note, Indian Judiciary is also playing an imperative role in overhauling the IPR regime and placing it up with the International standards. The Supreme Court of India in *Engineering Analysis Centre for Excellence Pvt. Ltd. v. CIT* (SC,2021) recognised End User License Agreements (“EULA”) that allow end users to use software but do not transfer or exhaust any rights given under Sections 14(a) or 14(b). The Apex Court in this case has very clearly pointed that under computer programmes, copyright exhaustion clearly exists. Further, clearing the position stated under *John Wiley & Sons Inc. & Ors. vs Prabhat Chander Kumar Jain & Ors.*(SC, decided on May 17, 2010) the Court held that when it comes to sale of software, conveying the title to distributors would not amount to first sale. Hence, Copyright Exhaustion does not apply when it comes to distributors. Given this backdrop, the research paper would address the basic ambiguities and concerns raised by the USTR regarding Indian IPR regime and the steps initiated by India to overcome these ambiguities and the challenges before it.

Justin KOO, University of the West Indies, St. Augustine

Exporting Fair Use to Developing Copyright Systems

In recent times, there have been increased discussions about whether common law countries should move from UK-centric fair dealing exceptions and limitations to the US-styled fair use approach. The root of this proposed shift would appear to be a desire for increased flexibility and agility in addressing contemporary copyright issues. Countries such as Israel, Malaysia, Poland, Singapore, South Korea, Jamaica and Barbados have already introduced various facets of fair use into their copyright statutes in lieu of fair dealing or as a means of interpreting fair dealing. However, it remains unclear whether a shift to fair use is practically desirable or feasible for countries with developing copyright systems. For the purpose of this paper, ‘countries with developing copyright systems’ is defined as any country with statutory laws on copyright, but little to no copyright case law, resulting in an underdeveloped copyright jurisprudence.

The paper will explore the issue of legally transplanting fair use into countries with developing copyright systems. This necessarily requires analysis of the history and development of fair use in the US for the purpose of isolating the key elements that make fair use workable and attractive. Thus, it will be evaluated how the concept of fair use can be exported. Additionally, the requirements for the importation of fair use into countries with developing copyright systems will also be evaluated by way of a case study. The case study will analyse the challenges with importing fair use, particularly the viability and feasibility of using fair use outside the US context and the measures needed for the implementation of fair use.

Trinidad and Tobago forms the basis of the case study given that it is a common law country that has a robust statutory copyright framework predominantly influenced by UK copyright law and the international treaties on copyright. Furthermore, Trinidad and Tobago is a country with a developing copyright system due to the lack of copyright case law resulting in many core copyright concepts remaining unaddressed and undefined.

Fennieka KRISTIANTO, President University

Intellectual Property Rights as the Collateral Goods in Bankruptcy: How to Appraise and How to Execute It

Indonesian Government has published the new Government Regulation concerning the IPR as the collateral goods. In fact, the banks are not ready to facilitate this due to the difficulty to appraise the value of the IPR and to execute the IPR as the collateral goods. Most of the banks are still afraid to give a loan to the IPR's holder. If they approve to give the loan, the IPR is only accepted as the additional collateral goods to secure the payment of the loan. When the debtor is declared bankrupt, the IPR as the intangible goods must be evaluated, and shall be considered as the bankruptcy estates. The problem is how to evaluate and determine the value for the IPR in order to get the money for paying the creditors. The receivers and the banks will have the obstacles in selling or monetizing this IPR either as the intangible assets or as the collateral goods. This research is designed to find the solution in supporting the government as well as developing the business by using the two approaches and by comparing with several countries.

Yaroslava KUCHINA, Faculty of Law, University of Macau

Artificial Intelligence and the Recent Legal Initiative of UNCITRAL

In the upcoming 64th session of UNCITRAL's Working Group IV the use of artificial intelligence and automation in contracting is announced to be discussed and, as it is expected, nominated as the next agenda. WG IV is widely famous for its work on the topic related to the use of electronics in trade and trade law. Several significant papers were produced as the result of such work, like the recent on cloud computing contracts and electronic transferrable record. AI is one of the most neo-technological subjects that attracts huge interest of scholars including legal scholars. However, there is few initiatives on international legal regulation, even soft law in this area. Most of the research projects and papers dedicated to the high-level problems of AI, close to ethic and safety concerns. At the same time practical experience, pushed by 2 years of global lockdown, makes AI-based services one of the most popular technology for the international trade and e-commerce. It raises specific legal challenges, including access to evidence and causality on account of the large quantities of data processed from multiple sources.

At the paper suggested to present during the conference the indicated challenges will be overviewed in strong connection with the UNCITRAL practical view on technology and digital economy in general. As the result of WG IV activities is usually the model law, presentation will also include the analysis of differentially between UNCITRAL's approach to the topic in contrary with the academics. The possible prognostication about the model law's will also be made.

Abhijeet KUMAR, Queen Mary Intellectual Property Research Institute Queen Mary University of London

Dropping the Brand Name for Public Good: Universal Healthcare Goal and Pharmaceutical Trademark Regulation in India

The modern-day usage of trademark has been stretched beyond its early role as the identifier of the proprietor of the product or services, to be a teller of quality and, subsequently, a tool for businesses to build customer loyalty. For a multi-billion-dollar industry, that the Indian pharmaceutical sector is, strategic commercialisation of the trademark plays a pivotal role in ensuring continued benefits to the company even

after the end of any monopolistic patent exploitation period, through brand reputation and association. Yet, the constitutional mandate of universal healthcare creates challenges in the exploitation of trademarks through policy-led generic substitution.

However, trademark in the pharmaceutical industry is not only a subject matter of intellectual property, but is also regulated by national, and international, healthcare bodies. The International Non-Proprietary Names (INN), published by the World Health Organisation (WHO), is a global list of generic names of active ingredients present in pharmaceutical products, which are aimed to be kept public. In addition, India has its own version of schedule of generic names, viz. Indian Pharmacopoeia (IP) and National Formulary of India (NFI), and requires labelling of the relevant schedule, where listed drugs are mentioned. With respect to generic names, the aim since inception has been to make sure that these names are not commercialised through proprietary rights, and therefore the registration of the same as trademarks is discouraged. The Trade-Related Aspects of Intellectual Properties (TRIPs) Agreement, which provides a minimum standard of IP protection for its member states, remained silent on the issue of (non)registrability of INNs. In India, this requirement is regulated through, a rather inconsistent, provisions and practices of the Trademarks Act and the Drugs and Cosmetics Act, both of which aim at creating an eligibility akin check, on a mark that is being applied to be registered or a name that is being intended to be used for marketing.

The present paper discusses these regulatory processes, involved in the registration of pharmaceutical trademarks in India, while highlighting the rationale for this TRIPs-Plus measure adopted. It also highlights steps taken by the healthcare fraternity, in adopting a universal healthcare goal, by regulating drugs prescription. It further emphasises the administrative loopholes that exist till date and attempts at providing solutions for what more is to be done, through the public health lens of a welfare state. [Note – The paper is a part of the chapter ‘Trademarks in Healthcare and the Regulatory Process in India’ submitted to the Book Project of National Law University Delhi, titled ‘IP and Healthcare in India’.]

Ranjeet KUMAR, Meerut Institute of Engineering and Technology

IP Valuation using Artificial Intelligence Approach

The novel approach of innovative work recognizes in different shape in the form of some process, method or product in any field or any stream of the technology. When it comes to commercialize the invention in the form of IP, the valuation process is must but valuation of an IP is a critical task to perform and analyzed. In the present paper, the idea of Artificial Intelligence has been discussed for IP valuation. Through AI methodology the process of valuation of any IP can be performed. The method of AI would be based on different parameters of factors somewhat same manner included in tradition process of IP valuation, the complete system will be automated based on these factors and parameters.

Introduction

The growth of the technology required the active protections and monopoly issues towards its required investments and possible use in the global market. Intellectual property rights (IPRs) allow keeping an eye on the innovations and giving the rights to their owners to exercise temporary monopoly power over their innovations. The consequent monopoly profits provide the returns on successful investment in research and development (R&D). These financial involvement in Intellectual Property, the valuation of IP comes in shape and it depends on many aspects and it may be a difficult to value IP assets in their correct value proposante terms. The consideration of different types of issues in this process, it includes related to the market analysis, value of similar products in the market, companies market value, economic potential of IP asset, and novelty of the IP in terms of global presence of innovative research. In the research of IP transfer

pricing [Richard Assmus, et. al, 2021] introduced the AI approach for market pricing for new innovation. These issues may take considerable facts into the account and propose a justifiable value of the IP assets. In this way the traditional IP valuation method is working right and it is considering these factors in the major phases and valuation report is generated for any IP. The different approach of IP valuation such as Machine Learning approach to predict of market analysis for any new innovation has been introduced by [Holland and Knight, 2019] where they introduced in specific type of market analysis for medical research.

IP Valuation Approach

In this present paper, the issues of IP valuation and its major parameters and factors has been considered and the system will be automated using an Artificial Intelligence approach. In the traditional approach of IP valuation for the monetary value of an Intellectual Property requires a nuanced approach that considers a variety of factors and methods. In these manual approach of the valuation process a typical mechanism is performed in three phases: the diligence phase, the analysis phase, and the reporting phase. In the proposed AI based IP valuation, it is likely to used traditional approach, the consideration of different parameters to valuate and execution of process is in its phases, but the diligence and analysis phases are abbreviated. It seems that the analysis phase is simply premised on the idea that an analyst can assess value by comparing a patent's attributes with the attributes of other patents with known value. As such, the due diligence phase may focus on gathering only the information that contributes to this limited scope of analysis. In this method of valuation of IP based on AI methodology, after the analysis of the data gathered the results of a financial analysis, the final reports of the valuation will be generated from the automated system provided other information that may be relevant to a patent owner, such as a list of companies that cited the patent-at-issue, the number of forward citations received, and a landscape analysis of comparable patents. The system will consider all these in the analysis phase for more accurate results generation.

Summary

For the technology transfer and commercialization of the developed technology needs the proper valuations before the whole commercialization and technology transfer activity. So, the valuation of the technology developed needs extensive market research for mapping the importance of the developed technology on the basis of its new and unique feature and the demand of the technology developed. The process of AI based valuation provided several benefits, when used in the right context. The method execution can provide a less expensive, quicker, and more convenient method for evaluating certain aspects of a patent than retaining an expert to perform a manual analysis.

Khushbu KUMARI, Wellington School of Business and Government, Victoria University of Wellington

Data Exclusivity: An Alternative To Patent Protection? An Indian Perspective

The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) lays down the minimum standard of intellectual property rights for the member countries. Article 39.3 of TRIPS talks about protection of undisclosed information submitted for approval of a new drug against unfair commercial use. Clinical trial data is considered undisclosed information and is said to be protected under this provision. The thing with Article 39.3 is that it does not specify the form of protection to be accorded to the clinical data nor does it provide the duration of protection as given for the other IP rights under TRIPS. It is significant to mention that both these factors were discussed during the negotiation of TRIPS but were not included in the final draft. The absence of nature and duration of protection under Article 39.3 has led to different interpretations of the provision. There's data exclusivity form of protection granted initially by developed countries like the US and the EU. The data exclusivity form of protection prevents the subsequent applicants

(generic drug applicants) from relying on the test data submitted by the first applicant for a specific period. The duration and subject matter of exclusivity varies among members. Importantly, the free trade agreements (FTAs) are also used as a platform to expand the period of exclusivity and the subject matter of protection. One possible implication of the delayed entry of generic applicants is the impaired accessibility of medicines.

The other interpretation of Article 39.3 that India among others, follow is to provide confidential form of data protection. Under this form of data protection, the subsequent applicants are allowed to enter the market by simply proving that their drug is similar to the first applicant's drug. India has been mindful of its economic and social needs and the flexibilities provided under TRIPS while framing its patent laws as well. Section 3(d) of Indian Patent Act requires the pharmaceutical applicants for structurally similar derivatives like salts, polymorphs etc. to prove "therapeutic efficacy". This was included to avoid several patent protections on various characteristics of one substance. As such a practice can extend the patent protection over a drug and hence, delay the entry of generics in the market, reducing competition and adversely affecting public health.

India maintains its position on protection of pharmaceutical patents and test data protection while negotiating FTAs. However, in the recent FTA negotiations, India is made to reconsider its stand. This paper discusses the scenarios where India considers data exclusivity form of protection. It discusses the changes implemented through the recent New Drugs and Clinical Trial Rules, 2019 including the definition of "new drug". Further, it explores the overall duration of market exclusivity for a new drug derived from patents as well as data exclusivity and its impact on the generic industry of India.

Israel Cedillo LAZCANO, Universidad de las Americas Puebla

A New Intellectual Property Right for the Digital Commercial Society

As it has been verified throughout the world in the context of COVID-19, Intellectual Property Rights (IPRs) are fundamental for the development of societies. It can be argued, that under the developments of the Fourth Industrial Revolution (FIR), IPRs are closely related to the nature and causes of the wealth of nations. Adam Smith developed his ideas on the wealth of nations during the development of what is called the Commercial Society, which relied on the projection of individual effort under the protection of the post-Westphalian Law. Under this spirit, IP Law evolved from sovereign prerogatives towards individual recognition through instruments and decisions like the Statute of Queen Anne and *Pope v Curl*; thus, setting the bases for the development of modern IP Law. Of course, law evolves with society and today we can argue that we are living within a Digital Commercial Society in which practically every individual that has access to Internet, has the potential to become a merchant through the monetization of content.

However, in stark contrast with the Commercial Society of the seventeenth century, we are living in a context of smart applications, such as, Dall-E, that rely on a "global mind" that presents intellectual commodities for the execution of works whose rights, under the doctrines of copyleft are distributed throughout the global community and even with the algorithms involved beyond the traditional individual boundaries. One of the questions that could emerge from this argument is: how can we distribute the rights that will emerge from the new creations while we preserve and foster the spirit of these open sourced works? What do we need if, for instance, I want to create an NFT or a meme based on a work developed through Dall-E?

In the context of this paper, it is proposed, first, that we can find inspiration in the paradigm of responsibilities found in instruments, such as, the CMMC 2.0. and the Principles of Operational Resilience presented by the Bank for International Settlements, which are applicable to AIs in other industries, with the aim to assign the rights to the individual that has decided to execute the work, following the terms of Section 9(3) of the Copyright, Designs and Patents Act 1988, but we are not going to label him/her as the author due to the lack of the creative Kantian element. Once we have identified this first stakeholder, we can think on the creation of a new hybrid right that will include the moral recognition of the algorithm while we allow the transfer and use of economic rights by the controller of the application and the individual identified in the previous point as co-beneficiaries. As one can infer, the figure of the individual human author would be left aside under this right; thus, reflecting the spirit of the new context that relies on the processing of Big Data.

Hohyun LEE, The Korea International Broadcasting Foundation

Is Copyright a Vehicle for the Regulation of Deep Fakes? Or Tool for a Disclaimer?

Deepfake refers to a recording or image that has been manipulated to trick people into believing what they see or hear is real that was not actually done or said. Since Deepfake technology become more sophisticated, it is difficult to distinguish it is fake or not. Furthermore, as more and more open sources or applications regarding deep fakes are open to the public, fake news is also spreading by many online platforms. Of course, not all deep fakes are problematic. However, maliciously crafted election-related videos or pornography cause social problems. Therefore, some countries propose legal countermeasures against deep fakes. There is also discussion about whether there is a way to regulate deep fakes with existing laws such as criminal law, data protection, defamation, and copyright act.

This study focuses on copyright act, especially Korean copyright act and some provisions are compared with the US copyright act for more detailed discussion. Due to the nature of production, deep fakes have no choice but to use existing works, and unauthorized use leads to infringement of the original work. This means we can regulate deep fake by author's economic right such as right of reproduction, distribution, and right of production of derivate work. Also, the moral right such as inalienability of author's moral right applies.

However, it is too early to conclude that copyright is a tool for regulating deep fakes. This is because deep fakes can be protected under the doctrine of fair use. According to article 35-5 of Korean copyright act, 1) purposes and characteristics of use, 2) types and purposes of works, 3) amount and substantiality of portion used in relation to the whole works, 4) effect of the use of works on the existing or potential market for the works or current or potential value shall be considered to determine whether an act of using works falls under fair use. Korea's fair use provisions are very similar to those of the United States, and the state of California, USA, enacts a law regulating deep fakes, stipulating that deep fakes that fall under satire or parody are not permitted.

Discussions are still ongoing about specific and detailed requirements and interpretations. This study intends to discuss how to set the standard for dividing satire, parody, and videos with obvious and existing harm, and how to strike a balance between protecting critical functions and protecting authors. Copyright related issues regarding deep fake are diverse. Among them, limitation on liability of online platform which transmit deep fake is also interpreted according to the Korean Copyright Act. For the purpose of copyright law that is to protect the author or neighboring rights holder, so it cannot directly protect victims of deep fakes, but it can be a bypass defense mechanism.

Piyumi LEKAMGE, General Sir John Kotelawala Defence University

Information Licensing: The Need for a Sui Generis Law

Data has turned out to be the most profitable and valuable commodity in today's world, especially with the advancement of the internet. In the last ten to fifteen years, the internet has become an integral part of everyone's life with the development of smart technology. A massive industry of collecting data on people's online and offline habits has emerged. Companies utilize data mining and data analysis techniques to profile individual internet users to achieve targeted advertising. Moreover, it is observed that the database producers have to invest megabucks in creating the databases.

Thereby, this research intends to evaluate whether the Sri Lankan intellectual property law regime is sufficient enough to safeguard the rights of the database producers and if the financial, technological, and human resources used to create the database's contents are protected from infringement. Nevertheless, it reveals that due to the loopholes and inherited limitations that exist in the current legal framework of Sri Lanka certain kinds of databases will not be qualified to receive the protection available. In this regard, the Sri Lankan legal principles are compared with the United Kingdom and special reference is being made to the Database Directive 96/9/EC to shed light on how Sri Lankan law ought to be altered in protecting the investment in databases. Accordingly, the paper will: define the concept of database and understands the importance of database protection; analyze the Sri Lankan legal framework relating to information licensing and its adequacy; appraise the lessons that can be learned from the United Kingdom; and make recommendations to the Sri Lankan policymakers in implementing comprehensive information licensing regime. Thus, the findings suggest that Sri Lanka would be benefitted by way of a *sui generis* law as opposed to the available intellectual property protection mechanisms concerning investments in databases.

Sartika Nanda LESTARI, School of Law, University of Aberdeen

The Protection of Traditional Knowledge: The Dispute between the North and the South upon the Form of Legal Protection

Traditional knowledge (TK) reflects the social, cultural and technological wealth and superiority of a community and a country for hundred years. Thus, TK has been attached to and becomes the identity of indigenous peoples and local communities and contributes to social and economic development. TK should be respected as a social, cultural, and community prosperity, yet legally binding law has not yet to be able to protect it comprehensively. Global North believes that the intellectual property (IP) system should protect the inventions of individual(s), while Global South argues that what belongs to the people should not be claimed individually. The debate continues on what the form of legal protection should take, including how benefits from commercial use ought to be shared. This paper discusses the complexities of protecting TK. This paper discusses the complexities of protecting TK through the lens of IP regimes from the Global South's point of view. Internationally, IP is used to allocate rights over TK. However, back to the origins of IP law, the law is Western-Eurocentric with the primary purpose of making IP laws benefit the Global North. The Western-Eurocentric IP law shows the Global North's power for commercial superiority in contact with other countries beyond Global North. Practices of power embodied in the history of colonialism and neo-colonialism, Global South remains a vehicle, vessel and visage of global domination. This paper argues the domination of the Global North in the IP law-making process causes an asymmetric of the international IP legal landscape, including discontent with the way the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement) interprets and implements in relation to TK. One of the implications

that the legal protection for TK has perennially been contested particularly since IP was incorporated into the multilateral trading system with the TRIPS Agreement.

Huan-Wei LIANG, Graduate Institute of Technology, Innovation & Intellectual Property Management, National Chengchi University

Reflect Value of Intellectual Properties: Known and Unknown?

What is the direction of intellectual properties (IP)? Why IP can be used to produce innovative product, service, process innovation as well as support sustainable environment, health care, and social and humanitarian good development, but also can be used in profiting benefits, prohibiting innovation, enlarging inequality, sanctioning economics, and politics manipulation? Previous literatures ask “what value of IP?” and following scholars are devoted to give diverse and insightful answers. However, value “for whom” is rarely discussed. Why this issue is important? Because there are obscure and latent cost, and unnecessary and meaningless waste resulting from institution, cognition, management, and competition in IP activities that people unknown. Simply to say, we likely work beneath invisible lines which influence the decisions of IP activity through the game rule of intangible asset that may not reveal deep value of IP, even direct us the way that may not right. In this paper, I will discuss what value of IP be viewed and thought by different levels (such as individual, organization, consortia, and country) and stakeholders (such as inventor, competitor, imitator, cooperator, attorney, investor, non-practicing entities, and government), what conflict and paradox relating to these views, and how it influences the R&D, transaction, innovation activity and IP and social development. First, I demonstrate that there are known and unknown rules that manipulate people’s IP recognition and sequential activities. Known rule is enacted clearly and transparent (such as patent law), but also has uncertain and dynamic factors (such as explanation and policy). Unknown rule is not easy to be observed (such as norm, culture and bandwagon effect) and often concretize as visible actions (such as patent deployment and litigation). I further discuss how the known and unknown rules interact, who and how apply these rules, and bring what influence, and I predict the future developmental problem of IP. Second, I reflect value of “value of IP”. Who actually define and decide the “value of IP”? What the influence (good or bad, visible or invisible, short and long term) during the process of IP development? Finally, I show the crash between virtuous cycle and vicious circle both shaped by IP institution, and hope to induce more discussion to find another value of IP.

Valeriy LISITSA, Novosibirsk State University

Intellectual Property in Investment Law

Both national and foreign investments are diverse and they can be performed *inter alia* in IP sphere. Although the present international and national investment law, comprising a numerous number of multilateral and bilateral investment international treaties and other instruments, does provide the legal protection of any tangible and intangible, movable or immovable property as an investment, they were primarily designed for corporeal objects and financial assets. Moreover, there is no universal legal definition of an investment so that its qualification often depends on the applicable law to a particular investment dispute. In this regard it is not surprising that some qualifying features have been developed in ICSID practice (see, e.g., *Salini Costruttori S.p.A. and Italstrade S.p.A. v. Kingdom of Morocco*, ICSID Case No. ARB/00/4).

As it is known, investment transactions are usually made by at least two persons. One of them is an investor who contributes his or her object of property (which is defined as an investment) into another one (object of investment activity). The former is transferred to the investor's counterparty, whereas the latter eventually becomes the investor's property. Hence it is argued to distinguish an investment as such and an object of investment activity. Both of them are to be any kind of property as they are to be transmitted to each party of a contract.

From this regard IP as an incorporeal or intangible object incapable to be delivered can be hardly recognized as investment or an object of investment activity. Furthermore, there are different (moral and exclusive) rights granted and treated in various ways. In particular, it is an exclusive IP right which has the nature of property as such and thereby can be transferred in investment transactions.

As a result, it is argued to consider an IP exclusive right as an admissible investment or an object of investment activity, if its disposal is not directly prohibited by law. In addition, it should be noted that the final qualification and legal protection depend on the rules of international and domestic investment law, which can stipulate additional requirements for any investments, such as to contribute to the economic development of a host state.

Li LIU, St. Catherine's College, University of Oxford

Patent Quality: A Rabbit Hole

Despite decades of debate, the narrative that low-quality patents stifle innovation is still fraught with controversies. It is being called into question because the empirical evidence is insufficient, the term 'patent quality' is a potential misnomer, and reforms to improve patent quality are ineffective. This article offers a detailed critique of the debate concerning patent quality in the EU and the US by investigating five aspects: history, definition, measurement, proposals, and reforms. The findings indicate that the definition is kaleidoscopic, the measurement is problematic, the proposals are precarious, and the reforms are frustrating. It argues that the debate is belied by substantively different conceptions of 'patent quality' influenced by different normative expectations and assessments of patent systems. The result is to turn a potentially useful analytical concept into a 'rabbit hole' into which scholars, as well as law- and policy-makers, are liable to fall. Addressing this requires two things: elucidating the different senses in which the concept of 'patent quality' is currently used; and assessing which of their underlying normative frames is legitimate. The focus on critique results in two limitations. The first limitation is that this article refrains from offering a definition of patent quality or remedies for improving it. This further leads to the second limitation: it does not examine the debates regarding the mechanism of patent quality.

Part I is a brief historical survey of the patent quality problem in the US. One important reason is that the US patent history offers an opportunity to focus on the evolution of the patent quality issue with less distraction from the controversies surrounding the justification and abolition of the patent law. Part II scrutinizes the definition of patent quality. It indicates that there is no consensus on how to define patent quality, and such a multidimensional concept covers numerous elements. Moreover, from the perspectives of different stakeholders with their own stances and interests, the meaning of patent quality is also divergent. Part III investigates the measurement of patent quality. It reveals that the measurement faces the problem of faithfulness, both theoretically and practically. Given these difficulties, the current measurement is unlikely to offer a plausible and comprehensive assessment of patent quality. Part IV examines proposals for improving patent quality by mainly focusing on two proposals made to the USPTO: rational ignorance and gold-plated patents. These two proposals are derived from the idea of optimal resource allocation. This part

suggests that no matter whether they are to defer to, circumvent, or ignore the resource restriction, they are all problematic in one way or another. Part V investigates reforms in the pre-grant and post-grant proceedings. These reforms are probably the most pragmatic approaches available, yet they are not sufficient enough to achieve their objective of improving the quality of individual patents. In addition to the limited effect, they backfire for being abused as a harassment tool. The most discouraging part is these attempts seem to be stuck in a loop where all the efforts lead back to the starting point.

Alexander LOU, School of Law, Tsinghua University

Fair Use in Douyin: From US Copyright to Chinese Personal Information

Common Law's fair use doctrine haunts Chinese copyright and spills into personal information. According to the Civil Code of the PRC, the Beijing Internet Court's judgment on the *Douyin* (Sino-TikTok) case, and the fair use of copyright, the legal provisions on the fair use of personal information should adopt a "dual-list" model. It is contextual like the rationale in American Law. Under it, the open list of permissible purpose should be satisfied first, followed by the open list of criteria to determine fairness. The fair use of personal information is established when the dual-list is satisfied. The open list of permissible purpose should give priority to Article 1036 of the Civil Code, followed by Article 999 and Article 1020 by reference to Article 1023, which follows a non-exhaustive list of standards that "protects public interests and private rights." The open list of criteria to determine fairness should give priority to the "three-elements doctrine" originated from the court's opinion, followed by the "three-principles doctrine" of Article 1035 of the Civil Code. The former renders the reception of American "four-factors doctrine". The fair use of personal information is an affirmative defense rather than a right, meaning the *Douyin* case has a certain procedural flaw. The fair use of personal information does not exclude commercial use, which means that the second element in the "three-element doctrine" should include the "transformative" factor. As the commercial use of the Internet platform experiences a greater transformation of innovation, the probability to justify the fair use of personal information also increases.

Nicola LUCCHI, Pompeu Fabra University, Giuseppe MAZZIOTTI, Catolica University Lisbon, and Enrico BONADIO, City University of London

Copyright in a New Technology-Aided Environment: The Challenge of Restoring Creators' Rights

The platform economy, the move towards artificial intelligence (AI) and the growing importance of new creative and transformative technologies such as 3D printing raise questions as to whether copyright law suffices in its present forms. Our piece argues that copyright is malleable enough to perform some of its traditional functions in this new technology-aided (and technology-dominated) environment. However, certain adaptations and complementary instruments seem to be necessary to revitalize these functions. For example, moral rights could be harmonized more effectively at international level, and made more easily enforceable, to reflect the global reach of social media and to protect their essential reputational value in a digital economy that prioritizes online exposure over remuneration opportunities. We also consider that creators' rights are difficult, if not impossible, to license and enforce in an environment where contractual practices such as social media terms and conditions dictate standard agreements that either do not compensate creators at all or compensate them only marginally. In this context, restoring the bargaining power of creators through the right of access to the platforms' data seems to have become as important as copyright itself. Finally, doubts remain as to whether requirements such as authorship and originality can continue to apply and trigger copyright protection. To this end, we believe that distinguishing between fully

generative machines and other technologies that merely assist human creators is essential to correctly identify “authorless” works. For such works we advocate the adoption of a very short right that would support computational creativity without stifling human ingenuity.

