



## Conference Abstracts

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# Conference Abstracts

## In Alphabetical Order by Surname (in Capital Letters)

**Muhammad Zaheer ABBAS, Faculty of Law, Queensland University of Technology**

*The Potential Role of 3D Printing Technology in Enabling Local Entrepreneurship: To What Extent Patent Exclusivities Pose a Barrier*

3D printing or additive manufacturing allows the rapid conversion of information from pre-designed digital 3D models into physical objects through the continual addition of layers of material. This approach is in contrast with conventional manufacturing processes in which physical shapes emerge either by removing material, as in machining, or changing the shape of a set volume of material. This modern method of manufacturing does away with the time-consuming and costly tooling and machining requirements. The advancements in 3D printing technology offer a new hope to underprivileged and under-resourced people with brilliant entrepreneurial ideas, especially in developing countries. With advances in material science and affordable availability of portable 3D printers, this disruptive technology is rapidly maturing to a level to support local entrepreneurship. 3D printing, which enables on demand manufacturing of customized or personalized products in a timely and cost-effective manner, is uniquely well positioned to support new business ideas. Part I of this paper evaluates the unique benefits of this revolutionary technology focuses on harnessing the potential of 3D printing in enabling local entrepreneurship. It highlights the need to address lack of basic digital infrastructure in low- and middle-income countries, which is a hurdle in providing an enabling ecosystem for 3D printing. Part II discusses to what extent patent exclusivities possibly become a hurdle in using the full potential of 3D printing. This study will help policymakers at national and international levels by contributing to the debate over intellectual property and scope of 3D printing in enhancing social and economic welfare of communities across the globe.

**Ranjit Oommen ABRAHAM & P.J. Yesu Nesa Joy SINGH, School of Excellence in Law, Tamil Nadu Dr. Ambedkar Law University**

*Interface Between Digital Rights Management and Fair Use for Access to Information*

The concept of Digital Rights Management and Fair Use are two sides of the same coin in the present era of online copyright. The copyright Legislation in many countries has been amended recently for the purpose of incorporating Digital Rights Management within the legislative framework. The concept of Fair Use is inevitably present in all copyright legislation throughout the world even though, the description may not be uniform. The evolution of Copyright Law clearly indicates the facts that Fair Use is an integral aspect of Copyright Legislation without which the basic right of Copyright would not have sustained. The advent of Internet has glorified copyright works because of its penetration in the World Wide Web leaving access, dissemination and storage possible without much difficulty. The copyrighted works in the online scenario also faces the risk of easy infringement by unidentifiable infringers in the Internet. The copyright owner has no other option but rather to get some solace under the wings and spheres of Digital Rights Management developing at a greater phase than expected. The various forms of Digital Rights Management restrict copyright infringement technologically and legally. Innovations in Digital Rights Management Technology is creating a great challenge to the concept of Fair Use or Fair Dealings which is available as a defense or

exceptions for copyright infringement in certain limited circumstances. The actual rights and access of various stakeholders under the fair use doctrines was the same when compared to the Rights and access of all permitted users of the copyrighted work. The present scenario carves out the situation where copyrighted works protected by the DRM may not be accessible to users of fair use doctrines for either educational or research purposes. The legislators who advocated amendments to the copyright regime for including DRM provisions never had anticipated its impact on fair use or fair dealings. The jurisprudence of copyright legislation in various countries have been impacted because of DRM provisions that restricts educational use or non-commercial research use. This paper analyses the various impact of DRM provisions on fair use and its relevance to access information in online scenarios. This paper further analyzes the possible loss to academic community because of the imbalance persisting due to simultaneous presence of both DRM technologies and constraints for fair use technologically. This paper will compare legislative framework interfacing DRM and fair use doctrine and will make necessary suggestions for an ideal copyright law for protecting both copyright through DRM and safeguarding the rights of academia through fair use or fair dealings.

**Kiyoshi ADACHI, National Graduate Institute for Policy Studies, Tokyo**

*The Medical Treatment Exclusion in Asia's Patent Legislation and Emerging Health Technologies*

The present study examines the variations in Asia in the implementation of a clause in Article 27 of the WTO Agreement on Trade-related Aspects of Intellectual Property Rights (the TRIPS Agreement) that allows Parties to remove from patentability diagnostic, therapeutic and surgical methods for the treatment of humans and animals. This exclusion is one of several important provisions in the TRIPS Agreement that are designed to support domestic public health objectives and countries' overall scientific and technological aspirations. The study examines the texts of the exclusion in the respective patent laws and policies of 24 South, Southeast and East Asia countries and territories, and identifies peculiarities in the variations among countries in these sub-regions. While most jurisdictions in the data set had incorporated a medical treatment exclusion, a number of variations were found in how the exclusion is implemented, the rationale given for excluding medical treatments and the scope of the exclusion.

**Akshat AGRAWAL, Jindal Global Law School, O.P. Jindal Global University**

*Access to Culture Dialogues: Remodeling Copyright for "Substantive" Equality in Cultural Discourse*

In Jack Balkin's words, "Culture is the source of the self." This paper explores potential reforms to copyright policy, intended to promote an egalitarian cultural discourse and democracy, instead of corporate patronage and gatekeeping. By studying the demography and portrayals of "popular culture" in Indian Entertainment industry, this paper uncovers the prevalent monologic, upper caste, upper class, gravely urbanized and gendered cultural narrative, which solely focus on interests of the elite and economically capable audience. The point is to highlight the role of this monologic discourse, facilitated by corporate ownership of copyrights, in shaping the romanticism of elite-culture over the "other(ed)", merely for profits. A legal regime aiding corporate patronage of creativity and culture erases underprivileged voices- leaving them unheard and undermined in societal scripts and narratives. This also has an abrasive effect on participation and diversity- in effect drawing constraints on creative practice, and conformity in cultural performance. This paper argues for "disintermediation", i.e., abolishing corporate ownership of copyrights, from a critical race lens. It goes beyond the usual arguments for and against disintermediation, by arguing for its feasibility

in terms of public interest and representational welfare. It further exposes a hierarchical dialogue in cultural meaning-making in the society, that coerces standards around what is conceived to be good and what is not - dictated by those who subserve the cultural needs of the highest paying audience, thus reinforcing privilege and limiting variety in cultural exposure. The intention of consequentialist copyright policy is not to be an engine of *free and more “upper caste, upper class, gendered, elite urban and western” expression*, but rather an engine of *more “diverse and represented” expression, inclusive of relative societal positions and non-conformist ideas*, to realize the end goal of sustainable cultural environmentalism, progress of arts and subjective self-determination- of both- the author and the audience. Therefore, this paper argues for the law to be modified to accommodate disintermediation, and shows the possible proximate benefits of this modification. Digital platforms potentially enable wide cultural participation. This paper goes on to explore this potential and the possibility of feasible alternate models of content distribution, emphasizing upon the “people” oriented business model of digital platforms, as against a “product” centric one - practiced by cultural conglomerates. The proposed socio-innovative model is based on commodifying the idea of diverse viewership, and not content itself. This paper sequentially argues for: (i) regulatory ban on sponsored visibility (by content owners) on platforms, (ii) “substantive” equality in discourse through incentives to platforms - to affirmatively amplify marginalised narratives, providing meaningful social agency (iii) alternate remuneration models for platforms based on economies of scale, aiming to capture a large and diverse audience, and *clicks* thereon, rather than solely focusing on the ones who can pay the highest. The point is to abolish corporate ownership of content, as a regulatory tool, to augment the voices of structurally and economically weaker sections of the society on digital platforms, in effect ensuring “actual” semiotic democracy and participation in shaping cultural identities.

**Akshat AGRAWAL, Jindal Global Law School, O.P. Jindal Global University and Brian L. FRYE, School of Law, University of Kentucky**

### *The Tragedy of Plagiarism Norms*

Copyright has always had both champions and detractors. For every Balzac extolling the virtues of literary ownership, there was a Jefferson questioning its justification. Today, as the scope and duration of copyright protection expands beyond all imagining, the copyleft stands athwart the Copyright Act, yelling Stop. But even the copyleft believes in the legitimacy of plagiarism norms and the obligation to attribute works of authorship. The most permissive Creative Commons license is CC-BY, which requires only attribution. Even the CC0 public domain tool is silent on plagiarism norms. Why does everyone hate plagiarism? After all, attribution is just another kind of property right, and plagiarism norms are nothing more than a way of enforcing ownership when copyright cannot. If there are good reasons to be skeptical of the legitimacy of copyright, surely there are good reasons to be skeptical of plagiarism norms as well. And yet, everyone takes them for granted. Worse, plagiarism is the original literary sin. Even an accusation is damning, no matter how spurious. The purpose of plagiarism norms is to enable authors to claim ownership and attribution over facts, expressions, and ideas that copyright leaves in the public domain, otherwise free for all to use. Why should we allow authors to make a claim on the public domain? And why should we credit their claims to creation? Everyone knows there is nothing new under the sun, just variations on a theme. Creation does not happen in a vacuum. If good authors borrow and great authors steal, then honest authors ought to be circumspect about what they claim to own. The dirty secret is that plagiarism norms are really a way of reifying and enforcing social hierarchy. Who owns the attribution right? Famous authors with access and visibility, who can stake out a claim to novelty the public is prepared to accept, because it doesn't know any better. In so doing, they obscure the legacy of those who preceded them, and impose a tax on those who follow. Ultimately, literary ownership is just dressed up rent-seeking, whether you call it copyright or

plagiarism norms. From an Indian perspective, plagiarism is a foreign concept, imposed on Indian culture by colonial ideology. Indian culture has always encouraged borrowing, and relied on the aural transmission of knowledge and ideas. For example, Indian musical pedagogy has always encouraged copying, as a way of developing skills and learning how to create works. Composition is a communal activity, not confined to individual authors. But the imposition of western plagiarism norms has undermined and de-legitimized these historical cultural practices, by insisting on individual ownership and attribution. Indeed, Indian society has so internalized western plagiarism norms that courts enforce them, even when they have no legal basis. Indian acceptance of western plagiarism norms is a tragedy, not only because it implicitly disrespect Indian cultural practices, but also because it discourages the creation of traditional works in traditional ways. It is the most pernicious form of colonialism: colonialism of the mind. We should question the legitimacy of western plagiarism norms, and reject them when they merely create and protect property interests in literary ownership, rather than the generation of cultural meaning.

**Aziza AL QAMASHOUI, University of Technology and Applied Science-Al Musanna**

*The Importance of Incorporating IP Subject in Higher Education Pedagogy in Oman*

Currently, the term of Intellectual Property Rights (IPRs) is gaining attention among educational institutions across the world. IPRs help students to gain knowledge of several aspects such as patents, trademark, industrial design and copyrights. The result of teaching IP paves the way for innovations among educational institutions, more importantly, develops students' skills as well as protecting the rights. As a result, the increase in IPRs registration and protection among of universities, colleges and schools in several developed countries evidence that the creative output, which places the country's ranking in the Global Innovation Index (GII). However, teaching IPRs is not a standard practice in many higher education institutions (HEIs) in Oman. Therefore, HEIs in Oman prioritizing to teach the scholars on the importance of IPR leads to an innovation culture in Oman. This research paper focuses on the importance and the possibility of teaching IPRs in HEIs in Oman. Also, it suggests ways of knowledge transfer of IPRs in the universities and colleges at different levels when the HEIs to incorporate the subject in pedagogy.

The primary contribution of this research is to have an impact on the primary educational professions by discussing the focal arguments that support IP education in institutions. Also, discussing different formal and informal methods that will ease embedding IPRs in the HEIs curriculum. This research, pertaining to earlier research, is the first study in Oman that focuses on building arguments for the professions in the education field on the need for teaching IPRS in Oman HEIs. Also, giving the HEIS a road map on the several formal and informal methods for the learning and teaching of IPRs. The researchers used the Focused Group Discussion (FGD) as a method to collect qualitative data in IP. The FGD was conducted at the University of Technology and Applied Science-Al Musanna on 4th of December 2019. There were four questions administered to the groups which are potential arguments for teaching IP in education, formal and informal way of IP implementation and the supporting resources needed to start teaching the subject at earliest. The participants in the groups were lecturers and professionals from 15 educational institutions in Oman. After distributing the participants in the group of a minimum of five members, 14 groups were created to complete the focused groups needed for this research. In total, 90 lecturers and professions participated in the focused groups.

The findings revealed that the chief argument for the importance of teaching IPRS in HEIs and as educators reported from the 14 groups is: Teaching IPRs will raise students' awareness and understanding of IP, which achieves Oman's 2040 vision. Second, using the General Course in Intellectual Property (DL101) is the

highest formal possible way in implementation the IP curriculums. Third, the agreed informal way is to implement IP through conducting workshops, conferences and seminars in the HEIs. Fourth, WIPO online resources were selected as the most adaptable teaching resources for IP education in Oman's HEIs. Therefore, this study presents all relevant resources available in WIPO, thus, could be used in specialization in Oman HEIs. This research, through the methodology employed in the IP, shows the participants' acceptance in teaching IPRs and suggests methods of teaching IPRs, namely, formal and informal way. As a result, categorical information would work as a guideline for the educators in Oman on teaching IPRs in the HEIs.

**Saleh AL-SHARIEH, College of Law, United Arab Emirates University**

*A New Conceptual Framework for Copyright Contract Rules in an Evolving Technological Landscape*

The understanding of the nuances of the regulation of copyright contracts, and its theoretical and policy backgrounds, can aid in the construction of the purposes of copyright statutes. Taking the United Arab Emirates (UAE) Copyright Act as a case study, the paper argues that the Act's regulatory approach to copyright contracts reflects the dignity-basis of copyright protection, enables the balancing function of copyright law, and maintains the coherence amongst the various principles and rules of the copyright system. Utilizing these purposes in the UAE Copyright Act's purposive statutory interpretation—or in future amendments—secures the sustainability of the copyright system. Furthermore, clarifying the inherent link between copyright contract rules and these interrelated purposes of copyright law resolves the paradox that scholars have identified in copyright law when perceiving the regulatory approach to copyright contracts as paternalistic and, concurrently, viewing copyright solely as an economic incentive to create addressed to rational economic actors. Finally, the regulatory approach to copyright contracts echoes copyright law's assertion of its autonomy against the outreach of contract law into its regulatory space in a manner that should inform court's evaluation of the legality of contractual provisions establishing rights and obligations inconsistent with the principles of copyright law.

**Aleksandr ALEKSEENKO, Department of Civil Law, Vladivostok State University of Economics and Service**

*Approaches on Legal Regulation of Cryptocurrency*

Development of digital technologies has led to appearance of cryptocurrency – a new tool which allows performing interstate transactions with minimal costs. Despite the active spreading of this innovation worldwide, a number of states do not establish legislation containing comprehensive legal regulation of cryptocurrency (Russia) or even ban it (China). This situation can cause negative consequences for users of cryptocurrency and impede the protection of their rights connecting with investments in cryptocurrency. The purpose of this research is to find the most optimal approaches which could be implemented for establishing legal regulation of cryptocurrency as international means of payment. Observation of various countries' experience on taxation and legal regulation of cryptocurrency makes possible to conduct a comparative study which shows that in some groups of states the cryptocurrency is prohibited, while others recognize it as a commodity or even as a unit of account equivalent to a foreign currency. Basing on it there were analysed advantages and disadvantages of different legal regulation types. The critical review of cryptocurrency regulation led to some results aiming to establish unified legal rules. Some Asian and African states ban cryptocurrency because of bulk of reasons. Firstly, they argue that anonymity of its users and

outlaw issuance raises risks of criminal activities such as money laundering and terrorist financing. Secondly, the absence of physical support such as fiat money or property characterizes high degree of cryptocurrency's volatility; therefore, its use connected with financial risks and fraud. The vast majority of developed countries recognize cryptocurrency as an asset or commodity, and transaction involving it as a barter. Due to this, states take away cryptocurrency exchange platforms, miners and traders from the shadow. Moreover, for states it is an additional source of taxation collecting, for example: company tax, property tax and income tax, if its cost became higher than a cost of purchase. Meanwhile, absence of determined treatment of cryptocurrency makes unavailable protection of its holders. There are many types of commodities and assets, and all of them have different legal regulation depending on their essence. So, it is impossible to recognize cryptocurrency just as a commodity or an asset, legislators shall answer the question of what exactly assets cryptocurrency is? The states should not ban the cryptocurrency but elaborate mechanism of its worldwide legal regulation. Basing on understanding the aim of cryptocurrency's creation and the fact that it is not money, the cryptocurrency should be deemed currency unit treated the same as means of payment.

**Mohammad ALJORATLE, Albaath University**

*Intellectual Property Right Disputes Resolution under Adversarial and Inquisitorial Systems - A case study of France & India*

With the technological progress, new types of disputes have emerged, methods and rules for resolving these disputes have varied as a result of the different legal and judicial systems prevailing in the world. Intellectual property rights disputes are one of the most important of these disputes. In view of the particular nature of these rights, it is necessary to look at how these disputes would be treated by the applicable judicial systems under the inquisitorial system and the adversarial system. This paper will highlight the most appropriate system of dispute resolution in terms of procedures, cost and time, and the nature of intellectual property rights disputes, whether in federal or non-federal countries or in countries those adopt the Anglo-Saxon or Civil law systems. Whether States adopting such judicial system determines competent courts to hear only those disputes (specialized IP court) in their laws or leave these disputes to rules of jurisdiction. This paper refers to the merits and demerits of Adversarial and Inquisitorial Systems for intellectual property disputes resolution, with reference to the judicial system with characteristics that are commensurate with the particular nature of intellectual property rights disputes or a judicial system which is in fact a mixture of the two systems. In order to find out the most appropriate, effective and successful we need to check different mechanisms applied in the field of intellectual property disputes. Therefore, I have identified two systems, one of them in India as one of the most important judicial systems in Asia, and the common-law countries, and the other in France as one of the most important judicial systems in Europe and countries which follow civil law. (*Key Words:* Intellectual Property Rights, Dispute Resolution, Adversarial system of justice, Inquisitorial system of justice, Common Law, Civil law, India and France)

**Laurensia ANDRINI, TC Beirne School of Law, University of Queensland**

*Rethinking Copyright Protection for Computer-Generated Works in Indonesia: Why Does Developing Countries' Perspective Matter?*

Technological development has been continuously challenging copyright law and, as a consequence, has resulted in numerous debates regarding how this domain of law should proceed in accommodating these new advances. Quite recently, the development of machine learning, a branch of artificial intelligence that

could autonomously generate works, has prompted scholarly discussions on the copyrightability of computer-generated works. In particular, it has required scholars to re-think the concept of originality and authorship essentials to copyright protection. Unfortunately, these debates are mostly concentrated on the perspectives of developed countries, while there has been limited discussion reflecting the standpoints of developing countries, such as Indonesia. This paper aims to assess why Indonesia's accommodation on computer-generated works into its national copyright law may be relevant to other countries' jurisdictions. It argues that despite limited development and applications of computer-generated works in Indonesia, its copyright law may still have relevant roles in the broader scope of discussion for several reasons. First, Indonesia's obligation under the Agreement on Trade-Related Aspects of Intellectual Property (TRIPs) to grant national treatment for foreign works will only have effect to the protection of computer-generated works if its national law has acknowledged and accommodated such works. Second, Indonesia has already attempted to develop *sui generis* mechanism for the recognition of multiple authorship in heritage work, that may provide similar paths to computer-generated works. Third, a clarity in Indonesia's national law may be required to support international legal harmonization of technology-related laws. Such harmonization is desirable because the movement of computing technologies, including computer-generated works, have gone beyond national borders and jurisdictions.

**Ankita ASERI, National Law University, Jodhpur and Ravi Prakash RAHUL, Dr. Ram Manohar Lohiya National Law University, Lucknow**

*Overhauling the Concept of Inventorship in Patent Law vis-à-vis AI Invented Patents*

Inventions are pertinent for a society to progress. The technological advancements have enabled AI to conceive inventions on its own. The Artificial Inventor Project had filed two patent applications listing AI i.e., DABUS as an inventor of the Patent. The application was rejected by the European Patent Office, UK Intellectual Property Office and the United States Patent and Trademark Office as DABUS is not a human inventor. This was the first instance where AI had been listed as an inventor. However, AI has been utilized in the inventing creations; for instance, Robot Eve had found a compound that can fight drug-resistant malaria. Therefore, the fundamental question that requires to be addressed is whether AI can be recognized as an inventor. The invention would have been accorded protection if it was invented by a human. Currently, no jurisdictions allow AI to be listed as an inventor. The America Invents Act defines the term inventor as an individual or individuals who invented or discovered the subject matter of the invention. In the case of *New Idea Farm Equipment Corporation v. Sperry Corporation and New Holland, Inc.*, the Court had excluded corporations to be listed as an inventor to protect the hard work of the person who has conceived the invention. Hence, only a natural person can be recognised as an inventor. However, the United States Patent Law requires that all inventors must be named in a patent application otherwise it may be a ground of invalidity as it would amount to inequitable conduct on part of the applicant. It is pertinent to note that the European Union has rejected the concept of an electronic person feeling the threat of AI surpassing human intellectual capacity. The question arises whether AI can be recognized as an inventor. India does not provide any clear guidelines if an inventor has to be a natural person to seek protection under the Patent Law. In this research paper, the researchers will attempt to evaluate the controversy concerning AI inventorship. The researchers will attempt to address the question if AI should be recognized as an inventor. Further, the researchers will analyze the position on the subject matter in different jurisdictions including the United States, United Kingdom, Europe and India. The research paper will also include the judicial precedents to provide more clarity on the current position on the issue of AI inventorship in AI-related patents. Lastly, the research paper would entail recommendations that can be emulated in the jurisdictions across the world.



**Nur Syakirah Bt Maimum AQSHA LUBIS and Nur Akma Bt Mohd DALI, Faculty of Law, Multimedia University Malaysia**

*The Impact of Artificial Intelligence on Patent Laws*

The accelerated pace and contribution of Artificial Intelligence ('AI') to innovation is growing in the midst of the 4<sup>th</sup> Industrial Revolution. Much AI development and applications are driven by business considerations, and business in turn shapes politics and law, influencing science and technology. Undeniably, the accelerated usage of AI in the industries has impacted traditional concept of regulation particularly the concepts of patent protection. This article aims to discuss the impact of AI on the existing Malaysian Patent protection. This includes discussing on the nature of patent rights and issues arising out of recognizing AI as an inventor. We must acknowledge that AI systems demand a reconsideration of patent law. Suggestions include making AI related invention as patentable subject matters with several solutions to the AI inventorship problem. This is to also consider allowing AI inventorship but creating a regime that vests ownership in human, allowing joint AI inventorship with ownership vesting in human co-inventor; or allowing non-inventive humans to be listed as patent inventors.

**Deepa BALACHANDRAN, Inter-University Centre for Intellectual Property Rights Studies, Cochin University of Science and Technology**

*Digital Revolution and Orphan Works*

Orphan works is a widespread and significant international issue. An orphan work is a copyrighted work whose author is unknown or untraceable. There are many reasons for a work getting orphaned. Orphan works create a problem when someone desires to make use of the work in a manner that requires permission of the copyright owner. The issue started after the introduction of the Berne Convention which mandates for the automatic protection of works. When the protection became formality free, all the works fixed in a medium get protection without registration or any kind of formality. However, the issue remained less noisy before the digital revolution. The developments in the digital world opened wide opportunities for the users, authors and publishers. The orphan work problem was extensively publicized and amplified by Google Book Search case which demonstrated orphan works as a serious obstacle to large scale digitization. The libraries and archives who were interested in digitizing their collection also faced difficulties in the digitization process.

The problem is, it is not possible to seek permission from the copyright owners. The mass digitization will help to ensure the access to all the copyright works and also it will prevent the loss of such works. However, there are legal barriers in the digitization of copyrighted works whose owners are not known. Another orphan work issue related to the development of digital technology is with the online contents. Advancement in the digital technology changed the traditional concepts of content creation, publication and reproduction. Ambit of orphan works issue has also changed with these developments. The new age orphan works issues are online and it is necessary to learn about the reasons and solutions for the digital orphan works. This paper shall analyze the major issues regarding the digitization of copyrighted works especially the orphan works and the impact of Google Books case and the issues related to the possibilities of online orphan work. The first part of the paper explains what orphan works are and what are the reasons for a work to be orphaned. The second part gives an overview of mass digitization and how the orphan works issues affects the mass digitization efforts. Finally, the last part discusses reasons for and problems created by online orphan works and analyses whether it is an issue of severity.

**Soorya BALENDRA, British College of Applied Sciences, University of Jaffna**

*Liability of ISPs in Online Copyright infringement – A Sri Lankan Study Compared with India, Singapore and USA*

Intellectual Property plays a vital role in modern economies as a valuable intangible asset. Among them, copyright protects a wide range of 'works of authorship' within its umbrella. Though IT development revolutionized towards the easy access to information, because of the nature of copyright that can easily be acquired and unduly exploited, the internet has made it much easier to manipulate, reproduce, and distribute protected works. As the technologies evolve very quickly, the laws are expected to be refined to combat modern challenges. During the past decades, there have been numerous efforts to bring in a suitable legal framework which deals with the Intellectual Property on the internet. Due to the anonymity nature of internet access, locating the alleged offender proves difficult in many cases. Therefore, copyright holders attempted to hold internet service providers (ISPs) liable for subscriber infringements. In the modern era, the urge to set the parameters to hold internet service providers liable has been realized to balance copyright holders and ISPs. In Sri Lanka, the copyright law is based on the Intellectual Property Act No. 36 of 2003(amended), which does not provide any specific protection for copyright infringements in the digital environment and overlooks to address the liability of ISPs. Similarly, in the Computer Crime Act No.24 of 2007, any provision relating to the ISPs is hardly found. However, the Electronic Transactions Act No. 19 of 2006 addresses the ISPs liability through its provisions to an extent. However, as the act itself applies only to the transactions under this act, copyright infringement on the internet is out of the scope of ETA. This paper's primary objective is to examine the liability of ISPs for copyright infringement by their subscribers in Sri Lanka. Also, this research attempts to analyze the arguments for holding ISPs liable for copyright infringements. Furthermore, it discusses the United States framework, which consists of one of the most comprehensive frameworks on ISPs liabilities popularly known as the Digital Millennium Copyright Act (DMCA). The Asia-Pacific region's position is also examined with special reference to Singapore since it is believed to be a jurisdiction with a well-developed system of law on IPS liability and India as a jurisdiction with similar regulatory features of Sri Lanka. Finally, this research intends to rationalize the urge to set parameters of ISPs liabilities on copyright infringement and conclude with suggestions on improving the law relating to the ISP liability in Sri Lanka.

**Arunabha BANERJEE, National Law University, Jodhpur**

*Dissecting the Impact of Interdigital Technology v. Xiaomi Corporation on the Autonomy of Courts and FRAND Licensing Regime in India – A Critical Analysis*

The proposed paper concerns *Interdigital Technology v. Xiaomi Corporation & Ors.*, a verdict pronounced by the Delhi High Court on October 9, 2020. In this case, Interdigital had filed a suit claiming infringement of its Standard Essential Patents (SEP) registered in India protecting its wireless communication technology. The Delhi High Court was expected to provide a prompt resolution to the litigation by fixing a FRAND royalty payable to Interdigital which would allow Xiaomi to continue its business of using the patented technology. But, in a peculiar turn of events, the court refused to hear the matter citing the anti-suit injunction issued by the Wuhan court in China where parallel proceedings were in the process on a different set of patents registered in China on the same technology. Not only does this judgement represent a drastic U-turn from the approached witnessed in earlier cases before the Delhi High Court, but it also raises a serious question mark on the autonomy of a court in adjudicating matters which derive legitimacy directly from registrations effected on the Indian soil. The issue is compounded by the fact that patents are essentially

territorial rights in terms of their fundamental nature as an intellectual property right under the global regulatory framework. Additionally, the paper would also examine whether the verdict is to be seen as a glorious chance spurned in defining the principles of FRAND licensing in India in a more concrete fashion, especially when seen from the perspective of downstream purchasers of patented technology sourcing the components from authorized licensees. The issue deserves a closer consideration in light of some key global developments like the list of questions formulated in *Nokia v. Daimler* by the Dusseldorf Regional Court in Germany for clarification by the Court of Justice of the European Union.

**Ann BARTOW, Franklin Pierce School of Law, University of New Hampshire**

*Copyright Law and Food*

This essay considers and rejects the notion that “creative platings” of food should constitute a copyrightable work. In part, it is a response to this essay: <http://www.californialawreview.org/copyrighting-creative-plating/> The first part of the essay describes the copyright law doctrines likely to have an impact on how a court might evaluate a claim that food plating. Based on analogous case law, it predicts that judges could find food platings to be sufficiently fixed and original to comprise copyrightable works without committing obviously reversible error. The second part argues against expanding copyright protection for food plating choices because of the potential negative impacts this could have on everyone in the food chain. Empowering chefs with the financial resources to file and enforce copyright registrations to use the threat of lawsuits to limit the ways that other chefs can present their food to customers. The third part makes a broad human rights-based argument that necessities like food should not be burdened with copyright law protections. As long as people go hungry governments must prioritize providing access to food over restricting access through copyright law-based monopolies.

**Jyotshana BHATTARAI, Music Producer Society of Nepal**

*Empowering Women Entrepreneurs through Intellectual Property Protection in Nepal*

Women entrepreneurship is a new phenomenon in Nepal. If we go through the history of Nepal, Nepalese women were subordinate to men. In the past to own a business and begin a large-scale commercial enterprise was limited to men, especially of Marwari and Newari communities. However, in recent time women were educated and with the help of internet access, globalization huge number of Nepalese women was empowerment, freedom and become success to run their own business. But also, it was not so easy for women to run their business in the developing countries like Nepal, because women-owned businesses face various challenges throughout their lifecycles they often have less start-up capital, seek out new funding relationships less often, are less likely to receive the full amount requested from funders, and earn lower revenues than men-owned businesses. Beside these, Nepalese women were not familiar on Intellectual Property only few of them have knowledge on Intellectual Property even though they have no idea that IP can be an important factor affecting female entrepreneurial success. Basic understanding of various IP types, procedures and awareness will help women entrepreneurs protect their IP correctly. On the other hand, Intellectual property (IP) is not physical in nature but is often the most valuable asset of a company because it gives the creator an exclusive right over the use of his or her creation for a certain period of time. As we know the protection of intellectual property rights is vital for economic growth. Intellectual property rights are so important that they are enshrined in Article 27 of the Universal Declaration of Human Rights of 1948, which states “everyone has the right to the protection of the moral and material interests resulting from any

scientific, literary or artistic production of which he is the author. In the context of Nepal, Intellectual Property was not given equal treatment as physical property before. But on 20 September 2015, we have been able to mention in our constitution. In Article 25 Intellectual Property is accepted as fundamental rights. After that now, few people understand value and its importance. Before only tangible property was regarded as property. Women in the economy are a powerful force for change and leadership. Therefore, Protection of Intellectual Property Rights is a valuable aspect for economic growth and empowering women. When IP rights are strongly protected, the rights of women will also be protected because empowering women means giving them equal Intellectual Property Rights. IP Rights not only bring back financial incentives for women but also give them exclusive power over their unique creations. If used correctly and skillfully, intellectual property rights can lead to major advancement in the entrepreneurship by inspiring women who come up with innovative ideas and inventions. Therefore, to be a successful female entrepreneurship every Nepalese woman should have good knowledge on IP which will help them for their economic growth and prosperity and should be aware on IP rights to solve the problems.

**Nidhi BUCH, Gujarat National Law University**

*Multifaceted Role of the State in Ensuring Sustainable GI System: Challenges and Opportunities in the Indian Legal Framework*

Geographical Indication (GI) which was once considered a sleeping beauty is now being seen as one of the most important tools for rural development. It protects products that are linked to its geographical origin. Originating from a definite geographical territory, it is used to identify agricultural, natural or manufactured goods in India. Goods protected with a GI tag, must have a special quality or reputation or other characteristics which are unique and can be attributable to its geographical origin. GI is considered to be a legal vehicle which can protect and preserve socio cultural heritage of a community. Products like Darjeeling Tea, Champaign, Roquefort Cheese and Basmati Rice are examples of local products capturing global market. India has put in place a *sui generis* system of protection for GI with enactment of a law exclusively dealing with protection of GIs. In intellectual property rights (IPRs), the term *sui generis* refers to a special form of protection regime outside the known framework. It can also be viewed as a regime especially tailored to meet certain needs. The legislations which deal with protection of GI's in India are 'The Geographical Indications of Goods (Registration & Protection) Act, 1999 (GI Act), and the 'Geographical Indications of Goods (Registration and Protection) Rules, 2002 (GI Rules). GIs are distinct due to its collective, non-transferable and perpetual nature which requires an equally different system for governance compared to other forms of intellectual property. One of the most important aspects of any GI regime in terms of its governance is the involvement of the State irrespective of the fact whether the country has just introduced the system of GI protection or it has been part and parcel of its history. The objective of GI is not only to grant registration to the origin linked products but also to ensure sustainable post registration system for reaping maximum benefits from such registered GI. State plays key role in ensuring sustainable and efficient GI system. In India, State's role is not only limited to facilitating the filing of GI application but also extends to being proprietor as well. In this context the paper makes an attempt to explore the role of State/government in promoting and protecting GI with particular reference to scope and significance of legal framework for GI protection in India. The involvement of state in GI governance is significant as it plays a critical role at every stage of spreading awareness, acquiring registration and finally implementing the legal rights. Thus, the paper makes an endeavor to understand the role of State by analyzing its nature, need and success in protecting GI. Considering the complexity and diversity of GI protection system, involvement of the State at national, regional and local level is critically examined and analyzed from Indian viewpoint. A comparative perspective from EU and India is taken to understand the role of State in

harnessing the effective and efficient GI protection system in both these jurisdictions. Lastly the paper elucidates on the governmental support schemes that play major role in GI governance in India. Finally, the conclusion on the role of state in harnessing the GI potential as a tool for development will be drawn taking into consideration the objective of Indian GI system, status of majority of producers being underprivileged, complexities and technicalities involved in the GI filing, absence of strong producers' organization and post grant benefit sharing mechanism.

**Gargi CHAKRABARTI, National Law University, Jodhpur**

*Revisiting Geographical Indication for Foodstuffs in India*

In India foodstuffs are protected under geographical indications (hereinafter GI). Among the 370 protected GI goods about 5% are foodstuff. The agricultural products and foodstuffs are closely related but they make the different categories. The definition of 'goods' in India include "*agricultural, natural or manufactured goods or any goods of handicraft or of industry and includes foodstuffs*". By virtue of this definition, foodstuffs are included as a category of goods under purview of protection under GI system in India, but the definition of 'foodstuff' or the inclusion or exclusion criteria by which the GI applications are categorized under foodstuff is neither mentioned in the GI Act, nor in the GI rule or in the manual of GI. From common understanding and by analyzing the protected foodstuff, it is understood that foodstuffs are the goods which are prepared items of food aimed for human consumption. Now while connecting the foodstuff with the definition of GI, a given quality or reputation of the good needs to be essentially attributable to its geographical origin. In case of foodstuffs the linkage of the goods with its geographical origin will depend on the quality & characteristics of the raw material and the steps of production following the recipe by using the specific human skills of that particular geographical area, which is the basis of a given quality and also for its reputation.

By analyzing the GI protected foodstuff of India, it is found that the characteristics of the raw material are not so specifically linked with the geographical location, but the recipe is specifically linked with the geographical area, and hence the reputation. If the example of Bengal Rosogolla is taken, which required special category of cottage cheese and the specific method of production; it can still be prepared in other parts of India if the production method is known. But the raw material the cottage cheese or the cow milk from which the cottage cheese is prepared or the rearing of the cows from which the milk is procured are not linked directly with Bengal; whereas it can be said that the processing or production is based in the geographical location, and hence is the special taste of Bengal Rosogolla and the reputation. The quality and taste of Odisha Rosogolla is different from Bengal Rosogolla, but then again only the recipe is linked with the geographical location and not the raw materials. It is well understood that food recipes are part of the human heritage and culture, and recipes mostly evolve with a mixture of traditional format with dynamic factors of experimentation by different generation. Geographical linkage is with the recipe of foodstuff, which provides them their unique characteristics and reputation, and also attributable to their demand in the domestic as well as international market.

The question here in the case of foodstuff protected under GI regime is, how the sanctity or authenticity of the indication is protected in India for the foodstuff, when only the recipe and the human skill is connected with the geographical location and not the raw materials. This article will analyze the different GI applications of protected foodstuff to check the geographical linkage between the good and the place of origin, will examine whether the requirement of linkage of quality, reputation or other characteristics are established with the geographical location and whether the criteria of quality, reputation or other

characteristics to be ‘essential attributable’ to its geographical origin is fulfilled, will discuss about the controversy regarding GI protection of foodstuff in India, and will also analyze whether it has any impact on commercial benefit of the producers.

**Ankita CHAKRABORTY, Delhi School of Economics, University of Delhi**

*The Role of Geographical Indications in Preserving Craft Traditions: Exploring Case Examples from Indian Handicrafts*

Geographical Indications (GIs) refer to that constituent of Intellectual Property Rights which is responsible for identifying and preserving goods originating from a particular region. Handicraft GIs comprise one of the major categories of GI classification of India. Handicrafts are either completely made by hand with usage of hand tools or can be undertaken mechanically to an extent so that the manual contribution has a substantial role in its creation. These GIs share a majority with 55.2% of the total GI registrations in the country. Handicrafts represent a sustainable model of economic activity which is mostly eco-friendly with low capital investment and an extensive skill base. These GIs are an essence of the traditional legacy of the exquisite craftsmanship that has been in existence in a specific region over a time period.

This study has the following objectives: 1) To understand the Handicraft GI registrations in the country; 2) To trace the tradition behind the genesis of Handicraft GIs; 3) To identify the physical and human factors responsible for the creation of these GIs; 4) To understand the role, importance and extent of protection rendered by GIs.

This study thus aims to document and describe the importance of the physical and human factors responsible in handicraft creations and look into how Geographical Indications have given a unique spatial identity to them and aided in preserving the same.

**Kailash CHAUHAN, New Delhi High Court**

*Patents and Innovation: A Tool for India Economic Growth*

India is emerging as a world’s fastest growing economy and there are some issues which need to be addressed. The domestic market is growing and the country needs a system to protect the same. IPRs protecting successful innovation promotes more innovation and achieves a number of objectives like it promotes companies’ intellectual capital, it recovers the capital invested in the R&D. IPRs ward off competition and help to achieve sustainable revenue, profits and market share. It improves investor confidence, attract investment, and encourage more innovation.

To make India a \$5 trillion economy by 2024 and 10 trillion by 2030 is one of the main ambitions of the government. This paper would focus on patents and innovation as a tool for economic growth. Other factors like FDI, R&D and economic policies would be studied to discuss their role in the IP based economic growth. As ICT and the digital economy would play an important role in the economic growth of the country, an ideal IP regime would be needed to foster such economy. This paper would discuss in detail all the factors which link IP (patents) to economy. It will research the gaps in the existing IP system and offer new recommendations for an IP regime that would help the country's economic development.