Le MA, East China University of Political Science and Law

China’s Anti-Suit Injunction over SEPs Dispute: Consistent with TRIPS or not?

As disputes over Standard Essential Patents (SEPs) licensing boost globally, parties involved resort to court decision over FRAND terms in different territories. Despite the patent territoriality, proceedings in different jurisdictions could be interconnected, or even interplayed. Given the parallel proceedings and the probable effect to the licensing negotiation thereof, both parties choose to request anti-suit injunction (ASI) from the court which may be friendlier to the SEPs holder or the licensing seeker. However, given ASI as a means to address the contradiction between internal jurisdictions in case law system, the extension of ASI to international scenario as well as use by courts in other law systems give rise to global concerns or even controversies. On 18 February 2022, the European Union requested consultations with China with regard to ASI that allegedly adversely affects the protection and enforcement of intellectual property rights. The European Union claimed that the ASI at issue appear to be inconsistent with TRIPS Agreement. Despite the pending status of this dispute, the consistency of China’s ASI with TRIPS Agreement has become an issue and deserves further consideration.

Faith O. MAJEKOLAGBE, Faculty of Law, University of Alberta

The Use of In-Copyright Works for Text & Data Mining Activities: (II) Legal in Canada?

The increasingly large volume of texts and data that are being generated today has also led to the development of automated tools and techniques that are aimed at facilitating quick and effective processing and analysis of texts and data in digital form. The automated technique of analysing and processing text and data in digital form to generate and discover information is what has become known as text and data mining (TDM), a technique that is not only useful for the advancement of research, especially in the digital humanities and biomedical sciences but is also integral to machine learning and the development of artificial intelligence (AI). While TDM activities whether for research or the training of machine learning models may involve the use of non-copyrightable elements or works in which the term of copyright protection has expired, often, TDM activities also involve the use of in-copyright works. Given that TDM activities usually involve the making of copies, whether temporary or permanent, and sometimes the distribution, including cross-border distribution, of such copies amongst research collaborators, there are concerns that these activities might clash with the exclusive rights of copyright owners and doubts as to whether they are covered under existing copyright exceptions and limitations. In some cases, such concern and/or doubt may emanate from the terms of copyright licensing agreements which might restrict the use of licensed works for TDM activities in the absence of a specifically negotiated TDM licence. There are also concerns that the use of in-copyright works to train machine learning models or algorithms to produce AI-generated could constitute an infringement of copyright and serve as an obstacle to the development of AI and AI-generated works.

In a recent public communication, Innovation, Science and Economic Development Canada (ISED) called for insights into copyright and related issues surrounding TDM, including the use of copyrighted works as training data for machine learning models and the development of AI systems. This paper is both a response

to this call by the ISED and an important attempt at addressing the concerns and issues raised by the use of in-copyright works for various TDM activities in Canada. It considers the scope of copyright protection in Canada, the extent to which the steps involved in TDM activities implicate exclusive copyrights, and whether (and to what extent) TDM activities are or should be regarded as exempt from exclusive copyright control based on existing copyright exceptions and limitations in Canada like the fair dealing provision and also importantly fundamental copyright doctrines like the idea/expression dichotomy and the principle of substantial similarity.

Henny MARLYNA, Faculty of Law, Universitas Indonesia

Stop Producing and Selling as a Non-Use Defence for Geographical Indication Infringement: Case Study on the Scotch Whisky Association vs Pt Industri Semak

Based on Article 66 of Law No. 20 of 2016 on Mark and Geographical Indication, a registered GI is protected against illegal used by third party that are among others: either directly or indirectly for goods and/or products which do not comply with the Geographical Indication Description Document, or which can mislead the public with respect to origin the geography of the product. Scotch Whisky as an GI has been registered in Indonesia since September 7, 2018 as a whisky produced in Scotland. In 2019, the Scotch Whisky Association found that in Indonesian market there are whisky produced by the PT Industri Semak, traded under the “Glenn Classic” trademark described as Scotch Whisky on their labels. Plaintiff argued that “Glenn Classic” infringed the registered GI Scotch Whisky and might misled consumer as if it is Scotch Whisky from Scotland. The legal issue in this case is whether stop producing and selling the product can be raised as a non-use defense for GI infringement.

Reciting the court decision in the case, this article found that stop producing and selling the product before the date of registration of the GI in dispute should be interpreted as non-use, improving that defendant was not infringing the GI. Although its products are still available in the public after the GI is registered, however defendant has stopped producing the product before the GI was registered. The Commercial Court of Central Jakarta refused the case finding that Defendant is not infringing Scotch Whisky since Defendant has stopped producing and selling Glenn Whisky before the Scotch Whisky GI registered and since 2017 has filed a registration for distribution permit to Indonesian Food and Drug Administration using the new trademark (Golden Classic) and there is no more “Scotch Whisky” on the label.

Althaf MARSOOF, Nanyang Business School, Nanyang Technological University

Sustainable Geographical Indications

Geographical Indications (GIs) are indications that designate the geographical origin of a product. But in the strict legal sense, a GI attracts a very specific meaning and is capable of indicating more than just origin. When a product bears a GI, such as “Ceylon Tea”, “Alphonso Mango”, “Kampot Pepper”, “Roquefort Cheese” or “Champagne”, consumers are guaranteed that not only that the underlying product originates from a specific and defined geographic location but also that the product’s quality, reputation or characteristics are derived from the geographical environment and conditions, including natural and human factors, prevailing in the place of origin. As a result, products bearing a GI designation or “GI products” attract higher price premiums compared to products of the same class that do not possess GI status.

Since GIs are distinctive and are capable of a distinguishing function—i.e., they enable consumers to identify products originating from a specified geographical location and conforming to predefined specifications whose fulfilment is ensured by a body responsible for quality control—they are worth protecting under the law. Therefore, it is not surprising that several international agreements administered by the World Intellectual Property Organization (WIPO) and the World Trade Organization (WTO) have classified and included GIs within the broader framework of intellectual property (IP) protection.

The IP in GIs is dependent on the link between the product and its place of origin (i.e., the “product-place” linkage). At any point in time, if that link in respect of a given GI product is severed, it is likely that the product will no longer be able to retain its GI status. For this reason, it is crucial that stakeholders interested in GI products ensure that the product-place link is maintained. It is important to identify and address any threats that can dilute the product-place link. This paper focuses on two such threats—namely, *climate change* and *urbanisation*. It argues that there is a need to promote greater equity in GI supply/value chains so that both the environmental and human factors associated with GI products can be preserved to ensure that GIs remain sustainable.

Dwi MARTINI, Faculty of Law, University of Mataram

The Recognition of Traditional Knowledge in Indonesian Patent Law: A Compromise between International Pressure and National Interests?

In Indonesia, patents and Traditional Knowledge (TK) are intricately intertwined; they are both correlated yet connected and contradictory. As the world’s largest archipelagic country, Indonesia is the home to more than 2000 Indigenous Communities (ICs) scattered throughout more than 17000 islands. this allows it to be one of the mega biological and cultural diversity countries where Traditional Knowledge (TK) plays a vital role in ensuring the sustainability of both ICs and biodiversity existing on their territory. In light of the fact that ICs are one of the most vulnerable groups in the national development scheme, adequate protection of TK becomes a crucial necessity for supporting the effort to improve their welfare. In contrast, patent requirements appear to be problematic for TK protection. Since, Patentability encompasses new, inventive and industrial-applicable objects under the TRIPs framework. In other words, the distinction between a patentable and unpatentable object is whether it is untouched and naturally existing or a manmade, finished product, resulting TK’s exclusion from the patent system. In order to, to harmonize national interest and international norms, Indonesian patent law was amended in 2016 to recognize communal ownership over TK and compel outsiders to negotiate access and benefit-sharing agreement with ICs on TK utilization and commercialization. Despite this enhancement on paper, the effectiveness of this law – particularly in preventing and resolving misappropriation is questionable due to the absence of implementation infrastructure such as a database on TK that can be used as prior art evidence; and a government institution to validate TK as well as utilization contracts.

Celia MATIAS, Faculty of Law, University of Macau

Digital Art, Copyright and NFTs: Bridging the Gap between Old Paradigms and New Modes of Creativity

Early forms of computer art were characterized by a high level of experimentalism. For instance, the 2002 piece “Super Mario Clouds” by Cory Archangel was made by hacking the famous video game “Super Mario Brothers” and removing all visual elements except for the blue background and passing white clouds. Nowadays, affordable computers, drawing tablets and design software are used widely, resulting in a vibrant

online space of grassroots digital art. These works often challenge the paradigm of individual creation that permeates continental *droit d'auteur* and, to a lesser extent, Anglo-Saxon copyright systems. Consequently, creators who modify, adapt, or make derivative works of copyright works may incur in penalties for the infringement of such rights, which can be a deterrent to the production and sharing of new art. When moral rights are at stake, in some legal systems, action can even be taken by the author's successors after the author's death. However, digital artworks can nowadays also be minted as Non-Fungible Tokens (NFTs) without the artists' consent or used for the generation of artworks through Artificial Intelligence (AI). This creates an apparent contradiction, as the same rules that appear stifling of creativity may be necessary to protect it from these emerging challenges. In this context, blockchain technology offers new possibilities as a form of authentication of authorship and of the author's will regarding the work. This calls for a careful evaluation of these possible mechanisms, including their reliability and compatibility with the Intellectual Property system.

Taking the legal system of the Macau S.A.R. as an anchoring point, this paper explores the need to rethink existing copyright models, which take an all or nothing approach, sometimes contrary to the author's vision and ideas. For this purpose, it weighs the need for flexibility arising from the emergence of new modes of creativity in the digital world, that often rely on collaboration, "remix", and "fan art", with the new possibilities of infringement offered by technology. Finally, it evaluates the potential of blockchain technology as a way of bridging the gap between authors' rights and digital creativity.

Tri Rusti MAYDRAWATI, Faculty of Law, Hang Tuah University

Protection of Genetic Resources in Drug Development in the Implementation of the Regional Comprehensive Economic Partnership

The impact of Covid 19 that has hit the world has not been able to fully restore the economy of each country. The signing of the Regional Comprehensive Economic Partnership (RCEP) agreement is a hope and a positive signal for Indonesia to restore global economic conditions. Intellectual property is an annex to the RCEP Agreement. The Intellectual Property Rights system is expected to be a driving force in restoring the economy, especially in the utilization of genetic resources in drug development. So far, in handling and preventing Covid 19, Indonesia is still importing and using foreign drug patents. The existence of the RCEP Agreement will bring about positive and negative changes depending on Indonesia's preparation to implement it, and the many opportunities and obstacles it will face. Method research is normative juridical, with a statutory and conceptual approach, Results and Discussion is the implementation of RCEP, especially in the use of genetic resources, especially in drug development, it still refers to the provisions of the convention Biological Diversity (CBD), and the Nagoya protocol, the two international agreements regulate several principles. among others are (disclosure requirements, prior informed consent, and access and benefit sharing) which must also be complied with by the signing country of the RCEP.

Nagamanickam MEENAKSHI and KD RAJU, Rajiv Gandhi School of Intellectual Property Law, IIT Kharagpur

The Challenges Faced by the Authorized Users of Geographical Indications in the Handicraft Sector: Case Study of Pochampally Ikat (Telangana)

Geographical Indications (G.I.) have evolved as a potent tool for recognizing and protecting products known for their reputation, quality, and specific geographic origin. Unlike the other Intellectual properties that

provide for private ownership, G.I. vouches for community ownership, and it helps to serve the producer community of the G.I. products to reap the maximum benefit out of the tag both nationally and internationally. Unfortunately, in India, the reality is far from this notion, and the condition worsened during the COVID-19 phase. The adverse effect of the COVID phase has not only touched the G.I. sector but also swept away the livelihood of the small-scale producers, the actual artisans, and weavers of the G.I. products. The studies conducted pre-COVID era served the Act's purpose at least to some extent, but the same turned out to be a massive question during the COVID phase. The recognition of G.I. producers under PART A and PART B registration as proprietors and authorized users, respectively, is to make all the producers a part of the G.I. benefit sharing. In reality, the situation has taken a volte-face from making it an inclusive process for the actual producers, specifically the PART B registration in the supply chain.

The present paper has attempted to understand the same by conducting an empirical study on G.I. "Pochampally Ikat" at Bhoothan Pochampally region, Telangana. The study has thrown limelight into the socio, economic and legal aspects such as the perplexity about the logo, Part B registration, enforcement mechanisms regarding the quality and infringement, the promotional activities, the recognition garnered worldwide, the government's role in improving the economic conditions, etc. Finally, the paper also provides suggestions to bring about positive changes in the existing situation of Geographical Indications in India.

Nidhi MEHROTRA and M. PADMAVATI, Rajiv Gandhi School of Intellectual Property Law, IIT Kharagpur

Pharmaceutical Test Data Protection and Data Exclusivity in India: Issues and Challenge

Clinical Trials play a crucial role in determining the safety, efficacy and associated information of new drugs on the human anatomy. The development of these test data typically represents more than sixty per cent of the research and development (R&D) costs of new drugs. The trial data, thus, generated is of high commercial value for the originator company which has invested its time and money to collect and compile it. It also forms the basis for granting marketing approvals by the concerned drug regulatory authorities within a jurisdiction. Data-exclusivity regimes prevent the subsequent pharmaceutical applicant from relying on the trial data of the originator company while seeking marketing approvals. The subsequent applicants are free to generate their own data sets and submit the same to drug regulators. Although data exclusivity seems to be less restrictive than other intellectual property rights like patents that bar generating the same results; however, in practice, the enhanced financial burden and the amount of time involved in generating data often act as a hurdle for generic entrants. Thus, the data-exclusivity regime is often criticized and is treated as one of the most controversial issues in pharmaceutical IP policy-making. Developed countries like the US and the EU have tried to impose the TRIPS-plus requirement in relation to the data-exclusivity regime through several Free Trade Agreements (FTAs) with the developing world. India, being the generic hub of the world, has resisted these forces, as imposing data exclusivity provisions will have a direct impact on the accessibility and affordability of medicines. In the recent years of the COVID-19 pandemic, a significant number of FTAs have been entered by developed nations, with the developing nations accepting TRIPS-plus provisions. Thus, the study critically analyses the test data exclusivity and tries to address whether a sui generis data exclusivity regime is required in India. It studies the recent development in the area of data exclusivity and analyses the challenges and issues faced in granting data exclusivity in the country. The study is also significant to understand the controversy as it has an impact on the significant population of developing countries. The study reveals that TRIPS provisions have been heavily interpreted to justify the monopoly of clinical trial data created by the original company, while the other interpretation of the provisions may actually dilute the monopoly in trial data.

Bryan MERCURIO, Faculty of Law, Chinese University of Hong Kong

The WTO Waiver Negotiations: What was Accomplished and What is Next?

This presentation critically examines the proposed waiver of IP rights for COVID-19 vaccines under the World Trade Organization Agreement's Trade-Related Aspects of Intellectual Property Rights (TRIPS), which was initiated in October 2020 when the pandemic raged and vaccines were unavailable. The Ministerial Decision of June 2022 recognizes the changing circumstances by focusing on easing the requirements to use TRIPS-flexibilities to accomplish wider and cheaper access. In so doing, the Ministerial Decision reinforces the notion that TRIPS flexibilities can be a useful part of the policy toolkit, even in times of crisis. After providing an overview of the context and outlining justifications for the waiver proposal, the presentation analyses and identifies key implications and possible effects of the Ministerial Decision before discussing ways the WTO can contribute to pandemic preparedness and response in the future.

Peter MEZEI, Faculty of Law, University of Szeged

Regulation of and Regulation by Platforms – The Comparative and Empirical Analysis of Article 17 CDSM Directive

The European Union's (EU) copyright liability regime for the use of contents in the online environment has been in motion for two decades. Based on the EU directives of the Millennium, the Court of Justice of the European Union (CJEU) has developed the direct liability of certain platforms for end-user activities. This, coupled with the growing streaming ecosystem prompted the EU to introduce the Copyright in the Digital Single Market (CDSM) Directive in 2019. Article 17 of the CDSM Directive obliges online content-sharing service providers (OCSSPs; practically platforms hosting predominantly user-generated contents) to authorize end-user uploads, and subjects them to liability in the lack of authorization or the prompt removal of illegal contents. Article 17 is the cornerstone of the EU's digital copyright reform, but its practical effectiveness is far from certain. This has prompted our research team, based on an EU grant for the project called "reCreating Europe", to test Article 17 with the help of both comparative and empirical methods. First, we checked how selected Member States have regulated platform liability preceding the CDSM Directive and how they implemented Article 17. Second, we analysed how selected platforms, including many OCSSPs, regulate end-users' activities by their end-user licence agreements (EULAs), especially with regard to end-user freedoms ("user rights" in the current EU copyright law) codified by Article 17(7) on certain exceptions and limitations, and Article 17(9) on end-users' informational rights and a new complaint-and-redress mechanism. Our findings are clear: while the reform was both timely and necessary to create a more uniform approach towards the regulation of platforms in the EU Member States, its effectiveness is questionable due to the Member States' diverging implementation strategies and platforms' strategically silent or shady EULAs.

Sara MIGLIORINI, Faculty of Law, University of Macau

Independent Research into Social Media Platforms: Reconciling Trade Secrets, Data Protection and Public Interest

This presentation studies the legal questions arising from independent research carried out by academics and/or civil society organizations into social media platforms. Certain social media have grown to become

an essential tool of communication and a great source of influence within our societies and calls for greater transparency and accountability are multiplying in many jurisdictions around the world. Initiatives to carry out research into social media data to uncover the functioning of certain features, such as recommendation algorithms or political ads, have been launched by universities and civil societies organizations.

Such research programs generally set the objective of uncovering potential problems, such as discrimination, and understanding social media's choices regarding content moderation. Usually, researchers have used two methods to access the data of the platforms, sometimes cumulatively: directly negotiating with the platform for access to the data, and relying on online programs allowing cover collection of data ("scraping tools"). Nonetheless, in many instances, such research has created tensions between the researchers and the operators of the targeted social medial platform. In one renowned case, independent research by NYU scholars into Facebook has ended with a denial of access to the platform data and the barring of the researchers from the platform.

Contrasting interests and rights underpin these tensions. Firstly, social media platforms have put forward their right to protect their own trade secrets, particularly with respect to the functioning of algorithms. Secondly, social media have also put forward the need to ensure the protection of personal data of users, which could be jeopardized by communication to the researchers. Finally, social media prohibit the use of scrapping tools in their term of services, so they have implemented private remedies against researchers and other users using them. On the other hand, researchers and civil society organizations underscore the important of shedding light over "the Black Box of Social Media", in a view to help tackle essential issues for society, such as why misinformation engages more users, or the impact of social media policies and decision-making on minorities and vulnerable groups.

Abhijeet MISHRA, Advocate High Court of Chhattisgarh, and Sonali AGNIHOTRI, Faculty of Law, Laxmi Chand Institute of Technology

Trade Secrets in India & Legislations for Protecting them in the Absence of a Specific Regime

The uniqueness of "*trade secrets*" is that it fits into one or more parameters of intellectual property, competition, contract and innovation. Trade secrets play a pivotal role in protecting innovations and establishing rights to use new technology. Trade secret protection extends to formulas, patterns, plans, designs, physical devices, processes, software and know-how. As there is "*no separate statute*" codifying the legislation of trade secret law, trade secret protection in India is still in its growing stage. However, the court's application and interpretation of the common law approach to protect trade secrets had been found to be inconsistent in practice. As a result, statutory legislation on "*trade secrets and confidentiality*" within the context of Intellectual Property Rights is not just a good concept but an absolute need. Despite the absence of a formal trade secrets legislation in India, Indian courts have supported trade secret protection using a variety of statutes, including "*contract law, copyright law, equity principles, and, in some cases, the common law action of breach of confidence (which in effect amounts to a violation of contractual obligation)*". *Section 72 of the Information Technology Act, 2000 also gives some protection, but only for electronic records.*" Generally, trade secrets have to be protected from exploitation by those who either obtained access to someone's trade secret by improper means or those who obtain the information from one who knows the information by improper means; or those who breach the confidence/promise to keep the information confidential. After the theft of the trade secret, if the owner can prove that reasonable efforts have been made to keep the information confidential, the information remains a trade secret and generally remains legally protected. Such reasonable steps taken by the owner will prove highly beneficial during the suit in infringement against the trade secret. Conversely, if owner of a trade secret cannot provide evidence of

reasonable efforts to protect confidential information, they risk losing the trade secret, even if the competitors illegally obtained the information. The trade secret protection seems to be essential for small-sized industries, as they cannot afford the patent protection, which is a very expensive process. The trade secret also had an added advantage; they would be the sole possession of the holder as long as he could keep it secret. Even if the competitor acquired through lawful means, the original holder can file a patent application to protect their innovation. The policy objectives behind the protection of trade secrets are maintaining ethical commercial standards and encouraging research and innovation. In the technology industry, trade secrets are particularly useful to protect a patentable invention during the application process, information not covered by the patent, and information not patentable. The other rationale behind the protection of trade secrets is that creative efforts made by the owner are valuable because they are products of creative work. To encourage those efforts, society needs to ascribe the benefits of such creative labour to the owner. That is why trade secrets deserve protection in order to make them valuable assets.

Andrew MITCHELL, Faculty of Law, Monash University, and Antony TAUBMAN, Intellectual Property, Government Procurement and Competition Division, World Trade Organization

*Intellectual Property and Vaccine Manufacturing: Utilising Existing Trips Agreement Flexibilities for Covid-19 and Other Public Health Crises**

Equitable access to COVID-19 vaccines is essential to alleviating the coronavirus pandemic's grave social and economic impact. Despite the rapid development and global increase in the production of vaccines, gross inequities are likely to continue. An effective pandemic response requires mapping current and projected future needs for vaccines and other essential health products, and diversifying their production and distribution accordingly. Some suggest that intellectual property (IP) rights protections are a significant barrier to such diversification. This article focuses on existing IP flexibilities and identifies practical options for utilising them in increasing and diversifying the manufacture and distribution of COVID-19 vaccines. To provide inclusive, timely and pragmatic policy and legal recommendations, the article provides guidance on the full scope of flexibilities currently available across several categories of IP rights by contrasting the international principles established under the TRIPS Agreement with actual practice in a range of domestic jurisdictions.

Tayyab Mohi Mujahid MOHAMMED, King Fahd University of Petroleum & Minerals

Sufficient Disclosure Requirements for Patenting 'Black-Box' Deep Learning Inventions: Learnings from Europe and US Approaches and Solutions in Indian Context

Modern AI algorithms, in particular deep neural networks (DNN), are often criticized to be 'black-box' models, meaning, the behavior and the decisions made by the trained AI algorithms are not possible to explain or interpret and thus not sufficiently describable in the context of patent law. According to the EPC Article 83 an invention/patent application must disclose enough information in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art this is called as sufficiency of disclosure. There is a similar requirement, referred to as the enablement requirement, in the US patent law in 35 US 112(a) of the US patent law and in the India's Patent Act 1970.

This paper shall try to explain that 'black-box' models are not necessarily 'black box' models and, possibly, can be sufficiently explained from the perspective of a person who has developed the model. The person who has developed a DNN model cannot explain the complex interrelatedness of the numerical values, as

to what values contribute to what output for a specific input and or specific features of an input. The models are essentially a set of numerical weighted values that are interrelated to each other and give a specific output based on specific features in an input. The USPTO has come up with a Guidance § 112 in January 2019 for evaluation of AI based inventions, where sufficient disclosure might not be entirely possible as in the case of DNNs. In Europe the EPO Board of appeals have, in T 0161/18 rejected a patent application for not describing the training data sufficiently in the specifications. There is currently no specific section in the Indian Patent Act 1970 or judicial precedent in India to deal with sufficiency requirements for 'black-box' AI inventions. The closest that is available is Guidelines for Examination of Computer Related Inventions (CRIs) published by the Indian patent office.

The paper shall also provide a comparative assessment of disclosure requirements, for AI related patents, in Indian patent law and judicial precedent to that of Europe & US. In addition, the paper shall also suggest solutions for such inventions in the Indian context.

Debmata MONDAL, Hidayatullah National Law University

Right to Repair in India: Intellectual Property Rights and End User Rights at Crossroads

Big-tech companies leverage their intellectual property rights and strategize licensing terms to limit the repairing parts, software and relevant manuals to selected authorized dealers only. Such licensing strategies are often justified under the umbrella of safety and quality control. It is reasoned that an inexperienced technician may cause further damages by using ill-fitted or faulty parts thereby tarnishing the company's brand-name. Improper servicing can also injure end-users and cause further safety hazards. In addition, there are apprehensions of proprietary information being stolen or imitated when unauthorized repair centers engage with such products. Often these concerns are reflected in limitations imposed by technology companies. In market, thus we find problems relating to accessibility of original spare/ repair parts or limited authorized servicing centers or warranty period terms in end user agreements.

However, a buyer of a device owns such device. Thus, the right to repair is a classic trending embodiment of conflict between tangible and intangible property owners. The limitations on right to repair impacts the end-user's freedom to modify/repair, has a connection with abuse of dominance by technology companies under garb of their intellectual property rights and is connected with global concern of e-waste and greener technology. This paper seeks to explore and provide insights on above issues from Indian Jurisdiction.

John Joshua MONTANEZ, Bicol State College of Applied Sciences and Technology

Copyright Awareness and Management in Flexible Learning: Challenges and Initiatives in the New Normal

The challenges brought by the COVID-19 pandemic have shifted the educational system from traditional (face-to-face) learning to flexible learning. This has caused teaching personnel to be more exposed to instructional materials found on the internet without knowing that copyright infringement was already committed. This study aims to determine the level of awareness of the Bicol State College of Applied Sciences and Technology teaching personnel in terms of copyright ranging from basic and advanced knowledge, Open Educational Resources (OERs) to Creative Commons (CCs). The Copyright Awareness Level serves as an input and response to administrative needs like drafting of policy guidelines on online course development and compliance to several Commission on Higher Education Memoranda (CMOs) like CMO No. 04, S. 2020. The survey, case study, and action research are the research method used in the study.

The questionnaire was divided into three sections: Fundamentals of Copyright, Limitations of Copyright and Fair Use, and Creative Commons. With the indicators from sections of the questionnaire, 5 of 7 for the first section, 7 of 7 for the second section, and 7 of 8 for the last section have a description of "Aware," therefore the Copyright awareness of the BISCASST teaching personnel is considered above average. Moreover, the initiatives that can be conducted are capacity or capability building focusing on advanced concepts on copyright, especially creative commons in the context of the new normal.

Shasika Amali MUNASINGHE, Faculty of Law, University of Colombo

Waiving Windfalls: Tariff Setting for Collective Management Organizations (CMOs) and State Intervention

Collective management of copyright and related rights plays a dynamic role in rights management. With the growth of online exploitation of works, its significance has been highlighted like never before. Due to the immense impact of digital technology, which renders an individual right holder utterly unable of observing and identifying many ways and means of violating his rights, collective management has grown more vital in areas such as music. The necessity of collective management of copyright and related rights in the current context goes beyond promoting benefits for authors and legal access for users. It has the potential to contribute to the knowledge-based economy of the country and the power to attract investments for the creative-based industries of the country.

Tariff setting is one of the primary tasks CMOs is collective management of copyright ad related rights. Despite the fact that there is no legislative piece that provides legal provisions for tariff settings for CMOs, it can be seen that the state institutions have been involved in the tariff setting process that enables CMOs' licensing and the collection and distribution of royalties in Sri Lanka. In this context, however, it can be seen that CMOs have also proclaimed that they are unable to provide licenses against tariffs until the government establishes the applicable rates. Meanwhile, it appears that users, particularly broadcasting companies, are taking advantage of the situation and avoiding paying royalties to copyright and related rights holders. In contrast, the jurisdictions of Japan and the UK have attempted to find reasonable and appropriate grounds for setting tariffs and have established tariff-setting systems.