*The Conundrum of Fast Pacing E-commerce in Trademark Law*

We live in a world where we are under the surveillance of several social media which gathers our tastes and preferences throughout our activities. Even within the remote villages of our country, the services of flip kart, amazon etc. seems to be available. A whole lot of the population is influenced by the simplicity of e-commerce platforms. However, the human influence is partially or even fully taken away in the decision-making process in the online e-commerce platforms. In every online shopping platform, the purchasing process is being affected by e-commerce gatekeepers. The kind of product recommended through the product suggestion methods influence us greatly. Most of these platforms also use AI recommended chat bots which have replace the job of customer care executives. It is worth looking at how the consumers are unknowingly guided to some of the branded products. AI gatekeeper such as “*Amazon’s Alexa*” keeps the information which you speak to it and then links such information to the cloud and it keeps that history. The shopping experience can also turn out to be into an automatic execution model by using its settings, wherein e-commerce sites would basically recommend the most top three branded products relating to the product for which you ask. Trademark law operates upon the principle of *consumer is the king* but what if the consumer is an AI application itself. Would the principle turn out to be *AI is the king*? The information available to the consumer here would be limited to the limitations of such applications. Who would be liable for such trademark infringement cases? How would trademark law cop up with the e-commerce revolution of internet shopping?

**Tamanna DALWAI and Syeeda SHAFIYA, Muscat College and Vincenzo SCAFARTO, University of Cassino and Southern Lazio**

*Does the Intellectual Property Index and Institutional Governance Quality of Developed Countries Impact the R&D Expenses of Information Technology Firms?*

Firms are under continuous pressure to enhance innovative capacities to compete effectively. R&D are critical for the corporate functions of knowledge intensive industries such as IT companies. There is little evidence relating to country’s institutional governance quality and intellectual property indices contribution to the R&D investment of firms. This research contributes to the gap in literature by examining the relationship of intellectual property index and institutional governance quality with research and development (R&D) expenses. This study uses data from listed information technology (IT) firms of six Asian/Pacific developed countries that includes Australia, Hong Kong, Japan, South Korea, New Zealand and Singapore. The model is estimated using ordinary least squares regression for 3740 firm year observations collected from S&P CapitalIQ for a five-year period from 2015 to 2019. The natural logarithm of R&D expenses was used as the dependent variable. Intellectual property index and institutional governance quality is used as the independent variables along with firm specific and macro-economic variables. The robustness of the results was checked using the generalized moments method estimation. The empirical evidence of first model reveals that intellectual property index of countries does not influence the R&D expenditures of the IT firms. Large firms that are highly leveraged have a high research and development expenditure. The results of the second model demonstrate that when institutional governance index is strong for the countries the IT firms have higher R&D expenditures. The findings also suggest that when the inflation is high in the developed countries more R&D expenditures are undertaken.

**Lihini DE SILVA, General Sir John Kotelawala Defence University**

*Geographical Indications for Non-Agricultural Products in Sri Lanka: Where Does the Frontier Stand?*

Sri Lanka having incorporated a definition for Geographical Indications (GIs) similar to the Agreement on Trade related Aspects of Intellectual Property Rights (TRIPS Agreement), would have to face the same circumstances as depicted by the TRIPS Agreement. Even though, the agricultural products can relatively easily be linked to the geographical origin, encapsulating non-agricultural products such as traditional crafts and textile under the GI definition creates ambiguities in the area. Hence, this research first aims to explore the possibility of bringing Sri Lankan non-agricultural products under the three components of GI definition – quality, reputation and characteristics. Next, the research sheds some light on the drafting history of the TRIPS Agreement and other widely recognized legal instruments to ascertain the possible content of GI definition. Lastly this research will propose the potential gauge that can be followed in incorporating non-agricultural products within the Sri Lankan GI regime. Accordingly, the research is primarily based on the black letter law approach where qualitative data was extensively gathered from primary and secondary sources. In order to ascertain empirical data, field research methodology was also followed. Accordingly, interviews were conducted with several regulatory and administrative bodies and producers of potential GIs. The findings reveal that historically GI paradigm has been only based on the *terroir* factor whereas a product has to be linked to the geographical factors to gleam as a GI. However, with the inception of the reputation factor within the GI definition, non-agricultural products based on human factors were also permitted to acquire the GI protection. This envisages that non-agricultural products can also be declared as GIs under the Sri Lankan intellectual property regime. Nevertheless, the paradox emanates in scrutinizing the point where the reputation of a product becomes essentially attributable to the geographical origin. The drafting history of the TRIPS Agreement and other related legal instruments supports the notion that bringing reputation factor to define GIs was a nod towards the countries that were divided over the types of GIs to be recognized and no convincing justification could be found for introducing the reputation component. The review of literature and the field research suggest that non-agricultural products such as Dumbara mats, Ambalangoda masks, Hapuvuda lacquer work, Galle *Beeralu* lace and Moratuwa furniture have been identified as potential GIs in Sri Lanka. In recognizing GIs, it is with no doubt that Sri Lanka could glean massive socio-economic benefits. This itself has the likelihood of making path for the corporates to misuse the invaluable GI expression. This even becomes worsened with the power given to the line Minister to declare GIs under the Intellectual Property Act, (as amended) No. 36 of 2003. Hence, this research suggests a narrower but history-based approach to be adopted in recognizing non-agricultural products as GIs in Sri Lanka.

**Monika DIWAKAR, Symbiosis Law School, Symbiosis International (Deemed University) Pune**

*Legal Challenges Faced by Indian Pharmaceutical Industry: An Analysis of TRIPs Provisions on Patent and Public Health and Compulsory License*

TRIPS Agreement was the successful ideology for the effective implementation of IP system and adoption by respective states according to their own laws but difficult negotiation on the issue of pharmaceutical patent protection, which is seen to have an impact on access to medicines in India. However, TRIPS Agreement provides limitations, exceptions and other flexibilities to promote access could be put into effective use by WTO members. First, the researcher wants to explore web of law and policy factors governing regulation of pharmaceutical industry and markets and also role for IP protection. This paper will examine the impact of IP protection in pharmaceutical industries (public health) in relation to developing



countries and made to India and also focus on particular usage of compulsory licensing have to a certain extent benefited to the developing countries and How it works for the Indian Pharmaceutical Industries? And what would be better solution for the development of India? Importantly this paper will examine the impact of the TRIPS Agreement on the Indian generic pharmaceutical industry and the legal challenges faced by Indian pharmaceutical industry after implementation of product patent regime effective from 1 January 2005, and the broad approach in relation to compulsory licensing in the view of the recent case in India. The researcher also wants to explore in relation to compulsory licensing for export in India being exporting country, and want to study some comparative analysis with respect to other countries like Thailand, Malaysia, USA, China and Japan.

**Djulaeka DJULAEKA, Makhmud ZULKIFLI, and Santi Rima MELATI, Faculty of Law, University of Trunojoyo Madura**

*Preservation of Traditional Cultural Expression as Communal Intellectual Property (Case Study in Madura Islands)*

Madura has distinct cultural characteristics from other regions in Indonesia. Local government responses in 4 (four) districts do not have in common. Two local governments that are quite responsive are Bangkalan and Pamekasan by issuing Regional Regulation Number 6 of 2017 concerning Preservation of Culture and Customs in Bangkalan and Regional Regulation Number 5 of 2013 jo Regional Regulation Number 6 of 2019 concerning Amendment of Regional Regulation Number 5 of 2013 concerning Preservation of Regional Culture Pamekasan. The existence of the Regional Regulation is a reflection that the region has responsibilities related to the process of preserving the traditional cultural values of the community. However, this regulation has not yet had a significant influence related to efforts to provide protection recorded in the Directorate General of Intellectual Property database as communal intellectual property that is recognized nationally and even internationally. This article seeks to uncover the obstacles in the recording process in the Directorate General of Intellectual Property's web database as part of the preservation of local cultural values of the Madurese community, especially Bangkalan and Pamekasan. Through a sociological juridical study, it shows that the Bangkalan and Pamekasan Regional Regulations have not been implemented effectively and there needs to be a strategic move from the Bangkalan and Pamekasan Regional Government in realizing the preservation of traditional cultural expression as communal intellectual property of the community.

**Charu DUREJA, Rayat College of Law, Panjab University Chandigarh**

*Infringement Liability for Artificial Intelligence generated work under Indian Copyright Law*

We are living in a world that has changed leaps and bounds with the evolution of technology, but law has not followed the same in synchrony. Traditionally creative works like writing, cooking, painting and music which were conceptualized only to the ingenuity of humans, have now become an apparent task of Artificial Intelligence. Since then, great advancement in programming and computational intelligence has opened many possible avenues of work for computers, one of which being creative works. Artificial intelligence technologies use tremendous amounts of information to learn, refine and then use to generate an output. The process commonly referred to as “machine learning” allows AI to create entirely new content based upon the materials it used to learn. Copyright is infringed when someone uses a substantial part of a copyright work without the copyright owner’s permission. Copies made inside a human brain do not infringe

copyright. For example, a person may remember a song and sing it in his head, without infringing copyright in it. But he would infringe copyright if he writes down the song or performed it in public without permission.

On the contrary, copies made within the AI ‘brain’ may infringe copyright. For example, an AI may store a copy of a song within its memory. Like a human, an AI may also violate copyright by generating copies of the song externally, performing it, distributing it, or communicating it to the public. In 2016 AI was trained to replicate and produce original paintings based upon works of renowned artist Rembrandt van Rijn. In the process of creating new content, AI, which has moved into the entertainment industry, may create copies of copyrighted works in memory of storage as a byproduct of its overall output sequence. Artificial Intelligence has become a key tool for developers and artists around the world. Some have used it to create unique creations. Others have used it to create derivative works and still others have used it to circumvent potential infringement claims. This upsurge of mechanically copied work has led itself to a collision course with the Copyright Law in India, raising doubts in the minds of legal practitioners as to who shall be liable for infringement. We must not forget that, AI can not only create works that theoretically can be protected under copyright law, but is also capable of infringing copyrights held by others while creating its work. It has already been seen above in the case of Rembrandt van Rijn. Applying the traditional rules of intellectual property law does not yield a plausible solution to this problem.

This paper explores to what extent, if any, can copyright be infringed upon when AI reproduces copyrighted works for machine learning. Who shall be held liable for the infringement? Whether AI can be held liable for the same? Are the existing Indian Copyright laws suffice to deal with this scenario?

**Mark Robert DY, School of Law, University of Cebu**

*DEEPFAKING ASIA: An Asian Perspective on Deepfake Technology, Media, and Copyright Law*

‘Deepfake’ technology is an artificial intelligence (AI)-powered method of creating synthetic media which allows users to speak and act as if they were another person – usually a public figure or celebrity. The coined term combines the words ‘deep learning’ and ‘fake’. Similar technologies have become common features on social media and chatting platforms like Facebook, Snapchat, and Tiktok which allow users to take the form of fictional or animated characters, all intended for good fun.

On the bright side, the technology adds new and exciting layers of human interaction. It enriches the immersive experience by making realistic-looking images and performances possible. Used properly, these technologies serve as excellent tools for media, education, entertainment, and practically all areas of cultural life. For example, in entertainment, filmmakers are using it to resurrect James Dean to star in a new movie. In art and culture, the Dali Museum in Florida uses a realistic deepfake hologram of Salvador Dali to welcome visitors even take selfies with them. On the dark side, we observe new challenges in the protection of privacy, the spread of misinformation, and the introduction of more complicated forms of copyright infringement.

These tools are used to create and communicate realistic-looking ‘fake news’ to the public. A dishonest campaigner can easily create a fake video showing an opposing political candidate hanging out with a group of known criminals a night before an election, causing them to lose the popular vote. But most commonly, this technology is used to objectify women against their will in the thousands of synthetic pornographic videos shared online. These videos usually feature famous celebrities digitally superimposed on the heads

of real porn stars. Reports show that these provocative deepfakes have been weaponized against a female journalist from Mumbai and a Senator from the Philippines. Nevertheless, any person with a public photo online may be victimized in the same way, including underage boys and girls. Such uses harm the reputation of individuals, sway public political opinion, or simply serve as cheap non-consensual sexual amusement over the Internet. And underneath it all, copyrighted content is casually being infringed – used to train the AI to generate new media without the consent of the right holders. Certainly, there is space for fair use and free speech exceptions to operate, but the line can quickly move away from entertainment and parody and turn into an outright attack on the privacy and dignity of featured persons.

This research aims to analyze specific incidents of deepfake abuse in Asia and how they were addressed. Informed by these experiences, Philippine domestic laws concerning privacy, publicity, and copyright will be examined for gaps that need to be managed to safeguard the copyright, privacy, and publicity rights of individuals and protect the public from misleading or false information. This research will provide recommendations for legislative amendments that address deepfake technology and its abuses, with the awareness that any legislative response needs to be fine-tuned to avoid suppressing the positive and creative applications of these technologies.

**Tabrez Y. EBRAHIM, California Western School of Law**

*Right to Exclude in Islamic Property Law as Applied to Western Legal Systems*

The right to exclude has long been debated among western property theorists. The western conceptualization of the right to exclude has spanned various interpretations, including the *sine qua non* of property, a claim-right, a privilege-right, a remedial right, a moral norm, and a use right. The right to exclude in the context of both tangible and intangible property has come to be associated with providing an owner the use and enjoy of property without interference and an entitlement to injunctive relief to restrain such interferences. In focusing on the elements of “the right” and “exclusion,” western courts and scholars have come to understand their meanings to be a duty relationship between individuals and a fencepost against trespass respectively. Western scholars have paid little attention to the Islamic viewpoint on the right to exclude.

In this Article, I set out to fill a void by interpreting and introducing the Islamic vision for the right to exclude. To that end and in contrast to the western conception of the right to exclude as an *in rem* right, I interpret the Islamic vision of the right to exclude to be a multi-faceted *in personam* obligation. The Islamic right to exclude has an *ex ante in personam* obligation for the owner and an *ex post in personam* regulatory obligation for government. Such characterization sheds light on the consequences for Muslim-majority countries and a basis for policymaking in real property and intellectual property laws for western societies. A theologically-sound right to exclude in Islamic property law would allow Muslim-majority countries to develop appropriate intellectual property statutes and innovation policy, and allow western lawmakers to make better decisions about socially astute land use measures and intellectual property injunctive relief.

I emphasize that my interpretations of Islamic property law should not be read as a call against injunctive relief. My goal is to furnish a needed balancing between the polarization of absolutist utilitarians and progressive skeptics in western property and intellectual property scholarship by acknowledging a different conceptualization—the Islamic vision of the right to exclude that recognizes and internalizes each view and moves property theory away from singular emphasis.

*Online Intermediaries as Hybrid Bodies: The Case of Copyright Infringing Content Monitoring*

The digital information environment is operated by a pyramid of “in-between” actors, known as online intermediaries. All these online actors are involved in the flow of information, and thus may function as “valves,” controlling the traffic on content in their “pipelines.” The issue of online content monitoring stands at the heart of contemporary social and legal discourse since it challenges other public, individual, or commercial entities’ rights and freedoms, such as freedom of speech, or more broadly other “digital human rights.”

Online intermediaries are facing a new legal and social challenge, since they are the ones that should strike the appropriate human-rights balance, although they are private-commercial entities. This phenomenon could be demonstrated through several examples concerning content monitoring in cases of allegedly copyright infringement, such as the legal schemes of “notice and takedown” or “blocking orders”. The online intermediaries are expected to act as gatekeepers, for the sake of public interest — but with no legal and social infrastructure.

Considering this background, the proposed research aims to explore whether and how some of the public law standards, such as accountability, transparency, equality, and reasoning, could be imposed on relevant private entities that are currently engaged in online content monitoring.

European countries, in contrast to the U.S., are more willing to accept the introduction of public law standards into the private law sphere. An accepted doctrine acknowledges that in some cases private entities, such as commercial companies that serve a social function in nature, may be perceived as a hybrid private/public body. The legal consequence stemming from such perception is the that the door is opened for the direct imposition of public law standards on the relevant private entity. The proposition that will be presented is that in relevant cases major online intermediaries should be acknowledged as hybrid bodies, in order to promote a balanced and fair digital information environment. There are many advantages in using this doctrine, which allows a gradual and dynamic application of public law principles and on a global scale. The significance of this proposed research lies in its potential to assist in shaping better policies and practices in the future.

**Jianmei GAO, Faculty of Law, Vrije Universiteit Brussel**

*Planting a sustainable root for Geographical Indications*

Geographical Indication (GI) is an independent type of Intellectual Property that indicates products’ geographical origin and connotes the link between the typicity of the products and their geographical origin. As a quality and source indicator GI requires certain degrees of localized production, which potentially could lead to overexploitation of the local resources without proper management. However, GI allows an industrialized and unsustainable production practices that potentially could either abandon or overexploit the local resources to compete with the localized and sustainable production activities as long as the typicity of the product is guaranteed and the final product could still be seen as originating in the indicated locale, which have been empirically confirmed. Noticing the adverse effects of an industrialized production model, such as leading to overproduction with homogeneous products, bring environmental problems and contributing to rural depopulation, some policy makers are turning to support a localized one, which is

anchored in a defined locale by adapting to or taking advantage of natural factors and human factors therein and allowing them to leave a trace (typicity) on the product produced therein, which obliges the local producers to utilize their resources in a sustainable way, and thus contributes to the achievement of the sustainable development goals.

This thesis explores the potential for GIs to function as a regime that supports a localized and sustainable production model. It proves that GIs could and should have a sustainable root. Different from the current literatures that utilize the theory of *terroir* to explain the nature of the subject matters of GIs focusing on the contribution of natural factors and traditions, this thesis explains the nature of the subject matters with the Circular Economy theory, according to which a GI regime appreciates human's endeavors that utilize and integrate the local resources efficiently and sustainably, which enables GIs to have a sustainable root.

**Lucky GEORGE, School of Excellence in Law, The Tamil Nadu Dr. Ambedkar Law University**

*Copyright Infringement in Cyberspace: Liability of the Developer of New Technology or Device*

The digital age marks a turning point in the world of copyright, allowing for the creation of infinite identical copies of digital content by anyone, autonomously and free of charge. The fact that copyright owners strive to fight the widespread copying and distribution of copyrighted works is not surprising, yet the degree to which their fight is carried out is quite striking. As a strategic decision, the fight is conducted not only against copyright infringers themselves, but also against the providers of various types of technologies that make such infringements possible. As rightly stated by Justice Stevens, "When a widely shared service or product is used to commit infringement, it may be impossible to enforce rights in the protected work effectively against all direct infringers, the only practical alternative being to go against the distributor/developer of the copying device for secondary liability on a theory of contributory or vicarious infringement." (*In re Aimster Copyright Litigation*)

Copyright law has developed the doctrine of secondary liability of parties other than those who commit the act of infringement. Making liable the provider of new technology or device either contributory or vicarious liability for the infringement done using their technology. Instead of taking action against individual wrong doer, take action against the provider and curb the root cause of it. Taking action against them is more feasible and can impose ban on the availability of the technology and claim reasonable damages from them as their pocket is bulk to pay the compensation. If the technology can be used both for copyright infringement and substantial non infringing use, only because if few customers use the technology for infringement is it justifiable to prohibit the use of it. If so it is going to prevent the development of technology and new device in order to protect the interest of copyright owner. In this research paper, the researcher focuses on the role of the judiciary in balancing the interest of developer of new technology and the interest of copyright owner in protecting the statutory monopoly.

In *Sony Corp of America v Universal City Studios, Inc.*, Court has relied on the doctrine of Staple article of commerce by interpreting the Patent Act 35 USC Sec 271 (c), to strike a balance between a copyright holder and the right of others freely to engage in substantially unrelated areas of commerce. Provided the device should be capable of substantial non infringing uses, the court found Sony innocent of contributory infringement. The Sony standard has presented interpretive difficulties for the courts, particularly in the context of digital technologies that permit reproduction and distribution of perfect copies of copyrighted works. The development of peer-to-peer file sharing technology has posed especially thorny problems. In the beginning for file sharing, they maintained a central server and the one who operates them will be made

contributory liable for the direct infringement by the end user for not preventing the infringement. But with the advancement of technology there is decentralisation of server and there is no need of any person to operate them, in that case is it justifiable to make the person liable for creating a technology that is used for infringement by the others. The development of peer-to-peer file sharing technology thus raises two important questions: First, when do these secondary liability doctrines apply to developers of technologies that enable users to copy and share digital copyrighted content; and second, what must be shown and by whom, for a technology developer to claim the protection of the Sony rule?