Against this backdrop, this paper seeks to analyze the role of the state in tariff setting for collective management of copyright and related rights through a comparative study of laws, regulations, and other relevant authorities in the area. The comparative research approach is adopted concerning the jurisdictions of Sri Lanka, Japan, and the UK, and the laws in each of these jurisdictions are analyzed with the aim of facilitating the tariff setting for collective management of copyright and related rights. It will conclude with recommendations on how to strengthen the Sri Lankan IP regime in terms of tariff setting to facilitate the successful operation of CMOs.

Dayananda MURTHY, Damodaram Sanjivayya National Law University

New Legal Regime of European Union on Protection of Copyright and Liability on Internet Service Provider: Certain Death of Internet

Article 17 of the European Union Directive on Copyright Law has created a ripple effect on the way copyright law will change with reference to the responsibility of the Internet Service Provider. The provision intends to improve the bargaining position of the creator of the work. This proposed law imposes a larger duty on the ISPs by imposing a monitoring and filtering obligation. The Digital Right Management Act

1998 in United States or the Copyright Act, 1957 and the Information Technology (Intermediary Guidelines & Digital Media Ethics Code) Rules, 2021 in India has adopted the digital right management to regulate the ISPs with reference to copyright protection. The safe harbour and take down provisions have been provided in order to protect the copyright as well as the ISP to claim immunity from liability. Even the World Copyright Treaty, 1996 has regulatory provision with reference to protection of the copyright. Article 17 has been criticised as to restrict significantly and reduce or censor the content over digital media, which may lead to the death of Internet. The author in this chapter will examine and analyse the impact on the copyright owner and the ISPs.

Hanane NAHID and Saadia MAROUANE, University Hassan II Casablanca

The New Perception of Intellectual Property by Moroccan SMEs in the Era of the CORONA Pandemic

Intellectual property law is now considered a universally recognised specialisation. It is becoming increasingly important in corporate strategy. Intellectual property contributes to the commercialisation of products and services in terms of enhancing the value of companies and possibly Small and medium-sized enterprises (SMEs), by relying on a series of intellectual property rights. These rights are granted on artistic, literary, handicraft, ornamental (creations of form: literary and artistic works, designs and models), industrial, technical (inventions), names and images used in commerce which cover distinctive signs (trademarks, trade names, indication of source and appellation of origin), as well as on software which is on the borderline between industrial property rights and copyright. In addition, thanks to the development of the Internet, intellectual property rights cover domain names.

SMEs are a major component of the economic fabric of most economies, both developed and developing. They account for 90% of enterprises and employ nearly 70% of the global workforce (ILO SCORE survey, 2020). In Morocco, the economic and industrial landscape cannot be dissociated from that of the SMEs which constitute about 95% of its productive fabric. They participate in the creation of new technologies, as well as the significant improvement of those that already exist. They design, manufacture and market products that integrate these technologies, generating jobs. Like any business, SMEs aim to gain a competitive advantage in the market to improve their revenues and profitability, as market conditions are very volatile. Nevertheless, as the Corona virus crisis since the beginning of 2020 has shown, this situation has been a real challenge for businesses worldwide. While much of the world was living with containment and daily monitoring of the health status and progress of the pandemic, many companies were wondering what would be the best scenario to get through the economic crisis following the health crisis and emerge, as far as possible, ahead of their competitors. While most of the world was living with the daily containment and monitoring of the health status and evolution of the pandemic, many companies were asking themselves what would be the most appropriate scenario to get through the economic crisis resulting from the health crisis and to emerge, as much as possible, victorious over their competitors. One of the ways in which companies can sustain their business, gain market power or create collaborative opportunities is by paying increasing attention to their intangible assets as part of an intellectual property management strategy. Given the crucial importance of SMEs for the national economy, it is important to reflect on the importance of intellectual property rights to survive the CORONA health crisis, to guarantee their success and to face these new challenges of a political, legal, economic and strategic nature, through an optimised use of intellectual property tools allowing the strengthening of SMEs' assets and the development of their innovation potential.

The objective of this contribution is to examine the intellectual property strategy adopted by SMEs during the CORONA pandemic, through a survey of a representative sample of Moroccan SMEs in order to identify the nature of the problems encountered during the pandemic and the challenges faced in coping with this

crisis based on the protection and management of their intellectual property assets. The answers provided in this contribution will be of an exploratory nature based on the survey allowing to have reliable and relevant information to contribute to the elaboration of the main lines of a guide of good IP practices for SMEs by drawing inspiration from a benchmark on IP protection and exploitation strategies for SMEs in other countries emerging in this field, with the aim of opening up to an intangible economy and striving to find new outlets for their intangible assets and win new shares of markets where creation and innovation are becoming the intrinsic criteria of competitiveness.

Chakravarthy NAIK, National Law University of Study and Research in Law, Ranchi

Growing Prominence of Artificial Intelligence in the Field of Intellectual Property Rights

Man and machine interaction is one of the most debated topics in our generation; it is well witnessed that Artificial Intelligence (AI) is proliferating and enhancing the scope of interaction to meet the needs of people and increasing human dependence on AI and related technology. AI is a technology that is sophisticated, contextualized and transformative. There is a need for a fine balance between protecting the interest of society and individuals and without stifling research and innovation in the field of AI. Legal framework on AI recognition solves the problem through which approach in granting of legal recognition to AI, under the umbrella of the concept “personhood” rights and duties can be assigned AI as a technology provide the best way to provide incentives or provide regulations for technology can be achieved through the Intellectual Property Rights (IPR). AI, therefore, must be looked at from an IPR perspective in the areas of Copyright, Patents, Designs and Trade Secrets that would mainly be affected by AI if there is no legal recognition. As a grant of legal recognition to the AI, it changes the face of IPR in a safer and stringent mechanism creates. IPR as the field that constantly changes it faces mask and upgrades as per the transformation of new technological development such as AI, Blockchain etc., this transformation is essential. Therefore, it needs to attempt to identify the challenges posed by AI in the above IPR's and assess the current coping mechanism in IPR while dealing with AI.

To name a few challenges that would have to be addressed in the field of AI are notions of ‘creativity’, ‘novelty’, ‘inventorship’, ‘author’, ‘owner of IP’, ‘PHOSITA’, ‘terms of protection’, ‘moral rights’, ‘legal personality’, ‘contractual relationships’, ‘legal rights and obligations arising out of the IPR system’, ‘infringement’, ‘computer generated works’. Above all, AI is part of real life and would potentially benefit human development. Need of this hour for legal framework and regulatory framework before deploying AI protection under Intellectual Property Rights.

Nadia NAIM, University of Aston, and Noor Suhaida KASRI, INCEIF University

Policy Framework for the Development of Intellectual Property Rights Valuation under Islamic Finance Principles

This is a joint paper presentation with Dr Naim focussing on IP rights for the UK-GCC FTA and Dr Noor leading on the conversation on IP rights and Islamic finance in Malaysia. The purpose of this paper is to assess how Islamic finance can act as a vehicle to enhance the current intellectual property rights regimes in the GCC and Malaysia. Islamic finance has developed within the constraints of sharia law and has been a growth sector for the global financial market. This paper will present a policy framework on how Islamic finance can enhance intellectual property protection. The main sharia compliant areas to be considered are; musharaka, mudaraba, murabaha, takaful, istisna, ijara, salam and sukuk and how there is a potential

relationship between the valuation of IP rights and Islamic finance. The presentation will be a working development of the framework to then incorporate feedback from the IP experts at the conference to inform the final version of the policy framework to be presented to IP offices and inform the UK-GCC free trade agreement on IP rights.

The paper will outline the founding principles of Islamic finance, different frameworks of sharia-compliant investment products and the impact of intellectual property rights on the varying Islamic finance investment tools. Further, the paper will discuss an integrated approach to intellectual property rights which learns lessons from the Islamic finance sector in relation to infrastructure, regulation and sharia compliance. The lessons learnt from Islamic finance will inform the overall framework of recommendations for an Islamic based intellectual property model as an alternative to current IP valuation methods and inform policy making between the UK and the GCC as well as other countries that adopt Islamic finance and banking, such as Malaysia. The use of Islamic finance as a vehicle to promote better intellectual property rights in terms of defining a new intellectual property approach is novel. In essence an Islamic intellectual property based regime can be developed to provide alternative intellectual property products, similar to how the Islamic finance industry has developed sharia compliant banking. It is vital research as the UK now has to agree free trade agreements with the GCC, Malaysia and other MENA region countries and cannot rely on EU free trade agreements. It also presents a unique opportunity for the UK Government to offer free trade agreements that incorporate the religious beliefs of Muslim countries and develop more fit for purpose agreements.

Ferdinand NEGRE, Ateneo Law School, Ateneo University

Bad Faith Registration: Quo Vadis?

The problem of bad faith registration of a trademark has been around in so many countries including even in developed countries. In the Philippines, the Supreme Court has recognized this problem some decades ago. How does it look and where is it going? In particular, what constitutes bad faith in trademark registration? Is mere knowledge on the part of the alleged bad-faith applicant or the bad-faith registrant of a prior creation, use and/or registration of the mark by another person or entity sufficient to show bad faith? How does one prove knowledge when knowledge it is a state of mind? Or, does bad faith necessarily include fraud? What is fraud? Is it committed by making false claims in connection with the trademark application and registration, particularly, on the issues of origin, ownership, and use of the trademark in question?

This paper seeks to review the concept and scope of bad faith registration of trademarks, its contours and the different colors and shapes it may look, and the direction it is going. The proponent will conduct a limited desktop survey of the bad faith registration practices in select countries worldwide and in ASEAN Region and proceed to discuss its development and status in the Philippines. The paper will attempt to conclude with recommendations moving forward.

Rostam NEUWIRTH, Faculty of Law, University of Macau

Brain Spyware, Freedom of Thought and Copyright Law in the Age of Subliminal Artificial Intelligence (AI) Systems

Following years of a hype about artificial intelligence (AI) and a global competitive race for its development, the year 2021 marked a turning point as regulators and lawmakers around the globe increasingly turned their focus on potentially harmful effects of artificial intelligence systems. Exemplifying the global concerns, it

was in November 2021 that the 193 members of the General Conference of the United Nations Educational, Scientific and Cultural Organization (UNESCO) adopted the *Recommendation on the Ethics of Artificial Intelligence* as a potential global standard-setting instrument for the regulation of AI. The UNESCO Recommendation explicitly emphasizes the profound and dynamic positive and negative impacts that artificial intelligence (AI) may have in a variety of fields but particularly on the human mind. A few months earlier, the European Commission too published a proposal for an EU Artificial Intelligence Act (EU AI Act), intended to make the European Union “a global leader in the development of secure, trustworthy and ethical Artificial Intelligence”. In Article 5 of the EU AI Act, several prohibited AI practices are listed, one of which specifically includes the prohibition of “the placing on the market, putting into service or use of an AI system that deploys subliminal techniques beyond a person’s consciousness in order to materially distort a person’s behaviour in a manner that causes or is likely to cause that person or another person physical or psychological harm.”

These two proposals for the regulation of AI highlight the drastic and potentially highly disruptive effects that recent scientific and technological advances, especially in the field of neuroscience, may have literally on all aspects of life but also specifically on law in general and intellectual property rights in particular. To exemplify the potential dangers for the integrity and rule of law, the paper first outlines the principal concerns of recent regulatory attempts to guarantee a trustworthy and safe AI. It then presents several new technologies known as “brain spyware”, which uses a combination of innovative technologies, including but not limited to machine learning, big data, functional magnetic resonance imaging as well as subliminal stimuli, to extract personal information of a user’s brain. Put simply, mind reading as well as other manipulative practices are no longer science fiction but may have already become possible. Based on this, the paper explores the potential implications that such mind reading devices may have on the one hand on the fundamental right of freedom of thought and on the other hand on copyright law in general and the idea/expression dichotomy in particular.

Hang NGUYEN, School of Law University of Eastern Finland

ISP’s Liabilities in the Trademark Infringement in the Digital Environment in Vietnam – When Enough is Enough?

The Internet ecosystem has significantly leveraged business activities in Vietnam recently, especially for e-commerce activities. When e-commerce rapidly develops, many people use an internet platform to do their business. The market value of e-commerce logistics in 2018 was estimated to amount to approximately 90.1 million euros. In 2022, the value was forecasted to reach about 801.9 million euros. In a survey, 87% of people living in rural areas in Vietnam stated that they buy products from Facebook; meanwhile, 55% of people in urban Vietnam do so. Whilst stopping trademark infringement via physical shops or stores has been difficult for the authorities, stopping the infringement of trademarks in the virtual environment is much more difficult because the nature of these transactions is so mobile. Counterfeit trademark products sold via Internet platforms continue to happen without support or cooperation from the platforms. When a website that provides e-commerce services is located outside of Vietnam, protecting the legitimate rights of trademark holders and consumers becomes harder. During the pandemic, the competent authorities stopped counterfeit pharmaceutical products such as masks, gloves, and even Covid treatment medicines of unknown origin that were circulated on the market and via the Internet platform. Not only are the health or lives of human beings in danger of unknown origin medicines, but the state management in the pharmaceutical area is also affected when counterfeit trademarked pharmaceutical products are sold freely in the market. Trademark infringement is a big challenge for Vietnam in implementing newly joined free trade agreements such as the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) or the

European Union Vietnam Free Trade Agreement (EVFTA). The Law on Intellectual Property of Vietnam has to strengthen its regulations regarding the liabilities of the ISP to protect the legitimate rights and benefits of trademark owners. This article aims to point out the ISP's liabilities, the obstacles that the competent authorities are dealing with, and suggest specific solutions to reduce trademark infringement in the digital environment in Vietnam.

Tram Ngoc NGUYEN, International IP Specialist of IPGEEKLAB and Sy LUONG, Law University, Hue University

Challenges of Vietnam in Regulating ISP and Experiences for Southeast Asia Regions

The lawsuit between Sconnect and EO (1) over alleged copyright infringement has posed legal challenges to Vietnam's intellectual property law. Many countries have developed a Safe Harbour for Internet service intermediaries from third-party copyright infringement. However, with the rise of similar lawsuits as mentioned above, the Vietnam government is wondering if the Safe Harbour also created an Inaccessible and Uncontrollable Harbour. The article analyses the challenges of Vietnam in regulating and cooperating with ISP to handle copyright infringement. The article will also provide examples that IP law regulators of Asia countries can discuss and may learn from.

Suvarna NILAKH, ILS Law College, Pune

Implementing the Marrakesh Treaty in India in the Light of Technological Advancements

Indian intellectual property law has generated controversy within and beyond due to the pro-public leanings of the law. The Copyright Act, 1957 (hereinafter referred to as "Act"), Section 52 provides several exceptions to copyright infringement. The Delhi High Court's ruling in *Oxford University Press v Rameshwari Photocopying Services* was notable in recognizing the importance of educational instructions and noting that Indian law was based on the state's policy of providing access to as many as possible; it ruled that photocopying of books would not amount to infringement as long as they were used strictly for teaching or educational purposes.

In that background, the Indian copyright law has to make access easier for the visually challenged or otherwise print disabled. India was the first country to ratify the Marrakesh Treaty. This Treaty addresses the access constraints by creating an obligation on the Contracting Parties to create exceptions in their copyright laws for the benefit of the blind, visually impaired, and otherwise print disabled, and to enable "beneficiaries" and "authorized entities" to undertake any changes needed in order to make a copy of a work in an accessible format on non-profit basis. It also seeks to allow cross border transfer of such accessible works without the consent of copyright owners, subject to exceptions under this Treaty, or in accordance with the operation of law. India made changes to the Act via the 2012 Amendment in order to strike this balance between disabled persons' right to access printed material and the interest of copyright owners.

There are several issues with this implementation, and it is likely that the possible ramifications of signing this treaty were not understood at the time. There are two facets to this problem. On one hand, India has a significant number of visually challenged persons. The accessibility to books must not be dependent on the treaty alone but must also be assisted by other disability rights and intellectual property laws which cause an improvement in cheaper technologies (for facilitating more persons to be able to read) and wider access.

On the other hand, India has seen a great deal of copyright infringement and a weak enforcement mechanism which witnesses poor prosecution which consequently is another challenge for the copyright owners.

Through this paper, the author shall attempt to discuss the challenges faced by India with its copyright jurisprudence (related to accessibility) and also try and suggest possible policy changes to increase access by visually challenged people who ordinarily cannot access online libraries. Further, author will attempt to juxtapose the copyright owner's rights against the rights of the visually challenged, ensuring that accessible books are not illegally converted for ill-begotten gains. Finally, the constant technological advancement dilutes the efficacy of copyright protection. This paper shall attempt to analyze the existing discourse on balancing of copyright laws and disability rights in context of technological advancements and shall place it in the Indian legal regime.

Saad NUSRULLAH, Punjab University Law College, Lahore

Patent Licensing and Access to Medicines in Pakistan

Many developing countries around the world do not have access to affordable, life saving medicines. To achieve Sustainable Development Goal 3: "Ensure healthy lives and promote well-being for all, at all ages", essential medicines must be affordable. Patents are intended to reward innovation, but being exclusive and monopoly rights they can sometimes contribute to significant gaps in ensuring access to quality, appropriate, affordable, safe and effective medicines and technologies, particularly in lower-resource countries by preventing the production or sale of affordable, quality-assured generic medicines and the development of novel formulations.

The Medicines Patent Pool (MPP) is a United Nations-backed international organization founded in July 2010. Its goal is to improve access to affordable and appropriate medicines in low- and middle-income countries. Its public health driven business model aims to lower the prices of medicines and facilitate the development of better-adapted treatments through voluntary licensing and patent pooling. The MPP negotiates with patent holders for licences on medicines. Licences negotiated by the MPP permit other pharmaceutical manufacturers to produce generic versions of patented HIV, Hepatitis C and TB medicines for developing countries. Licences also provide the freedom to develop new treatments, such as paediatric formulations and fixed-dose combinations. Competition among many manufacturers should bring prices down supporting treatment scale-up.

On 31 March 2020, the MPP expanded its mandate to include any health technology that could contribute to the global response to COVID-19. MPP is already gathering patent knowledge for products being used in clinical trials and making it available on its patents and licences database, [MedsPaL](#).

Pakistan has the second highest global burden of HCV infection with almost seven million people living with hepatitis C. In early 2020 Remington Pharmaceuticals signed sublicense agreement with MPP, becoming its first ever partner in Pakistan, for manufacturing and supply of high-quality affordable versions of [glecaprevir/pibrentasvir \(G/P\)](#), a World Health Organization (WHO)-recommended treatment for people living with the hepatitis C virus (HCV) for the benefit of so many people affected by the disease around the world, including people from Pakistan. In October 2021 the MPP signed agreements with 27 generic manufacturing companies, including a company from PAKISTAN, for the manufacturing of the oral COVID-19 antiviral medication molnupiravir and supply in 105 low- and-middle-income countries (LMICs) to facilitate affordable global access for molnupiravir.

This paper will analyze how far the Medicines Patent Pool's licence agreements with Pakistani generic companies have helped in improving access to safe, effective, more appropriate and affordable essential medicines/vaccines in Pakistan, by reducing prices, improving supplies or adding capacity and what can be expected in future.

Ifeoluwa A. OLUBIYI, Afe Babalola University College of Law

The Use of Utility Models/Patents for the Encouragement of Local Innovation in Developing Countries: Lessons for Nigeria

Patents are granted to new inventions in order to encourage the innovation and technological advancements in the society. Member states of the TRIPS Agreement have an obligation to grant patent protection to new inventions in their jurisdiction (apart from the least developed countries who have an exception until 2033). In this light, many developing countries have patent protection either because of their colonial history, as it is the case with Nigeria, or because they are members of the WTO. Nevertheless, the mere existence of these laws has not necessarily translated to increased innovations and technological advancements in the countries. There is also the argument that the patent system favours the global North as evidenced in the fact that most of the patent applications made in many developing countries are from the developed world than from local inventors. Utility models (sometimes referred to as minor patents) are being used by some countries as a way to encourage innovation among local inventors by providing a lesser protection to inventions which may find it difficult to meet the requirements of the patent system. This research shall examine the legal protection of utility models or minor patents. It shall focus particularly on the extant provisions available in selected jurisdictions which already have this law in place and examine whether the existence of this legislation has had significant effects in the promotion of local innovation. The Nigerian Patent Registry has recently been granting utility models to software inventions albeit in the absence of a legislative provision or backing. This study is essential to draw lessons for Nigeria, a developing country equally seeking to drive innovations and developments within its territory.

Rami OLWAN, Faculty of Business and Law, School of Law, Curtin University

Rethinking Farmers' Privilege in the Intellectual Property Laws of Egypt and Jordan

The presentation will provide a summary of the plant variety protection in the intellectual property laws of Egypt and Jordan. It discusses the international treaty obligations of these countries under the TRIPS Agreement and the International Union for the Protection of New Varieties of Plants 1991 (UPOV). It assesses and critiques the farmers' privilege under the laws of these countries and provide specific recommendations and suggestions to support sustainable agriculture and food security in the Arab countries.

Justyna OŻEGALSKA-TRYBALSKA, Faculty of Law, Jagiellonian University

Metaverse and Trademarks - Recent Practices and Challenges

The increasing use and dependence of society on new technologies speed the development of the metaverse-virtual three-dimensional space using elements of the real world and offering digital resources for use in the traditional world (including NFTs). The new trends create an interest in providing goods and services in virtual reality. More companies are interested in securing the identification sphere in their business,

marketing and advertising strategies through trademark registration. Evidence of this is the growing number of applications for the trademark registration of virtual goods filed with patent offices worldwide. This opens up discussions about potential problems with applying existing trademark regulations to the assessment of such applications and trademark disputes involving virtual goods. This paper aims to identify them and answer the following questions based on current practices of regional and national patent offices and trademark cases: 1) How should virtual goods be classified, and in which classes of Nice Classification should they be filed? 2) Is it appropriate to classify all goods offered virtually only in class 9 or for goods with the addition of information that they are virtual goods? 3) Should trademark law consider NFTs representing real goods with protected trademarks as traditional goods or only images and NFTs as tools authenticating virtual goods? 4) Should any new standards have been developed for the assessment of trademark infringement in metaverse/virtual worlds?

Zehra OZKAN-UNER, Faculty of Law, Ankara University

Flexibility in Turkish Copyright Law: Focusing on a Caricature Case

Exceptions and limitations of the owner's exclusive rights are regulated as closed-list under Turkish law, like EU law. However, there are no general provisions or open clauses that enable flexibility to the current limitations. In addition, some limitations have yet to be amended since their enactment in 1951, like freedom of quotation. Although a draft reforming the current law was prepared, it could not be enacted. Therefore, limitations and exceptions in Turkish copyright law are out of date. How can this law meet the needs of the current copyright issues? Unless there is an amendment in the law, it is the role of the Turkish Court of Cassation to meet these needs, and the Turkish Court of Cassation is aware of this situation. For example, article 35 of the Law on Intellectual and Artistic Works, which regulates the freedom of quotation, is very similar to §51 of the UrhG before it was amended. Turkish Court of Cassation found it permissible to make quotations to cinematographic works or to quote from a whole photographic work. The Court interpreted article 35 widely like the German Federal Court, although the literary of the article does not allow it. Furthermore, the Turkish Court of Cassation found some uses permissible, although the situation was not regulated as a limitation. For example, the incidental inclusion of a work in other material is not one of the limitations of Turkish copyright law. Nevertheless, the Court took into account whether the use was incidental or not in two of its decision.

A decision of the Turkish Court of Cassation in 2018 was about a caricature in which an employee union changed its dialogue. The changes aimed to criticize the mass dismissal of employees from a one company which was also the owner of the monetary rights of that caricature. The company brought an infringement case against the Union after it had shared the transformed caricature on its social media accounts. The Court of Cassation ruled that the "*Union used the caricature for the humor and parody purposes, the usage was not infringed the three-step test regulated under article 13 of TRIPS, and the defendant did not have profit-making purposes and in addition to that honor and reputation of the plaintiff was not infringed*". This decision raised too many questions. Does it mean that parody exception is introduced through this decision? If it is so, does it mean that this exception covers only the non-profit-making uses? As it is well known, non-profit making is not one of the conditions of parody exception in EU law. Such an implementation will be against both EU law and is going to restrict the freedom of expression. Or did the Court try to protect the user's rights in the online content-sharing platforms? On the other hand, it can also be argued that the aim of the Court of Cassation was only to list the features of the concrete case. Although it is impossible to find an answer to these questions based on a single decision, all of these scenarios will be discussed in the paper.

Ayyappan PALANISSAMY, Modern College of Business and Science

Digital Copyright Protection and Enforcement Measures – A Review

From what we live today, the world has developed so much as the internet became one of the most important sectors in modern days. Digitalization made the world smaller and faster than it was before the appearance of the internet. Today most of the work and transactions even in the legal sector depend on the internet because it's a tremendously useful tool that makes reaching other people, nations, and countries easier which further helps in the development of different sectors. Most of the copyrighted works are established on the internet today, sharing and doing work on the internet helps the creator get to his desired goal. People depend on the internet to develop their work and reach their goals, whether for economic or commercial profit. Now creators can produce their work in a whole different way and procedures than the traditional ways which are highly developed to be much more efficient and convenient. The new way reaches a higher amount of audience. As the world develops and the work form shifts to digitalization, now copyright law also shifts to protect the established works on the internet because as it reaches a lot of people it becomes more subjected to infringement than it is in traditional establishments.

Jacob George PANICKASSERIL, School of Law, Bennett University

A Square Peg in a Round Hole - Infringement of Intellectual Property Rights as a Crime in India

Infringement of intellectual property rights is considered a wrong to the rights holder necessitating judicial intervention in all jurisdictions which recognize such rights under law. Part III of the TRIPS Agreement of which India being a Member State mandates Member States to provide for enforcement of intellectual property rights. The laws in India on intellectual property cover remedies for infringement in the form of as injunctions and damages (civil law measures) and imprisonment and fine (criminal law measures). However these measures are not uniform for all the various forms of intellectual property. Imagining infringement as a crime represents a shift from conventional norms of its mental and physical components due to the focus of protection of intellectual property. The balance of interests between the rights holders and users which necessitate exceptions to criminal liability is fraught with limited judicial interpretations. Laws hitherto dealing with antisocial elements of society have been amended resulting in increased criminalization of infringement. A discourse which requires a nuanced understanding of intellectual property rights, its exceptions and balance of interests is absent in criminal cases with dire legal consequences such as preventive arrest before commission of the infringing act; increased police powers to arrest persons; search persons and places and seize infringing goods and limited mechanisms for obtaining release on bail and settlement of court cases. The paper seeks to critically analyze the judicial discourse on criminalization of infringement in light of the developments in municipal and international law.

Stefan PAPASTEFANOU, Center for Transnational IP, Media and Technology Law and Policy, Bucerius Law School

The Significant Impact of “DALL·E 2” in Copyright Law – How the Rise of Text-to-Image Diffusion Models Challenge the Fundamentals of Copyright Law across the Globe

OpenAI's DALL·E 2 has been the most complex and successful text-to-image model that is able to create digital artworks that are essentially indistinguishable from conventional digital artworks. The core feature of text-to-image models is their ability to take as input a natural language description and produce an image

matching that description. With the release of DALL E 2 in 2022, the output of text-to-image models approach the quality of real photographs and human-drawn digital art.

This paper will in a first section present and explain the function of DALL E 2 and by doing so the general innovations that constitute text-to-image diffusion models. A precise look at the different levels of algorithms and neural networks within the DALL E 2 program allows identifying the legally relevant technological elements without losing focus in the software details.

Based on the findings in the first section, the paper analyses two crucial questions raised by the innovative DALL E 2 technology: Does the image created by DALL E 2 constitute a “work” in sense of copyright law? If yes, who is considered the creator or owner of said work? To gain insights in those issues the paper analyses each identified technical step and addresses whether the creative connection to the natural or legal person is sufficient for copyright protection. The answers to the questions heavily depend on the technical function and whether a substantial amount of algorithmic random values have been added in the creation process or whether any involved person can be considered to be sufficiently in control of the specific creative process.

The paper analyses that this questions challenge copyright law examples by example of European and U.S. copyright law. These two copyright law jurisdictions are fundamentally different but still have difficulties adequately addressing the issues raised by DALL E 2.