**Manju GERARD and Kondapi SRINIVAS, ICAR-National Academy of Agricultural Research Management, Hyderabad**

*Innovation Trends in Internet of Things Based Smart Greenhouses through Patent Data*

Digitalization of technologies has led to the intensification and revolutionized the system of agriculture paving the way for manifestation of dynamic innovations in this sector. One of the potential technology is Internet of Things (IoT) with dynamic innovations for multiple applications in farming. IoT enabled smart greenhouses have increased market potential as these controlled systems help in monitoring a microclimate environment for crops, yield monitoring and nutrient management remotely.

This study aims to analyze trends in IoT based smart greenhouses using patent analytics. Trends in patent filings show early filings in 2004, but a surge after 2014. There is a six-fold increase in patent filings from 2014-2018. Most of the filings are from China, making it a leader in market. It is observed that in the IoT based applications in controlled/protected environment agriculture sector, China is dominating with 93% of applications filed in China as priority country. Maximum filings are in China (1029) followed by Korea (50) and US (21). The assignee data indicate that the patent race dynamics is distributed more in private than academic sector. The study also discusses the citation analysis and the market potential trends where the many inventive startups are emerging at the global platform.

**Jayanta GHOSH, Centre for Regulatory Studies, Governance and Public Policy, West Bengal National University of Juridical Sciences**

*Artificial Intelligence (AI) Impact on Data Ownership Conflict with Trade Secret*

The progress of technology goes so far as to jeopardize the human trade secret entity. Allied human-like personal data or data ownership business is in crisis. Human trade secret values are optimally destroyed with Artificial Intelligence (AI) in the near future. In order to protect future contingencies, human-regulating integration of access, stored and processed information and data must be regulated holistically. These future circumstances lead to an ethical dilemma for an adequate solution, which loses human control and human values in technological advancement. Artificial Intelligence (AI) research has evolved rapidly in recent years to resolve human values with economic, political and social conflicts. It is attributable to many successes of modern machine learning methods, such as deep learning with the availability of massive datasets and computational power improvements in business. AI and data are rapidly relevant to the specific trade secret domain. There's an increasing list of tasks where algorithms equal or surpass intellectual output. Despite the successes, the opacity, confidence, and protection of common trade secret data remain significant issues and challenges. The exponential evolution of computing resources, data storage, and rising information digitization has led to AI's current data ownership growth.

In the near future, AI technologies will affect many fields including creative intellectual work, creativity, economy, politics, ethics, health and medicine. A deeper understanding of "fairness" and ethical approaches in the world of intellectual property is required to provide people with sufficient rights against unequal or socially harmful applications of artificial intelligence and to clarify organisations, in the interest of fairness and impartiality. AI is an area that often has a somewhat ill-defined and disputed ultimate goal. It aims to imitate human understanding; others aim at creating intelligence with no regard for human characteristics; yet others aim at creating useful artifacts without regard for abstract ideas of intelligence in trade or business. It will serve as the starting point for solving the machine puzzle and human trade secret conflict. It will also provide an ethical-legal policy action for the AI and trade data possession, which can follow worldwide.

**Rima GHOSH, West Bengal National University of Juridical Sciences Kolkata**

*Protection of Fashion Industry through Intellectual Property Rights*

The fashion industry in the entire globe is growing day by day, and it has experienced significant expansion in the last decade, mainly driven by the growth of domestic designers. Some of them have gained international recognition in recent years. Fashion is an exceptional and demanding sector in the entire sphere. It may be from mobile design to clothes design. Every season witnesses the arrival of new techniques and new trends and brings news of yesterday's styles' decline and fall. It is challenging for any fashion company or retailer to predict which new products will be hits and misses when a retailer in the market has the privilege to keep in their stock the collection of stylish demanding product that turns to be sold out quickly. After that, customers who come in looking for that item are prone to leave in frustration and disappointment unless the retailer can promptly stock a similar. There is a high demand for fashion in every sphere in the globalization era, and it may be from the starting of the morning breakfast to dinner at night. Due to the increased demand for fashion, the newcomers are coming forward and trying their hands in fashion designing.

Across the globe, there are many famous renowned designers whose designs are remarkable and outstanding. These favorite designers are sometimes copied and used by local designers or as a replica to sell the product in a local market or even in the glamour's showrooms and earn huge money. There somewhere arises an infringement of the design of the renowned designers. There should be a law point to stop such infringement and protect the plan's actual owner for their original and unique work. In this context, the fashion law can be related to Intellectual Property law, with copyright, trademark, geographical Indication. The first and most important would be the copyright with the Idea expression, which can be used to protect the designers' idea. If the argument is covered, then there can be no violation, and it would benefit the designers. The trademark can be related to branding the product with a designer's name, and it way it would not have been infringed the product. Trademark protection will help the business imperative for large fashion companies. Companies can share a premium for their fashion product to the extent that they have created brand value in their trademarks. The geographical Indication is too connected with fashion law. The renowned designer always looks for the local artisans of a particular area in which they are known to moderate their work in the country's corners. In this paper, the main motive is to protect the fashion designer's unique and original work and give them royalty for their creativity. It might help in the country's economy. The fashion industry plays an efficient role in the country's development. The modicum of the invention of the creator needs to be analyzed and required specific policy implementation

**Ruchika GHOSH, National University of Juridical Sciences**

*How can Compulsory Licensing Promote Competition in Case of Pharmaceutical Drugs?*

Intellectual Property Rights are essential in rewarding investments in research and development. The history of the Indian pharmaceutical industry can be divided into three distinct phases. A number of developing as well as Least Developed Countries (LDCs) Lack the capability to manufacture the drugs. The pharmaceutical industry is the most regulated in the world. The nature of demand for drugs, the composition of drugs brought to the market and the nature of patents and competition in the drug market over time are all shaped by regulation. There are three main objectives to this regulation: 1) securing a reward to R&D in the form of Patents to assure a continuous flow of innovative new medications; 2) ensuring the safety of drugs; and 3) controlling the quantity and enhancing the quality of drug expenditures.

Patent policy can be broken into two parts: firstly a choice of how much to reward each patent; and secondly how to structure each given reward. Over the last twenty years, the Indian pharmaceutical industry has increased stupendously. It is now the world's largest producer of formulations in terms of volume and the world's third-largest producer of bulk drugs. Whenever, there is a conflict between competition and intellectual property policies, developing countries like India incline towards competition rather than exclusiveness. However, as the invention capability of domestic drug makers grows, an innovative pharmaceutical policy will be required. The Researcher aims to answer two research questions: 1) How can Competition be promoted in case of pharmaceutical drugs? 2) How can pharmaceutical drugs be made available at competitive rates in India?

**Anjana GIRISH and Seena KURIAKOSE, Inter University Centre for Intellectual Property Rights Studies, Cochin University of Science and Technology**

*Visually Impaired Persons: Copyright and Access to Works in Schools in Kerala*

Access to works is recognized as an inevitable facet of the law of copyright. However, this vital objective of copyright regime is relegated to the monopoly of the copyright owners. It is often seen that visually impaired persons are made to bear additional costs on reading materials, owing to the copyright regime. The case of visually impaired persons calls for special attention from the policy makers, as it involves a catena of human rights relating to the disabled and their educational concerns. Visually impaired persons can realize their right to education only if they have adequate text books in accessible format copies available to them. To ensure that the visually impaired persons also have access to materials at par with that available to normal sighted persons is the responsibility of the State and copyright could serve as an answer to the question of facilitating access to such materials for such persons. It is important to have exceptions in the copyright laws of the countries so as to facilitate access to works to visually impaired persons. In India, Section 52 (1) (zb) of the Copyright Act provides exceptions to copyright for the visually impaired persons. However, it is essential to study how far this provision has been beneficial to the visually impaired persons in the country. In this backdrop, a pilot study has been conducted by the authors to assess how far the exceptions provided in the Indian Copyright Act relating to visually impaired persons, has helped the visually impaired students studying in the schools of Kerala, from VIII to XII standards, to have access to copyrighted works which may be used as their study materials in the accessible formats. The study aims to look at the steps taken by the State Government in Kerala, to facilitate and improve access to copyrighted works to visually impaired students in Kerala from VIII to XII standards in mainstream schools in Kerala, and suggest recommendations to improve the access to copyrighted works to visually impaired students, in the light of



the observations made through the period of the study. The presentation by the authors would be essentially focusing on the issues identified and the results reached during the course of the study conducted by the authors.

**Naveen GOPAL, Inter University Centre of Intellectual Property Rights Studies, Cochin University of Science and Technology**

*A Revisit to the National Innovation Bill of 2008: Analyzing the Concept of Trade Secrets*

India has been following the common law approach for trade secret protection since a very long time. India has mostly adopted trade secret principles from the English law, which is evident from the cases cited by the Indian courts. The draft of the National Innovation Bill of 2008, (here after referred to as Innovation bill) was released by the Ministry of Science and Technology. The Federation of Indian Chambers of Commerce and Industry (FICCI) along with other stake holders had drafted the bill. Amidst the criticisms that India needs a strong legal mechanism for trade secret protection, this was the first initiative on behalf of the Government of India to create a legislation for protection of confidential information. However, protection of confidentiality was not the sole aim of the legislation. The preamble recites as follows: “An Act to facilitate public, private or public- private partnership initiatives for building an Innovation support system to encourage Innovation, evolve a National Integrated Science and Technology Plan and codify and consolidate the law of confidentiality in aid of protecting Confidential Information, trade secrets and Innovation.” Unfortunately, the bill was not tabled in the Parliament, hence it remained in its infant stage. However, we cannot rule out the possibility of the legislature re-visiting the draft in case there arises a strong need for a legislation. Hence, it is important to have a critical look at the provisions dealing with trade secret.

**Massimiliano GRANIERI, Department of Mechanical and Industrial Engineering, University of Brescia**

*The Law and Economics of Markets for Technology and Intellectual Property Intermediaries*

In this paper, I investigate the functioning of the worldwide market for intellectual property (IP) rights and technology, which is a multi-billion worth market. There is a worldwide movement to foster the growth of businesses that facilitate, or directly carry out, the exchange of intellectual property rights in response to certain changes in markets and in the way companies innovate and the violence of the recent Covid-19 pandemic made ever urgent the need to uncover the mechanisms that ensure translational efforts for promising technologies reach the market efficiently and timely. New entities specializing in the intermediation of IP have been around for a while on the markets for technologies; yet, when looking at the main players of the IP market (those responsible for mobilizing the output of research), the lion's share is for U.S. intermediaries, with some Asian countries also becoming relevant. Europe is trying to catch up, but differences remain, and they threaten to yield serious negative consequences for the European internal market and for the European economy as a whole.

Many legal and non-legal factors concur to shape a market for the exchange of IP and empirical studies are required to establish unequivocal correlations between causes and effects. A wealthy stream of literature both in economics and in management studies is still addressing markets for technology and the role of IP intermediaries, their business models and their contribution towards efficient markets. There seems to be

general consensus on the fact that IP intermediaries are largely responsible for creating and animating IP markets. Quite surprisingly, very little relevance is given to legal determinants of technology markets and IP intermediation and to the role legal systems have in providing suitable background conditions for IP intermediaries to start and operate in given geographic markets. As a consequence, there is also a gap in the legal studies about the competitiveness of markets for technology bases on legal factors.

This paper aims at filling the gap in the law literature, providing arguments that rely on differences in (IP) laws as determinants of IP markets and to make sense of the apparently unjustified difference of Europe vis-à-vis the rest of the world in terms of economic performance of the respective markets for technology. The paper takes a myopic view and tries to shed some light on possible legal causes of different comparative economic performances, by using concepts of neo-institutional economics about transaction costs and anticommons in markets.

Eventually, the paper provides inputs also for policy makers, as it aims at identifying which are the determinants of technology markets that can be influenced by legislative choices, administrative operation and judicial interpretation. Where technology markets remain underdeveloped, intellectual property and technology result in untapped resources, in a world that has increasing and urgent needs for new drugs, new crops, new raw materials and energy sources to feed a sustainable growth.

**Shouvik Kumar GUHA, The West Bengal National University of Juridical Sciences**

*Considering the IP/Antitrust Interface in India in the Context of Licensing and Technology Transfer: Regulatory Behaviour, Inconsistencies and Uncertainties*

In course of this paper, the author has sought to provide an overview and analysis of the existing regulatory regime in India governing issues relating to the IP/antitrust interface in general, and particularly in the context of licensing issues related to the transfer of technology in particular. The main discussion starts with the relevant provisions of competition law in India, which have been used by the judiciary while analyzing exercise of IPR by a market player, viz. Sections 3 and 4 of the Competition Act. The main argument of the paper would be that certain kind of contractual provisions in a technology transfer agreement may be considered per se illegal under the Act, especially if they pertain to price fixing, territory allocation etc., but the rest of the agreement should usually be subjected to a rule of reason analysis. If any condition is considered a reasonable extension or corollary of legitimate exercise of IP rights, then it can be allowed, otherwise the Competition Commission of India retains the power to consider the agreement to be anticompetitive and render it void, as well as impose monetary penalties. Further, if the CCI is of the impression that the IP owner is leveraging his rights to abuse his dominance in the relevant market, then a multitude of directions may be issued including compelling the owner to divest of his rights or even restructure the entire enterprise as per need.

The author opines that while the CCI has successfully used static market analysis, focusing on pricing and output conditions, in course of fulfilment of its objectives equivalent attention has not been paid to the prevailing market context and the economic objectives that antitrust legislation seeks to achieve as a whole; nor has CCI or the Indian government focused till date on issuing guidelines or clarification about the CCI's interpretation and administration of complex technical issues involving antitrust, such as its interface with IP, licensing arrangements and transfer of technology for instance –this is a parameter in which regulatory regimes in developed economies like the EC and US are considerably ahead of India. An analysis of relevant decisions of the CCI has led the researcher to the conclusion that CCI's application of law has at times been fraught with uncertainty, especially when it comes to the intersection of IP and antitrust laws. There are

occasions wherein the CCI has almost resorted to applying a per se analysis instead of evaluating the anticompetitive effects of or the resulting pro-competitive impact from agreements involving vertical restraints. At the same time, unfair pricing conditions in the context of licensing, if deemed to be anticompetitive, have also been sanctioned by the Commission; while the latter has occasionally deviated from the antitrust focus on a rule of reason analysis when it comes to evaluating non-price related contractual restrictions in agreements including TTAs, such focus being something that its counterparts in the US and EC have often concurred about over the years. To address such inconsistencies, the CCI ought to have considered by now some form of bright-line safe harbour provisions that would clearly indicate the scenarios wherein legitimate exercise of IP rights can be subjected to antitrust scrutiny and whether the same should take into consideration the nature of the relevant market and to what extent, especially when such market is technology-intensive and witnesses regular technology transfer.

**Shubhangi GUPTA, Department of Law, Prestige Institute of Management and Research Gwalior**

*Interplay Between Patents and Trade Secrets: India & United States*

Trade Secret and Patents both play a prominent role in protecting Innovation. But there is always an ongoing tussle between two as to which is better and preferable in protecting innovation. On one hand it is contended that patents are better in long run as it promotes innovation and trade secrets retards innovation and on the other hand it is contended that trade secrets are better as perpetual right is given for protection as compared to patents. But if we study closely, we would observe that both these Intellectual Property Laws complement each other. This is true that the same innovation cannot get protection under both the IPs. But the combination of both patent and trade secret could be effectively applied for the protection of that innovation and there are various instances wherein this combination proved very beneficial to the inventor. The combination is required to be done very meticulously depending upon the nature or properties of the innovation. So, that there could be no thwarting of innovation and the innovator could also get benefit or rather reward of his hard work.

The scope of this paper is limited to India and US. Patent Law is there in both the jurisdictions. But for trade secrets, there is no specific law in India whereas in US, there is separate legislation for trade secrets. So, this paper would first brief out the situations of these IPs in both the jurisdiction. Then further through judicial trends, this paper would be specifying the situation of interplay prevalent in both US and India and recently in India it could be seen in *Prof. Dr. Claudio de Simone v. Acital Farmaceutica Srl*. Thus, this paper would state the situation of the interplay and would analyze the laws which are enacted for the protection of innovation. And at last, would give suggestions so that the situation could be improved with special reference to India as they are no laws for protecting trade secret, so this paper would take US as basis for enactment of legislation for protection of trade secrets.

**Ananthu HARI and Raju K.D., Rajiv Gandhi School of Intellectual Property Law, Indian Institute of Technology Kharagpur**

*Geneva Act and Geographical Indications: Prospects and Challenges for Asia*

The legal standard for *Geographical Indication* (GI) protection varies significantly from jurisdiction to jurisdiction. The Europeans are historically known for protecting their unique products through specific laws, whereas the *United States* (US) embraced a trademark-centric approach rather than a *sui generis*

legislation. Asian countries, in general, have adopted a middle path as to GI protection. There was a significant debate between the *European Union* (EU) and the US regarding the standard to be adopted as GI protection during the Uruguay Round of GATT negotiations. The negotiations on GI were primarily carried out between these two power blocks to the near exclusion of other countries. During the Uruguay Round, the EU has submitted a draft proposal with provisions on GI. In contrast, the US has submitted a draft with trademark law as the alternative system of protection. As the negotiations continued, a compromise position was reached without much Asian involvement, and GI was bestowed a minimum standard of protection under Articles 22 to 24 of the agreement. Since the TRIPS Agreement envisaged only a minimum standard of protection and no consensus was reached between the US and the EU, both the power blocks attempted to implement their desired level of GI protection through FTAs. Most of these FTAs were signed with developing countries in Asia. Many critics also see the additional protection for wines and spirits as envisaged under Article 23 of the TRIPS agreement as detrimental to the interest of Asian countries that do not have a historical background of producing wines and spirits. Interestingly, a counter-movement from some Asian countries for the extension of GI protection to products other than wines and spirits have also begun since the WTO Doha Ministerial Conference of 2001. In a significant post-TRIPS development, the *Geneva Act of the Lisbon Agreement on Appellations of Origin and Geographical Indications* of 2015 succeeded in establishing an international system for GIs registration for the first time. The Geneva Act established an international registration system and permits countries with a certification mark system to join. The provision in the Geneva Act to include non-agricultural GI protection is seen as a significant shift and is very much within the interest of Asian countries. The inclination towards more robust protection for agricultural goods, handicraft products, and foodstuffs is manifested in the national legislation of many developing countries in Asia. However, Cambodia, Laos, and North Korea are the only Asian countries that signed the Geneva Act until December 2020. This research paper attempts to analyze the nature of Post-Trips GI debate in the context of emerging free trade agreements involving the US, the EU, and some of the Asian countries. This paper also analyses the features of the Geneva Act and examines whether the agreement is beneficial to the socio-economic interests of Asian countries.

**Hakan HASIRCI, Yeditepe University Faculty of Law**

*Protection of Industrial Property Rights by Means of Preliminary Measures in Turkey*

Rights arising from industrial properties offers a monopolistic area of use and protection to the owner. In this respect, the owner has the authority to benefit from it as he/she wishes, as well as to prevent third parties from taking certain actions without his consent. Within the scope of this use, one of the most important dimensions on the protection of the right is the resolution of the disputes arising from them by means of state litigation and preliminary measures that can be taken during the litigation. Final and most effective mean that the industrial property right owner can utilize to protect it against third parties is applying to a competent court and requesting legal protection. However, the litigation process may (and will) take a while and in this period, if the legal relationship between the plaintiff, defendant and the third parties is not temporarily regulated and especially important transactions on or about the right is not halted, industrial property right can be damaged beyond repair. Industrial Property Act (No 6769, Official Gazette: 22.12.2016), which regulates wide variety of industrial property rights and their protection in Turkey, also regulates the litigation and preliminary measures in order to protect them. With the aim of offering the right owners a better and more inclusive protection, Article 159 of the Act grants first instance courts more preliminary measures than previous regulations. However, this motive adopted in the making of the Act caused some of these measures to be not compatible with theoretical structure of Turkish civil procedure law and created some challenges in both theoretical and practical areas. Thus, within the scope of this

presentation, order to adopt a more systematic approach, the claims, lawsuits and preliminary legal protection measures that can be brought forward by the industrial right owner will be clarified, discussed, examined and some solutions to the problems that emerge in the application of the Act will be suggested.

**James M. HELLER, Empire State College, State University of New York**

*Does Legal Uncertainty Surrounding Collateralization of Copyrighted Works Inhibit Development of Structured Financing Techniques for Asian SMEs?*

This research is an analysis of countries that increasingly benefit from the importance of intellectual property as an economic driver. The research questions posited will advance the field of finance in copyright industries. A goal of this research is to assess the legal underpinnings of structured finance of copyrighted works in emerging Asian copyright economies and Asian jurisdictions with a history of structured finance. In so doing, this research aims to ascertain what legal and structured finance uncertainties are contributing to the lack of evolution of finance of copyrighted works. This research explores perfection of security interests in copyrighted works in Australia, China, Hong Kong, India, Indonesia and Singapore. Would improving legal certainty of underlying copyrighted works and security interests in copyrighted works encourage the evolution of finance? How can such legal certainty be achieved?

There has been increased interest in establishing an efficient regime for the collateralization of copyrighted works. "Perfection" is crucial to the collateralization 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 along with a notification mechanism for equitable mortgages and charges (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 signatories' copyright registries were designed to comprehensively handle security interests over copyrighted works.

**Daniel HOFILENA, School of Economics, De la Salle University-Manila**

*Establishing a Uniform Alternative Dispute Settlement and Enforcement Mechanism for Intellectual Property Disputes in the Association of Southeast Asian Nations (ASEAN)*

The research will focus on the feasibility of establishing a uniform Alternative Dispute Mechanism for the Settlement and Enforcement of intellectual property disputes in the ASEAN through the conclusion of a multilateral instrument. The paper's objective is to hurdle a significant challenge in resolving cross-border disputes in intellectual property rights: accessibility. The paper advances the position that ASEAN member nations can take advantage of the emergence of alternative dispute resolution mechanisms to make the enforcement of intellectual property rights cheaper and faster. In sum, there is a need to establish a framework agreement that will harmonize alternative dispute resolution laws among member

nations. Consequently, one of the significant challenges will be to provide for the arbitrability of intellectual property disputes: which aspects of intellectual property disputes can be settled considering its nature as a State grant. Another significant challenge for this proposal is the existence of various arbitration institutions that provide for a diverse set of rules, which may or may not be appropriate for resolving intellectual property disputes. Finally, when it comes to the enforcement stage, there is a need to provide an efficient mechanism among member states to effectively and efficiently enforce arbitration awards, notwithstanding the Convention Recognition and Enforcement of Foreign Arbitral Awards of 1958.

The paper is divided into four parts. The first part will be a comparative analysis of the laws on intellectual property and alternative dispute resolution of ASEAN member nations. The second part will provide for steps that member nations can take in order to harmonize their laws. The third part will discuss the feasibility of establishing a regional arbitration center or a permanent regional court that can resolve intellectual property disputes. The paper will also discuss the feasibility of designating the WIPO Arbitration and Mediation Center as the regional body. The fourth part will recommend a model instrument that ASEAN member nations can conclude to provide a unified dispute settlement and enforcement mechanism.

**Md. Pizuar HOSSAIN, Department of Law, East West University**

*Trademark Protection in Bangladesh: A Critical Assessment through the Lens of Treaty Obligations and Progression of Artificial Intelligence*

The trademarks attached to the goods or services are still protected by the principles that emerged in the nineteenth century. In contrast, the purchasing goods and services are shifting from a reactive to predictive approach with the development of Artificial Intelligence (“AI”). AI is now creating new challenges to the laws of trademark protection. It appears that many doctrines of present trademark protection laws may become irrelevant to address the future disputes concerning trademark infringements. However, the question as to whether the trademark laws are ready to deal with the impacts of AI is still untested. In Bangladesh, the Trademarks Act (“TA”) came into force in 2009 for affording better protection to trademarks. This research critically appraises the standard of trademark protection ensured under this law within the confines of Bangladesh’s treaty obligations and global development of AI. Considering the standard of trademark protection set out in the Paris Convention and the TRIPS Agreement and their key commentaries, the author first recommends that the TA should take account of some specific determining factors of trademark protection. Moreover, with reference to the impacts of AI on the principles involving trademark protection such as likelihood of confusion, imperfect recollection, average consumer, and phonetic, aural and conceptual similarity, the author suggests that these principles should be reconsidered in the TA.

**Vitor IDO, Faculty of Law, University of Sao Paolo**

*Intellectual Property “with Chinese Characteristics”: Understanding the Linkages between Nationalism, Industrial Policy and Innovation in China*

In a matter of 40 years, China has developed a remarkable, well-developed intellectual property system (Yu, 2020). Recent legislative and institutional changes continue to strengthen the protection of IP in the country in areas as varied as pharmaceutical patents, trade secret protection and enforcement of trademarks. Specialized IP courts provide more legal certainty and empirical data shows that they even slightly favor

foreign applicants, against expectations of a system designed only for nationals. China has also become the biggest patent applicant in the world and has actively engaged internationally at WTO and WIPO.

However, arguments related to IP infringements and lack of protection remain to be at the core of international geopolitics related to China, particularly from the United States, who accuses China of widespread “theft of American IP” and forced technology transfer. Questions related to bad-faith trademarking, cybersquatting, lack of transparency and lax enforcement regulations all remain. While new norms and institutions point towards a maximalization of IP protection to match the standards found in the USA, the EU and Japan, this also brings important questions in terms of its consequences for access to medicines (due to the effects of patent and data exclusivity monopolies), limited freedom to operate (given the overwhelming number of trademarks and low-quality patents) and the interpretations on the notion of “public interest” for military and State-based technologies. This is all surrounded by the Chinese State’s narrative of IP “with Chinese characteristics”, a nod to the idea that China adopts and integrates certain categories and practices with specific national traits, which comes from the notion of “socialism with Chinese characteristics”.

This paper takes this expression as a departure point to reflect on how this set of paradoxes to attempt to address what may be purely rhetorical and what constitutes real “Chinese characteristics”. But more importantly, how it fits into an often overlooked, but increasingly relevant, dimension in the socio-legal IP scholarship: how intellectual property may be understood as part of nationalist aspirations in which the protection of IP is a proxy of “modernity” and “rule of law” (i.e. “a country that protects IP is a rule of law country”), and how an IP system is an intrinsic element of innovation and industrial policies, both in China and elsewhere. This may offer additional inputs for a balanced, grounded understanding of what Chinese policies in IP entail.

**Manvendra Singh JADON, National Law University and Judicial Academy**

*Copyrightability in the Exporting World: Extending the Video Game Debate from Video Game Publishers Monopoly to Stratified IP Rights*

The COVID-19 pandemic has made the world of e-sports a tad more lucrative, with E-Premier league and E-Formula One becoming a modern alternative for the sporting industry. As per disclosed figures, 42 Million USD worth deals in esportsing world were signed in April alone this year, even when the world was reeling under the subversive effects of a global lockdown. In common parlance, esports are nothing but a ‘virtual progeny’ in the lineage of traditional sports. Esports encapsulates within it the experience of the competitive traditional sports, albeit, with an interlinkage of an athlete (popularized as a player having a professional contract with an esports team/franchise) or a team of athletes with that of a ‘computing device’ or a ‘gaming device’ competing within the annals of a tournament. Due to this meteoric rise of video gaming titles in the early half of the 1980s & the subsequent profits these video gaming titles generated through public competitions, 80s became a tumultuous period of extensive litigation to gain monopoly rights over this mass phenomenon. In turn, these litigations reflected the fact that the video game industry is a copyright dominated structure. Despite the inter-personal relationships and points of convergence between esports and traditional sports based on factors such as contractual norms, stakeholder’s ownership hierarchy, the contribution of the players, regulations, and the economic legacy, the convulsion among the two is messy. Even so with these complexities, the primary economic model and the cultural impact of esports can be best understood with a comparative study of traditional sports.

Principally the study of esports in respect to any domain involves four primary stakeholders, quite similar to the structure of traditional sports: 1) Game Publishers (can be relative to say FIFA); 2) Tournament Organizers (can be relative to Bundesliga in Football); 3) Team Owners (Franchisees); 4) Players. To further elaborate on the copyright structures in detail and compute solutions for the existing problems, these stakeholders must be read carefully. Chapter 2 essentially caters to the discussion of these stakeholders, their interests and the probable copyright dispute that may arise in these relationships. Given that the discussion is limited to the study of esports in a tournament format, it will be studied as a commercial venture and not as a personal endeavour for casual gaming, entertainment, fun or enjoyment. In the further course of this paper and in specifically in Chapter 3, the *law in esse* would be analyzed relative to the disputes, to understand them and profess solution to its extant issues. Whilst the wrangle over the copyrightability of esports is quite inimitably a *trickle-over* issue of the copyrightability of video-games as a starting point, the discourse of esports has enlarged much than its predecessor. The earlier is mostly a settled debate with video games being recognized as both audio-visual works of authorship and literary works for their underlying code through a series of cases. On the other hand, esports offers a stratified relationship, where video game publishers own most of the intellectual property but a slew of rights also accrue to the gamers and tournament organizers in respect to their individual performances of the game. In terms of video games, there are quite a few scholars who argue against providing copyright protection to video-games, based on the fact that games are a mere emulation of rules, stock characters, a generic central plot, and an extension of the input commands by the player. Such arguments state that games exist because the user exists. The debate between these two arguments (for and against video games copyright) is itself research-worthy and would be discussed in detail.

Through a combination of a normative critique, critical review and logical/inferential analysis of copyrightability in esports, I plan to achieve dualistic aims. First, most of the esports experts are of the view that starting from the ownership in the game to the downstream control over the distribution, streaming, gameplay and performance play, the tide is heavily biased in favour of the game publishers. In contrast to this popular belief, I would argue that the structure of copyright in an esports schema is stratified to a large extent and hence rights accrue to each stakeholder (to players, tournament organizers etc.) in this schema as per their creativity, labour and expression. Second, as the copyright law of India is still lacking behind in terms of scholarship and jurisprudence on esports, I would be borrowing heavily from the contemporary legal scholarship, hotly contested disputes & best practices in the US to propose a consolidated model of copyright structure, a body of law as applicable and how the up and coming disputes can be settled in India.

**Taslima JAHAN, United International University and Imtiaz Ahmed SAJAL, Bangladesh Army International University of Science and Technology**

*TRIPS Flexibilities for Sustainable Trade & Development of Bangladesh: Post-Pandemic Economy in Context*

At the edge of the global pandemic, Bangladesh is waiting for coronation of LDC graduation in 2021 to be a developing economy. For the promotion of local trade and development, at present, Bangladesh is processing its regulatory regime including revision and enforcement of intellectual property rights compliance to TRIPS. But the severity of pandemic pervaded over the struggling economy in a manner to reconsider the graduation. In experiences of pandemic the flow of economic growth besides public health has been went down to picture out the local resources and government yet unfit to deal and enforce intellectual property attached to some vital public sectors. So, this paper purportedly highlights on deeper understanding of TRIPS flexibilities saved under Article 7 and 8 of TRIPS to recover the broken economy



and essential public sectors before digestion and enforcement of intellectual property rights in Bangladesh. This paper would focus into the understanding and implications of TRIPS Article 66 as a resort for Bangladesh. This article will discuss on present challenges in local manufacture and technology of Bangladesh that call for more assistance and development necessary for being into developing economy. It will also discuss the ongoing pandemic burden over Bangladesh that gives rise to rethink the meaning of development and promotion of intellectual property rights to safeguard the economy. Finally, this paper will shed light on the policy options available for Bangladesh in tailoring its TRIPS compliant IP regime in the changing circumstances of global epidemic while rethinking about the graduation and considering the promotion of sustainable trade and development for national economy.

**Ansar Mahmood JASPAL, Ministry of Higher Education, Research and Innovation (Oman), and Frank PHAM, Pham & Symmes LLP**

*Drug Approval and Patent Linkage Regulation in the Gulf Cooperation Council (GCC)*

Multinational pharmaceutical companies have long been privileged from drug regulators to provide strong intellectual property rights to therapeutic product development. The privilege is deemed necessary to offset large regulatory delays and the growing costs of drug development. Drug patenting and drug approval are legally linked through a legal structure of a "patent linkage regulation." This regulation allows a brand-name drug company to list all relevant patents of an already marketed drug product to extend market exclusivity. Generic drug companies must successfully litigate each patent listed on the drug product before gaining market entry. Thus, patenting and litigation under this regulation are critical to brand-name and generic markets, as they represent a primary mechanism by which regulators promote drug development in exchange for intellectual property rights.

The Patent Office of the Cooperation Council for the Arab States of the Gulf (Gulf Cooperation Council or GCC) is a regional office for the Gulf Cooperation Council, which comprises the States United Arab Emirates, Kingdom of Bahrain, Kingdom of Saudi Arabia, Sultanate of Oman, State of Qatar, and State of Kuwait. As the drug development industry in the GCC has reached to maturity, a linkage regime provides an excellent opportunity not only to thrive generic drug development in the region but also to protect high value innovations of the multinational pharmaceutical companies. This presentation proposes a legal framework for the GCC's patent linkage regulatory system to allow a pioneer drug company to register patents claiming (a) a material; (b) a combination or formula; or (c) pharmaceutical use. The regulatory system requires generic drug company to notify the patentee at the time of filing a generic drug application. If the generic drug company asserts a case of patent invalidity or non-infringement, the case must be litigated and decided on merit. Furthermore, the health authority may allow a stay on the issuance of a generic drug permit while the patentee is suing the generic drug company in the court.

**Ajoy JOSE, Rajiv Gandhi School of Intellectual Property Law, Indian Institute of Technology**

*The Importance of Immunity Boosting Measures During the COVID-19 using Traditional Medicines - Comprehensive Evaluation*

Medicinal plants are considered as rich resources of ingredients which can be used in drug development pharmacopeial, non- pharmacopeial or synthetic drugs. Apart from that, these plants play an important role in the development of human cultures around the whole world. Currently, Severe Acute Respiratory

Syndrome Coronavirus 2 (SARS-CoV-2, formerly known as 2019-nCoV, has rapidly spread across the world.

There are many benefits of Herbal Medicine like Easier to obtain than prescription medicine, Metabolism and Stabilizes hormones, Strength in immune system, Natural healing, Fewer side effects. Considering the importance of immunity boosting measures during the COVID-19, it is very important to consume supplements in the form of immune nutrients such as vitamin A, C,E, D, B-complex, Zinc and copper that will support your body to fight against the pathogens. Application of modern technologies and methodologies in herbal medicine research and development using the accepted Western scientific and ethical standards can have a significant impact on the scientific validity, quality improvement, and standardization of herbal medicines. Natural products and their derivatives have potential activities in the treatment of viral infections. Until now, several herbal extracts or their derivatives have shown potential antiviral efficacy.

One of the three strategic objectives of the WHO Traditional Medicine Strategy 2014–2023 is “to build the knowledge base for active management of T&CM through appropriate national policies.” As a result, a key priority identified for Member States is the strategic gathering, analysis and synthesis of data on T&CM use, and the development of a national research agenda. Another strategic objective of the WHO Traditional Medicine Strategy 2014–2023 is “To promote universal health coverage by integrating T&CM services into health care service delivery and self-health care”. Capitalizing on the potential contribution of T&CM to improve health services and health outcomes was identified as a strategic direction for this objective. Indian medicinal plants are a promising field for treatment of several diseases. Ayurveda and Siddha practices originated in India and are still widely used among the Indian population. India is home to several spices that are used extensively in traditional medicine. Holy Basil, Ginger, Fenugreek, Garlic, Turmeric are some examples of herbs and spices which can help improve immunity.

**Julija KALPOKIENE, Faculty of Law, Vytautas Magnus University**

*An Uphill Battle for a Human Author – TDM and Copyright Exceptions*

The paper proposes to examine copyright exceptions for the text and data mining (TDM) for commercial use. The difference between human creativity and AI-output will briefly be discussed in order to highlight the difficulty for human authors to compete with AI-generated output. To start with, it will be looked at arguments in favour of copyright limitations for text and data mining (TDM). Briefly, different philosophical views of copyright would be overviewed in order to establish the purpose of copyright protection and to tease out what are (or could be) the aims of copyright. Then, the author will turn to compare the legal position in terms of TDM for commercial use in the European Union and in the USA. First, the current position in the European Union law, in particular, discussing Article 4 of the Directive on Copyright in the Digital Single Market (the Directive) will be overviewed, discussing what result it is likely to have in practice for authors and businesses engaging in the TDM. The shortcomings of the TDM exception for commercial purposes will be highlighted, arguing that the exception fails to increase legal certainty and ease TDM for commercial use while burdening the rightsholders. Next, it will be looked at the position in relation to TDM in the USA. The doctrine of fair use will be overviewed. The pros and cons of each approach to TDM will be discussed offering an insight with lessons to be learned from each of the two highlighting the scope of copyright protection afforded to human authors and opportunities and risks to those undertaking TDM activities under both legal regimes.

**Mohammad Ataul KARIM, Munich International Property Law Center**

*Traditional Knowledge in Fragmentation of International Law: Revisiting IP Regime through Oriental Philosophy of 'Yin and Yang'*

Protection of Traditional Knowledge (TK) in international law has been approached mainly in three ways, preservation approach based on principles of biological diversity law, human rights approach founded on cultural aspect and right to self-determination of indigenous or traditional communities and finally, proprietary rights approach premised on intellectual property law. However, none of the three approaches has been able to address the issue comprehensively due to the peculiarity and distinct characteristics of TK. Instead, the disagreements among the various stakeholders, policy makers and scholars have placed it at the crossroads of diverse legal regimes. Thus, adopting appropriate legal framework for TK tends to be a singular difficult task in international law. Crucially, one of the gray areas of legal investigations in international law remains: how far the fragmented approach of international law broadens or narrows the scope of legal protection for TK? Does fragmentation of international law, particularly, non-concerted initiatives of specialized UN law-making agencies erode TK protection? Perhaps unlike any other areas of international law, IP scholars have, timely and timelessly, navigated the theoretical discontents and practical discomforts of TK protection. The debates surrounding IP protection of TK emanate from the core connotation of definition it suits, peculiar characteristics it offers, nature of protection it requires, kind of ownership it demands and controversially, type of proprietary rights such as knowledge producers and custodians may be entitled to. The dominant philosophies, justifications and principles of IP regime seemingly debar the legal protection of TK. However, it is significant to ventilate carefully the chartered or unchartered territories of global and local views of TK for reaching at any cogent position. From the oriental perspective, one may ponder if any oriental ideology helps to critically revisit the established and mostly west-centric theoretical foundations of IP regime which long been viewed TK and IP as diametrically opposite. As one of the oriental philosophies, can Confucian idea of 'Yin and Yang'-apparently a binary of competing values but may turn out to be complementary, offer any assistance in recapitulating the existing literature on IP and TK? Thus, it remains to be seen that how revisiting the existing IP regime through the lens of oriental philosophy of 'Yin and Yang' may bridge the gaps, if at all, between IP and TK. At these doctrinal and practical backdrops, this paper will explore the implications of fragmentation of international law on TK protection. It will, then, encapsulate the theoretical and practical discontents of TK protection under IP regime. Finally, it will revisit the existing IP regime through oriental philosophy of 'Yin and Yang' for developing a potential oriental approach of TK protection.