In its final section, the paper addresses the challenges raised by the results from the previous analyses. Potential challenges arise from two perspectives: (1) Is there sufficient copyright protection for investors, programmers and users involved with the creation of DALL E 2 images? (2) Do DALL E 2 and similar models lead to difficulties for conventional copyright holders that are insufficiently addressed by current copyright law regimes?

Shaista PEERZADA, School of Law, Ajeenkya D Y Patil University

IP Challenges for Trading in Cryptocurrency

The research paper aims to expose the author’s interest in intellectual property challenges for cryptocurrency trading. Although we cannot use cryptocurrency like real money, it is gaining popularity worldwide. The beginning was with ‘BITCOIN,’ the biggest cryptocurrency provider. New emerging companies like the NIKE in the USA, ALIBABA GROUP, TELEGRAM MESSENGER, TWITTER, and many more have registered their cryptocurrencies. Because of the trending market, many industries must address various cryptocurrency trading challenges.

In addition, a larger sample size and more analysis of the adoption and acceptance levels are required. Trust and confidence are crucial aspects that require further research when using and trading cryptocurrency. The scope of the additional research can be expanded to include creating use cases for cryptocurrency applications in various Indian and MNC industries.

A few conventional currencies are being replaced by cryptocurrencies, which may carry out equivalent financial operations without requiring official status from the government or being accepted as legal cash. Typically, a virtual organization or a capital-raising company issues them. Hence, there is a need to understand the IP challenges for trading in cryptocurrency. A few of them are discussed below.

A cryptocurrency mark must meet the fundamental requirements of a trademark to be registered, just like any other mark. New kinds of difficulties arise with cryptocurrencies. The requirement to make sure the cryptocurrency mark differs is arguably the most crucial. The trademark must be unique and distinct from any other previously registered marks. The trademark shouldn't just be descriptive; it should also be unique. Regarding ownership or control, the matter of cryptocurrency is somewhat unusual. Due to this, it is challenging to identify the owners of such technology and currencies to protect them through Intellectual Property (IP). Given that the creator of currency is unknown and since the system is purely focused on anonymous and interference-free transactions, it can be challenging to apply this idea to cryptocurrencies. Frauds often succeed by exploiting already existing or comparable intellectual property and branding to give a particular coin and artificial intelligence of its credibility. The coin might be named after that recognizable brand or organization or linked to it in another way. For instance, the name of a well-known sports team has been used to promote a coin, which might create artificial legitimacy in that coin, particularly for fans, who might see it as being associated with the team itself.

In respect of cryptocurrencies, it is clear that we are going to continue to see a push by scammers or IP infringers to use others' IPs to promote their crypto products illegally. The cryptocurrency industry offers numerous research opportunities and studies that must be conducted to produce new IP policies to be used worldwide. The relationship between existing financial laws and the IP legal framework for implementing cryptocurrency platforms needs to be further investigated from several angles.

Kencho PELDON, University of Queensland

Rethinking Intellectual Property Law and Governance of Biological Materials through the Agricultural Crop Production in the Early Twentieth-Century British Colonial India

The paper/presentation analyses the creation and implementation of three sets of laws by the British colonial government in India in the early twentieth century to control the production of cotton. Specifically, the focus of the paper is on the cotton transport law (1923), cotton ginning law (1925) and one-variety cotton control law (the 1930s) that operated across the cotton production chain.

The long-staple cotton fibre was a much sought-after resource of the British cotton industry. Britain depended on the supply of high-quality, long-staple cotton from America in the nineteenth century. Britain attempted to grow American long-staple cotton varieties in colonial India to reduce its dependency on American cotton supply from the early nineteenth century to the twentieth century. In order for this to occur, however, the British colonial government had to first deal with what it saw as a number of problems, not least that farmers in India cultivated native short-staple cotton species and often mixed fibres of different staple lengths, which posed challenges to the circulation of pure long-staple cotton seed. Faced with these challenges, the colonial government adopted a number of legal, scientific and agricultural measures in an attempt to ensure an adequate and reliable supply of long-staple cotton for the British domestic industry.

By exploring the regulatory schemes that the colonial administration applied across the cotton production chain, I show that the combined legal system increasingly focused on the reproductive materials of the cotton plant. The presentation will outline the details of the laws and will show how by controlling the way cotton was grown, processed, stored, and transported; the laws offer important insight into changes in the way cotton was regulated. Collectively, the legal system intervened in the circulation of biological materials at the juncture of the political economy of cotton textile manufacture. Finally, the paper argues that these laws and legal measures to standardize agricultural practices related to crop production provide a better understanding of the law and governance of plant intellectual property systems.

Asanka PERERA, Monash Business School, Monash University

The Role of IP to Stimulate Local Innovations in Sri Lanka

This project emanates from one of my PhD chapters. This project will examine the role assigned to intellectual property (IP) in the local and international discourse relating to STI and development of a national Science Technology Policy (STP) in Sri Lanka. Moreover, none of the ST policies emphasised mechanisms to drive economic development via high-technology solutions to boost national and local needs and tackle the major global challenges. Accordingly, the STI discourse in Sri Lanka has not gained the strength to develop high-technology IP clusters and activities, resulting in the development of industries that have low-technology IP requirements, such as manufacturing and service industries. Low technology places less emphasis on business innovation and R&D commercialisation and lacks openness to foreign investment, which results in low inflows of FDI and TT. SMEs in Sri Lanka develop innovations through a low-technology approach owing to their lack of expertise and resources and the high cost involved. Evidence suggests that patents are not a prerequisite for the SME sector. In this presentation I will examine to what extent the small and medium-sized enterprises (SMEs) in Sri Lanka can stimulate local innovations considering the fact that Sri Lanka has high number of SMEs.

Frank PHAM, Attorney, IP Protection & Litigation, Antitrust and Unfair Competition

Fair Use, How Far it Can Go?

The U.S. Supreme Court reversed a Federal Circuit decision holding that Google's use of Java SE API programming code on to create its Android platform was a fair use. The Court found that the Google's copied lines are declaring code that is inherently associated with uncopyrightable ideas of "general task division and organization." Justice Breyer wrote that Google's reuse of code was "reimplementation" that has different purpose with the original works. The decision raises a question of how far an original work can be altered to avoid copyright infringement. Google's copied code was a transformative work only because its use was repurposed for different computing environment. This expansion of fair use would provide a new tool for attorneys defending the reuse of copyrighted work in a new context.

Aneesh V. PILLAI, Cochin University of Science & Technology

Licensing of Intellectual Property Rights and its Anti-Competitive Scrutiny: An Analysis of Standards Developed in Various Jurisdictions with Special Reference to India

Licensing is one of the core strategies for the commercialisation and monetization of Intellectual Property Rights. It is one of the easiest ways to benefit from IP Rights as it is an intangible property. Licensing is a contract wherein an IP holder allows another person to make use of the IP assets for a fixed period on the basis of certain terms and conditions. In India, the legislations such as Patents Act, 1970; Copyright Act, 1957; Trade Marks Act, 1999; and Designs Act, 2000 contain provisions dealing with the right of licensing by the concerned IP holders. The licensing of IP rights is done through a formal agreement containing several terms and conditions as agreed by the parties. In such agreements, the licensor, i.e. the IP holder, will include conditions relating to production, distribution, sale, price range, geographical market, etc. These terms and conditions primarily focus on the protection of the interests of the IP holder. Hence, in most cases, the licensing agreements will contain several restrictive conditions, and the licensee needs to concur with them. IPR is the backbone of several industrial and commercial activities. The licensing of IPR thus

facilitates to a greater extent the industrial and commercial activities as well as the market competition. Fair competition is a precondition for the efficient working of the market as well as for the welfare of the consumers and the nation. However, the restrictive conditions in IP licensing may cause some adverse effects on competition in the market.

Worldwide, competition law enforcement agencies are compelled to scrutinise the scope of IP licences and their scope in order to eliminate the possible adverse effects on the competition. Such intervention and scrutiny are unwelcome as it may declare certain terms and conditions are bad at competition law. In India, the authority of the Competition Commission to interfere with licensing agreements is conferred under Sections 3(5) and 4 of the Competition Act, 2002. The Competition Act in S. 3(5) declares that those agreements which are reasonable for protecting IP rights are excluded from the purview of law relating to anti-competitive agreements. However, whether an agreement imposes only reasonable conditions for the purpose of protecting the interest of the IP holder can be scrutinised by the Competition Commission. If a license agreement contains an unreasonable condition and if it has an adverse effect on market competition, the Competition Commission can apply the law relating to anti-competitive agreements. So also, in certain situations, the S.4 of the Act may also require the Commission to scrutinise the scope of IP Licencing agreements. For example, while determining the royalty amount, the licensor may fix an exorbitant rate and which may amount to an abuse of dominant power, if the licensor enjoys a dominance in the market. This paper seeks to examine the standards developed by the Competition enforcement agencies in several jurisdictions with special reference to India for the purpose of scrutinising the terms and conditions of licensing agreements in order to identify and prevent adverse effects on competition.

Anna POKROVSKAYA, Civil Law and Procedure and Private International Law, RUDN University

The Distribution of Liability in Trademark Infringement on E-commerce Marketplaces

This paper examines the issue of distribution of liability for infringement of exclusive rights to trademarks in the sale of goods through marketplaces. Examined the legislation and case law of Russia and other countries on the liability for selling counterfeit goods on marketplaces. The following legal cases (Russian practice) were considered: Veksel LLC v Kupishuz LLC; Individual Entrepreneur Tatintsyang K.Y. v Zaslavskaya Confectionary, VALLAR LLC v WILDBERRIZ LLC; Divis LLC (right holder) v Internet Solutions LLC, as well as foreign practice: Tiffany v eBay; Louis Vuitton v eBay; Hermes International v Cindy Feitz and eBay. Models of legal regulation of e-commerce in foreign countries were analysed. The conclusions have been formulated on the need for progressive development of legislation of the Russian Federation in the area under study, including regulation of e-commerce platforms, and measures to improve the liability of marketplaces and sellers for the sale of counterfeit products were developed.

Abhinav PRAKASH, National University of Study & Research in Law

The Role & Scope of Intellectual Property Rights (IPR) as a Catalyst to the Realization of Global Green Energy Transition

Today, the world is facing one of the most severe energy crises of modern times. Russian- Ukraine war and thereby the anti-Russian stand of European and western countries have worsened the situation. OPEC and OPEC+ groups are led by Russia and Saudi Arabia respectively; these groups of crude oil producer countries have not agreed to the request of the United States of America to not reduce the production of crude oil. Reduction in crude oil production would further worsen the energy crises by making the fuel more expensive

for the crude oil importing countries. Third-world countries like countries of African continents, South East Asian countries, etc. would be severely affected by the surge in fuel prices, which may further worsen the global economy.

The IEA (International Energy Agency) executive director Fatih Birol in IEA's annual World Energy Outlook has acknowledged that "The energy world is shifting dramatically before our eyes. Government responses around the world promise to make this a historic and definitive turning point toward a cleaner, more affordable, and more secure energy system". He further added that these situations along with the emerging challenges out of the climate change issues may have a gross impact on green energy transition throughout the world. At this juncture, The International Solar Alliance (ISA) being a coalition of countries falling at the Torrid Zone (completely or partly between the Tropic of Cancer and the Tropic of Capricorn); which receives potent sunrays throughout the year may play a vital role. ISA has objectives to provide a dedicated platform for cooperation among solar-resource-rich countries, through which the global community, including governments, bilateral and multilateral organizations, corporates, industry, and other stakeholders, can contribute to help achieve the common goal of increasing the use and quality of solar energy in meeting energy needs of prospective ISA member countries in a safe, convenient, affordable, equitable and sustainable manner".

However, the basic issue with the technology transfer of solar energy technologies is that majority of the patent holder on these solar energy technologies are multi-national corporations "MNCs" of the developed countries. Therefore, it requires a sufficient source of funds, knowledge base, infrastructure, and existing working market to lure and motivate these multinational corporations for considering such technology transfer to third-world countries. Since "IPRs are one of many factors influencing firms' decisions to transfer technology to, or to invest in, a particular country. Therefore, it becomes apparent that the effects of IPRs and their strengthening are often dependent on their interrelationship with other factors, such as the size of the domestic market, the structure of factor supply, productive infrastructure, and the degree of stability of the macroeconomic environment." Under the circumstances, the Author would enquire through the research that whether Intellectual Property Rights may have a role and scope to act as a catalyst to the global green energy transition?

Sherin PRIYAN and Gouri GARGATE, Rajiv Gandhi School of Intellectual Property Law, IIT Kharagpur

Innovation-based Patent Pool Models in Automobile Industry in the Smart Car Era

Patent Pools are a form of technology licensing model that eases the transaction cost between licensors and licensees. The authors in this paper have presented a case study on the patent pool models in the automotive industry, emphasizing the role of standard essential patents in the high technology used in vehicles. This is of particular importance in the present times due to the extension of telecommunication technologies to the automotive industry such as smart cars. The authors have conducted this study by analysis of the basic, core, and essential patents to measure the innovative potential in the automobile industry. This is essential to study the effectiveness of the patent pool which depends on the number of essential and complementary patents licensed in the pool. This paper uses patent analytics to study the effect of the interoperability of standards in the industry. The authors have observed that joint licensing models between telecommunications and automotive industries can be more effective with the use of Patent Pools. The authors have discussed a comprehensive framework to incorporate patent pools, to accommodate incentives given to the standard essential patent holder while also maintaining the innovation capabilities of the industry.

Ria Wierma PUTRI, Faculty of Law, Universitas Lampung

Seeking Common Denominators in the Law Regime: Achieving Intellectual Property Rights Compliance in ASEAN

Intellectual Property (IP) standards are viewed as essential to the success of the state's economy, as they provide the foundation for stimulating innovation and enhancing competitiveness. In this regard, states with the strongest IP systems stand to reap the greatest economic rewards. ASEAN region recognized the importance of IP protection through the ASEAN Framework Agreement on Intellectual Property (IP) Cooperation in 1995, a year after the conclusion of the Trade-related Aspects of Intellectual Property Rights (TRIPs) Agreement of the World Trade Organization (WTO). Also, IP is acknowledged as a fundamental element of the ASEAN Economic Community Blueprint 2025. In terms of adoption, the majority of ASEAN states' IP legislation covers all aspects of IP protection in accordance with the TRIPS agreement. However, the diversity of economic growth among the member states has created a threat to IP protection and enforcement in the ASEAN region. Based on previous research, ASEAN states are required to strengthen both their administration and legislation enforcement, as well as enhance cooperation between government agencies and the private sector. Thus, the article aims to seek common denominators among the ASEAN states to find a possible fraction of solutions to face these challenges. This study uses the common denominators approach because we recognize that each nation has its own patterns and ways of addressing its IP systems. Since ASEAN states share similar cultural dimensions and characteristics, we may identify this commonness as a strength to address the proposed issue. Recognizing this, ASEAN poses as a platform for these countries to use their common strength to address the issue collaboratively as a part of regional cooperation. Moreover, posing ASEAN as the primary regional organization that aims to elevate the welfare of Southeast Asia nations, ASEAN encourages states to attain measurable benchmarks for sustainability in the matter of IP protection, which can be done through the integration through law (ITL) approach. In this sense, ASEAN, as a regional platform, enables all member states to engage in the organization's strategy and perceives it as a means for law integration. With this approach, hopefully, member states will be able to find strategic ways to combat IP threats by being compliant with the ASEAN frameworks. Therefore, this study will discuss three main topics, namely (1) the status of IP protection among ASEAN member states; (2) ASEAN member states common denominator as a platform to strengthen IP protection within the ASEAN law regime; (3) Achieving ideal IP protection through compliance.

Yunita Maya PUTRI, Faculty of Law, University of Lampung

Access and Benefit-Sharing on Communal Rights in Indonesia

Intellectual Property Rights (IPR) proposes as an economic growth platform for states. However, in practice, developed nations are dominating IPR ownership which causes an undermining of IPR's value. Moreover, IPRs are usually owned individually, especially for innovation-driven IPR applications. This situation sparks a debate among developing countries because IPR is seemed to give a sense that the IPR's value is unapproachable to a general community. Therefore, there is a collision between individual and communal definitions from the IPR perspective. Individual rights are owned by an individual without proposing application towards the state to receive economic exploitation rights. On the other hand, communal rights are entirely owned by a community group/state. The communal IPR covers four types which are Traditional Cultural Expression (TCE), Traditional Knowledge (TK), Geographical Indication (GI), and Genetic Resources (GR). These rights are considered instruments to protect rights owned, monetized, and valued by the community/state because they are based on an Access and Benefit Sharing (ABS) system.

ABS ensures GR and TK related to GR are accessed and optimally used for the benefit of the users, providers, and indigenous community. This means that ABS could be a reliable piece of equipment for countries to enhance their communal rights' potential to its fullest, especially for developing countries with multicultural backgrounds. Indonesia is one of these countries that are doubtful of IPR's stance. Aligned with Indonesia's reluctance, IPR's recent dynamic is the development of ABR's mechanism. Indonesia is ideal for illustrating ABR because it consists of multi-diverse cultures and natural resources. Thus, Indonesia cannot neglect IPR as a part of its domestic economic system. Instead of being skeptical of IPR, Indonesia must implement strategies in its communal rights ABS. Indonesia is beginning to encourage communal rights to fulfill its indigenous nature's perspective. Therefore, ABR is a potential bridge to interlink IPR's position between developed and developing countries, between an individual and communal emphasis. Optimizing an IPRs strength is much more effective than having a constant innovation competition. Nevertheless, this research must prove if communal rights could resolve this argument. Therefore, it will describe whether communal rights are the answer to IPR hegemony by analyzing ABR's implementation and development in Indonesia.

Laina RAFIANTI, Faculty of Law, Universitas Padjadjaran

Wrapping and Guarding Local Music in the Era of the Industrial Revolution 5.0: Indonesian Perspective

Indonesia consists of 300 ethnic groups and 1340 tribes. Its diverse and dynamic art and culture create a unique, distinctive and become a national aesthetic identity. Likewise, songs or music originating from Indonesia also vary regarding musical instruments, tones, and the regional language used in the song. Modern folk songs that have been modified today may be derived from folk songs that someone, whether known or unknown, has created. Based on Article 38 of the Indonesian National Copyright Law, there is no need for a permitting mechanism in the use of traditional cultural expressions of songs/music that will be reused by other parties as long as they uphold the values of the carrying community. In this era of the industrial revolution, many digital platforms use local music content as back songs or modifications of songs. This paper provides a view of fair and balanced protection for the original creators of regional music (if known) and the creators of derivative works to realize the promotion of culture as mandated in Law Number 5 of 2017.

The methods used for this study are socio-legal studies. They are presented descriptively—this research uses a comparative analysis of regulations and conducts comparative studies of best practices from other countries. The theory used in this research is transformative of law initiated by Ahmad M. Ramli. This theory studies that the law is not intended to constrain the use of technology but rather to realize legal purposes through information and communication technology. Hopefully, this paper will increase the number of musicians who create songs and music, and the use of local music will increase so that local cultural identity rises. In particular, the protection of musicians is protected through the establishment of a collective management institution for folk songs.

Mas RAHMAH, Faculty of Law, Universitas Airlangga

The Journey of Indonesia Intellectual Property Financing: A Long and Winding Road to "Creative and Innovative Finance"

The paper studies the role of intellectual property (IP) in facilitating Indonesian businesses to use their IP assets to secure the finance they need for company growth and innovative lifecycle. As property, IP rights can be legally transferred and secured and have a great potential to be used as a financial instrument and

source of financing. For Indonesia, financing is a critical part of the innovation lifecycle and key part of respective national innovation policies, particularly for small-and-medium-sized enterprises (SMEs), universities and startups seeking to maximize the benefits of their IP. This study discusses the emerging field of IP financing, analyzing how innovative businesses can leverage their IP portfolios to access equity investments and debt. This study also aligns how IP couples creativity with capital, and incentives innovation through financing. It will focus on signaling IP value for external investors, the option of IP financing types with their characteristics, clarify how the IP ownership can facilitate investment and valuation methods, the attribute of potential users, and the success factors. However, several risks are involved in IP financing that make companies face severe challenges in raising IP financing because investments in creative products, R&D and new technologies are difficult to predict, measure, evaluate and manage. Therefore, the study will discuss the current problems associated to IP financing in Indonesia which includes normative, doctrinal and practical challenges. At normative level, the current legal jurisdiction still does not offer legal means and system, and needs to be further regulated. While at doctrinal level, there is different logic and language between IP and finance world that IP speaks about legal rights and protection, while finance world focuses on risks and return, therefore, there is a challenge on translating IP assets into financial terms of expected return, cash flow, and risks. At practical level, there are challenges on the insufficient public awareness of IP, limited experience on practicing IP finance, transferability and acceptability of IP in banking loans, the absence of infrastructure and system of IP financing such as IP valuation and IP valuation experts, clear and transparent evaluation criteria and standard, etc. To overcome the challenges, Indonesia needs to take the tremendous efforts to the establishment of legal infrastructure and comprehensive IP financing system covering IP valuation with proper standard, building capacity for IP valuers, improving the guarantees for the lending institutions, encouraging risk mitigation and risk sharing strategies to increase the confidence on the lending decision. From the situation, it can be concluded that currently Indonesia faces the long and winding road to “Creative and Innovative Finance”.

Wazida RAHMAN, Rajiv National University of Law, Punjab

Preservation of Traditional Curative Plants Used in Indigenous Health Care Systems in Assam

Traditional knowledge refers to the long-standing traditions and practices of certain indigenous or local communities. The Indigenous People are the custodian of unique traditional knowledge and practices of natural health care systems and their aural flora and fauna. A region like Assam in the North-Eastern part of India is very rich in traditional practice and knowledge. The Indigenous communities of Assam have some traditional healthcare practices. Assam is very rich in plant biodiversity as well as in ethnic diversity and has great traditional knowledge as well as practices based on plant resources. The traditional medicinal plants are widely used in the villages of Assam. It has a unique geographical location, climate, and land topography that harbors different tribes, each having a distinct culture and traditional knowledge. Due to remoteness, inaccessibility, and closed cultural tradition; a vast body of ethnobotanical knowledge has remained largely unexplored. Identification of medicinal plants is the result of long generational practices by the indigenous people. This study is mainly with traditional plants used to cure diseases and their preservations. The present study can explore unique and special traditional plants which are widely used by tribes in disease curative methods, i.e., broken bone joiner, curative from cardiac issues, blood-curdling in injury, healing of cutting injury, curative from diabetes, etc. From the study, it can be opined that tribes in Assam are very rich in indigenous healthcare practices. However, these traditional plants, as well as traditional knowledge of healing techniques, are not been scientifically validated till now. Traditional Knowledge of the indigenous people constitutes a major part of intangible heritage as defined by the UNESCO convention, 2003. However, with the higher rate of socio-economic changes, this knowledge is disappearing very fast. Thus, we need to think of a methodology or procedure to use this traditional

knowledge-based curative natural plant as well as its usefulness to be safeguarded for future generations. The study shows that there is immense potential admittance for ethnobotanical research which would benefit not only the scientific world but also open new boulevards for augmenting the tribal economy through a sustainable approach.

KD RAJU, Rajiv Ghandi School of Intellectual Property Law, IIT Kharagpur

The Use and Abuse of Intellectual Property Rights and Anti-trust Actions in Technology Markets: The Emerging Jurisprudence in India

The objective of competition law and intellectual property rights are complimentary and supplemental to the extent of fostering innovation and dispersing the benefit to consumers. Technology companies are using intellectual property as a tool for protectionism in technology markets. Is there a fundamental conflict between antitrust laws and monopolies granted under intellectual property laws? Whether IP monopoly is a hindrance to market competition? These questions are to be examined against the backdrop of the recent decision of the competition authority's jurisprudence that emerged from different jurisdictions.

Being a key player in technology, Google has adopted many anticompetitive practices and abused its dominant positions in markets, including those in the UK, US, EU, India, South Korea, and France. Earlier, Microsoft also faced similar action in multiple jurisdictions for violating various antitrust provisions. On October 20, 2022, the Competition Commission (CCI) of India fined Google a large sum totaling Rs.1337.76 Crores (\$161 million) for engaging in anti-competitive practices and abuse of its dominant position in several services offered in the Indian market relating to Android. The second decision in a week's interval (October 25, 2022) was another fine of Rs.936.44 Crores (\$113.04 Million) imposed for abusing its dominant position on its Playstore policies in addition to issuing a cease-and-desist order. Thus, Google will pay a total amount of Rs.2274.20 Crores (\$274.04 million).

Many scholars are not surprised because a similar action was taken in the EU in 2018 (resulting in a EUR 4.34 billion fine) for similar allegations. The investigation was launched in 2018 in response to a complaint that Google had forced OEMs to pre-install the whole Google Mobile Suite, which includes Chrome search, YouTube, Google Play store, Google maps, and other suites, because of its dominant position in the Indian market. The CCI found that 97% of the handsets used Android operating systems with Google suites in the Indian market. According to the CCI, Google violated the provisions of Section 4(2)(a)(i) of the Competition Act, 2002 by imposing unfair conditions on the OEMs. This paper discusses the impact of the protectionism of technology companies and the antitrust countermeasures in various technology markets. A comparative study will be made from other jurisdictions like the US, EU, and other countries that faced a similar situation. The focus of the study will be on India and emerging jurisprudence. It is crucial to enforce antitrust laws against technology companies that flout market rules to protect the advantages of innovation that secures the economic growth of emerging nations.

Lucas RIZZO-ARRIVILLAGA, Faculty of Law, University of Neuchatel

What Can International Arbitration do for Regulatory Test Data Protection at Multilateral Level?

Regulatory Test Data Protection is the IP mechanism that seeks to protect the information obtained through Clinical Trials by the R&D sector of the pharmaceutical market. For public health authorities, that information is key to satisfying the standard of safety and efficacy of drugs, both patented or generic drugs

for human consumption. The WTO/TRIPS Agreement —adopted in Marrakesh in April 1994— had as its primary aim the harmonization of private economic cross-border tradable IP rights. Whose most salient characteristic, even today, is their attachment to the Principle of Territoriality. The Agreement draft *gavelled* with a series of well-established harmonized categories of IPRs, most of which had already been part of many WTO Members' domestic IPR legal regimes. However, test data protection related to the process of the marketing authorization of drugs, as a category of Undisclosed Information (as included in trips Art. 39.3), was not the case. Before the Uruguay Round (UR), not many countries adopted a regulatory test data protection system. Notwithstanding the UR multilateral cross-sector negotiation and the inclusion of WTO/TRIPs Art 39.3, after 27 years, it seems disputable to assert that Art. 39.3 has set a harmonized standard for test data protection. It is because its formulation needs to specify a clear protection standard. Indeed, WTO Members that today have harmonized standards of protection at the domestic level have achieved it within the context of FTAs. That is beyond the WTO Multilateral approach.

This paper seeks to test whether a system based on arbitration would be a valuable international legal tool to bridge the gap between the needs to have: a) an affordable multilateral pharmaceutical legal framework supporting drugs marketing authorization procedures at the worldwide level; b) a mechanism of reward to the developers of clinical trials; 3) an international leveled field framework for generics. In answering this inquiry, this paper analyses: I. In relationship to the arbitrable subject matter and *lex arbitri*, whether there would be a need as such for an international legal instrument to structure a system on test data related disputes based in arbitration at the international level. II. Concerning the arbitration procedure as such, is it advisable to have a system based on institutional arbitration rather than *ad-hoc* arbitration procedures? III. Is it more convenient for institutions to have a multilaterally-based arbitration institution to deal with disputes related to testing data protection?

Oshada RODRIGO, Faculty of Law of General Sir John Kotelawala Defence University

Access to Copyright Material for Persons with Disabilities: A Comparative Analysis of the Fair Use and Fair Dealing Provisions in Sri Lanka and Australia

The *Intellectual Property (Amendment) Act No 08 of 2021* of Sri Lanka is intended to provide persons with disabilities access to copyright works. For this purpose, a new section 12(A) has been added to the principal enactment broadening the scope of the concept of fair use. Furthermore, there is a new interpretation of the term 'beneficiary person' for whose benefit this amendment has been made. It appears that the legislature endeavours to reap the benefits of the Marrakesh Treaty provisions that entered into force on the 30th of September 2016 facilitating access to published copyright works for blind, visually impaired or otherwise print-disabled persons. This is a praiseworthy move that attempts to fulfil a long-felt need of some deserving people of Sri Lanka.

A welcome feature of the amendment is that it is designed to enable people with visual impairment or a perceptual or reading disability to enjoy reading printed works to substantially the same degree as a person without any such disability. However, the ability of the new fair use provision to achieve its intended purposes must be evaluated in comparison with the corresponding provisions in other jurisdictions like Australia. The lack of flexible fair use exceptions to copyright infringement in the *Intellectual Property Act No 36 of 2003* of Sri Lanka that are comparable with the fair dealing exceptions in Australia may hinder the implementation of the new amendment. For instance, the effect of section 23 of the *Intellectual Property Act No 36 of 2003* is to prevent the circumvention of technological protection measures used by copyright owners even for fair use as there is no exception to section 23 even for such legitimate purposes. Consequently, the exercise of fair use exceptions over digital copyright works is at the mercy of copyright

owners. For this reason, 'beneficiary persons' will have to be content with the use of hard copies of works and digital works that are not protected by technological protection measures.

The modern tendency is to produce and communicate copyright works to the public in digital form by copyright owners due to ease of reproduction and cost-effectiveness. For the same reason, it is very unlikely that they will rely on copyright law alone for their protection without using the self-help protection of technological measures. This causes no problem for Australia where *Copyright (Technological Protection Measures) Regulations 1969* made under the *Copyright Act 1968 (Cth)*, permits access to such material by or for persons with a disability. Sri Lanka does not have similar regulations. Hence, this research doctrinally explores whether the new fair use provision introduced by the *Intellectual Property (Amendment) Act No 08 of 2021* of Sri Lanka could be useful for its intended purposes if there were exceptions to the anti-circumvention provisions in section 23 of the *Intellectual Property Act No 36 of 2003* designed to provide access to protected digital material as well.

Subhash Chandra ROY, Chanakya National Law University

Competitive Advantages of Trade Secrets (Undisclosed Information) and Protection under Intellectual Property Rights Law: Indian Perspectives

Every business generates some beneficial data/formula/new innovative techniques in the course of trade and confide them so that they can obtain competitive advantages in the market. Trade secrets are the process, technical knowhow, customer's list, pricing, supplier's list, methods and policies on manufacturing innovative techniques, sales, distributions, business methods, etc. These information have commercial value. Therefore, the owners confide the information from outside world for competitive advantages over the competitors. The trade secrets can be divided into technical and non-technical information. While non-technical information is copyrightable, the technical information are patentable, if disclosed. The copyrightable contents are not mandatorily registered. While the patents registration requires lots of procedures, heavy investments, time taking and ultimately limited period of rights, i.e twenty years. More so the sword of infringement hangs all the time. Therefore, many businesses /companies find it better to keep the information undisclosed. However, the proprietor is scared of disclosure of such information, for which they have to enter into non-disclosure agreement (NDA) with the employees under section 27 of the Indian contract Act. They have remedies under common law, as it is based on the principles of common law and equity.

Since there is no trace in history about any specific legislative protection in India. India had opposed the move to include 'trade secrets' as it does not fall under the category of IPRs. "It is only the restrictive and anti-competitive practices of the owners of intellectual property rights that can be considered to be 'trade related', because they alone distort or impede international trade." Hence the trade secrets cannot be considered to be intellectual property rights since the basis of IPRs lies in 'disclosure, publication and registration', trade secrets are based on 'secrecy and confidentiality'. The secrecy and confidentiality can be governed under contractual obligation, which India already has under the contract Act. However, despite opposing, Trade secrets became part and parcel of TRIPS Text under Article 39.1, and all the signatories are bound to legislate for the protection of trade secret/ confidential information or undisclosed information. However, the increasing number of cases on trade secrets in courts, the government of India drafted a bill, 'National Innovation Bill 2008', which has tried to protect and find remedies. However still it couldn't be passed in the parliament.

After a long silence, in 2016, the dialogue between India and US trade representatives (USTR) on the issues of trade secrets again came for discussion. This followed the National IPR Policy 2016, which does mention the phrase ‘Protection from Trade secret’, but the specific legislation is still a subject of consideration. Despite demand that the trade secrets law be enacted at par with US Economic Espionage Act 1996, for its protection, in the era of liberalisation, privatisation and globalisation (LPG) is an urgent need.

In this context, this paper seeks to study, the requirements of the trade secrets laws in India with reference to WIPO, WTO, US Economic Espionage Act 1996, Defend Trade Secret Act 2016, Korean and Japanese legislations, UK Trade Secret (Enforcement) Regulation 2018, and Spring Board doctrine of UK court, Anti-unfair competition Law (AUCL) of China and Indian stand over the trade secrets (Undisclosed information). With increasing number of litigations in trade secrets and weakness in contractual obligations, how can the foreign direct investment (FDI) be attracted in India, shall be the subject of discussion.

Pranjali SAHNI, CHRIST (Deemed to be University)

Checking Online Content Piracy in the Indian Digital Market – Is DRM the Right Answer?

Unlike the physical world where it is relatively easier to control copying of copyrighted works, checking piracy in the digital world becomes difficult due to the inherent nature of the internet. In order to check piracy, right-owners adopt certain techniques to prevent unauthorized use of their works, which is collectively called Digital Rights Management (DRM). Netflix does not allow downloaded videos to be viewed outside its application portal. Similarly, Amazon e-books can only be accessed via Amazon Kindle, and the content can neither be downloaded nor copied. This way DRM restricts interoperability between devices. Not only that, it also restricts accessibility of the work for fair uses recognized under international law such as for research or self-study or private family circle usage. It also makes it impossible for a market for sale of second-hand goods to exist in the digital media. DRM in such cases is managed and enforced through end-user licensing agreements binding the consumers who become ‘licensees’ and not ‘owners’ of the copyrighted works. This way DRM checks the implementation of the exhaustion doctrine in the digital world. The doctrine of exhaustion lays down that once a sale of a copyrighted good has been made, the purchaser of the good can freely exercise his discretion over the distribution of that good. Thus, the right to distribution of the copyright owners ends with the first sale of the copyrighted good. This doctrine is well established in the sale of physical goods. However, its status in the online world is a matter of extensive debate in multiple jurisdictions. This article will analyze decisions of the CJEU and the US courts which are inclined towards allowing the applicability of the exhaustion doctrine on physical goods alone. Thereafter, the position under the Indian law will be looked at. The point of concern is, whether the Indian Copyright Act 1957 allows for a distinction to be drawn between physical and digital goods u/s 14. As the Act stands today, this seems unlikely. Another question for consideration is whether inapplicability of the exhaustion doctrine and usage of DRM by restricting the consumers in the digital market is really solving the problem of online content piracy? The answer seems to be in the negative, as was witnessed during the Covid 19 pandemic when copyright content piracy was at an all-time high. It therefore becomes apparent that DRM has failed to solve the digital piracy dilemma. It is argued that less encroaching alternative solutions need to be looked at to address this issue. Perhaps blockchains could be a viable solution, as the original copyrighted work will be trackable using the unique hash code that will remain intact in further sales of the original copy by the purchaser. Any attempt to tamper with the work or create its duplicate copy will change the code, and make this pirated copy easily identifiable as such. This could be clubbed with other technological models where, for every copy made, an automated message could be sent to the author who would then be able to enforce his rights over the infringer.

Wathsala Ravihari SAMARANAYAKE, Faculty of Law University of Colombo

Re-Visiting the Concept of 'Trans-Border Reputation' in the Age of Globalization and Digitization: Indian and Sri Lankan Perspectives

In this era of global trade and digital communication, where geographical borders between States have become virtually redundant, it is inevitable that the 'aura' of well-known trademarks will transgress national borders. As an upshot of this, the reputation and goodwill attached to well-known trademarks have become less and less commensurate with the territorial delimitations of States. This raises the question whether strict adherence to the bedrock principle of 'territoriality' is both apt and justifiable in the backdrop of modern commerce- not only from a trademark holder's perspective but also from a consumer-centric viewpoint. The rift between the territoriality doctrine and the reality of modern commerce is manifestly acute in the goodwill element of the passing off action and in the statutorily stipulated criteria for assessing well-known character of a mark, especially where the so-called 'reputation-without-use scenarios' are concerned. Interestingly enough, the judicially crafted concept of 'trans-border reputation' is often hailed as a promising solution to this problem. It delinks trademark rights from the territory by bestowing protection on trademarks that have neither been used nor registered in the country where protection is sought, thereby effectively tying the protection to the 'mere reputation' of the mark. However, the trans-border reputation has often been criticized as postulating a too liberal approach to protecting foreign trademark interests. Most significantly, the concern has been raised that the application of an unbridled doctrine of 'trans-border reputation' may unduly thwart the interests of local entrepreneurs. Thus, the argument that the 'priority of innocent use' by a local trader should not be superseded by trans-border reputation of a foreign well-known trademark cannot be easily ignored. In this research, an attempt is made to critically evaluate the application of the trans-border reputation concept within the Indian and Sri Lankan legal landscapes. By employing a comparative research methodology through a critical review of the literature, this research argues that the competing interests of the trademark owners, consumers and domestic entrepreneurs can be meticulously balanced if the evidentiary burden in a trans-border reputation claim is gauged by the yardstick of 'bad faith'. Accordingly, it suggests that where there is cogent evidence of bad faith, the courts may not insist on direct evidence of 'spilling over' of trans-border reputation but should rather rely on presumptive evidence of 'spilling over' of trans-border reputation. But by contrast, where the bad faith element is lacking, the courts should not rely on mere presumptive evidence of infiltration of trans-border reputation.

Shahrina Anis SAMSUDIN, Faculty of Law, Multimedia University

Geographical Indication in Malaysia: A Case of Protecting Pua Kumbu Designs

Pua Kumbu is one of the Iban's tribe Traditional Cultural Expressions (TCEs). It is a tie-dye hand woven cloth which can have both sacred and non-sacred designs. The Iban largely live in the State of Sarawak. Hence, the Pua Kumbu are famously known to be originated from Sarawak. There are general designs of Pua Kumbu that are being used by all Iban, and there are some designs which can be known to be originated from specific area. However, there are some companies in Indonesia that use and manufactured commercially the designs that belongs to the Iban in Sarawak on cloths and selling them as souvenirs in Malaysia as belonging to the Iban in Sarawak. As a result of the unauthorized usage, the Iban in Sarawak does not profit from the commercialization, and the consumers are misled into thinking that the Iban in Sarawak profits whenever they buy the cloths as souvenirs. In light of Malaysia's new Geographical Indication Act 2022, this work-in-progress looks into the protection provided by the Act in protecting Pua Kumbu designs with the nature of TCEs. Data is collected from primary and secondary sources, primarily

statutes, journal articles, and interviews. The result is expected to provide an insight on how the Iban people can utilise the new Geographical Indications Act 2022 in protecting their Pua Kumbu designs.

Edy SANTOSO, University of Langlangbuana

Computer Program Protection: An Effort to Improve the Creative Industry in Indonesia

Nowadays, Information and Communication Technology (ICT) allows to support the creating new model of commerce based on application. In Indonesia, according to the Statista portal, the number of online shoppers is expected to increase to 65 million by 2022. Of course, this is due to the rise of creators creating various applications that contain computer programs. Here, computer programs have a very important role to support transaction processing in all e-commerce activities. Computer program is a part of creative industries which focus substantially on creating and exploiting intellectual property products that get protection under copyrights regime. Here, the role of IP is to provide protection to creators, to encourage government policies to develop creative industries. A person's creativity is an "intangible asset" that should be used to create prosperity, and can open up job opportunities. The creative industry is expected to create a work without exploiting abundant natural resources. Therefore, this paper will examine the matters related to computer program protection under copyrights related to support The Creative Industry in Indonesia.

Cristiana SAPPA, IESEG School of Management

A Script on Copyright, Virtual Reality and Cultural Heritage

Virtual reality (VR) is gaining an increasing attention in the field of cultural heritage, mainly for technological, social and policy reasons. In a legal perspective, several approaches may be taken. The ultimate aim of this research is to understand the role of VR on cultural goods for economic growth, cultural development and market and social inclusion, as well as for a better implementation of the fundamental interests of participation in cultural life and freedom to conduct a business. All this, via a focus on the role and interaction between copyright and VR in the field of cultural heritage.

If this paper was a script, copyright would be the main character acting in the city of cultural heritage, and working in the business of VR. The other main characters of the script would be the fundamental rights of access to culture, and the one of participation in cultural life, but also the fundamental freedom of conducting a business. Their presence would be justified by the fact that VR is supposed to serve them, ideally to a large extent.

VR initiatives can be implemented by cultural heritage institutes (CHIs) and public sector bodies (PSBs) managing cultural heritage, within their public task or in a complementary way to it. They can be developed in house or via public procurements or other contractual provisions concluded upon the request of the public body. Or, in alternative, they can be developed independently by third parties for mere market purposes. This reflects questions on the scope of public tasks, right ownership or authorization to exploit, and conclusion of contracts.

Then, VR is developed via the production and use of static or animated reproductions of goods collected by CHIs and PSBs, together with the elaboration of sounds and potentially many other technical tools, such as software and databases. Reproduced goods may embed works of art that are still protected by copyright or neighboring rights; also, the digital reproductions composing the VR may enjoy some protection. Copyright

may also cover sounds and other material, as well as software and databases used or developed, and then embedded within the AR. Finally, the overall AR experience is likely to be protected by a set of Intellectual Property Rights (IPRs).

This points out to questions on challenges raised as for both moral rights and economic rights while reproducing and communicating to the public data, images and other material via VR. Economic rights need to be owned by the VR developer, or licensed to her. In case copyright or neighboring rights are not owned by or licensed to the VR developer, exceptions and limitations might provide for a solution, or collective manage may. Additional sources of legal rules (such as those on public sector information or on cultural heritage) may step in to hinder or facilitate the development, and the subsequent exploitation of VR.

Manisah SARUJEE, International Islamic University Malaysia

Application of Shariah Collaborative Elements in TRL-Based Technology Commercialization for Malaysian Public Universities

With the motivation to improve the commercialization rate of Malaysian public universities, this study aims to explore the collaborative elements found in the classical Shariah frameworks that can be adopted to develop a dynamic collaborative technology commercialization framework. To answer this question, literature review was conducted on existing commercialization strategies and frameworks, and collaborative elements in classical Shariah frameworks. Apart from modern literatures, the historical accounts of Ibn Khaldun in *The Muqaddimah*, the jurisprudence on partnerships during the Ottoman Empire in *The Al-Majalla*, and Shariah Standards for Mudarabah and Musharakah in *The Accounting and Auditing Organization for Islamic Financial Institutions* were also reviewed. This study finds that the protective approach in the Intellectual Property (IP) strategy commonly adopted by the Malaysian public universities limits the success and increases the gap in commercialization. Furthermore, there is a concern on the high redundancy and coordination cost of collaboration. It was found that IP strategies based on openness and connectedness offers solutions to the issues identified. This study also highlights the collaborative frameworks in Mudarabah, Musharakah and Shariah partnership structures that the universities can use that provide a clear collaboration outcome. The outcome of this study seeks to provide Malaysian public universities with a guideline in enhancing collaborative technology commercialization. Due to the novelty in how the Shariah framework for Collaborative Commercialization could provide a guideline on how *Istisna'a*, Mudarabah and Musharakah could be used to support research commercialization at various TRLs, this study would like to continue its framework building as a PhD. It will analyse and map the Shariah frameworks against the various Technology Readiness Levels (TRLs). It will also explore *Istisna'a* as another Shariah framework due to its collaborative elements which could support Pre-Research and nascent TRLs (TRL1-3) in addition to Mudarabah and Musharakah.

Balachandran SATHYAN, University of Madras

Attribution, Recognition and Preservation: A Proposal for Sui Generis Protection to the Holders of Traditional Knowledge Manuscripts in the Light of Prizing Theory

Any knowledge system is sustained only by competitive market facilitation and patronisation. Be it the law of the jungle or the rule of law, the historical continuum of Traditional Knowledge manuscripts (TKM) from one generation to the other depends upon the rulers and their willingness to facilitate market competition and patronisation. Not all TKM have survived the fire of destructive forces in history. In the 21st century if

there are still innumerable TKM available to us, it's purely out of the resilience of the people or the civility of their rulers. The Customary holders of Traditional Knowledge and Traditional Cultural Expression Manuscripts (CHTKM & CHTCEM) have a legitimate right to expect their property to be duly attributed and recognized. When any CHTKM is identified with a very specific specialisation of a particular knowledge, say for example medicine, there is no question of their property rights, as it's the ancestors of the family who have transferred it to their offsprings.

CHTKM & CHTCEM strive for protection in two ways: first, access control, i.e. the stipulation of a prior informed consent requirement ('PIC') and fair access and benefit-sharing (ABS) mechanisms, allowing them to ban unauthorized use (so-called positive protection); and second, the exclusion of IP rights relating to TK for the benefit of third parties (so-called defensive protection). Under the conventional IP regime, Traditional Knowledge (TK) or Traditional Cultural Expressions (TCEs) are protected only in the particular form in which they have been expressed. Whenever a TK manuscript is published by the manuscript preservation agency, it's immediately exposed to the market consumption indifferent of the attribution and recognition circumscribed to it. And as a conventional practice the public policies have hitherto prioritised preservation rather than the licit attribution and recognition due to the holders. Any attempt of preservation of TKM for public consumption without attribution and recognition will only destroy the original property rights of the CHTKM & CHTCEM.

Given the above mentioned scenario, the present study puts forth Prize System as a solution to duly recognise the resilience and the property rights of the CHTKM & CHTCEM. Through prize system, The State, International Organisations and Foundations can create a prize fund to recognize the CHTKM & CHTCEM whosoever is willing to share their manuscripts to be placed in the public domain. The size of the prize shall be calibrated to the magnitude of contribution. With the help of prize system in line a sui generis benefit sharing system shall be created without being abused by the third parties. In that context, the rights, needs and expectations of CHTKM & CHTCEM should be placed front and centre, by ensuring either preservation is guided by the well being of the stakeholders or, at least, they are consulted at each step. The present study proposes a sui generis protection to the CHTKM & CHTCEM by redefining conventional IP terms, such as "protection," "originality," "novelty" and the "public domain" in the light of prize theory.

Keita SATO, Chuo Law School, Chuo University

Why are Prints (Hanga) Considered as Works of Art? Japanese Perspectives

The purpose of this presentation is to examine the copyrightability of prints (hanga), with comparison of another category such as photographs, and propose a solution on how to recognize them as works of art. In Japan at present, exhibitions of foreign paintings can no longer be held due to soaring insurance premiums due to the impact of the corona disaster. For this reason, a great number of exhibitions of prints have been held and attracted attention, and trade of print works are also drastically increased. Alongside, many counterfeit prints were circulating, and an art dealer was found guilty in March, 2022.

Prints are basically copies, but are traditionally considered as original works of art. In fact, Japanese Copyright Law specifies prints as one of examples of copyrighted works alongside paintings. Photographs are also exemplified as works, although they are reproductions (US Copyright Act Section 101 as well). However, Japanese courts did not make it clear why originality in prints is recognized even though it is a reproduction, and there are no judgments directly answering this point. In general terms, there was only a Supreme Court decision stating that it is necessary to have "aesthetic character" in order to qualify as work of art (Gona-U decision denying copyrightability of type fonts).

On the other hand, in the field of art trade, it is customary to trade prints as works of art with an edition number (listing the total number of prints and the number of them printed) and an author's signature. This edition numbered and signed practice has been established since the Vienna 3rd International Congress of plastic art in 1960. In Japan, also this practice is broadly accepted, although not well-established in the field of photography (to which similarly recognized the copyrightability of reproductions. Then, it can be said that the description of edition numbers has no relationship with recognizing originality. So, how should we understand the "aesthetic character" that underpins the copyrightability of prints?

I will give some hints. The painter Yoshio Yoshimura finished splendid drawings. His way of drawing was very special, because he first took a photo, and made an enlarged copy of a photo, then drew squares of several millimeters square, classified the shades into nine levels, and painted each of the squares drawn on paper one by one. In this way, he completed a painting of transcendental skill using a technique. Yoshimura's works will be recognized by everyone as excellent paintings. There could be a hint here to answer the question. Also, Japan has a tradition of "Ukiyo-e" namely old wooden block carving prints. It is well-known that several Ukiyo-e works were copied by Van Gogh as drawings. Ukiyo-e was made jointly produced by painters, engravers, and scissors, but it has become a custom to be introduced as the work of painters. Also in this regard, I will clarify the problems and search for a solution.

Viktoriia SAVINA, Plekhanov Russian University of Economics

Artificial Intelligence Technology and IP Law

The article is devoted to the analysis of issues of protecting the rights to digital content created using artificial intelligence technology and neural networks, which are updated with the development of these technologies and the expansion of their application in various areas of society. Issues on protecting the rights and legitimate interests of developers have come to the fore in the field of intellectual property law. At the same time, with the help of intelligent systems, can be created not only legally legible content, but also other data, relations about which are also subject to protection. In this regard, the standardization of requirements for procedures and means of storage big data used in the development, testing and operation of artificial intelligence systems, as well as the use of blockchain technology, are of particular importance.

Purpose: to form an idea of the areas of legal and the prospects for the application of artificial intelligence technology from a legal perspective based on an analysis of Russian and foreign scientific sources.

Results: analysis of the practice of using artificial intelligence systems showed analysis of the practice of using artificial intelligence systems has shown that today intelligent algorithms are understood as a variety of technologies that are based on or related to intelligent systems, but do not always fall under the concept of classical artificial intelligence. Strictly speaking, classic results created by autonomous artificial intelligence have features of works. At the same time, the resolution of issues of a public law nature is required: obtaining consent to the processing of data from the subjects of this data, determining the legal personality of these persons, establishing legal liability in connection with the unfair use of data obtained for decision-making. Standardization and application of blockchain technology can help in their resolution. **Conclusions:** In connection with the identified and constantly changing composition of high technologies that fall under the definition of artificial intelligence highlights various issues that are divided into groups. A number of issues of legal regulation in this area have already been resolved and have lost their relevance for advanced legal science (legal personality of artificial intelligence technology), a number of issues can be resolved using existing legal mechanisms (analysis of personal data and other information in the course

of applying computational intelligence technology for decision-making), and some require new approaches from legal science (development of a sui generis legal regime for the results of artificial intelligence technology, provided that the original result is obtained).

Agung SAYUTI, Legal Team, National Research and Innovation Agency

Patent Provisions toward Investment: Recommendation for Future Indonesian Patent Bill

Indonesian National Patent Law System is still considered ineffective. Though it has been enacted under the Law Number 13 of 2016, which replaced the previous, Law Number 14 of 2001, government still evaluate the effectiveness of its implication toward investments. In order to encourage an increase in the investment ecosystem and provide convenience in investments making, the Omnibus Law method has been initiated to amend several provisions in the Patent Law and enacted under the Law Number 11 of 2020 on Job Creation Law. In less than two years of its enactment, the Directorate General of Intellectual Property at the Ministry of Law and Human Rights reconsiders to adjust several regulations. These new arrangements include provisions regarding patent examination procedures, protection of inventions by international rules, and technology transfer. Several approach including protection under computer implemented invention will be proposed. This become crucial to improve national benefit toward emerging investment and innovation encouragement by coping technological development and vast globalization. This amendment can also be a solution to escalate financial benefit for the inventors and stakeholders. Several of these new provisions require a thorough analysis of the implementation of investment and ease of doing business in Indonesia, particularly the regulation regarding Patent Commercialization and its utilization.

Patent commercialization is highly influenced by the quality of patents. As a stimulus for inventors to produce high quality patents, the Government issued Minister of Finance Regulation No. 136/PMK.02/2021. In practice, the disbursement of compensation for successful invention must be supported by effective planning in the research institution's budget. On the other hand, the ineffectiveness will affect in payment of rewards for the inventors. In line with this, the Government has also ratified The Regulation of the Minister for Law and Human Rights No. 20 of 2020 to support technology transfer from patents through the imposition of specific patent rates. However, to support emerging technology transfer, these regulations required evaluation Changes to the Patent Bill have been proposed for discussion in the 2023 National Priority Legislation Program (Prolegnas). Apart from that, the implementation of patents by foreign parties who have businesses in Indonesia must also be assigned to the Patent Bill because this will encourage investment. This paper discusses how the recommendations for comprehensive regulation are contained in the Patent Bill to expand the investment ecosystem that is equitable and enhances economic competitiveness.

Riccardo Vecellio SEGATE, School of Law, University of Dundee

Precedential Value of Judicial Decisions in Increasingly Hybridised Civil-law Systems: Chinese Choreographies at the WTO

Pursuant to Article 63 TRIPS, a State may demand other treaty parties to disclose their IP case-law “of general application”. While most domestic judgements are indeed of general application in common law, civil-law systems theoretically employ judgements as reference only. Nevertheless, to value consistency and predictability, the hybridisation of civil-law jurisdictions is increasingly leading them to devise special lists of judgements that acquire formal or factual binding status on lower-ranked courts. This trend is particularly evident in China, whose SPC’s “Guiding Cases” join other specific categories of holdings within “Judicial

Interpretations” and further guideline documents which are factually binding domestically. When the US and the EU submitted requests through the WTO in order for China to disclose the entire spectrum of its case-law of general application, China responded that civil-law jurisdictions issue no judgment whose bindingness extends beyond the parties. What are the limitations and merits of the Chinese stance?

Mayuree SENGUPTA, Researcher, Indian Institute of Management Kashipur

Wherewithal of Women Inventors in India: Lacunae and Opportunities

Traditionally, women have had unequal opportunities in education and workforce participation in some countries. Nevertheless, majority of the respective governments have actively tried to address the gap by policy reforms. Gender disparity is a familiar phenomenon, especially while patenting innovations. However, harnessing intellectual property can be an effective mechanism for enabling women to be self-reliant. As patents are widely accepted as an indicator of innovation and knowledge, therefore, examining patents filed by female inventors can be expected to reveal wherewithal of women inventors in a particular jurisdiction. The objective of the present study is to review female contribution with respect to patentable innovation in India. In India, recently there have been amendments to existing patent rules to incentivize and thus encourage patent filings by female inventors. The present research proposes to assess the impact of this exclusive gender-based affirmative action on Indian patent landscape in the post-Covid era.

Paramita SENGUPTA, Patel College of Law, Karnataka State Law University

Erasing Digital Footprints and the Right to be Forgotten - A Legal Conundrum

The right to be forgotten constitutes a part of an individual's right to privacy. A data principal has the right to have his/ her digital footprints removed from internet search to prevent appearance of personal information in internet searches, databases when it is no longer needed. The right to be forgotten is a contentious issue in every discussion on data protection as it ensures control over erasure of data processed by data fiduciary. The right to be forgotten is rooted in tradition as every culture and society upholds an individual's right to bury the past and move on. In today's data driven world information is a tool which has the power to model business strategy, help in identifying the areas of the areas of medical, social or legal research that need attention and pave way towards finding solution to the problems that pose threat to human and other forms of life on earth. The big data era has made it possible for collecting information on individuals behaviour by data collectors enabling them to predict the subjects' behaviour by following the pattern of internet searches and personal information provided during the searches. The" internet behaviour "of individuals leave behind digital footprints which are imprinted every time one clicks on the search button and the information seems to be increasingly difficult to be forgotten. One is exposing oneself to the risk of misuse of personal information every time one is signing up for some service on the virtual platform and the everything from buying pattern to events attended is remembered by the world wide web network, the internet as we call it. The significance of information and its uses gives rise to the debate on the issue of the right to be forgotten. The removal of information from internet can be seen as exercising control over information and can be detrimental to public interest. This study aims at making a comparative analysis of the opposing arguments on the right to be forgotten.

Kasmawati SH, Faculty of Law, University of Lampung

How Should We Addressed Cultures Appropriation toward Intellectual Property Rights Regimes in Indonesia

Cultural appropriation refers to the use of traditional that belong to a non-dominant cultural object or element in a way that does not respect its original meaning, rewards its source, reinforces stereotypes or contributes to oppression. In other words, cultural appropriation occurs when the dominant cultural group utilizes elements of the non-dominant group in a way that is considered exploitative. Mostly, the owner of the culture will against the use of their culture based on moral consciousness because it is not applied as it should be and usually, the community do not realize that their culture is vandalized. Therefore, it was late to prevent the appropriation oct. Also currently, there are many cultural appropriation cases of local culture also used for commercial purposes and profit. Actually, TRIPS regimes facilitate the protection for cultural creativities via Traditional Cultural Expressions/Expressions of Folklore. Recent years Indonesia also develops effort to protect cultural creativity using as known as communal intellectual property rights. This article will outlook how IPR regime in Indonesia address cultural appropriation. The method used in this research is normative legal research based on literature research. This study finds that there is no specific regulation on protection of TCE, but the protection will use other form of IPR such as Copy Right. However, Indonesia is indeed forwarding the effort to protect TCE by starting up database of TCE.