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

*Do We Need a New Definition of Work in Copyright Law?*

Today we are seeing the emergence of new technologies. This has a great impact on the existing intellectual property. F. Gurry, WIPO Director General, expressed an opinion that the developments that create challenges are not negative in themselves, but what is simply needed in an attempt to understand how they will impact the existing IP system and its future evolution. They also constitute a challenge as well as a task for academics to tackle. We have to think how to restructure the existing system of IP. In my opinion what is currently crucial for Intellectual Property is a re-definition of the notion of "work" and the protection thresholds in Copyright Law. \

Work is protected in copyright. In Article 2 of the Bern Convention there is a definition of its subject matter. This Article also contains provisions determining the minimum protection to be granted. The Convention also lists examples of such works. Pursuant to Article 1(1) of the Polish Copyright Act, each manifestation of creative activity of individual character, established in any form, regardless of the value, purpose and manner of expression is regarded as a work. The Act also contains a sample catalogue of works e.g., works of applied art. In § 101 of the U.S. Copyright Act there is no definition of the term “work” itself, but it provides definitions of different kinds of works (e.g., derivative work, literary works etc.) However, the most important is § 102 which explains that copyright protection “subsists (...) in original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device”.

All the definitions presented above are very general. The national courts (and nowadays also the Court of Justice of the European Union) play a special role in interpreting the conditions of originality/creativity and individuality with reference to all manifestations of human activities. There may arise certain difficulties in determining what is and what is not a work. This is particularly true of works in which this premise may not be obvious such as works of applied art. Currently, there is a lively discussion whether Artificial Intelligence (AI) can be the author. In my opinion, no, but perhaps in the nearest future some courts will have to deal with such a problem. During my lecture I would like to focus on the current legal statues of works and propose some general solutions for the future.

### **Dennis KHONG, Centre for Law and Technology, Faculty of Law, Multimedia University**

#### *Trade Secret Protection for Computer Source Codes in Malaysia*

Typically, in the software industry, computer source codes, unless they are open-sourced or officially released to the public, are considered as trade secrets or confidential information. This is particularly true where proprietary software is involved. In Malaysia, following the English common law tradition, the tort of breach of confidence gives intellectual property protection to confidential information and trade secrets. Some years ago, in a High Court decision, *Alfa Laval (M) Sdn Bhd v Ng Ah Hai & Ors* [2008] 5 MLJ 344, [2009] 7 CLJ 1, it was decided that only confidential information embedded or contained in a computer program and not the computer program itself can be protected under the tort of breach of confidence. Consequently, an action for an interlocutory injunction in that case failed for not identifying what confidential information is contained in the computer program. The upshot of this decision is that different parts of source codes need to be properly tagged as confidential information in order to obtain confidential information protection. Unfortunately, despite the case being cited in numerous subsequent decisions, the veracity of this requirement has not been discussed or clarified.

In this paper, we examine whether this legal requirement as set out in *Alfa Laval* is compatible with industrial practice. In addition, we review the decision in the context English common law cases for breach of confidence on when confidential information needs to be specifically tagged, especially in relation to unpublished manuscripts. There is a risk that the *Alfa Laval* requirement may impose an onerous demand on the software industry in Malaysia. Foreign investors may be wary of outsourcing software development work to Malaysia because of the risk that source codes may not be protected as confidential information. Additionally, in the era of artificial intelligence, machine learning and big data, proprietary databases may also be at risk of not been completely protected as confidential information.

**Ragini KHUBALKAR, National Law University Nagpur**

*Issues and Challenges in Implementation of Geographical Indication in India: A Case Study of “Nagpur Oranges” in Maharashtra State*

The TRIPS obligated all WTO members to implement provisions relating to Geographical Indications to its Domestic laws. India being a member of WTO has introduced the Geographical Indication of Goods (Registration and Protection) Act, 1999. This Act aims for making provisions for registration and better protection of Geographical Indications relating to goods. The concept of ‘Geographical Indication’ is different from other species of Intellectual Property as it talks about community rights. The right related to the GI is owned collectively by all people residing in the region. Many interesting issues crop up when a selected group tries to claim GI protection by excluding others. This research aims to study the impact of Geographical Indication Recognition to ‘Nagpur Orange’, in State of Maharashtra. The purpose of this research is to analyze the provisions of Geographical Indication Act and issues and challenges relating to its implementation, by collecting the data from producers of Oranges from Nagpur District and authorities involved in it. The researcher has framed two hypotheses for this research: 1) Although there are provisions for the protection and Recognition of Geographical Indication but when it comes to implementation, there are many problems in protecting the GI. 2) Unawareness amongst the orange producers about Geographical Indication protection and its advantages and amongst the consumers. With this hypothesis, the researcher wants to find out possible solutions to solve the problems involved therein by referring to the provisions of developed countries relating to better protection and implementation of Geographical Indication

**Siow KIM, Institute of Microengineering and Nanoelectronics, Universiti Kebangsaan Malaysia and Ramakrishna DAMODHARAN, Adipven (M) Sdn. Bhd.**

*Doctrine of Purposive Construction in Malaysia and Triz-Based Patent Circumvention Techniques*

Patent circumvention is about avoiding the inventive steps encapsulated in a patent without infringing it, et fulfilling the same function to achieve the same results. This paper introduces the main steps of using TRIZ tools (i.e., function-oriented search, function analysis and trimming) and related terminology to circumvent patents. Although the doctrine of equivalent (DOE) and prosecution history estoppel (PHE) are used to limit the substitutional approach in circumventing patents in the USA and other common law countries, its limited application and availability of PHE to the Malaysian patent law system open limited opportunity for competitors to do otherwise here. This paper is expected to be useful to Malaysia inventors to appreciate their “domestic” equivalent concept of Doctrine of Purposive Construction when circumventing the patent.

**Nikita SHAH and Taruna JAKHAR, Gujarat National Law University**

*Standard Essential Patents and Competition Law in India: Time to go beneath the Surface of Standardization*

The substantial benefits associated with the standardized technologies cannot be denied. The standardized technologies have eased the use of multiple devices at the same time. Standard Essential Patents are patents over technology which is essential for complying with a particular standard, such as 2G, or 3G. Such standards are generally set by standard setting organizations, with the aim of ensuring interoperability. The recent advent of SEP’s over these standardized technologies or components of these essential standards have

paved way for anti-competitive conduct to breed, which could harm consumer welfare or disrupt the functioning of the competitive market. SEP's and their conflict with competition laws is just one facet of the interface between IP and Competition laws, however, due to the ubiquitous nature of technology, it is an important facet.

This paper aims to deal with the issues that arise due to the delicate balance of power between technology developers and technology implementers which has been created by countering the monopoly of SEPs by Fair, Reasonable, and Non-Discriminatory terms of licensing commitments (FRAND), and in particular, how the jurisprudence has evolved in India.

The SEPs grants their holders extensive market power, and thus, the possibility to abuse it by implementing standards to eliminate competitors or excerpt excessive royalty fees, cross-license fees. Patent owners abuse market power most often through several practices, like refusal of licenses, excessive prices, unfair or discriminatory conditions in the form royalty stacking etc. These practices can lead to abuse of dominance and delay in the entry of competitors into the market through abuse of the patent/regulatory process, supplementary protection certificates, excessive pricing and the conclusion of anti-competitive agreements.

In India, unlike US and EU, the FRAND licensing terms for SEP's is at a fairly emerging phase as the Courts and the CCI in India are yet to decide such FRAND licensing proceedings. For instance, in the EU any guidelines for the purpose of determining the amount of royalties are not given by the courts as well the EU commission may direct the SEP implementer to provide security preceding the litigation, whereas, in US either the SEP holder or the alleged infringer may request the court for fixation of the royalty rate and there no such advance security from the SEP implementers is required.

This issue of how FRAND terms are to be interpreted where there are several legislations governing different aspects of the License agreements remains at a nascent stage under the Indian law as opposed to in EU and US. There has been a little progression by the court in the case of Koninklijke Phillips Electronics v Rajesh Bansal, where the court refused to discuss the question of whether patent pooling constitutes abuse of dominance by holding that in light of the existence of Competition Commission, it does not have the jurisdiction to address the issue. The paper aims to clarify on the issue of overlapping jurisdictions which would help in clearing the legal hurdles faced by market players, and in the long run, would help develop India as a hub for technological innovation. In few cases the courts have gone ahead and set its own terms of what constitutes FRAND licensing instead of letting the parties arrive at it through negotiations. A standard policy of determining what would constitute FRAND terms would guide the courts, and reassure the patent holders that their innovations would be treated fairly.

**Fennieka KRISTIANO, President University**

#### *Liability of the Parties in Franchising due to Pandemic Covid-19*

Due to the outbreak of Covid-19, the Indonesian franchisee solely has cancelled the franchising agreement, and this situation creates a dispute between franchisor and franchisee. The franchisee asked the foreign franchisor (franchisor) to refund the initial fee, but the franchisor has rejected and insist to continue the business which is not started. The problem is, how does franchisee start the franchising business during the pandemic? Because of many restrictions, the franchisor has some difficulties to export the raw materials to the franchisee. Who will be liable for this situation? Is it fair enough for the franchisor to return 100 % initial fee to the franchisee? Pandemic is not covered in the franchising agreement, and because of the delay

of delivery from the franchisor, the franchisee has to wait for such a long period in order to start his business. This partnership is supposed to give mutual benefit for both parties. The purpose of this research is to explore the possibilities of liability of each party, and find the best solution for the franchising business.

**Yaroslava KUCHINA, Faculty of Law, University of Macau**

*Fintech of the Russian Federation and its Legal Framework: When the Law Meets the Developed Sector*

As it broadly defined in the academic papers, Fintech refers to a using technology for the provisions of financial services. The phenomenon now is a very widespread and almost no one of the state, especially those who are interested in digital transformation, also interested on modernization of the banking sector. In general, under the definition of Fintech the technologies that change the way of banking, investing and crediting are gathered. Experts in the area highlighted that Fintech is a part of contemporary trend – the trend of lifechanging, that allows not only to modernize, but mostly to save, time and money in the permanently moving society.

The researches of the digitalization and the regulation of the process note, that the fastening of this is strictly connected to the development of the Internet. The first step of it, pushing the transformations, was change from a wired Internet-connection to a wireless one and the emergence of broadband high-speed Internet. In the time when the 4G switches to the 5G Internet we can reasonably expect an even greater surge of interest in the Fintech - both from the economy and from the politics spheres of the society. Moreover, the pandemic seems to be the pusher to that, especially in the part of paperless connections. In that circumstance, the financial sector of the Russian Federation is not an exception. The digitalization and the digital economy are the part of officially stated politic lines since 2016. Fintech industry of Russia is ranging from the distance banking services, developed very successfully, to the first regulatory sandbox on the territories of CIS member-states.

In the same time the regulatory matters of Fintech sector are not that clear and faces both opportunities and challenges. They raised from the number of questions coming both from the legal society of practitioners and academical uncertainty. The reason for uncertainty is the “non-traditional” way Fintech changes the business models of financial institutions. On the other hand, the using of Fintech introduces the number of issues related to regulation of personal data and cyber security. At the proposed presentation I would like to define the FinTech industry of Russia and give a brief overview of its legal framework, especially in regard with the difference between the technological sector, which is successfully and highly developed – and the regulation that still in the beginning of its way.

**Abhijeet KUMAR, Centre for Commercial Law Studies, Queen Mary University of London**

*Valuating the Non-Industrial Intellectual Property*

One of the biggest motivators for development of intellectual properties (IPs) have been the involved monetary interest. This also justifies the economic principles of investment and return, wherein the probability of return plays a crucial role in the investment done in development. While the argument holds water for industrial IPs (Copyright, Trade Mark, Patent, Design etc.), a different approach is witnessed in the case of non-industrial IPs (Geographical Indication, Plant Varieties, Traditional Knowledge and Genetic

Resources etc.). This has been primarily because of the neglected approach adopted by international and national IP regimes with respect to protection, preservation, development, marketing and commercialization of non-industrial IPs. Considering the different types of transactions that such IPs get into, it becomes pertinent that the properties get valued to their true worthiness for the economic market. The science for determining this economic worthiness is Valuation. While there have been several discussions at different forums which relates to valuations of IP assets, there has been very few which have deliberated upon the need for devising methodologies for holistic valuation of non-industrial IPs, which carries with themselves intrinsic values in addition to the extrinsic economic value.

Non-industrial IPs, unlike industrial IPs, generally don't develop in a small timeframe. It takes generations for them to develop, and efforts of a whole community to sustain the same. Undervaluing (or unavailability of valuation) for these IPs leads to impractical sharing of profit by corporates (in an Access and Benefit Sharing regime) or non-detrimental amount as damages in the instances of violation of IP rights. Another aspect involved relates to the question of identity rights of the community, only through a strong IP regime, and adoption of methods of valuation, which affixes most reasonable and marketable numeric value on the assets, act as a motivator for the State. The presentation aims to highlight the socio-economic problems being faced by the owners of non-industrial IPs due to limited academic discussion on the subject matter. The presentation also discusses various valuation techniques, i.e., traditional valuation methods (income, cost and market methods) and other modern methods, and examines their suitability for the purpose of valuating non-industrial IPs, in light of their unique characteristics.

**Vijay KUMAR, K.D. RAJU, and S R SUBRAMANIAN, Rajiv Gandhi School of Intellectual Property Law, Indian Institute of Technology, Kharagpur**

*Extra-Terrestrial Application of Terrestrial Laws: A Legal Study of Strain of Intellectual Property Rights and Space Technologies*

Outer space activities have turned into realities due to the development of sophisticated technologies. Such technologies are developing at an increased-rate as space activities are increasingly shifting from state-oriented activities to private and commercial activities. The nature of IP protection of space technologies lies in two territories: applicable national laws in the earth territory including air space, and outer space where national law has limited application. The IPR laws protect the interests of the owner of the IP against any infringement and unauthorized use. The remedies available to the owner are generally of two kinds: civil and criminal actions provided by the national IP laws. The application of IP laws in outer space activities in current form is having many fundamental issues. Such as IP laws are territorial in nature so whether these laws could be applied to outer space. Different nations own the the International Space Station (ISS), and visitors are to be from other nations. Therefore, the question arises of which/whose countries' IP laws should be made applicable in IP creation or infringement. Whether national IP laws apply to inventions made in space? How can the IP be protected from infringement, and how enforcement can be effectuated and secured in space?

Such a dilemma arises because outer space has been designated as the "province of mankind" and the "common heritage of mankind" by the existing international legal framework. It means no country has jurisdiction over outer space, and it is not subject to national appropriation. However, a state exercises its jurisdiction and rights over the registered "space objects" and "personnel" thereof. Still, the issues are becoming complex with the emergence of commercial and private participation and interactions among states in outer space. This is creating grey-zones in identifying and applying the IP Laws to the different



segments of space technologies. In this connection, the present paper in Part I explores the IP laws relevant to outer space activities. Part II details the outer space laws which are relevant for IP protection. Part III makes a comparative analysis of the US, Russia, and the EU space legal provision pertaining to IP protection in outer space. Part IV concludes with the suggestions required to harmonize the IP laws and Outer Space Law in the context of current commercial aspects of space activities with a special focus on Asian countries.

**Hohyun LEE, Department of Intellectual Property, Hongik University**

*A Study on the Concept of Broadcasting in the Korean Copyright Act*

To date, the Korea Copyright Act has been revised 32 times, and there have been a total of three enactments and amendments regarding the concept of broadcasting. In the Korea Copyright Act enacted in 1957, there was no article about the definition of broadcasting only provisions for broadcasting rights existed. In 1986, broadcasting was defined as a form that includes both wireless and wired systems. In the current law, broadcasting is defined under the concept of public transmission. This change reflects the development of media and how the copyright works which are sound or image, sound and image are used.

Although the concept of public transmission was introduced in the Korea Copyright Act, broadcasting, interactive transmission, and digital sound transmission are treated as individual rights in practice of TV program distribution and broadcasting and interactive transmission are also used in the neighboring right. The findings of this research reveal that a new and intangible usage behavior emerged as existing media converged and the media environment changed. In addition, the concept of broadcasting was considered at a time when an international conference for the WIPO Broadcasting Treaty was being held. The Copyright Act must have provisions that are in agreement with International Treaties on Copyright and Neighboring Rights that reflect its subject matter. It is interesting to specifically examine how the scope of broadcasting is expanding in international treaties. The WIPO Broadcasting Treaty, currently under discussion, is moving toward the concept of wired broadcasting, which was not included in the existing agreement. There were also discussions on whether to include webcasting within the definition of broadcasting.

As the broadcasting treaty of WIPO is being completed and new media are emerging, changes to the concept of broadcasting in the Korea copyright Act is also required. This study aims to find out what the concept of broadcasting in the current Korean copyright Act is, and to analyze what limitations this concept has. In the continuously changing media environment, this research discusses how the concept of broadcasting should be defined under Korea copyright Act.

**Wong Bok LEE, Ewha Law School**

*The Recipe for Facilitating International IP Arbitration in Korea*

The news that Singapore amended its Arbitration Act and International Arbitration Act to clarify the arbitrability of intellectual property rights disputes must have sent shockwaves to the collective spines of South Korean policymakers and scholars alike. South Korea has worked hard to present itself as an international venue for intellectual property (“IP”) disputes. Her efforts include changing the Civil Procedure Law in 2016 in order to concentrate patent litigation at the 20-year-old Patent Court, which was a first of its kind in Asia, in a manner similar to the U.S. Court of Appeals for the Federal Circuit. The Patent Court even conducted an oral hearing in English in a case between a Korean party and a multi-

national corporation – a feat that some praised as ground-breaking. These legislative and judicial reforms and experimentation are perhaps commensurate with the technological advances the South Korean tech industry represented by Samsung and LG have made in the last couple of decades. However, there is one significant piece missing in this redesigning of Korea's IP dispute resolution infrastructure as a favorable forum for multinational entities: IP arbitration. It is not that Korea's general attitude towards arbitration is lukewarm; to the contrary, Korea has been pulling out all stops to foster commercial arbitration. It has established Seoul International Dispute Resolution Center in a swanky building with a long-term view to unseat Hong Kong and Singapore as the arbitration capital of Asia. Also, Korea and her companies are no stranger to investor-state disputes. Arbitration is also gaining strong foothold in construction disputes and medical malpractice. But utilization of IP arbitration is not widely discussed owing to one big reason: the arbitrability of IP disputes. That is why the Singaporean approach must feel obvious and ingenious at the same time to Korean policy makers. Against this backdrop. This paper will discuss two issues that are closely related: (1) the arbitrability of patent disputes and (2) a roadmap for modifying Korea's arbitration infrastructure in order to facilitate IP arbitration. The first part will include a review of literature as well as the author's analysis, especially in light of Korean Supreme Court's en-banc decision that permitted invalidity defense notwithstanding the exclusive jurisdiction of the Korean Intellectual Property Office to invalidate patent. The second part will explore both legal and practical considerations. As the arbitrability of IP disputes under current laws is debatable, legislative changes will be the clearest solution to remove any such uncertainties. My analysis will describe which laws need to be modified in which direction, largely based on the doctrinal analysis offered in the first part. Legislative approach is only half the answer, because Korea's goal is to attract multinational IP arbitration in Korea, not just foster domestic IP arbitration. Therefore, practical measures required for South Korea to become a preferred seat of international IP arbitration are discussed. Successful efforts made by Singapore in becoming a popular seat of international commercial arbitration are analyzed.

**Valeriy N. LISITSA, Institute of Philosophy and Law & Faculty of Economic, Novosibirsk State University**

*Digital Rights as an Innovative Object in Civil and Private International Law*

In recent years, thanks to the rapid progress of information technologies, digitalization has become a key feature of the economic development of any country. One of the innovations arisen in the modern business is digital rights, which may be called in different ways (financial digital asset, digital currency, cryptocurrency, etc.) and have been already involved into legal transactions. It is the sphere where the law falls behind the economic development too much. The matter is that there are no special rules in international law and national law which would govern digital rights properly. Such objects are different from traditional ones in civil law (especially things) so that the general legal instruments stipulated in the contemporary law can be hardly applied. The legislator is now just trying to conceive and sometimes to introduce some new rules into the legal system, taking into account a plenty of various concepts on digital rights and other informational objects, especially in economics and IT science. Meanwhile, a lot of issues, such as the order of appearance, implementation and protection of digital rights as well as conflict of law, are to be clearly settled in the law.