Owais Hassan SHAIKH, Department of Law, Shaheed Zulfiqar Ali Bhutto University of Law

Pharmaceutical Test Data Exclusivity in Ftas and Their Implementation in National Laws: An Updated Idea

Protection of pharmaceutical test data through a time-limited exclusive right has been part of Free Trade Agreements (FTAs) starting from as early as 1994 when United States, Canada and Mexico enacted the North America Free Trade Agreement. Following suit, the European Union and the European Free Trade Association started including similar provisions in their own FTAs with their trading partners.

To date several FTAs contain such provisions. This not only gives a specific interpretation to Article 39(3) of the Agreement on Trade-related Aspects of Intellectual Property Rights (TRIPS Agreement), it also raises the minimum standard of this article from protection of pharmaceutical test data against unfair commercial use to protection through an exclusive right, primarily due to the Most Favored Nation requirement as enshrined in Article 4 of the TRIPS Agreement.

This works firstly takes stock of the test data exclusivity provisions in FTAs concluded to date. It then compares these provisions with the implementing legislation of the FTA parties. The objective is to assess how FTA parties implement test data exclusivity provision in the their national laws. For this purpose the Index of Data Exclusivity and Access (IDEAS) is utilized. IDEAS was first used in 2016 by the author to study FTAs concluded till 2010. This work updates IDEAS by including FTAs concluded in the last decade containing provisions on test data exclusivity. Accordingly, it ranks test data exclusivity provisions in FTAs and in the national laws from most to least access-oriented. The works provides FTA negotiators as well as law makers important insights to all relevant FTAs and national laws, enabling them to negotiate and draft test data exclusivity provisions most suitable to their national needs and interests.

Ajay K SHARMA, Rajiv Gandhi School of Intellectual Property Law, IIT Kharagpur

Intellectual Property Enforcement in Cross Border Cases: Indian Perspective

Every member nation have enacted their respective national IP Law under TRIPs obligations. As far as territorial violation is concerned, is easily dealt in accordance with the provisions of such national IP Laws but when such violations involved the cross border transit of infringed goods etc., the overlapping laws of the bordering nations get involved and the question arises that which national law will be enforced in such cases. To resolve such issues some nation may have bilateral agreement/treaty with some other nations but not with all. Over the years, the number of such cases have increased, and how they have been dealt? Which were the contentious issues, and technicalities involved in such cases... particularly in the Indian perspective has been analysed in this paper with comparison with other IP regimes in Asia. A holistic view of the contentious issues involved, and legal technicalities to enforce IPRs in such cross border cases, given to explain the issues in depth. Which are the other laws than IPRs which will be applied in such cases. The methodology is analytical and observational.

Nitan SHARMA, and Kartika BAKSHI, Amity Law School, Amity University

Technological Innovation for Air Quality Management: Analysis and Perspectives

The problem of air pollution is worsened by a lack of understanding, both among scientists and among different stakeholders, such as industry, the government, and pressure groups, leading to a range of interests and beliefs. We cannot afford to learn incrementally through trial and error methods given the stakes. There is no "magic bullet" approach to safeguard the health of people and the environment because the causes of the decline in global air quality are complex, as is the case with many problems that the modern world faces. Instead, a multifaceted strategy that integrates political, technological, innovative, and sociological responses is required. The fact that environmental issues may be measured is one of their key characteristics, and modern technology and innovation play a major role in this regard. For instance, air quality monitoring methods are crucial if we are to arm ourselves with the most recent data on pollution sources, concentrations, and effects. But considering the human, educational, and financial resources required for effective air pollution monitoring, it is still unclear to what degree such technologies are the answer to pollution. To give people more sustainable options and possibilities to solve the problem of improving air quality, this requires for technological advancements from specialists and even technology transfer from industrialised nations. The innovation introduced by Globally Unified Air Quality, Urbanemission.info, IndiaAirQuality.info, IQ Air, ClimaCell, and KIDS by the use of technology in Air Quality Management is commendable in this regard and can help in some way address environmental injustice as now with the technological innovations of like nature, people especially from more polluted regions will be able to make more informed choices regarding their daily lifestyle, health, and personal preferences.

Dilip SHARMA, ICFAI Law School, IFHE, Hyderabad

Valuation of Intellectual Property Assets – An Unsolved Puzzle

Intellectual property valuation refers to the process of determining the monetary value of an IP asset. Intellectual property valuation is obligatory for various purposes (known as IP valuation triggers) such as licensing, assignment, donation or insurance of an IP asset or for calculation of damages during infringement or mergers or acquisition or financial reporting or bankruptcy/liquidation of an entity. Determining the

appropriate value of an IP asset is crucial for reaping the maximum benefits out of it. There are multiple methods of intellectual property valuation such as cost method, market method, income method and several modern methods like royalty rate method, right hand thumb rule, loss of profit calculation method, decision tree analysis method, contingent claim analysis method and Monte-Carlo simulation method etc. Each of these methods have several advantages and disadvantages and can be used only under certain specific circumstances. Thus, selecting the suitable method for finding the appropriate value of an intellectual property asset among so many available options is really a challenging task. Hence, the author in this article focuses on various methods of intellectual property valuation including both traditional as well as modern methods along with the pros and cons of using each of these methods. After carefully analysing all the methods of IP valuation, the research work also suggests the best method of IP valuation under different circumstances.

Kiran SHARMA, ICAI Law School, IFHE, Hyderabad

“Latching on”: An Intellectual Property Infringement by E-commerce Platform

Based on the transactions made on its portal, E-commerce platforms recommend specific items in a given category such as “Best Sellers” when a seller wants to put their products there. Along with this, it offers the new seller the chance to become one of the “More Sellers” of the best-selling products. The third-party seller is also given the option to incorporate well-liked listings from other vendors onto its own listings page. This is known as “latching on”. The process of “latching on” enables third-party sellers to include numerous items from a specific brand in their own listings along with pictures of those items. Such a feature should not be used or made available by these platforms which are harming the brand owner or the person who developed the original product. Before such activity by any seller is permissible, consent and authorization of the brand owner and the listing owner should be required otherwise it will amount to trademark and copyright infringement. Such acts undoubtedly constituted passing off because they amounted to the unauthorized use of the company’s mark and its goodwill. A passing-off action, which was formerly restricted to products with identical logos, markings, names, and labels in the physical world, has now taken on a new dimension in this subject as a result of the arrival of e-commerce. These platforms have a sizable window and some components, like the “latch on” feature, may be harmful. The seller who is using the keywords of the popular brand to divert the traffic on their website, no doubt will be held responsible but the E-commerce platform working as an intermediary and making available the platform to third-party to use such keywords can be held responsible, or not is a matter of question. Moreover, such kind of features on these platforms are encouraging third-party sellers to capitalize on the popularity of real-owner products and designs. The law in India with respect to intermediaries has a safe harbor provision. So, can these intermediaries escape themselves every time using such safe harbor provisions?

Rudra SHARMA, Faculty of Art, Law, and Education, Purbanchhal University

Protection of Trademark across the Borders: A Case of Nepal

As intellectual property is geographical specific, protection of trademark across the border is problematic. It is more difficult in such countries where borders are open and unregulated. This is the situation of Nepal where the geographical boundaries towards India are open and a little regulated. Similar situation is with China except the natural walls of high mountains that can be considered a kind of restriction in the open borders. However, the proximity of shared borders is gradually becoming difficult protection of trademarks

across the borders. Such proximity of Nepal towards India and China has exposed more risks for protection of trademarks in digital world like domain name registration and cyber squatting related to trademark.

Besides the geographical proximities and open borders, there are difficulties related legal systems. Nepal is a common law system. However, trademarks in Nepal are largely protected based on registration rather than use. India is also a common law system but it seeks protection of trademark (at least in Nepal) based on uses rather than registration. China is a civil law country.

Nepal has domestic laws for protection of trademark. It is yet to be member of the Madrid system. However, Nepal is a member of World Trade Organization (WTO), World Intellectual Property Organization (WIPO) and some other regional and bilateral trading agreements. Nepal and India has done treaties of trade, transit and agreement related to unauthorized trade. Besides the domestic laws and international instruments, we can take resort to the Article 6bis of Paris Convention and Article 16 of the TRIPS agreement for the protection of trademark across the border. Further, there have been some attempts from informal co-operation between and among the chamber of commerce and civil society for better protection of trademark across the border. There may be some services available from private sector for the protection of trademark at the custom and border points.

The above account is all about established facts for protection of trademark across the borders. However, they have not been enough. Businesses are much suffered by non-compliance or infringement of trademark across the border. Therefore, we may consider some more measures for the protection of trademark across the border. Some of them may be as follows – (1) Better measures for protection of trademark through passing off (2) Protection of trademark through tort law and consumer protection law (3) Can we consider an additional mechanism within Madrid system ? The Madrid treaty and Protocol for registration and protection of trademark is laudable. But, can we consider a more effective mechanism under the Madrid System? Such 'more effective' mechanism should look into the grounds for compliance and protection of trademark across the borders.

Sajal SHARMA, School of Law, University of Petroleum and Energy Studies

Private Properties including Intellectual Properties in Outerspace Bodies: Time for Rebooting Non-Appropriation Principle of Outer Space Law in the Light of Established Economic Principles

The reach of humanity as a species is not limited to the Earth. The launch of the first artificial satellite Sputnik on 15 October 1957 heralded a new age in the expanding human footprint. Subsequently on July 20 1969 two American astronauts landed on the Moon and hoisted the American flag on its surface. Budgetary constraints and technological challenges reduced the interest in outer space bodies in the three decades post the first manned mission to the Moon. Time having stepped into the third decade of the new millennium the scenario has changed drastically. Private corporations have come big time into the new space race and the aspiration of man to be a multi planetary species looks only few decades away.

One of the hurdles in this developmental march appears to be the fifty-year-old international space law regime built around the Outer Space Treaty of 1967. It governs the activities of the States in the exploration and use of outer space, including the Moon and other celestial bodies. It is built on principles which suited the times of the old millennium. With climate change now a major concern promotion of outerspace activities is a must. If private enterprise is to succeed in developing the technology to not only take humans to Moon and beyond and to create viable settlements a lot would depend on how the question of private properties is addressed on these celestial bodies.

The importance of having well-defined and strongly protected property rights including intellectual properties on these celestial bodies is something economists and policymakers need to look into. A private property system would give corporations the exclusive right to use their resources as they see fit. It is also important that intellectual properties developed in outer space are adequately protected. That dominion over what is theirs would lead such property users to take full account of all the benefits and costs of employing those resources on these celestial bodies. In order to get the efficient outcome by weighing the costs and benefits there is a need to clarify the position of international space law vis-à-vis private property on the celestial bodies.

This paper proposes a reform of the existing law towards those ends. It is suggested to develop a new legal regime suited to the needs of the outer space and celestial bodies that would allow a sustainable development of the resources in outer space.

Arunima SHASTRI, School of Law CHRIST (Deemed to be) University

Analyzing Deepfake's Distress on Intellectual Property Rights

Deepfakes are emergent works created by Artificial Intelligence that present new challenges to IP regime. Deepfakes are certain audio and video manipulation processed by AI through software rooted in deep neural network. Its tremendous capacity from creating memes to fake pornographic videos, to making politicians speak about something they did not, signifies the length and breadth of disaster it withholds for individuals and societies. Through this research paper it is intended to examine the distress caused by deepfake to the present IP regime in India and abroad, particularly the Rights of Publicity; Personality Rights woven under Copyright, Damages and Royalties. Currently, the degree of likeness/semblance is determinant factor decisive on what should we categorize deepfake to be. AI poses threat and concerns on a greater magnitude when the voices and faces of several individual are blended together. It would be an endeavor of the author to sieve through the rights of the individuals in these circumstances. Besides, there is criminal aspect wobbling with deepfake if source code and creator are identified, the regulations and policies can be framed accordingly to address the situation, alarmingly raising concerns.

Sajid SHEIKH and Gunjan DESHPANDE, Maharashtra National Law University

Minimizing Digital Infringement through the Use of Technology

Digitalization has made the content easily accessible and made infringement easier, faster, cheaper, and untraceable at times. The high volume of illegal uses has increased over the past decade. Digital infringement is challenging the very goal of IP policies, which is to promote innovation, and protect the content and the rights of the owner and creator. In a developing country like India, the lack of an enforcement Agency is hampering the rights of millions; and on the other hand, International legal instruments are providing protection all over the world. While the countries are building economies over this intangible property, Indian IP is losing its value due to a dramatic increase in the number of infringements. Whereas private companies have adopted inventive mechanisms to stop digital infringement- like Netflix, any screenshot taken on the same device on which Netflix is streaming, the screenshot will be black; or YouTube policies and technology actively ensure while uploading that there is no copyright infringement and further second manual examination of content is done by the examiner to ensure zero infringement. With the changing styles of infringement, the enforcement agency and mechanism should also change to adapt to the

changing technologies. The authors argue that the use of Technical Protection Services (TPSs) is the most effective way to curb digital infringement. Rather than working on a strong enforcement human agency, a strong AI-based enforcement mechanism that will curb the infringement on every digital front will lead to a minimum infringement society.

David SIMON, Harvard Law School

The Other FDA

In one traditional story of drug regulation, the Food and Drug Administration (“FDA”) protects consumers by approving only those uses of drugs that are safe and effective. The Centers for Medicare and Medicaid Services (“CMS”), on the other hand, simply pays for drugs used in the manner FDA approves. This Article shows that this isn’t always true. In some cases, CMS decides which uses to pay for based on evidence rather than simply approval: it acts as *The Other FDA*. This reconceptualization has two significant implications. First, it enables the marriage of two seemingly diametrically opposed views of drug approval: the speed-centered approach favored by economists (where FDA approval is either voluntary or evaluates only safety) and the safety-centered approach favored by many academics (where FDA approval standards are retained or strengthened). Using this new picture, FDA could approve drugs based on safety (satisfying the speed-centered approach) and CMS could regulate efficacy by modulating use through reimbursement (satisfying the safety-centered approach). Second, it provides a thought experiment to test economists’ proposals to lower or eliminate FDA efficacy standards for drug approval. Thinking through this proposal shows a variety of benefits and costs economists have not fully considered. As a result, it suggests that the most appropriate step forward in any such regime is a small one. To illustrate, it proposes a targeted pilot program for specific types of cancer drugs where FDA approves the drug based on safety and CMS evaluates efficacy for reimbursement purposes.

Alaknanda SINGH, Amity Law School, Amity University

Biotechnology and Patent Protection: Comparative Analysis of Developments in the US and India

The scope of invention and research are expanding globally with advancement of technology and availability of genetic resources. India is known for its rich biodiversity which can be useful for research, innovation and betterment of human lives. Biotechnology is the area of science that involves the application of technology on living organisms and biological resources for development and innovation of different products and processes useful in various industries. There have been numerous developments and research in the field of biotechnology in India including pharmaceutical inventions, agricultural products, gene-based inventions, cosmetic and other industrial products. The abundance and variety of biological resources and advancement of technology have contributed to the development of Indian biotech sector, scope of entrepreneurship and other industries, making India one of the prominent global manufacturers and suppliers of biotechnological products. There have been significant developments during the covid-19 pandemic era related to the vaccines, diagnostics, gene sequencing and other novel biotech process and products.

Inventions in the field of biotechnology can be patent protected subject to conditions of patentability and other criteria which are either country specific or regulated by international legal standards. There have been debates and discussion between countries regarding the patentability and protection of biotechnological inventions at various platforms. Based on recent global developments and judicial precedents, it is seen that countries have divergent approach and views regarding patent protection of living organism, particularly

the inventions involving higher organisms. The objective of this research paper is to explore the scope of patent protection and biotech inventions through comparative analysis of the judicial developments in the US and India.

Bhupinder SINGH, School of Law, SVKM'S NMIMS (Deemed to be) University

IPRs, Innovation and Development: Complexities in Fostering Critical Thinking in Curriculum Innovation concerning Legal Regime

Innovation is the key factor boosting economics and international competitiveness, but it takes a long time for a nation to get to the point where innovation becomes the main force. The concept of innovation has to be seen somewhat differently when applied to latecomer nations than it is when applied to leaders. The leading nations are eager in keeping their advantage via "world-first" advances in goods, services or generally abstract knowledge. Innovation refers to "new-to-the-country" innovation for latecomer nations whose main strategic objective is to catch up, which entails the management of rapid diffusion of technology from advanced to catch-up countries. The idea offers a method for improving the quality of academic instruction via the study of student feedback systems. The technology combines textual feedback and machine learning. This approach examines the remarks, viewpoints and assessments of instructors made by students. Textual criticism enhances teaching style and provides valuable insights on the effectiveness of instruction. The purpose of this study is to assess machine learning methods, IPRs, Innovation and Developments focusing upon complexities in fostering critical thinking and advancement in curriculum innovation concerning global innovation networks. Data on instruction and learning are included in the dataset. Based on textual comments, this research divides student feedback into three categories: positive, negative, and neutral. The input is recorded by the technology and stored in an authorized database. To assist the teacher see the input, ratings and graphs are provided. This method improves student learning by providing teachers with insightful feedback. Economic leaders in developing nations have resisted calls to make their intellectual property rights (IPR) regimes stronger for decades. Many of them have cited the development of high-tech industries in Asia as evidence for the idea that weakening IPR regimes at certain periods of economic development might serve as an infant industry strategy, promoting the expansion of locally based enterprises with cutting-edge technology. This article evaluates current econometric research on how changes in IPR policy affect educational growth and comes to the conclusion that most of the research points to the acceleration of education and innovation development with stronger IPR regimes. Technologically advanced sectors indicate that protracted periods of education and innovation growth with inadequate IPR regimes may lead to issues that manifest over time. This paper will examine from the legal perspective concerning IPRs and innovation with regard to quality education with curriculum advancement.

Kshitij Singh, Faculty of Law, University of Delhi

IPR and Crisis Innovation: An Inquiry into the COVID-19 Pandemic

Crises provide opportunities for innovators to create new technological solutions to emerging problems. However, it also raises a resource-related burden on the innovation system. On an individual level, a crisis generates new demands for goods and services for private companies, yet these companies face investment constraints without a supporting mechanism. Health crises such as the COVID-19 pandemic demand innovative products and services in no time. It poses an enormous burden on the health innovation system, which critics argue is a broken system. IPR is considered one of the main drivers of innovation that guarantees economic incentives to investors and innovators. However, access to IP-protected products and

services is vital to make an innovation socially relevant. How to trigger and sustain innovation in a crisis is increasingly challenging. A well-defined innovation policy that tailors the innovation system according to the suitable incentive models is the key.

The COVID-19 pandemic has enabled us to learn about the success and failure of different innovative policies. It has created a demand for new technologies to control the spread of disease and treat disease. It reflects a mix of encouraging and discouraging signs (many initiatives started well but ended in disappointment). The encouraging signs includes: an increased collaboration at the global, national and local levels; private-private, public-private, government-academic, and industry-academic partnerships; patent pledges; and unilateral commitments not to enforce IP rights during the pandemic. These initiatives led to the fast designing and manufacturing of personal protective equipment (PPE), medical devices, vaccine technologies and different vaccines. Many of these innovative activities took place beyond organizational boundaries and with the help of collaboration and open innovation. However, after the discovery of vaccines, the distribution and allocation of vaccines have remained a vital issue, along with the failure or the partial success of global efforts in the form of C-TAP and COVAX plagued with the accumulation of vaccines by rich countries leading to vaccine nationalism.

Patent policy encountered two competing challenges during the COVID-19 pandemic: first, the allocation of existing resources among potential users; and second, the creation of new technologies through innovation. Regarding the first challenge, governments could intervene through compulsory licensing and governmental use rights. To respond to the second challenge, preservation of incentive structures became pertinent to encourage the private sector to develop vaccines and therapeutics. Theoretical ambiguity and potential constraints in applying the compulsory licensing and inability to access the know-how of vaccine manufacturing led India and South Africa to move a proposal for IP waiver. Countries opposing the IP waiver proposal suggested that the existing framework in patent law needs to be explored and applied instead of IP waiver. The COVID-19 pandemic spark the following debatable questions: Do we need to appreciate the distinction between health crises such as COVID-19 pandemic and other crises? What kind of incentive models and innovative approaches a health crisis needs? Whether open innovation during COVID-19 is sustainable? Do specific sectors demand specific approaches to innovation with or without IP (e.g. innovation in antimicrobial drugs and vaccines)? Against this background, the present paper examines the interrelation between IPR and Innovation in health crises, emphasizing the learning from COVID-19 pandemic.

Vikram SINGH, Indian Council of Agricultural Research

Intellectual Assets Management in National Agricultural Research System (NARS) in India

Indian Council of Agricultural Research (ICAR) is the apex body for agricultural research and education in the country, which started its journey with the recommendations of the Royal Commission in 1929. The commission had focussed on food availability and its distribution in the country, where Council had been given the major responsibility to make the country hunger free through its crop improvement initiatives. After independence, hard work of ICAR scientists and political will of the national leadership assured the food availability in the country through the Green Revolution, which continued by adding milk, fish, egg, meat, fruit and vegetables in the food basket of the country. These efforts resulted in the form of new crop varieties; germplasms; farm machinery; and crop husbandry, animal health, fish production practices, which became the technological base of the Council. To protect these technological innovations, the council had started participating in the discussions/initiatives with different national and internal agencies, specifically for seed planting material. Meanwhile, the existing law of patent protection attracts the research

scholars/scientists of ICAR, where they had first filed a patent in 1950 for “*Desi Country Plough*” at ICAR-Indian Agricultural Research Institute (IARI), New Delhi. This trend continued up to 1995 at individual level where 100 plus technological innovations were protected through patents at Indian Patent Office (IPO).

In the late 1990s a major paradigm shift in management of agricultural research was witnessed mainly in response to issues emanating from the Convention on Biological Diversity (CBD) and the Agreements under the World Trade Organisation (WTO). As the provisions under the TRIPs Agreement (Agreement on Trade Related Aspects of Intellectual Property Rights) of the WTO, became operational from 1 January 2005, globally enforceable minimum standards of protection for all major forms of intellectual property rights (IPRs) were established. In India, these international developments were supported with amendments in the existing Intellectual Property (IP) laws and introduction of new IP laws for the remaining IP forms that were not addressed so far under any specific domestic IPR law.

ICAR institutionalized a three tier Intellectual Property (IP) management system, to protect its intellectual assets/research outcomes in the year 2006. This system is supported by Guidelines for Intellectual Property Management and Technology Transfer/Commercialization. To steer the IP environment in the research system of ICAR, a special project “Intellectual Property Management and Transfer/Commercialization of Agricultural Technology Scheme” was launched in XI Plan. This strengthening the IP governance mechanism. The three-tier system comprises of Institute Technology Management Unit (ITMU) at each ICAR institute, which is pursuing matters related to IP management with the purpose of accelerating transfer/commercialization of technologies in the institutes; Zonal Technology Management Centre (ZTMC) at level 2 to facilitate the ITMUs in their subject domain. At apex, the Intellectual Property and Technology Management (IPTM) Unit that facilitates ITMUs/ZTMUs. The unit developed policy guidelines, monitors the programs of IP management and technology commercialization and help the units on difficult issues beyond the capacity of ITMU or ZTMC.

These efforts raised ICARs’ IP Portfolio by filing Copyrights (273), Design (58), Patents (1377), Plant Variety (1482), and Trademarks (171) at IPO, USPTO, EPO, WIPO (through PCT). The efforts to know the different trajectories of ICAR’s intellectual assets/innovations through licensing to different public and private organizations in the field of agriculture and allied field of research. The data sets were analysed with best possible permutation and combination, using simple tool and graphical representations. The analysis revealed that, the pan India presence of ICAR institutes focusing to the end users by providing its research outcomes. Data w.r.t. licensing of technologies by different institution was collected since the inception of scheme i.e. 2007 onwards. The data collected were grouped in three timelines: 2007-2011; 2012-2016; and 2016-2021. Total 72 ICAR institutes who licensed 1084 technologies through 3029 licensing agreements.

Mini SRIVASTAVA, Amity Law School, Amity University

Technological Trends qua Patents in India: A Snapshot of the Past, Present and Future

The catastrophe of COVID 19 became a catalyst for extraordinary innovation by the human race. More and more organizations worldwide strived to create an alternative environment to achieve the new normal. Amidst this, it is noticed that many emerging technologies like IoT, AI, and Blockchain are playing a crucial role in creating this new normal. E.g. according to a June 2020 NASSCOM report, over 6000 IoT patents were filed in India during 2009-2019 (with 5000 being filed during 2014-19), and 40% of these patents were granted. 80% accounted for Industry 4.0-related patents. MNCs have filed more than 70% IoT Patents out of total IoT Patents. Taking a cue from the report, the areas in focus in future will be health, automotive, 5G, disaster prevention, public safety and security, manufacturing, and supply chains. The research paper

aims to highlight all such significant technological trends in patents in India. This research paper aims to assess current trends and predict emerging trends circumscribing the present position.

Yii-Der SU, School of Law, Catholic Fu-Jen University

The Perpetuation of Evidence of Patent Infringement: A Comparative Approach

The intangible nature of the intellectual property has an incentive that encourages infringement. Compared with tangible property rights, its feature of “public goods” thereof also results in the difficulty of noticing an infringement. It is especially in patent litigation, due to the industrial division, and Business-to-Business customized or closed-market transactions, where infringement facts and evidence are often controlled by infringers. Besides, the acts of infringement of process patents are not necessarily attached to a specific tangible object, conducted often in the private domain.

These cases have often led to a relatively low success rate of patent infringement claims and an unsatisfactory compensation amount in patent infringement civil lawsuits in Taiwan, under the traditional rule of allocation of the burden of proof, “*Affirmanti (non neganti) incumbit probatio*”. On the contrary, France has become one of the first countries to establish a modern intellectual property system since the 19th century. Given the complexities of intellectual property, French legislators have set up very efficient civil evidence preservation procedures in intellectual property infringement (*saisie-contrefaçon*) for benefit of right holders.

This article will analyze and compare the application elements of the perpetuation of evidence in both Taiwanese and French law, discuss the legal practices and draft amendments, and further provide some suggestions for the current situation.

P. Sree SUDHA, National Law University, Visakhapatnam

Judicial Response towards Deceptive Similarity: Public Policy Perspectives

Trademarks are essential in developing a company’s brand name and goodwill. It not only aids in the creation of brand value but also aids in the generation of revenue. A trademark is vulnerable to being infringed and/or misused because it is so important. One such way of a trademark is making “deceptively similar” trademarks. The present paper aims to understand the concept of deceptive similarity in trademarks. From public policy perspective. To establish infringement of a registered trademark, it is necessary to establish that the infringing mark is identical or deceptively similar to the registered mark, and no additional proof is required. In a passing-off action, proving that the marks are identical or deceptively similar is not enough. The mark’s use should be likely to deceive or confuse. Furthermore, in a passing-off action, it is necessary to prove that the defendant’s use of the trademark is likely to cause injury or damage to the plaintiff’s goodwill, whereas, in an infringement suit, the defendant’s use of the mark does not need to cause any injury to the plaintiff. Trademark guarantees continuance in the flow of quality. These marks are considered as the output of one’s intellect which he uses in producing the goods and applies to the trade in question. Hence, such form of intellectual property needs protection in order to ensure that quality goods and service are maintained for the welfare of the society.

With this paper the author have tried to highlight the position of the Courts in understanding the concept of deceptive similarity beyond the literal meaning of the term under law to deliver justice. Courts have developed guidelines and valuable principles to understand the concept and to protect the rights of the

trademark holder. To establish infringement of a registered trademark, it is necessary to establish that the infringing mark is identical or deceptively similar to the registered mark, and no additional proof is required. In a passing-off action, proving that the marks are identical or deceptively similar is not enough. The mark's use should be likely to deceive or confuse. Furthermore, in a passing-off action, it is necessary to prove that the defendant's use of the trademark is likely to cause injury or damage to the plaintiff's goodwill, whereas, in an infringement suit, the defendant's use of the mark does not need to cause any injury to the plaintiff. In conclusion, the author would like to present an overview of the judicial approach in easing the understanding of deceptive similarity in such a manner wherein a balance has maintained between the protection of intellectual property rights of the trademark holder as well as the growth and enlargement of the market in the present globalised world.

Ranggalawe SUGIRI, Faculty of Law, Universitas Indonesia

Issues on Local Variety Protection under Indonesia Plant Variety Protection System: The Challenge of Implementation and its Harmonization with Plant Breeders Rights to Support New Plant Varieties Development

Indonesia adopt Sui Generis protection system for new varieties of plant stipulated by TRIPS Agreement article 27.3.b. While adopting plant variety protection system of UPOV 1991 without joining UPOV Convention, Indonesia government regulate the protection of local varieties under Law No. 29/2000 of Plant Variety Protection system. This regulation aims at preserving the local varieties that being used by local farmers as not being subject to misappropriation by breeders who develop new plant varieties that claiming plant breeders right to government. After more than two decade of its implementation this regulation need to be assessed and analyzed whether or not the purpose of Local Varieties protection has achieved the objectives and stipulate the development of new plant varieties based on Local Varieties by breeders and Indonesia seed industry. This paper aim to analyze and examine the current conditions and issues being raised from local variety protection debate and discussions and the need to revise Indonesia Plant Variety Protection system in the future.

Diyana SULAIMAN and Rohazar ZUALLCOBLEY, Faculty of Law, Unversiti Teknologi MARA

Heritage Gastronomy and Intellectual Property Implications

Heritage gastronomy centres on cuisines and culinary linked to the local communities of the country, through traditions and customary practices that have been transmitted intergenerationally. Intellectual property laws offer mechanisms to protect the intellectual property of various elements of gastronomy, ranging from copyright protection for the recipe books, trade secret or confidential information law for confidential information pertaining to the cooking technique and recipes, applicable industrial designs law for unique kitchen and dining utensils, trademark law that could be applied for the name as well as the logo of restaurants or business establishments, and geographical indication designation that could further enhance the value of the delicacies and the ingredients used. Additionally heritage gastronomy acts as a pulling factor for sustainable tourism. This paper aims to discuss the approaches of intellectual property laws in Malaysia and their implications concerning heritage gastronomy in the country and its supporting roles in promoting tourism.

Mafruz SULTANA, South Asian University

Intellectual Property Rights as an Investment: A Study of Uzbekistan's Bilateral Investment Treaty Practices and its Prospects

Uzbekistan is in rapid progress in its WTO accession process, thereby compliance with TRIPS is a matter of discussion for Uzbekistan. As a least developed country, it will get the privilege of a long transition period, however, the state should design and amend its laws for maximum benefit, avoiding liability. This Article will link IPRs with the Investment regime with a specific focus on the Bilateral Investment treaties of Uzbekistan with other countries. In the globalizing world, trade, investment, and Intellectual property are interrelated of them. Trade law was introduced in international law by GATT 1947, while the concept of Intellectual property was much old, and the first BITs were signed in 1959. The protection IPR came into the international forum under Paris Convention for the Protection of Industrial Property in 1883 and then by the Berne Convention for the Protection of Literary and Artistic Works in 1886. Then, TRIPS Agreement comes as an integral agreement of WTO that covers the protection of industrial property, copyright, and new IPR, which was not included in the Paris and Berne convention. TRIPS includes IPR protection for Trademarks, patents, copyrights, industrial designs, trade secrets, geographical indicators, and integrated circuit industrial designs and sets up the minimum ceiling, but the state may give higher protection of the said intellectual property.

Now, most of the bilateral investment treaty has incorporated intellectual property rights as an asset within the ambit of the definition of Investment for the goal of adequate and effective protection of intellectual property as an investment. However, different trends may be found in this respect. Whereas some IIAs rely on detailed non-exhaustive lists of IP rights either by referring to the term 'intellectual property rights' or by directly listing the IP rights; some BITs simply rely on broader terms without listing every IP right category and by inserting catch-all clauses such as 'other intangible property'. In some definitions may intend to cover a realm broader than acquired IP rights; for instance, US-Jamaica BIT refers to 'patentable inventions' rather than only 'patents which may imply that even applications for patents are caught by definition. Till now, Uzbekistan has signed 54 BIT. Most of the BIT has incorporated IPR as an asset within the definition of Investment. Based on all those BIT, the paper will discuss what kind of IPR has been included within the definition of Investment and how it is protected under domestic regulations of Uzbekistan and what steps Uzbekistan should adopt in advance to comply with TRIPS obligations.

Alexandr SVETLICINII and Xie FALI, University of Macau Faculty of Law

Competing for Standard Essential Patent Disputes: Anti-Suit Injunctions as a U-Turn in the Chinese Courts' International Comity Approach?

To avoid "patent hijacking" by Standard Essential Patent ("SEP") holders and the "patent licensing fee stacking" problem, standard-setting bodies frequently require their members to license SEPs in under fair, reasonable, and non-discriminatory ("FRAND") terms. When a SEP holder and a patent implementer cannot reach a FRAND agreement, the actions for injunctive relief, declaratory actions to set a FRAND rate, and antitrust complaints are launched. The standard compliant products are produced and sold globally, while IP rights are being protected at the national level, thus triggering successive or parallel litigation. The national courts setting the global FRAND rates and issuing anti-suit injunctions ("ASI") and anti-anti-suit injunctions ("AASI") have challenged judicial sovereignty, affected market competition for the implementers, as well as distorted the bargaining power between SEP holders and licensees.

In 2020, China has entered the jurisdictional battle for SEP disputes when the Supreme People's Court (SPC) issued its first patent-related ASI in the *Huawei v Conversant* case. The Chinese courts followed the SPC's lead and issued a sequence of ASIs concerning the information and communication technology SEPs. The European Union, concerned with these practices, has commenced dispute settlement proceedings before the World Trade Organization arguing that Chinese ASI-related judicial practices represent a breach of obligations under the TRIPS agreement. The issuance of ASIs in SEP disputes represents a U-turn in the Chinese courts' international comity approach.

The paper discusses the Chinese courts' innovative interpretation of the existing "act preservation measures" system under the general civil procedure rules, as well as previous judicial practice in the field of maritime and shipping law where such measures originate. Further, our research analyzes the requisite legal conditions and the underlying procedures for the Chinese courts to grant ASI in SEP litigation. The growing practice of issuing ASIs will only prompt the parties to engage in parallel litigation, which deviates from the original intention of the FRAND commitments. To the resulting "race to the courthouse", this research argues for a more consistent "international comity" approach to be considered in the SEP litigation. Adopting such domestic perspective could contribute to effective settlement of the SEP licensing disputes until the emergence of an international mechanism for SEP licensing. By contrasting the Chinese courts' practice on international comity with that of other jurisdiction, this research proposes a set of principles for the assessment of the "international comity" considerations when assessing a request for an ASI in the SEP-related disputes.

Mohd SYAUFIQ, Faculty of Law, National University of Malaysia

The Role of Right Holders, Content, Providers and Government in Combating Digital Piracy in Malaysia

Copyrighted goods are easy to disseminate and shared in a digital environment at user convenience. As the world continued to develop and cross-border activity flourished, national copyright legislation was not sufficient to govern what had become a global concern and copyright theft across borders became a problem because all the legislation that was developing in the world was limited to the jurisdictions within which it was being developed. Unlike counterfeiting and piracy that results in physical goods, as a practical matter, digital piracy generally cannot be detected at national borders with the flow of pirated digital products is more difficult to track by law enforcement agencies from sellers, via distributors, to producers, than the flow of physical goods. As a result, copyright owners are struggling and searching for the most effective way to combat this worldwide problem to protect their content without depending heavily on legal recourse. Hence, this paper critically discusses the role of rights holders, content providers and the government in order to deal with the digital piracy problem to further identify strengths, gaps, and suggest an alternative way to protect right holders content in Malaysia.

Yasmine TADEO, Saint Louis University School of Law, and Clifford CHAN, Civil Services Commission - National Capital Region, and Esperanza ORIG, Attorney

Free Prior Informed Consent and the Influence of Valuation of Intellectual Property in the Philippines

Republic Act No. 8371 or the Indigenous Peoples' Rights Act of 1997 explicitly recognizes the rights of indigenous communities to participate in the decision-making processes affecting them, their lands, and their resources. The rights of Indigenous cultural communities are likewise buttressed by International Agreements such as the Nagoya Protocols. Due to the passage of the law, the National Commission on

Indigenous Peoples has promulgated guidelines on the acquisition of Free Prior Informed from affected Indigenous Cultural Communities prior to the exploitation of their lands and resources. NCIP Administrative Order No. 3, Series of 2012 or the “the Revised Guidelines on Free and Prior Informed Consent (FPIC) and Related Processes of 2012,” was passed with the intention of providing concrete steps in obtaining the consent of the affected communities. However, how does the FPIC process ensure that there is proper knowledge dissemination with respect to the use of traditional knowledge and genetic resources in ancestral lands and domain? Does this proper knowledge and dissemination include consideration of sufficient tools on valuation to ensure that the benefits to be received by the affected communities are not arbitrary in nature, but are relatively sufficient to meet their long-term needs?

This paper seeks to understand whether there are best practices in other jurisdictions that may be adapted in the Philippine setting in order to give value to intellectual properties of Indigenous Cultural Communities in the Philippines.

Carmen SIN and Corinne TAN, Nanyang Business School, Nanyang Technological University

Anything can be a Meme: Ramifications for Copyright and the Right of Publicity

In the last decade, the citizens of the internet have fashioned a language of their own. At once more humorous and efficient than our analogue tongues, to invoke a meme is to immediately convey a specific sentiment or mood understood by all. The prevailing understanding of memes in legal scholarship as images with text pasted on in cartoonish font is already defunct. As cultural tastes have grown more bizarre and netizens have access to more material as life migrates online, anything can now be a meme. Contemporary memes can take the form of images (often without text), video clips, song snippets and phrases. But all memes begin as copies of original content that internet users save and spread, sometimes with minimal alteration. This throws up thorny issues for intellectual property law. The discourse so far has advocated for the protection of memes under the fair use doctrine, a well-meaning argument that sidesteps fundamental questions on the nature of memes. In the first place, who owns a meme? The meme as a shared cultural creation resists the hallowed notion in copyright law of a single artist-author. A related enquiry considers the implications for rights of publicity as both private and public individuals find themselves reluctant entrants into the meme canon; a person’s photograph, catch-phrase or mannerisms are all plausible meme fodder. Our presentation examines these challenges.

Ufuk TEKIN, Eskisehir Osmangazi University Faculty of Law

About the Decision of the Turkish Constitutional Court dated 14 September 2022 Regarding the Duration of Term of Protection for Adaptations

The applicant stated that the work titled “Mehmet Akif Ersoy ve Safahat-Tam Metin ve Safahat Dışında Kalmış 54 Şiir” (Mehmet Akif Ersoy and Safahat - Full Text and 54 Poems Excluding Safahat) is an original adaptation and that it was created 50 years after the death of Mehmet Akif Ersoy (27 December 1936) and before the amendments made by Code No. 4410. The applicant argued that the extension of the term of protection from 50 to 70 years by Code No. 4410 would not affect the acquired rights in relation to the work. The applicant argued that the courts of first instance had misinterpreted the regulations and evidence, and claimed that the principle of legal certainty and the right to a fair trial had been violated. The applicant also complained that this situation harmed his right to property.

The main problem in this case is whether the work, which was created by adapting the poems of Mehmet Akif Ersoy after the expiration of the 50-year protection period in 1987 (this period expired in 1986) in accordance with the legislation in force, will become illegal since the protection period of the work created by adapting the poems of Mehmet Akif Ersoy was increased to 70 years with the Code No. 4110, which entered into force on 12 June 1995. The Constitutional Court decided to accept the applicant's claims, stating that the application of the provision on increasing the protection period to 70 years in the present action was incompatible with the principle of legal certainty and the protection period should be considered as 50 years (i.e. in this case the duration of term of protection expired on 27 December 1986). In this study, in the light of the decisions of the court of first instance and the decision of the constitutional court, evaluations will be made regarding the protection period of the adaptations.

Archana THAKUR, Chandigarh University

An Overview of the Patenting Stevia based Sweeteners in India

Obesity and type 2 diabetes mellitus are becoming more common all over the world. Because of the growing demand for sugar substitutes, the market now offers a varied range of artificial sweeteners and low-calorie sweeteners. This group includes saccharin, dulcin, sodium cyclamate, and a few more. However, there are a few potential risks associated with the use of artificial sweeteners. As a result of this, natural sweeteners with little to no negative side effects are seeing unprecedented market demand. Stevia rebaudiana bertoni commonly known as stevia is a tropical plant has a high sweetness. It contains no carbohydrates and contributes no calories. This is due to the presence of a high amount of steviol. Stevia has attracted the interest of researchers from all over the world in recent years. Investigating current patent activity in the stevia sweeteners can help inventors creating new products, methods and determine the potential of the market for their ideas.

Hannibal TRAVIS, Florida International University College of Law

The Nexus between Knowledge Preservation and Freedom of Expression in a Circular Global Economy

Sound recordings continue to be lost at an alarming rate, even as historians, recording academies, and the public rediscover and collaboratively enrich the world's audible cultural heritage. Video games serving as platforms for user-generated creativity and self-expression, sometimes revived by dedicated players and fans after premature termination of online access, are the subject of newly-filed copyright and rights-management litigation. The explosion in the number of published books and articles is followed fast by their falling out of print. Providing unauthorized online access to unavailable printed work has been branded as piracy and even counterfeiting.

Scholars have explored limitations on library and preservation exceptions in domestic and international copyright for many decades. Fair use/dealing, library copying, distance learning, quotation, and personal use: each exception or set of them has its own carve-outs that make assertion difficult and frequently impossible. This presentation draws on insights from prior work on limitations and exceptions, builds on it by examining the nexus between the preservation interest in intellectual-property law and the rise of a "circular economy" underwritten by a pan-European right to repair, and explains why the ecological and collaborative values of Europe may not translate anytime soon into a right of preservation in copyright and trademark/name-right law (whether in Europe or elsewhere).

An access to knowledge mobilization may be the solution. A free speech approach to the issue seems to be nearly foreclosed by U.S. rulings on copyright term extension and E.C.J. rulings on music sampling. However, a new path to preservation for knowledge sharing may exist after a U.S. Supreme Court ruling on Andy Warhol's use of photographs, or an E.C.J. ruling on upload filters in the DSM directive. Another opening may be provided by the Jack Daniels case, with the Court revisiting precisely how the freedom of speech under the Constitution limits trademark and other (notably right of publicity) enforcement. The public values of aesthetic relevance and user intent or recklessness underlying the likely outcome in Jack Daniels have clear counterparts in the values of scientific and scholarly inquiry, and good faith. A human right to lightly-mediated digital communication could motivate further legal convergence in this area, as automated locks and filters that hinder preservation are recognized as threats to our rights.

Vikesh TRIPATHI, University of Delhi and Shweta SHUKLA, Advocate, Allahabad High Court

Settlement of IP Disputes in India through Mediation with Special Reference to Draft Mediation Bill 2021

In India Mediation is an effective process of dispute resolution Mechanism for settlements of various kinds of disputes i.e., Matrimonial disputes, IP disputes, corporate disputes, etc., since time immemorial. In India, mediation is used to settle IP disputes in two ways: first, as a court-referred mediation, in which the court refers a dispute to mediation under section 89 of the Code of Civil Procedure, 1908, until a specific stage of pending IP litigation is reached. Private mediation is a type of IP mediation in which the parties agree to resolve their disputes through the use of well-qualified and trained mediators. Furthermore, the Indian judicial system is already overburdened by a backlog of cases involving intellectual property disputes.

It is pertinent to mention here that India is a signatory to United Nations Convention on International settlement agreements resulting from Mediation (New York 2018) also known as the Singapore Convention on Mediation.

With the aforesaid-mentioned-objective in mind, and in order to strengthen and promote mediation as an effective tool of the Alternative Dispute Resolution System, the Indian government proposed the Draft Mediation Bill 2021 and invited public comments. The Mediation as a settlement of IP dispute can be effective in the dispute relation licencing and infringement of IP rights, patent entitlement, trademark ownership, etc.

In this working research paper, the authors are analysing the existing legal framework to regulate the mediation in IP disputes and further exploring the legal framework provided under the Draft Mediation bill 2021 regarding the settlement of IP disputes

Sunita TRIPATHY, European University Institute

Regulating Medical Device Innovation: Points and Perspectives from History

The datafication of health and use of software *per se* in inventive activities impacting health has important social ramifications. The law for ensuring the safety, efficacy and functionality of medical devices and drugs gains prominence in that regard. Overtime technological advances has led to the adoption of artificial intelligence for early diagnosis and clinical decision making, which allows for a rethink of the prevalent approaches to regulating medical innovation. This paper identifies three main logics emerging from the

globalized intellectual property regime that apply to regulations on data privacy, trade secrecy and innovation linked to medical devices.

While importing countries like India have been testing grounds for new and nascent technologies by foreign countries, the make-in-India initiative entitles the State to check adverse events proactively. Based on such premise and comprehending the logical reasoning through the historical phases of pre-post and de-globalisation the paper critically analyses the evolution of the Indian regulatory framework for AI based medical devices. The provisional analysis entails explanation of the law on computer related inventions under the Patent Act, 1970 (as amended) and the regulation of medical devices by the Central Drug Standard Control Organisation under the Medical Device Rules, 2020. The paper concludes with observations on the challenges of protecting and regulating medical device innovation and reflects on the merits as well as potential areas of future work in the sector.

TRISTIYANTO, Faculty of Mathematics and Sciences, Lampung University

Inclusivity vs Exclusivity of Big Data: An Intersection between IPR and Open Sources

Big data refers to huge, fast, and complex data, which makes it almost impossible to process with traditional methods. Accessing and saving information for analytics have been commonly performed since years ago. However, big data gained momentum in the early 2000s, where big data is interpreted into three definitions, volume, velocity, and variety. Big data nowadays is an organization that swiftly collects data of wide varieties such as text, email, video, stock, audio, and financial transaction. Big data is unique because the data requires massive storage. Therefore, big data is generally found in software, business transactions, the Internet of Things (IoT), industrial equipment, and social media, primarily open sources. The connection between big data and open source is explicit since open source can accommodate big data. Open source is software or computer programming code publicly accessible to use, modify, and share. Open source is very beneficial because it costs less, is freely developed, and is legal. With the invention of open source, we can seek information from engines such as Google Chrome or Mozilla Firefox.

Nevertheless, open source's openness is becoming an issue in the International Property Rights Regime (IPR) because the exposed data is restricted by copyrights, patent rights, and trade secrets. Accessible data in open source will threaten IPR, knowing that many creations are illegally obtained through open sources such as music and art. Moreover, patent rights are also in a grey area due to the exposure of the license. On the other hand, we must refrain from seizing the acquirable nature of open resources and big data. The reason is that technology and information have further integrated into human lives. This situation is an intersection between open source as an inclusive entity and IPR as an exclusive entity in extensive data utilization. Hence, the research will highlight several issues: (1) Prevention of IPR exploitation in open source's transparency, (2) figuring out the ideal circumstance of prioritizing between open source's inclusivity or IPR's exclusivity, and (3) describing IPR in the computer science perspective.

Shubhi TRIVEDI, Gujarat National Law University

Motion Mark Protection for Sports Moves in India

Sportspersons have long been excluded from the scope of intellectual property rights. However, it is questionable whether this exclusion is justifiable and appropriate in the context of modern-day sport. There have been attempts made by the legal academia to introduce the sports moves and performances of athletes

to the intellectual property world. The discussions revolved around protecting unique sports moves and celebration moves under various intellectual properties especially patent, trade marks and copyright. However, the divide in the scholastic opinions continues till date, thus, keeping alive the conundrum about the protection of sports moves under intellectual property regime.

The present article introduces key contemporary arguments for protecting sportspersons' moves through motion marks. The paper discusses the interface of sports and trade mark followed by a brief discussion on registration requirements of conventional and non-conventional marks. The discourse then proceeds on graphical representation requirement for non-conventional marks succeeded by graphical representation of motion marks in special reference to India. The next part deals with case studies on motion marks in various jurisdictions followed by the application of motion marks requirements on sports moves especially in India. The last part deals with concluding remarks and suggestions.

Ronald TUNDANG, Faculty of Law, Chinese University of Hong Kong

The Outlook for Transfer of Technology of mRNA Vaccines through the WHO Tech Transfer Hub

The WHO mRNA tech transfer was established to address the challenges in scaling up mRNA vaccine production during the COVID-19 pandemic. It took us more than two years since the pandemic began to vaccinate at least sixty percent of the global population. The lack of mRNA vaccine manufacturers and raw materials are the main reasons scaling up quickly is difficult. Pfizer and Moderna are the leading companies behind COVID-19 mRNA production. The geographical factor is also limiting the distribution of vaccines. Most of the mRNA production center is in the US and Europe. mRNA vaccine is proven to provide better immunity when compared with other types of vaccines. This has prompted an initiative to have more extensive use of mRNA technology against different kinds of diseases. The WHO tech transfer hub is one of these initiatives. WHO tech transfer hub is a multilateral effort. It establishes a manufacturing center that provides technical expertise, funding, and support for the beneficiaries. There are currently fifteen countries that will be the beneficiaries of the WHO technology transfer hub. These are low and middle-income countries (LMIC). The WHO hub in South Africa will share technology and technical know-how with local producers in these countries. Defining technology is of a vital essence here. In addition to information protected by patents, the term 'technology' may include 'know-how' such as production processes, management, techniques, expertise, and the knowledge of personnel. These are exactly what the WHO tech transfer hub is trying to cover. The hub will provide training to the beneficiaries and enable them to learn about the hub's manufacturing processes. WHO will also provide capacity building to the beneficiaries through its global biomanufacturing workforce training hubs to ensure they can adopt the mRNA technology. Furthermore, WHO will ensure that regulatory authorities in LMIC can oversee and provide quality assurance of the end-products through the WHO global benchmarking tool. This is not the first time WHO established a technology transfer hub. Previously, WHO facilitated the creation of an influenza vaccine technology hub. Such a hub entails the establishment of a manufacturing facility that provides technical expertise and funding. The hub has been successful with the increased capacity of the new manufacturers in developing countries.

Existing mRNA patents may be a barrier for the WHO tech transfer hub. Currently, Moderna has three patents registered in SA related to mRNA vaccines. Hence, Moderna can enforce its patents in SA if the WHO hub or the beneficiaries decide to further develop the current batch mRNA vaccine for use other than COVID-19. The WTO TRIPs waiver decision also does not cover non-COVID 19 mRNA patents. Moderna is unwilling to work directly with the Hub, restricting access to their know-how and dossier. More importantly, their decision requires the SA Hub to go with a clinical trial rather than go directly to

manufacturing. In other jurisdictions, Moderna's patent has been denied protection. Due to their "non-examining" patent policy, the SA IP authority did not examine the substance of Moderna's patent application, and there are lax patentability criteria. Other jurisdictions, such as China, Israel, and Japan, have rejected Moderna's mRNA patents as their patent applications were too broad and lack of technical merits. South African Patents Act requires that patent application shall be examined. However, this requirement only requires that the application documents are legible and capable of reproduction. Hence, this kind of examination does not cover substantive aspects of the application, including whether there is novelty and inventiveness in the patent application through prior art search. As a comparison, the Japanese Patents Act requires substantive examination of a patent application and sets the ground for refusal or rejection. Furthermore, a highly qualified examiner shall be selected by the Commissioner of the Patent Office based on their expertise to make fair determinations of the application. More importantly, the examiner is required to do a prior art search to determine patentability.

The TRIPs Agreement provides patentability principles but leaves it to the state parties to determine their criteria, including how to define inventiveness and novelty. R&D activities correspond positively with new technology. The pharmaceutical industry spends over thirteen percent of its gross value added on R and D. Most pharmaceutical R&D expenditure still occurs in OECD countries. Nearly two-thirds of this spending occurred in the United States, followed by Europe and Japan. For example, South Africa only spent about 0.8% of their GDP on R&D, while the US spent 2.6% in 2020. Firms in the beneficiaries may lack the capacity to adapt and implement new technologies due to the lack of research and development. R&D can be done through public-private partnerships or research and development subsidies. One example of this is the collaboration between NIH and Moderna. The NIH-Moderna collaboration benefitted from the support of the US Government through the provision of funds and the involvement of researchers from the USG. The Department of Defense awarded Moderna USD 25 million to develop an mRNA vaccine in 2013. Later, in 2016, BARDA provided Moderna with USD 125 million to develop an mRNA vaccine for Zika. The NIH worked with Moderna to develop an mRNA vaccine for MERS. More recently, The USG awarded millions of dollars to Moderna to develop the mRNA vaccine for COVID-19. In exchange, BARDA received access to Moderna's dossiers and the right to share data from the development and the use of Moderna's vaccine. The NIH, on behalf of the US Government, has argued that it contributed to Moderna's patent, and its use shall be jointly decided by the two. Their collaboration constitutes a research and development subsidy under the WTO Subsidies and Countervailing Measures Agreement (SCM Agreement). The definition of subsidy under the SCM Agreement contains three essential elements: (i) a financial contribution, (ii) a government or any public body within the territory of a Member, and (iii) which confers a benefit. A subsidy must be specifically provided to an enterprise or industry or group of enterprises or industries. R and D subsidies are not prohibited but are subject to challenges at the WTO if there are adverse effects on the interests of another Member. Adverse effects may happen if USG decided to block access to mRNA technology by the other WTO Member States and increase the export of their mRNA vaccines. In other words, to stop the creation of mRNA production hubs in other countries.

It is recommended for the beneficiaries to revisit their patentability criteria and introduce substantive examination as a requirement for patent application. Although this may not directly affect the current mRNA patents, this will certainly help with future applications. Good patentability criteria will ensure legal certainty and provide an industry incentive. The beneficiaries must train a cadre of patent examiners with high-level expertise to ensure this is enforced. There are a couple of examples to do this. The African Regional Intellectual Property Organization partnered with the European Patent Office to launch a regional patent examination training program in 2021. The Association of Southeast Asian Nations (ASEAN) partnered with IP Australia with support from WIPO to hold a similar regional program. The beneficiaries should also aim for the same thing as the US and increase the number of R&D subsidies in their budget to develop mRNA vaccines. Another effort the beneficiaries should consider is participating in multilateral R

and D through initiatives like CEPI. CEPI is raising USD 3.5 billion to prepare for future epidemic and pandemic threats. This initiative lowers the risk and cost of R and D for future mRNA technologies. Furthermore, this initiative also addresses the lack of raw materials for vaccine production by pooling global resources in one place.

Faye WANG, Brunel Law School, Brunel University London

Legal Consideration for Voluntary AI-assisted Content Moderation on Social Media

When hosting service providers adopt voluntary AI-assisted content recognition tools to detect and remove copyright infringement materials, such measures may be perceived to minimise legal risks for infringing content on social media platforms. If such measures take place before a notice and takedown legal procedure, this is a voluntary procedure which is not subject to the ‘notice and takedown’ legislation. For example, YouTube Content ID Claim Service enables copyright owners and content creators to resolve any content disputes by themselves without any human review by hosting service. It would be challenging for hosting service providers to ensure due process under such voluntary procedure governed by the terms of use of platforms rather than law. There is a gap to bring about legal certainty for such voluntary content recognition services provided by hosting service providers to minimise harmful effects to all parties involved.

This paper reviews the existing and proposed regulations, including the Proposed Artificial Intelligence (AI) Act and seeks to promote best practices for the use of voluntary AI-assisted content moderation process before the notice and takedown legal procedure. It argues that there is need to establish an appropriate risk assessment framework for the adoption of such voluntary process in order to strike a fair balance of protection among different rightsholders. It finally proposes possible legal and technological solutions to improve the legal certainty for rights holders and intermediaries.