It is argued that digital rights as rights arisen and performed within a particular informational system be considered as property rights. They are more likely to be non-documentary securities, which are recognized as intangible assets with the special legal treatment for making transactions with them. They exist as fictitious objects in the list of records kept by their authorized registrar. Such a registrar in case of digital

rights could be an information system operator, who is responsible for the operation of the information system, including the processing of information contained in its databases. For the purpose of state control some requirements, such as the contents of a decision on the issue of digital rights, the order of making transactions, the procedures of running the register and operating the information platform, etc., can be conferred upon on information system operators in virtue of rules of civil and administrative law to be enshrined in the legislation. In the scope of private international law, it is also deemed to develop special additional rules, other than *lex rei sitae*, which is designed for material objects (things) and as a result it can be hardly applied in case of digital rights as intangible assets. Based on the general principle of the closest connection, it is argued to be the law of the place, where the register of such rights is conducted. It can be the country, in which the registrar should be licensed or registered by the authorized governmental body and pursue the rules of law of such a state. In this regard it is concluded that new provisions be introduced into the national law, including the order of appearance, implementation and enforcement of digital rights, legal treatment for information system operators, as well as applicable law and jurisdictional issues to transnational legal relationships arising from conducting foreign economic activity with those intangible assets.

**Yi (Thomas) LU, Department of Business Administration, National Sun-Yat Sen University**

*What Pharmaceutical Enterprises should do under the Risk of Pay-for-Delay Scrutiny*

This paper is poised to answer a critical question: how do the brand-name and the generic pharmaceutical enterprises lower the risk of pay-for-delay investigation if they have patent infringement settlements relating to Abbreviated New Drug Applications (ANDAs)? In order to solve this question, this paper collects seventy-even settlements between pharmaceutical enterprises and the judgements relating to pay-for-delay issues from spring 2015 to summer 2020 in the U.S. jurisdiction. Through the decision tree methods under the criterion of the Gini index, we found that even the generic entry is earlier than the date of patent expiration, that does not mean that the pharmaceutical enterprises are safe from being investigated by the government. Moreover, if the pharmaceutical enterprises settled and their estimated reverse payment in their settlements are larger than the average litigation costs, which are from two million to four million U.S dollars, the probability of being investigated by the government agency is ninety two percent (92%). Based on these findings, when pharmaceutical enterprises settle, they could be safe from the investigation if their reverse payments do not exceed two million U.S dollars.

**Nicola LUCCHI, Faculty of Law, Universitat Pompeu Fabra, Enrico BONADIO, City Law School, University of London, and Oreste POLLICINO, Department of Legal Studies, Bocconi University**

*Copyright and Fake News*

New technologies have profoundly changed the way content is produced, shared, and disseminated. One of the most recent (and worrying) changes is the phenomenon of “fake news”, especially since disinformation and intentional misrepresentation of real information have started to affect individual decision-making in the political sphere and – more recently – with the spread of fake news related to COVID-19 pandemic. Internet also plays a crucial role in amplifying disinformation. It is a worrying phenomenon because dissemination of fake news can challenge democratic values and undermine national security. Against this background, the article will focus on these research questions. Can copyright play a role in the fight against fake news? And what is the relationship between such news and copyright in the first place? Fake news in

theory falls within the copyrightable subject matter and may often meet the requirements for copyright protection.

The paper analyses three recent fake news which have been widely disseminated online – and makes the point that copyright may subsist in such news. The first example is a short article. The other two examples are a digitally modified photograph and video. Yet, despite them being potentially capable of attracting such protection, we propose to remove any copyright which may arise on grounds of public interest. Indeed, when a work is protected by copyright, right holders have an incentive to exploit it, as the monopoly granted to them increases the ability to extract profits out of the work. This may inevitably contribute to encouraging creators of fake news to spread them exponentially across multiple channels to reach wide audiences. Excluding copyright could therefore contribute to making fake news less appealing, for example avoiding that their creators successfully enforce the exclusive rights against those who try to use them to check their accuracy. The paper – after introductory sections on the taxonomy of fake news and on emergency legislation enacted to tackle the phenomenon – provides a comparative perspective to defences to copyright which may apply to fact-checkers – e.g. the fair use doctrine under US law, the transient use exception under EU law, and the public security exception (again) under EU law.

**Le MA, School of International Law, East China University of Political Science and Law**

*Dilemma and Countermeasures of Implementing Compulsory Licensing of Pharmaceuticals Patent to Cope with Public Health Crisis*

Compulsory licensing of pharmaceuticals patent as a system in coping with the public health emergency has been recognized by legislation and policies both at home and abroad. Controversy has surrounded it due to the complexity of its interests involved since it came into being. When it comes to implementation, there are even more uncertainties concerning both process and effect. Although some countries like Brazil and Ecuador have enforced compulsory licensing to address COVID-19, controversies do exist regarding the poor capability of developing countries, uncertainties in addressing intellectual property rights within the pharmaceuticals other than patents and low invocation of *TRIPS 31bis*. As to Brazil notably, when the Brazilian Congress issued a compulsory licensing bill to address the pandemics earlier this year, it was immediately questioned by some drug companies which raised objections. The controversies have been focused on the necessity of this new bill. Comparatively, China has established a kind of system from legislation to policy in compulsory patent licensing. However, it still lacks clear procedural provisions in terms of compulsory licensing for pharmaceuticals patent decided by government in the context of the public health crisis. Guided by the concept of modesty, prudence and flexibility, developing countries like China and Brazil need to perfect the implementing mechanism of compulsory licensing on the basis of effective protection of the patentee's rights and interests.

**Apoorv MADAN and Pallavi KISHORE, Jindal Global Law School, O.P. Jindal Global University**

*Incentivizing Biotechnological Innovations and Achieving Public Welfare Objectives – Are Patent Laws Sufficiently Inventive?*

Biotechnological developments are on the rise and there has been an increased interest in investing in biotechnology owing to its abundant potential for tackling humanity's challenges or simply, because of its scope for commercial exploitation. Arguably, patent is an effective policy tool for incentivizing innovation

in the area. At the same time, the practice of granting patents over 'inventions' such as isolated genes, transgenic organisms, and technological processes for producing them raises serious ethical, environmental, and health concerns. Considering the scope and depth of evidenced benefits, prospects, potentially damaging consequences, and criticisms of biotechnological inventions, this article employs them as a case study for examining the suitability of the patent regime as an avenue for addressing moral, environmental, health, and other public policy implications of inventions claimed in a patent.

The first part of the article will clarify the terms integral to gene technology that have been used in the article. Considering the importance of international harmonization in the area, the second part will present an overview of the relevant legal scenario in the BRICS nations, Japan, Australia, European Union, Canada, and United States concerning patent eligibility of inventions involving gene technology. Drawing upon the experiences of some of these jurisdictions with evolved jurisprudence in the area, the third part will critically analyse the appropriateness of legal rules prevalent in various jurisdictions across Asia that allow patent examiners to reject an application on the grounds of morality, public order, public interests and other public policy objectives. After highlighting the inadequacies of the present rules and the practical difficulties in applying them, this part will propose an alternative model for addressing the moral and public policy implications of inventions claimed in the patent. Finally, the fourth part will conclude by discussing the 'patent-innovation paradox' and by examining whether carving out blanket exclusions from patentability is a preferable approach to resolve the paradox and to enhance accessibility. Additionally, it will discuss alternative mechanisms which could help in achieving greater accessibility to patented inventions.

**Vandana MAHALWAR, Faculty of Law, University of Delhi**

*Access to Knowledge, Education, and Copyright Law in India*

For centuries, copyright law has been a significant public policy tool for the knowledge mobility. However, the commercialization of knowledge has resulted in enhanced creator's rights that inhibit the adequate and affordable access to the latest and most timely knowledge. Copyright rules that meet the interest of authors upset public by restricting the mobility of knowledge. Copyright maximalism seeks an absolute control over dissemination of their copyrighted work and are against any limitations, exceptions and fair uses over their monopolistic copyright. This maximalist approach contributes in promoting socio-economic inequalities in society and advancing 'selective mobility' by letting only those have access to copyrighted works, who can afford to pay high prices. This construction of copyright raises the disturbing issues of social justice. There are three groups at the core of copyright policy: users, creators and publishers. It is the responsibility of the legislature to maintain the appropriate balance between these three constituent groups. In 1710, the Statute of Anne intended to strive at maintaining a balance between rewards and incentives with an aim to foster learning, as the title sets out its underlying objective: *An Act for the Encouragement of Learning by Vesting the Copies of Printed Books in the Authors or Purchasers of such Copies, during the Times herein Mentioned*. But the current copyright law seems to fail to walk along the utilitarian lines drawn in the Statute of Anne to foster the social utility considerations of public interests. The access to knowledge (A2K) movement stands in direct conflict with the proprietary rights of copyright owners. There are diverse forms of access to knowledge, here the term 'access' refers to access to the source of knowledge which includes copyright works and corpora of scientific and technological knowledge. Books and articles, being the central learning materials in educational institutions, are photocopied in quantitatively significant number by students. As and when students need to access these educational resources, they get the relevant chapters photocopied easily, expeditiously and inexpensively. In this whole process, authors and publishers find themselves in an

unsatisfactory and thwarting state, and the commercial photoshops are alleged to infringe the copyright of publishers by reproducing and distributing the educational material without seeking permission from copyright owners. On the contrary, the most common defense which is taken by defendants is that of 'fair use' or 'fair dealing'. As copyright System is strongly fastened to the principle of access to knowledge, this paper would explore how the maximalist approach of copyright contributes in promoting social injustice. This paper would analyze the pertinent provisions of The Copyright Act, 1957 and would explore whether Indian copyright law and A2K have a congruous relationship.

**Twinkle MAHESHWAR, Kirit P. Mehta School of Law**

*Protection of Voice as a Personality Right*

Entertainment and Creative Industry has its origin in the creativity of an individual that has the potential to be exploited and generate wealth. With the recent growth in Entertainment industry, the awareness about the rights related to the work of an artist has multiplied resulting in the increase of *malafide* use of the work. With such enormous growth in the entertainment industry to be witnessed by the World, protecting the rights of the authors of this industry becomes essential. The industry is not only limited to the producers and composers but will not stand without the performing artists. So artists play a major role in the entertainment and creative industry. Therefore, there is a need to protect the rights of such artists and creators. Once an artist becomes famous, the personality of the person also forms the part of the property of an individual and this property should be protected from exploitation. It is observed that certain aspects of personality that after being worked upon by the author in a unique way are commercially exploited of generation of wealth. Therefore, personality rights attached to the personality of the celebrity or the artist needs a mention in the current legislation. For instance, voice of an individual does not have protection under Intellectual Property laws so far in India. But, when one hears the voice of certain celebrities, one is able to identify them easily because of the distinctive nature of their voice. For instance, Amitabh Bachchan or Lata Mangeshkar, even if one doesn't see them but just hear them on the radio or in the background of any video, one can easily identify who is the speaker. With the growth of technology and popularity of certain celebrities, instances have been reported for misuse of their voice for commercial gains.

The question arises that whether providing remedies for related rights under the Act, means that protection should not be granted to such aspect of personality? Another pertinent question is whether voice could be considered as an expression under law, with reference to the idea- expression dichotomy debate? Only, if we can consider voice as an expression under law, we may grant protection to it under the Intellectual Property regime. Therefore, there is a sturdy need to strike a balance between encouraging economic activities through the protection of intellectual property rights and creating an environment in which the needs of consumers are respected and creativity and innovation are not stifled is an on-going challenge. The challenge faced today and agreed upon by various researchers is the enforcement of the copyright in digital platforms for which the Statute have adequate provisions, however, the provisions lack clarity and specific rights of protection. Various creations fall in the ambit of fair use exception, for instance parody, but there is no specific protection given to the creator of parody due to which there have been diverse and conflicting judgments. Infringement of personality rights in certain situations may lead to tortious liability, which is similar in different countries to a large extent. However, the interdict is directed at the prevention of a wrongful act, and not at retribution for wrongfulness already committed, it is generally accepted that fault is not a requirement. The paper therefore would look into the protection of voice as a part of personality right in India and compare it with other jurisdictions.

**Hitesh MANGLANI, ICAFI Law School, The ICAFI University, Jaipur**

*Violation of Trademarks in Cyberspace, Jurisdictional Issues and Indian Judicial Approach*

Cyberspace has brought the world into a situation where anybody can violate the trademark/domain name of another website by making a similar type of mark with the *malafide* intention to deceive people, or an effort to trade in the name of others in the form of cyber squatting are all the factors which the law makers must take consideration to protect the work of authors or to safeguard the trademarks of various organizations or of an individual. While trademarks are of great importance in this virtual environment, they are more vulnerable to infringement, dilution and anti-competitive practices. Trademark owners expend vast resources, engaging automated ‘web crawling’ software and cyber surveillance firms to monitor billions of web pages and protect their intellectual property rights.

There are numerous domain name disputes that have come up for the consideration of courts all over the world. One of the more serious ones has been “Cyber-squatting”, which involves the use of a domain name by a person with neither trademark registration, nor any inherent rights to the name. Trademark plays an important role in the cyberspace which the manufacturer with the one click single advertisement can rule the whole world by indicating the source or the origin of the goods coming from the distinct manufacture.

Now here lies the origin of the disputes with regard to infringement of trade marks in the realm of internet by registering the domain names in disguise for the marks or trade names used by the other. Cyber-squatting jurisprudence has developed through various important judgments. From the very first case of World Wrestling Federation case to *Marks and Spencer’s* case, the courts have tried to concretize the standards of determining the cases of Cyber Squatting. In India, the judiciary through various cases such as *Manish Vij v. Indra Chugh*, *Maruti Udyog v. Maruti Infotech*, *Yahoo Inc. v. Akash Arora & Anr.*, *Rediff Communication v. Cyberbooth & Anr*, *Tata Sons Ltd. v. Monu Kasuri and others*, *Satyam Infoway Ltd. v Sifynet Solutions*, *SBI cards and Payment Services Pvt. Ltd. v. Domain Active Pty Limited*, *Acqua Minerals Ltd v Pramod Bose*, *Madhuri Dixit Nene v. VG Online* and *Titan Industries Limited v. Prashanth Koorapati and Ors* has developed the rules and legal process to deal with such infringements.

Apart from squatting, Meta Tag and Spamming also pose the threat to protection of Trademarks. The genesis of jurisdiction in the internet world includes some of the test to determine jurisdiction. Courts particularly in USA have applied these tests to determine cyberspace jurisdiction since due to lack of jurisdiction many a times defendants try to escapes from their liability. India has borrowed some key principles from these case laws to determine the jurisdiction. In order to provide a legal response to such infringements, ICANN and WIPO have come up with their own dispute resolution mechanism whereas India has developed its *sui genreis* Indian Domain Name Dispute Resolution Policy.

**Thomas MARGONI, Faculty of Law, KU Leuven, and Martin KRETSCHMER, CREATE, School of Law, University of Glaskow**

*Property Rights over Mere Facts and Data in an AI-driven Society*

The Directive on Copyright in the Digital Single Market entered into force in June 2019 and gives 24 months to Member States to implement it. The Directive, a complex instrument containing a rich number of provisions intended to modernise EU copyright law and to make it “fit for the digital age” has been object

of much attention and, in relation to certain provisions, sharp criticism. Arts. 3 and 4 introduce two mandatory exceptions under EU copyright law which will exempt acts of reproduction for the purpose of text and data mining (TDM) made by research organisations for the purpose of scientific research (Art. 3) or by anyone but with the possibility of “contract-out” (Art. 4). These exceptions are additional to already existing domestic TDM exceptions created within the EU framework.

This paper discusses the EU TDM provisions from a EU and international point of view and endeavours to illustrate why their current formulation – although underpinned by the right innovation policy goal – is conceptually wrong and normatively unambitious. Under the expression TDM the real game that is being played – wittingly or unwittingly – is the issue of data ownership in EU copyright law. By agreeing that data can be reused thanks to an exception, we are accepting the rule that data can object of proprietary claims. This is in spite (and against) international norms and accepted copyright theory. Accordingly, the paper argues that in a properly designed copyright framework there should be no need for a TDM exception, as the acts involved in TDM are clearly external to the scope of copyright law.

The paper further argues that in the current – not properly designed – EU copyright framework a broad TDM exception can be seen as a temporary compromise, however the TDM exception of the CDSMD falls short of this compromise. The paper concludes suggesting that what the TDM exception really does is quite close to a definitive yet disguised recognition of proprietary claims in mere facts and data when contained in protected works. The paper explains why this attempt must be resisted and finally identifies areas where a certain degree of “flexibility” may still be present at the EU, MS and extra EU level.

**Sanitta MARIA, Tamil Nadu National Law School, Trichy and Saveetha University, Chennai**

*Price Regulatory Policies on Pharmaceutical Patents in India: Will it Lead to Availability or Scarcity?*

The high price of drugs is a real problem acknowledged by all. However, a situation where there are no effective drugs for diseases are more severe than highly priced drugs. The paper revolves around the relationship between three principles; patents, innovation and price control. The study attempts to find out the impact of price controls on incentives and innovation in particular to life saving patented drugs. Patented medicines have mechanism within the IP regime like compulsory licenses, parallel imports etc. to make medicines affordable and available. But the paper focuses on the price control policies taken by Indian government outside the IP flexibilities to make medicines available and affordable. Price controls are a pure economic tool by government to reduce the prices of commodities. Government intervenes with price controls usually to makes sure the essential commodities are affordable at reasonable prices. Till 2005, there was no need for price controls of patented medicines due to process patent protection. Reverse engineering by generic industries kept the competition in market and prices were low due to this. The prices of patented medicines were out of price ceiling post-product patent regime.

In 2007 Department of pharmaceutical has formed a committee to study the inclusion of patented medicines under price negotiations and ceilings. At present the 2015 National List of Essential Medicines (NLEM) is in effect with 376 medicines which includes patented medicines. The latest 2020 NLEM list is yet to be published were patient action groups requesting for more patent medicines to be included and industrial groups requesting for the removal of patented medicines from the list. Other than this India has piloted the Trade Margin Rationalisation (TMR) since 2019 as a method to reduce price of patented medicines. The price control on stents and implants has resulted in withdrawal of high -quality stents and implants from market. the launch lag of drugs, non-marketing of break through drugs into our market etc. are certainly not



good for patients. The lack of product in market will lead to availability of product in black markets. A patient will have to pay double or triple or even more to buy them. The sudden reduction of drug prices through government order are quick solutions but with severe impacts in long run. The past experiences of price controls on various commodities by different economies mandates us to do thorough study before gripping more on price control of patented medicines. We need a pharmaceutical market which can cater the growing medical need of current patients without compromising on future patients.

**Henny MARLYNA, Faculty of Law, Universitas Indonesia**

*Trademark Cancellation Lawsuit having Similarity with Well-Known Trademark for Dissimilar Goods/Services: Analysis of the Current Regulation and Case Law in Indonesia*

The issue of protection of well-known mark has posed challenges for owners of well-known marks in Indonesia. Most marks cases that have been brought to the courts dealt with well-known marks since the enactment of the first Marks Law in 1961. Most cases brought to the court arguing well known mark usually won by the mark's owner. By arguing that the mark was well-known and has been registered in many other countries, the owner of the well-known mark was able to convince the court that their marks have been registered in bad faith by local, both for similar and dissimilar kind of goods and/or services. However, in 2015 - 2016, there were some court decision for cases of well-known mark for dissimilar kinds of goods and/or services, argued to be controversial. Based on the 2015 Supreme Court circular, the Supreme Court overruled the Commercial Court decision and dismissed the cases. According to the Supreme Court Circular Number 03/BUA.6/H.S/SP/XII/2015), any cancellation lawsuit arising from alleged essential similarities to well-known marks involving dissimilar goods or services should be dismissed given the absence of any relevant implementing regulation under the 2001 Mark Law. The Supreme Court further found that "previous Supreme Court precedents of cases involving trademark dispute of dissimilar goods should no longer be upheld". Based on the new Mark Law Number 20 of 2016, the government has issued Minister of Law and Human Rights Regulation No. 67 of 2016 that provides the requirements for examining the case. It is interesting to analyze whether the new regulation provides clear regulation and how the court apply the requirements.