Saifei WANG and Jiyu ZHANG, Renmin University of China

Copyright Duty of Care of Algorithmic Recommendation Service Providers under the Principle of "Digital Good-Oriented"

The regulation of algorithms is a key issue in the construction of the rule of law in an intelligent society. In the field of copyright, the allocation of tort liability to the algorithmic recommendation service providers should be based on the systemic perspective of the spirit of rule-of-law in the era, break through the principle of “technology neutrality” and move towards the principle of “digital for good”, study the key rule of internet platforms in preventing infringement and promoting the development of “digital for good” technology, and construct a legal system that is conducive to promoting the combination of law and technology to support multiple co-governance. Under certain conditions, the algorithmic recommendation service provider should have a higher duty of care than that of “notice and takedown” rule, and whether it has fulfilled its duty of care should be determined based on the technical development of the industry, taking into account multiple factors, such as the infringement loss, the probability of infringement, the cost of preventing infringement, and the measures already taken by the algorithmic recommendation service provider for copyright protection. At the same time, the system for effective notification, efficient complaint process and the right to request restoration should be established to protect the users’ interests.

Afzal WANI, IILM, University

IPR and Constitutional Commitments for Development (State Responsibilities)

Intellectual Property Rights are definitely emerging as next to nothing, that has become a vehicle for the development of humanity, and these are giving true hope and shape to constitutional commitments about human development. As understood before and after the World Wars, the understanding of rights was more a kind of privileges, conferred on people after a long history of oppression under feudalism, kingship, anarchy, law less communities, customs, tribal policies, religion, casteism, regionalism and gender discrimination. By initiating the constitutionalism, the situation and the understanding underwent a slow change in thinking and action, but largely in most parts of the world the true implementation of constitutional agenda for development for all remains a sweet day dream. Now, the emergence of new technologies, trends in more application of mind and culture of invention and innovation has changed the old inertia and transformed it into action, engaging all human beings in the new IPR dynamics leading to opening of previous shackles of bondage and involvements with the unscientific fictions. The developed world has now come out to share their fruits of scientific investigation and technologies with the other parts of the world. The bond is growing so strong that the national borders had to melt to give space to more international movements, understanding of global cooperation and regulation of human actions by prime constitutional commitments to liberty, equality, justice and relevance of institutions of United Nations.

In India, a big leap is found from the ground, in the form of scientific studies, inventions and discoveries leading to perpetual efforts of innovation. The copy right, patent, trade mark, designs and geographical indications are being taken with seriousness to equip self with entitlements, invigorating the feelings of energy to work more, to create more and have more power. This incentivization by the IPR movement proved extremely educative, influencing people to do more for self-help, self-respect, self-reliance which could not happen before the IPR Regime started showing its results. The impact is visible from various legislations and litigations, reflective of citizens capacity to strive more. The IPRs came up as complimentary to constitutional values and culture. This idea needs more elaboration and popularity to understand the significance of IPRs with constitutional developments, especially in the developing economies like India and other Asian economies and legal systems. The idea will be elaborated in this paper at the Fifth IPIRA Conference illustratively to benefit various emerging economies and societies.

Jakub WYCZIK, Institute of Law, Faculty of Law and Administration, University of Silesia in Katowice

Artificial Intelligence and the Death of Copyright

Artificial Intelligence has undoubtedly taken over the world. Recent months have seen a surge in the popularity of generative system results such as DALL-E 2, Midjourney, and Stable Diffusion. This article is about why AI is the death of copyright law.

First, it is always necessary to explain the phenomenon under study. A mistake at this stage leaves other research results without practical significance. Therefore, I explain the technology and how such systems work so that one can understand the risks involved. Then I present the current rulings on artificial intelligence and the dominant position to view such creations as unprotected. Clarify the reasons for such claims, citing fundamental disputes in the international forum, among others, in the United States, the United Kingdom, and Europe. Although they do not involve artificial intelligence, they have determined copyright law's shape. Finally, the third section is the conclusion.

The conclusion is that artificial intelligence is the very killer of copyright law. Outdated concepts that originated before the development of the Internet can no longer adapt to the changing reality. Of course, one can turn a blind eye and claim that nothing has happened, but this will only lead to copyright law becoming even more of a fiction than a legal regime. In addition, it will be fiction that monopolizes information, which is what copyright law was never intended to be.

I believe it is necessary to break old patterns and look for new solutions. Protect all results regardless of whether they are human-made. At the same time, one should remember that copyright is not for the author's protection but for the protection of society and to guarantee the proper development of the economy and technology. The motivation in the form of the author's rights is only a consequence of the first objective. As creativity has changed its face, so too must the law adapt to these changing circumstances. The law exists for society, and not society exists for the law.

Richa YADAV, Amity Law School, Amity University and Shweta AMRAWANSHI, Government Law College, Seoni

Geographical Indications and Sustainability: What we can Learn from the European Union

Sweltering heat, melting glaciers, forest fires, depleting resources, extinction of flora and fauna, sinking groundwater levels, increased instances of flood and famine, and climate change all are attributed to the rising temperature of our planet. Reckless and profit-driven development has brought the human civilization on the brink of extinction. Sustainable development is garnering a lot of attention in present times as it is need of the hour to foster a planet that is sustainable for all future generations, and is anticipated to have a positive socioeconomic impact on the environment and all living things. “Our Common Future”, a United Nations report defined sustainable development for the first time in 1987. Thereon, the concept found its way into several conventions, conferences, discussions, and debates at national and International levels. The policymakers and academicians have identified the importance of territorial approaches in contributing to and achieving sustainable development goals as envisaged by the 2030 UN Agenda. Geographical Indication (GI), can act as a powerful driver to increase the sustainability of the production system and rural transformation. It can be utilized to promote high-quality products linked to the place origin, preserve local traditions, protect natural resources and uplift producers by ensuring fair income. Indian GI systems can take cues from European Union which developed a “Geographical Indications” scheme (GI), providing the option of PDO or PGI label to certify the highest standard for products to be linked with the geography, landscape, traditions, and food culture. This research paper intends to establish the link between sustainable development and promoting and preserving our heritage through geographical indication.

Chih-Chieh YANG, Institute of Technology Law, National Yunlin University of Science & Technology

Can and How to File alot of Copyright Infringement Lawsuits to Bittorrent Users? Compare the US vs. Taiwan

Many unknown netizens use BitTorrent technology to illegally download (and share with others) the movies of the film company on the Internet. Suppose the copyright owner wants to know who has used BitTorrent to download videos illegally. In that case, he can also participate in the BT download and record the IP Addresses of these downloaders. After recording these IP Addresses, the copyright owners or their licensees

then initiate legal actions.

These legal actions that can be instituted vary according to the copyright laws of various countries. In the United States, individual downloaders will only have civil liability. Therefore, copyright owners have to use civil procedures, through the court's discovery procedure, to ask ISPs to provide the true identities of these downloaders and then file civil lawsuits against netizens to force them to settle. Interestingly, in 2013, a U.S. judge couldn't stand these large numbers of cases, so he believed that the plaintiffs and lawyers were defrauding the court, abusing the lawsuit, and sanctioning them with fines.

In Taiwan, there is criminal responsibility for copyright infringement, and it is not limited to those who have reached a specific commercial scale. Therefore, foreign film companies exclusively authorize the licensee in Taiwan. The licensee will report the case to the police, asking the police to identify the users of these IP addresses and then file criminal complaints through the prosecutor to force the infringers to settle. In 2022, Taiwanese prosecutors, unable to bear the volume of cases, decided to file criminal charges against these licensees, arguing that they "unlawfully solicited lawsuits".

Li YI, Faculty of Law, University of Macau

Copyright Issues of AI-generated Works in China

The growing use of artificial intelligence (AI) technology has significantly contributed to society in recent years. As the second World's largest economy, China actively participates in global governance, particularly in issues related to high technology, such as AI. On March 12, 2021, the Government issued the "Outline of the Fourteenth Five-Year Plan for National Economic and Social Development of the People's Republic of China and Vision 2035" which contains multiple references to AI. The Communist Party of China(CPC)has raised a set of long-range objectives for China to basically achieve socialist modernization by 2035. China's economic and technological strength and composite national strength will increase significantly.

Nowadays, AI is increasingly getting involved in various creative processes, which means that creativity appears no longer as an exclusively human activity. This article investigates current debates on copyright issues of AI-generated works, especially those surrounding the pivotal issues of originality and ownership. If the purpose of Machine Learning is to form algorithms rather than plagiarism, could it meet the requirements of "independent creation"? Moreover, it will also analyze in greater detail two cases that were decided based on the existing Copyright Law of China. The article argues that in order to respond to the emergence of AI-generated works, the copyright law governing AI creations should be rearranged based on the principles of protection, encouragement and promotion.

İmge Hazal YILMAZ TEKİN, Faculty of Law, Hacettepe University

The Legal Rights on Photographs

A person's photo is part of their personality as it shows their unique features and distinguishes them from other people. In fact, it is one of the important tools that reflect the personality to the outside world. For this reason, a person may prohibit another person from taking and publishing his or her photograph. Except in some exceptional cases, the publication of a person's photograph also constitutes an interference with his/her private life or honour and dignity. The right to the photograph of a person is generally protected

under the provisions of the Turkish Civil Code No. 4721 on the protection of personality. Although the main rule is that taking or publishing a photograph of a person violates his or her right of personality, there are exceptions to this rule. The most important of these is the consent of the person. If the person has consented to the taking or publication of his/her picture, there can be no violation. However, the publication of the photograph must not exceed the scope of this consent. This is because the person has the right to refuse the publication of his/her photograph, as well as the right to determine its limits, in other words, the right to control the use of the photograph. According to Article 86 of the Code No. 5846 on Intellectual and Artistic Works, the publication of photographs of persons who play a role in the political and social life of the country and the ceremonies or meetings attended by these persons is not unlawful even if the persons do not consent. The fact that consent is not required also applies to events that fall within the scope of the press's duty to report. It should be noted that the limit here will be determined by considering freedom of expression, public interest and social appropriateness. Therefore, it is unlawful to publish a photograph of a person who plays a role in the political and social life of the country, which is not related to his/her place in society, without his/her consent. In addition, the right of personality is also violated if the use of the photograph exceeds the purpose of providing news and interferes with the person's honour or private life. The European Court of Human Rights has also issued various decisions on the subject. In these decisions, it has stated that a balance must be provided between the right to control the publication of one's photograph as well as the right to refuse its publication and the use of the photograph within the scope of freedom of expression, and that the use of the photograph must not violate the right to respect for private life. Within the scope of this paper, the right of the person over his/her photograph is examined by including the rules and exceptions.

Qian YIN, Faculty of Law, Chinese University of Hong Kong

Compulsory Licenses for Pharmaceutical Patents in China in Light of the TRIPS Agreement

The recurrence of public health emergencies has made the issue of access to drugs a pertinent problem for developing countries. As a public health safeguard, the compulsory license system for patented pharmaceuticals is embodied in the international intellectual property (IP) norms related to public health. The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) flexibility is a double-edged sword for the pharmaceutical patent system in developing countries. On the one hand, the exception clauses to IP protection under the TRIPS Agreement, especially the compulsory licensing system, give member states the possibility of exempting their treaty obligations in the event of a public health crisis. On the other hand, the different interpretations deriving from the ambiguity of TRIPS 'flexibility' defer members from implementing compulsory licensing in response to a public health crisis. China has established a systematic set of rules, including legislation and policies on compulsory licensing and integrated the TRIPS flexibility into FTAs. However, it still lacks clear procedural provisions regarding the compulsory licensing of pharmaceutical patents in the context of the public health crisis, which affects China's ability to use TRIPS flexibility of Compulsory licenses effectively.

Furthermore, China's compulsory license law is never implemented despite the increasing need to ensure drug access and effectively respond to public health emergencies. This article aims to assess China's compulsory license system in light of the TRIPS Agreement. The article analyses how and why China's domestic compulsory license system fails to take advantage of TRIPS flexibility in substance and implementation. It suggests points for reform to enhance China's compulsory license system for pharmaceutical patents, which can effectively be utilized in public health emergencies, as well as heading towards better integration and implementation of the TRIPS flexibility, referring to the interest-balanced guiding principle.

Helen YU, Centre for Advanced Studies in Biomedical Innovation Law, University of Copenhagen

The Concept of Value-Based Healthcare from a Responsible Research and Innovation Perspective

Affordable access to quality healthcare is generally recognized as a basic human need and one of the grand challenges our society currently faces, especially in the wake of the COVID-19 pandemic. However, according to the World Health Organization, the cost of healthcare has continually risen globally since 2000, reaching 10% of global GDP in 2018. Conceptually, value-based healthcare (VBHC) is an intuitive and pragmatic approach to the delivery of health services, given the increasing demand on public healthcare systems in the face of limited resources. However, the literature generally attributes the lack of uptake and implementation of VBHC in current healthcare systems due to the lack of an agreed upon basis to assess or define “value”. For example, the current focus on cost as the primary approach to understanding the principle of value may inadvertently create exclusionary and discriminatory outcomes, particularly for patients with rare diseases and those who can be cured (as opposed to be treated) by expensive personalized therapies.

This article proposes a more nuanced and holistic approach to the concept of VBHC by exploring how the principle of responsible research and innovation (RRI), can help achieve the objectives of VBHC in a more inclusive and equitable manner. Furthermore, this article describes how existing legal frameworks can be leveraged to operationalize RRI to practically align societal needs with the economic realities of healthcare systems to achieve VBHC outcomes. Legal tools such as impact licensing will be explored as a way to address intellectual property related barriers that prevent access and availability to critical health technologies. Furthermore, the intersection between intellectual property rights and two concepts within the EU procurement legal framework (innovation partnerships and value-based procurement) will be examined as a tool that public authorities may rely upon to consider attributes such as quality of healthcare and societal impact instead of traditional considerations (ie. cost) in the procurement of healthcare technologies.

Science and technology alone are not sufficient to address issues of global health, especially with VBHC outcomes as a key objective. For new policies or strategies to have legitimacy in the eyes of those who will adopt these new approaches, alignment of stakeholder interests needs to have a responsive component in order for it to be meaningful. This is where the law and the principles of RRI play a key role in giving credibility and accountability to ensure that stakeholder interests and concerns are reflected and taken into account as part of the process of implementing and adopting new approaches. The law can be used to provide legally supported and incentivized ways to help implement policy objectives such as VBHC.

Pengfei YUAN, Renmin University of China Law School

Copyright Ownership of Audiovisual Works in the Age of Media Convergence

The special creation mechanism and business model of audio-visual works, such as the large number of creative subjects and huge investment, determine the particularity of the ownership of their rights. Correspondingly, the construction of the copyright attribution system of audio-visual works usually aims at simplifying the rights structure, protecting transaction security, and balancing investment returns and risks. The producer's attribution model is mainly based on the principle that the copyright of audiovisual works belongs to the producer, with the exception of attribution to the creator. The creator's attribution model is based on the principle that the copyright of audio-visual works belongs to the creator, and the legal transfer of copyright to the producer is a modification. In the era of media convergence, great changes have taken

place in the creation and dissemination of audio-visual works. Therefore, whether the copyright ownership of audio-visual works should give priority to the autonomy of the parties, and whether the parties agree to give priority is an important issue that needs to be considered at present. In recent years, some countries have made corresponding legislative changes.

Abdumumin YULDASHOV, Tashkent State University of Law

Copyright Protection in Uzbekistan: the Role of CMO's

According to Article No. 1056 of the Civil Code of Uzbekistan, the owner of IP rights in relation to the result of intellectual activity has the full right to use this object of IP in any form and in any way at his discretion. However, in practice it is clear that the above legal norms and principles of copyright protection practically do not work. In this regard, increasing the role of "IP institutions" is an urgent task. Despite that fact in recent years, copyright disputes have become more frequent in Uzbekistan. This in itself indicates that CMOs (Collective Management Organizations) are active. On January 13, 2022, in the civil court of Tashkent, one of the first trials was held on the claim of the plaintiff – UzAvtor CMO in the interests of a member of this society, the Poet of Uzbekistan Mr. Usmon Azim against the defendant – "Sanjay" to eliminate copyright infringement, recover compensation and compensation for moral damages for copyright infringement. UzAvtor, asked the court to recover from the defendant in favor of the plaintiff compensation in the amount of 1000 basic calculations (according to the Law of Uzbekistan introduced in August 2021) and moral damage, as well as to withdraw the famous Uzbek poem "Karvon", which was performed by the defendant, from various sources (YouTube, Instagram, etc.). Furthermore, the introduction of limits on the amount of compensation by the above norm into the legislation served as an important basis for determining the measure of responsibility for the courts. The defendant's representative informed the court that CMOs couldn't bring claims on behalf of the author. Of course, the peculiarity of this case is that the CMO filed a claim on behalf of the author. According to Article No.58 of the Law of Uzbekistan "On Copyright", the CMO is necessary to protect the rights that it manages on behalf of the right holders and, based on its authority, has the right to take any legal action. Also, in accordance with Article No.65 of this Law, the CMO has the right to apply to the court on its own behalf in the manner prescribed by law to protect the violated copyright and related rights of persons exercised by such an organization. By the decision of this court session, the claim of UzAvtor was partially satisfied. For another case, on March, 2022, another court for civil cases in Tashkent considered a lawsuit filed by UzAvtor in the interests of a member of this CMO. The peculiarity of this lawsuit is that for the first time in Uzbekistan a lawsuit was filed against a restaurant for using an author's work without permission. According to the court decision, the defendant was obliged to pay in favor of the author. It should be noted that in recent years a number of reforms have been carried out in Uzbekistan to protect the property rights of authors and copyright holders. In particular, ensuring the legitimate rights and interests of authors, co-owners and other right holders, fair receipt of remuneration (fee) by them.

Yulia YULIA, Faculty of Law, Malikussaleh University

Management of Traditional Knowledge that Supporting Geographic Indications in Aceh

The Convention on Biological Diversity is one of the international rules that recognizes the existence of traditional knowledge as emphasized in article 8j. Traditional knowledge is information that has been used and developed by a community based on experience and adaptation to the local environment. Management of traditional knowledge that supports geographical indications including legal protection and preservation

of traditional knowledge in order to gain economic potential while preserving traditional knowledge. One of the elements of geographic indications is the human factor, namely traditional knowledge. Then in the Indonesian constitution Article 18B paragraph (2) and Article 28I paragraph (3) of the 1945 Constitution, implicitly traditional knowledge as a traditional right and indigenous cultural identity is recognized as a constitutional right. Aceh has traditional knowledge that supports geographical indications such as knowledge in handling agricultural and plantation products. Examples of handling coffee into coffee powder, melinjo into emping melinjo or melinjo crisp, Nutmeg into Nutmeg oil Nutmeg syrup, handling meat into beef jerky. This study uses empirical legal research with a qualitative approach that uses primary and secondary data. In obtaining primary data, respondents and informants were determined. The results of the study found that management of traditional knowledge that supports geographical indications in Aceh needs to be collected and compiled in digital data so that it is easily accessible to anyone who needs it. Digital data collection and compilation will support the protection and preservation of traditional knowledge that supports geographic indications. Thus it does not eliminate the identity of the knowledge of the Acehnese people and is protected from being used by people in other areas. Legal protection of traditional knowledge that supports geographical indications is the responsibility of local governments, therefore strategic steps are needed such as socialization, making technical regulations, collecting data and compiling digital data.

Mahua ZAHUR, Jagannath University

Use of Copyrighted Works on Fashion Apparels: Copyright Infringement or 'Transformative Work' under Fair Use Regime? An Appraisal in the Context of Current Fashion Trend in Bangladesh

Recently in Bangladesh fashion designers have developed a trend whereby they are using copyrighted materials on fashion apparels. Their works include the portraying of artistic works, poetries, lyrics, film scenes, famous characters from a novel or a film on fashion fabrics and accessories. The paper will shed light on the legal consequences of the said acts in the context of copyright law. Apparently, from the context of copyright, the said acts can give rise to copyright infringements including unauthorized reproduction, fixation, publication, distribution, sale etc. of copyrighted materials. Other legal consequences of such acts include infringement of fictional characters and image right of an actor etc. Moreover, such acts may give rise to infringement of author's moral right. The paper seeks to enquire whether the fear of legal consequences would create a 'chilling effect' on artists and designers and thereby would violate their right to expressions. In general, the fashion industry in Bangladesh is one of the sectors that is evolving vigorously generating huge revenues and creating employment opportunities to thousands. Also, the industry is contributing in the enrichment of the country's cultural progress. Considering the fact that the sector is advantageous to the overall benefit of the country, would the given acts be construed as 'fair use' of copyrighted material? Apparently, the application of 'fair use' doctrine seems inappropriate in the context mentioned, since the adapted works are in furtherance of the commercial benefits of artists and designers of later works. In a nutshell, the legal position of such cases still seems to be uncanny since as of now no concrete case is brought to fore and the future of this creative industry remains precarious. In this backdrop, the paper holds the view that, the judiciary in Bangladesh may, in future, take the trajectory of US judiciary that developed the notion of 'transformative work' under the scheme of 'fair use' of copyrighted materials. In a number of decisions, the US judiciary has taken the view that, new works can come to the purview of 'fair use' on the proof that they are sufficiently 'transformative' by alteration of earlier works through new expression, meaning or message. However, in a number of stances, the courts found some acts 'not transformative' where the later acts merely supplanted the earlier acts. Hence, the US courts tried to strike a good balance to uphold the copyrights of earlier works and new original works. This generous approach of US judiciary is basically established on the overall philosophy of US copyright law namely the 'progress of science and the art'. The paper holds the view that, the judiciary of Bangladesh can follow the trail of US

judiciary as the goal of copyright scheme of both nations is premised on the identical public policy of favouring freedom of expression and encouraging the creation of new and original works.

Huan ZHANG, City University of Hong Kong

Regulation of Text-to-Image/Video AI Model-generated Contents from the Copyright Perspective in China

In recent months, various AI-based text-to-image/video generators (hereinafter referred to as ‘AI generators’) have gone viral both overseas and in China. As if by magic, with some text prompts input by users, these AI generators would be able to automatically generate creative images or videos very shortly without any further human intervention. From the copyright law perspective, the outputs so generated are questionable as to the copyrightability under the current copyright law. However, notwithstanding the uncertainty of copyright issues, many AI generator websites and mobile apps (hereinafter referred to as ‘platforms’) are already in operation and use terms of service to regulate the legal relationship between the platforms and the users over the AI-generated outputs, with or without referring to the term ‘copyright’. Regarding the new content creation ecosystem built up by these platforms, whether it is inherently unstable due to the potential copyright-related risks, or is it in fact promising no matter whether the AI-generated outputs are copyrightable or not?

The paper aims to examine the business models adopted by the platforms to ascertain the concerns of various interested parties in the new ecosystem and discuss the following issues in the Chinese context: firstly, to what extent the current Chinese copyright law can cover the text-to-image/video AI model-generated contents? Secondly, for those contents that the current law cannot cover, in what ways the current Chinese copyright law should be amended to address the interested parties' concerns? Thirdly, based on discussions on the aforesaid two issues, what is the proper regulatory mode that China should adopt so as to set up a sustainable environment for content creation in the AI era?

Naigen ZHANG, Fudan University Law School

Analysis on the Decision on the Waiver of Intellectual Property Rights Relating to the COVID-19 Vaccine and Its Significance

The decision on a waiver of intellectual property rights relating to the COVID-19 vaccine is the most attractive result of the ‘single package’ adopted by the 12th ministerial conference of the World Trade Organization. It is very significant for the international community to combat the COVID-19 pandemic, to increase its confidence on the multilateral trade system. China proposed to have the COVID-19 vaccine as the global public goods while providing more than two billion doses of vaccines produced by Chinese companies with safety and effectiveness, and also giving up the waiver, which demonstrates China’s responsibility as the largest developing country and effort to promote a community of sharing future for mankind in respect of health. The waiver decision is based on the existing international rules of compulsory patent licensing to grant the eligible developing countries the maximum flexibility to enforce the special compulsory licensing relating to the COVID-19 vaccine. China shall implement the commitment on giving up the waiver, and meantime, fully apply the existing rules for the improvement of the medical patents compulsory licensing and other intellectual property rights relating to the public health in considering the coordination of domestic laws and the laws for foreign affairs.

Wenyan ZHANG, East China University of Law and Political Science

A Study on the Impact of Subsidy Reallocation Policy on the Innovative Performance of the Photovoltaic Industry under the Double Carbon Target: Empirical Evidence from China

China has announced its climate goal to peak carbon emissions before 2030 and reach carbon neutrality before 2060, the “Double Carbon Goal”. A fundamental way to solve the contradiction between environmental pollution and energy consumption growth in China is to develop new energy actively, especially photovoltaic solar energy. Supported by preferential policies and government funding, the technological innovation of China’s photovoltaic industry has been improved greatly. However, out of various reasons, China has dramatically changed its subsidy policies as to the new energy industry by reducing its financial supports to the industry. As a capital-intensive practice, will innovation activities in China’s photovoltaic industry be affected by the reallocation subsidy policy in recent years? This article supplements the previous studies by doing empirical studies on the relationship between the subsidy reallocation policy and innovative performance of the photovoltaic industry. This paper argues that the reallocation of government grants can improve the innovative performance of photovoltaic companies by getting rid of the ex-ante screening and subsidizing the companies ex-post.

This paper is distinguished from the previous studies on the following respects: firstly, prior studies have not taken into account of the influences exerted by the reallocation of the subsidies since the policy took into effect from 2014; secondly, the photovoltaic industry has special characteristics subject to fiscal policies; lastly, this paper explores the mechanism by which different external investors besides the government subsidies affect the innovative performance of the photovoltaic industry. Thus, this paper fills the gap by exploring how the subsidy reallocation policy influences the photovoltaic industry under the double carbon background. The findings will serve as a reference for shaping the legal policies, such as the subsidy policies, intellectual property law and credit law to achieve the double carbon goal. Additionally, this paper provides practices that other countries can build on to develop the energy-saving industries and curb the climate change issues.

Hewei ZHOU, Beijing University of Technology

Understanding “Abnormal Patent Application”

Patent application is the most important part for market players to obtain patent rights. In order to improve the quality of patents and protect innovation, China has introduced irregular patent applications. China has also introduced regulations on abnormal patent applications which contributes to restrain abnormal patent applications. This leads us to consider: 1. what is the nature of a patent application; 2. under what conditions an act of patent application is considered an irregular patent application and for what reasons; and 3. what impact the crackdown on abnormal patent applications has on the patent order. Looking at these issues from a China’s perspective will demonstrate how China's approach to patent filing has changed. Market players respond to them accordingly, with the views and interests of patent agents also deserving attention. It is also worth considering whether China's experience has informed other countries' perceptions of patent filing behaviour and, at the same time, whether other countries' perceptions of patent filing behaviour have inspired China.

The New “Encouraging Innovation” Goal of China’s Anti-Monopoly Law Requires a Stricter Standard of Proof: Analysis Based on the Merger Control Review

In August 2022, the AML was amended and an open-textured goal – “encouraging innovation” – was added. When the diversity of goals is criticised from a legislative perspective, it reveals that they take legislation per se too seriously and overlook that the legal uncertainty might be remedied by enforcement with sound reasons. This article, hence, assesses the application of the diverse purposes of the AML in merger control cases in the past 14 years. On closer inspection, caution should be exercised in light of China’s limited length of conclusive decisions. Analysis in these decisions seems to depend on subjective judgment of authorities, since only evidence in support of the decisions was presented and few counterarguments were analysed. By comparison, in the EU, decisions are taken based on all available evidence, including merging parties’ arguments and comprehensive market investigation. This contrast is more obvious when same cases were reviewed by both Chinese and the EU’s authorities. While not all experience of the EU can be simply transplanted, a comparison might produce enforcement gaps between the two jurisdictions, providing China with opportunities to reflect on China’s application of diverse goals. Admittedly, it is difficult to assess whether the merging parties’ innovation efforts will be successful even if there is no merger and how to quantify the potential innovation reduction compared with the efficiency improvement of mergers. Simply bypassing the goal interpretation issue does not dismiss ambiguity. Fearing the difficulties will fail to guide future practice. For China, to make decisions more convincing, a stricter standard of proof should be applied in merger control review process, where evidence in support of and against decisions should all be presented. Transparency of balancing diverse goals is central to both fairness and efficiency of a market.