**Althaf MARSOOF, Nanyang Business School, Nanyang Technological University**

*A CSR/Fair Trade Inspired Policy for Fairer Geographical Indications*

Geographical Indications (GIs) come with the promise of socio-economic development for local communities. But more often than not, GIs in the developing world have not been able to deliver on that promise. However, it is unwise to place the entire blame on GIs for this shortcoming. Rather, the problem lies in the inequitable distribution of premiums generated by GIs within supply/value chains. For that reason, it is worth looking outside the GIs system so that we can draw inspiration from concepts such as Corporate Social Responsibility (CSR) and fair-trade. Both the CSR and fair-trade share certain common standards that aim to guarantee fair wages/prices, access to education and training, healthcare and safe working conditions, and human rights to stakeholders involved across supply/value chains. This paper makes a plea for these common standards to be infused into the GIs system to benefit local communities, while also proposing a strategy to achieve that objective.

**Muhammad MASUM BILLAH, Sultan Qaboos University**

*Who Has Copyright in Works Created by Machines with Artificial Intelligence?*

As machine-learning advances, machines become more sophisticated and may mimic human brains to generate works that traditionally only human being could create. While the law grants a human author or artist copyright in works created by them, there is no uniform treatment when it comes to copyright in works autonomously generated by machines with artificial intelligence. It is a generally accepted rule that when a human author uses a machine as a tool to produce a copyrighted work (e.g., a typewriter or computer), the holder of the copyright is the human author or the artist. However, when a machine is programmed in a way that it can learn from given circumstances and data sets and can automatically produce works based on such learning, there may be very little human input behind the generation of such works other than the initial programming of the machine. There are different proposals commentators advance with regard to copyright in such works. One approach is to grant copyright to the programmer or the owner of the machine with artificial intelligence while the opposite view is to grant copyright to the machine. Even though these two approaches may appear quite opposite to each other, they both lead to the same result i.e., the programmer or the owner of the machine will receive the economic benefits from such copyright whether held by the machine or the programmer of the machine. The third approach is to grant copyright to the users of machines especially when the users' inputs are necessary for the generation of a work by the machines. The fourth approach is to deny any copyright to such works and to treat them as part of the public domain. The US Copyright Office also adopts this approach because the Office does not recognize copyright in any work that lacks a human author. While there are arguments both in favor and against each of these approaches, the paper supports the last approach as this will allow unrestricted access to such works without diminishing much incentive either for further development of machines with artificial intelligence or to generate works by the machines.

**Tri Rusti MAYDRAWATI, Hang Tuah University**

*Bioprospection Based on Genetic Resources and Utilization of Traditional Knowledge in the Discovery of Covid Drugs and Vaccines 19 Perspectives on Intellectual Property and Human Rights*

The emergence of the Covid 19 pandemic has changed the concept and paradigm of all aspects of community life, especially the economy, although the pandemic is directly correlated with public health. This impact is felt not by the people of one country, but most countries around the world. The presence of this pandemic has been felt by all countries in the world for almost one year, when the end of time is unknown. This condition is exacerbated by the absence of Covid 19 drugs and vaccines. Another impact is that scientists in the world are competing to find drugs or vaccines with all available efforts including conducting research and exploration based on genetic resources (GS) and making use of available traditional knowledge (TK). In this bioprospection activity, researchers should be rewarded for all the efforts that have been made. This form of appreciation has been manifested in the protection and incentives of Intellectual Property Rights (IPR). Universal IPR protection has also been recognized and even manifested legitimately in the form of legislation both nationally and internationally. In the context of efforts to find Covid 19 drugs and vaccines, these research activities should not only use the elements of an IPR approach but use a human rights approach. Given that Covid 19 is already a global pandemic, it is certainly necessary on a large scale, including there is no difference whether rich countries are more entitled to younger access than poor countries because of different economic strengths.

In the context of healing, it is necessary to have equal distribution and access to drugs and vaccines easily and cheaply. Basically, the two approaches have different points of view. IPR with its rules protects individually, while the human rights of a large group of individuals, namely the community. In the context of the human rights approach in the health sector, the IPR approach is considered a barrier to accessing drugs and vaccines. The use of exclusive rights restricts people's access to drugs and vaccines. Therefore, many people cannot access drugs that are suitable and useful. The use of exclusive rights should also not limit cultural participation and scientific access, but on the contrary, must facilitate and accelerate the provision of access and show good faith by providing incentives when involving genetic resources and the use of traditional knowledge of indigenous peoples which are often neglected, such as without permission to access and without any compensation, especially without the fulfillment of profit sharing. In this context, efforts are needed to clarify the sharing of benefits and benefits for each party, as stipulated in the Convention on Biological Diversity (CBD) and the Nagoya protocol, but they still require details in their implementation so that no party will be harmed.

**Saeede MAZINANIAN and Mohammad Hosein ZAREI, Faculty of Law, Shahid Beheshti University**

*Regulation of the Internet of Things: An Approach to the Iranian Legal System in Privacy*

The Internet of Things (IoT), among Internet-based technologies, has more noticeable and far-reaching effects, for the applications of the IoT are not limited to the arena of the Information and Communications Technology. Predictably, in the near future, connected devices will be utilized increasingly for delivering such various services as healthcare, public security improvement, resources conservation, and productivity enhancement. Ergo, considering the increasing applications of the IoT, the present paper addresses the regulation of privacy in the arena of the IoT. Taking the importance of the subject of the regulation of the IoT into consideration, the current paper deals with the regulation of privacy in the arena of the IoT. According to the comparative studies conducted to date, amongst the priorities of the regulation of the IoT ecosystem, the regulatory authorities of the developed countries have focused on privacy regulation; the rationale is that the advent of the IoT, and the risks it poses to privacy, has caused a large quantity of concern—and in turn, challenges. Therefore, this article examines the situation of the regulation of privacy, and the IoT data protection, in the Islamic Republic of Iran; additionally, it examines the current challenges and offers a number of solutions.

**Preneksha MENIA, Symbiosis Law School, Symbiosis International (Deemed University) Pune**

*Doctrine of Fair Use During COVID-19*

During this COVID-19 pandemic wherein The World Health Organization has declared the huge spread of corona virus to be a disaster affecting all the countries and the territories around the world and the potential danger of its global spread, the issues of copyright law is definitely not the matter of prime concern for this country. It is pertinent to note herein that the shift towards the online system of education, digitalization and taking the recourse of digital library require a proper framework as copyright law hasn't contemplated within its purview the provisions to deal with these kinds of unpredictable situations and circumstances.

There are many matters of concern beginning from providing academic study material to students through the use of internet till ensuring digital access. Herein; during such exceptional circumstances, the Doctrine of fair use gets expansion and the interpretation and implementation of policy of fair use under the Copyright

law receives a wider scope and as a result of which, the schools, colleges and universities are permitted to shift their library catalogues to digital database and many other aligned activities without actually obtaining the licence or prior permission of the rightful owner of the literary work under the Copyright Act prevalent within the territory of the respective country. Thereby, the use of the copyrighted material in the ongoing online classes and the sharing of study material protected by the Copyright enactment is definitely a great matter of concern.

**Srijan MISHRA, Maharashtra National Law University, Nagpur**

*Protection of Geographical Indications in The Market Driven Era*

In this era of globalization, the nature and scope of the Intellectual Property Rights is changing and the new forms of intellectual properties are being given protection under national and International legislations. The Geographical Indications have become a way to protect Traditional Knowledge which otherwise would have diminished or would have exploited by the huge MNCs. In this period of globalization and industrialization, protection of the ancient practices has become important. The protection of not only cultural practices is necessary but also protection is necessary for the intangible and tangible forms of intellectual knowledge which are communicated and expressed. In this market driven era, we have to focus on not only registering these GIs but also providing adequate protection to them. Studies have found that the GI holders themselves at times are involved in 'self-dilution' of their own GI product to meet the market demand and to stay in the competition. In India, a case of Banarasi Sarees, it was found that cheap material was used by competitors to meet the demand and earn more profit. Chinese material was used in these sarees and by doing this the essence of the GI was in danger. This paper aims to explore such practices and focus on the problems with The Geographical Indications of Goods (Registration and Protection) Act, 1999. The paper also aims to suggest means and measures to provide suitable protection to the GIs in India and amendment to the legislation.

**Khadijah MOHAMED, School of Law, Universiti Utara Malaysia**

*Criminal Enforcement against Trademark Counterfeiting*

The scope of trademark counterfeiting is tremendous and spans a wide range of industries. Counterfeit products create global problems by risking safety and health of the public, hinders economic growth of a nation through tax avoidance, threatens the business opportunities of legitimate businesses and jeopardize employees' job. In certain sectors such as foodstuffs, medicines, and vehicle parts, counterfeit products may be fatal. Therefore, effective legal protection and enforcement is crucial to counter the problem. Many governments have devoted serious effort to improve the legal framework in order to effectively deal with this issue. It appears that the significant increase in observed counterfeiting activity and its effects have caused criminal enforcement to be more aware of its importance. Generally, criminal proceedings have not been a popular option in intellectual property (IP) infringement although as pointed out by some commentators, they could address counterfeiting cases on a large or commercial scale. Moreover, the process is likely to be quicker than civil actions and their sanction might carry deterrent effects. In this respect, criminal proceedings could constitute an alternative and effective means of enforcing IP rights especially when dealing with the manufacturing and importation of counterfeit products. This paper aims to examine and explain why criminal punishment is important and would be appropriate mechanism in addressing counterfeiting problems.

**Debmita MONDAL, Hidayatullah National Law University**

*Title: Indigenous Intellectual and Cultural Property Laws in India: Non-existent and/or Unnecessary?*

“Indigenous” has not been defined in WIPO, UN or any such international bodies conclusively. Many have adopted/ suggested working inclusive understanding of the term based on self-identification as indigenous people, connection with land and nature, their beliefs and culture distinct from modern society, historical continuity of such culture pre-colonization, etc. In fact, the term indigenous has been much debated and distinguished and compared with other terms like tribal, advasi, nomads, ethnic groups, first people. What has however been increasingly brought to light in modern society is the indigenous society have their own culture, knowledge and expressions which have relevance and value even in today’s world. Just like any valued thing, thus indigenous art, cultural expressions, rituals and practices has faced the wrath of technology by making it easier to copy, reproduce, share and ready for sale. While modern societies and regulatory bodies internationally and domestically are struggling to provide affirmative recognition to indigenous rights and protect such rights, surprisingly India the home to more than 75 million such people do not have a single specific legislation talking about intellectual and cultural property rights of indigus people. While some constitutional guarantee of special status is provided to such people, neither the term indigenous is accepted and adopted by the government nor there is any such mention of indigenous people’s rights over their intellectual creations in the intellectual property laws of India. However, concerns have time and again been raised over unauthorized exploitation of folklore, folk song, Adivasi arts, tribal dance often in media, before Indian judiciary and in public discourse in India. The objective of this research is to explore a possibility that the indigenous works have faced a unique challenge of gendecide in India making them non-distinguishable from other works and thus the need for recognition of such rights has exhausted.

**John Joshua F. MONTANEZ, College of Engineering and Architecture, Bicol State College of Applied Science and Technology**

*Level of Intellectual Property (IP) Awareness: A Basis of IP Policy Development Towards Establishing Innovation Ecosystem*

Protection of the creations of the mind or Intellectual Property is an emerging concept among State Universities and Colleges and Private Higher Education Institutions and is the cornerstone of the innovation ecosystem among academic institutions aside from research activities. This study presents the level of Intellectual Property (IP) Awareness of the employees (Teaching and Non-Teaching Personnel) of the Bicol State College of Applied Sciences and Technology (BISCAST) and its impact on the IP policy development of BISCAST. The study used a mixed-method type of research incorporating quantitative and descriptive analysis. The quantitative analysis utilizes a survey instrument that was used to assess the level of IP awareness of BISCAST employees. The survey instrument is divided into two parts, namely: IP and IP rights. The IP section covers several IPs like Patents, Utility Model, Industrial Design, Copyrights, and other IPs like Geographical Indications, New Plant Variety, Trade Secrets, and Trademarks. In contrast, the IP rights section includes benefits of IP protection, motivations of drafting and submitting IP applications to the Intellectual Property Office of the Philippines (IPOPHL), and IP enforcement. The descriptive component of the study shows the impact of several initiatives of the BISCAST towards the development of the IP Policy like IP education like seminars, workshops and patent drafting among BISCAST employees and students, IP bench learning activities among BISCAST administration, and several consultation meetings with different sectors stakeholders and line agencies like the IPOPHL and the Department of Science and Technology (DOST). The survey was administered to 120 teaching personnel and 54 non-

teaching personnel garnering a weighted mean of 2.85 and 1.94 interpreted as partially aware and less aware, respectively. Furthermore, the study reveals that an increase in utility model and industrial design applications is noted, despite partial awareness of the teaching personnel, and this is attributed to the annual IP awareness seminar and workshops. The necessary factors were considered in the IP Policy's approval tailor-suited to the needs of BISCASIT like incentives among employees, provisions of IP ownerships, and disputes. It gave birth to the BISCASIT Intellectual Property Management Unit. The approval of the BISCASIT IP policy sparks the innovation ecosystem within the institution.

**Sangeetha MURALI, Ramaiah College of Law**

*Exclusion of Medical Methods from Patent Eligibility and Access to Healthcare Innovations: A Comparative Study on India, Brazil, and South Africa*

Medical methods including, methods of treatment, diagnosis, therapy, surgery etc., are often kept outside the preview of patent eligibility citing concerns relating to access to health and ethics of medical profession. The Agreement on Trade-Related Aspects of Intellectual Property through Article 27(3)(a) provides scope for the member countries to come up with regulatory restrictions on the grant of a patent for an invention related to or involving medical procedures which would render humans and animals free from diseases etc. The restrictions on patenting inventions related to the medical process appeared in the patent statute in many countries right from the adoption of laws related to patent protection but, often such restriction was intended to give medical practitioners free access to medical treatments methods etc. without facing prosecution for patent infringement. The Provision is also perceived with capacity to secure access to health care technologies and the right to health in developing countries. Lately, some developed countries have started easing the provisions when the medical procedure is related to diagnostic methods, cosmetic therapy, dental procedures etc. taking into account their lack of direct nexus to right to health and other industry concern. Besides, on the evolution of technologies relating to gene therapy, personalized/precision medicine etc. the provisions on such exclusion from patent eligibility exclusions raises the necessity for a review. The paper focuses on the critical analysis of the legal regime excluding medical procedures from patent eligibility in India, Brazil and South Africa. Countries are chosen for a comparison considering their common stands in terms of matters related to human rights, public health at WTO negotiations and conferences on Intellectual Property and the common trends in the health care delivery system. The research will also analyse the recent trends in the patent offices of the mentioned countries in processing patents applications related to medical processes.

**Venkat NADELLA, Indian Institute of Science, Bangalore**

*Knowledge Spillovers, Technology, Acceleration, and Early-Stage Science and Technology Entrepreneurship in India*

The central role of entrepreneurship and innovation in accelerating economic growth, and the role of the state in guiding the rate and direction of knowledge creation, is widely acknowledged in the innovation studies literature. Knowledge spillover theory of entrepreneurship posits that entrepreneurial opportunities are created by investments in new knowledge made by commercial firms and universities. To the degree that these opportunities are not completely exhausted by incumbent firms, scientists and knowledge workers appropriate the value of their research by starting a new firm and serve as a conduit for the spillover and commercialization of knowledge. However, several factors impede the spillover and

commercialization of knowledge also referred to as the knowledge filter. The central aim of this research is to provide insights into how scientist firm financing public policies do and can influence the knowledge filter; through the decision-making of individual scientists and knowledge workers to become entrepreneurs.

This study asks why some scientists, and not others, engage in knowledge commercialization i.e., science and technology entrepreneurship. It does so by examining the effectiveness of the Small Business Innovation Research Initiative (SBIRI) and the Biotechnology Industry Partnership Programme (BIPP) initiatives in improving biotechnology entrepreneurship in India. These programs inspired by the Small Business Innovation Research in the United States (US-SBIR) promotes technological innovation by encouraging commercialization of new, and established, ideas emanating from scientific research. The central unit of analyses in this study is the scientist-firm; and examines the impact of program initiatives in improving the intellectual property outputs of the scientist-firm. One of the challenges of evaluating these programs are that retrospective data on scientist firm outcomes are not readily available to conduct quasi-experimental evaluation (which is the norm in program and policy evaluation) to obtain average-treatment-effect and intent-to-treat estimators on the impact of the SBIRI funding on venture outcomes. To obtain retrospective data, I use annual returns, profit-and-loss statements, and balance sheet information obtained from the Ministry of Corporate Affairs of the Government of India (MCA) of firms that applied for SBIRI and BIPP funding. Thus, enabling construction of a longitudinal data of firm performance indicators. Preliminary findings indicate that the impact of funding on firm survival, speed and incidence of access to risk capital from venture capital firms and other financial intermediaries, access to loans from private and public banks, and most importantly firm growth (employees, sales and revenue measures) and knowledge growth (patent stock, contracts and tie-ups with key research institutions around the world), and innovation (products launched) are significantly higher among award recipients than non-recipients. Policy implications of technology acceleration programs on science and technology entrepreneurship are discussed.

**Sulimenov NARIMAN, Caspian Public University**

#### *Legal regulation of Copyright on the Internet in the Republic of Kazakhstan*

The role of the Internet in everyday life can hardly be underestimated. It affects all spheres of life, including intellectual property in general, and copyright and related rights, in particular. The works of many authors, for example, books, today are often published not in the paper version, but on the Internet. The same can be said about some other objects of intellectual property. However, due to the peculiarities of the Internet, this leads not only to the development of some areas, but also to potential violations. It is in this connection that the modern regulation of copyright is impossible without its regulation on the Internet. In recent years, copyright infringements on the Internet represent difficult problems to be solved, both from the point of view of technical means and from the point of view of legal liability due to its insufficient legal regulation. Obviously, the solution to this problem should be comprehensive, including the improvement of legal culture, on the one hand, the development and adoption of various measures to prevent violations in this area, on the other hand. In this aspect, the systematic adoption of new laws, as well as the introduction of appropriate additions and changes to the current legislation, is of great importance, since the analysis of regulatory legal acts regulating copyright in Kazakhstan leads to the conclusion that they are imperfect and incomplete. In addition, in order to improve the current Kazakhstani system of legislation in the field of copyright, it is necessary to take into account international experience in the legal regulation of copyright issues in Kazakhstan, as well as for further possible implementation into national law.

**Phan Quốc NGUYEN, School of Law, Vietnam National University**

*Better Modification of Laws on Competition and Intellectual Property of Vietnam Under New Contract*

Competition and Intellectual Property (IP) have the strict and intertwined relationship. They are legally complementing in one hand but conflicting in the other hand. Under new context, competition is a driving force behind protection of IP rights and innovation, in its turn IP plays a more and more important role for increasing competitiveness of enterprises. With the rapid development of science-technology, economy-society, many countries in the region and all over the world have been regulating and modifying the relevant policy and laws in order to create the linkage in the direction of balancing them for innovation and development. Although Vietnam has policy and legal rules on IP and competition, but the connection between two fields is still very weak, not various so Vietnam has many difficulties in the practice for the resolution of related cases. Vietnam is under the process of regional and international strong and broad integration where IP and competition both play the key role. The regional and global competitive environment is stronger and stronger, the regional and international integration not only creates more and more opportunities but also brings not small challenges for Vietnam. For that reason, the modification and complementation of policy and legal rules on IP, competition in the direction of closer, more intertwined connection between the IP and competition under the new changing context for better exploitation of intellectual assets, encouraging innovation in Vietnam are the urgent need, which helps Vietnam to integrate more deeply at the regional and international scale. Most scholarship in the area has focused on case studies of particular industries and social movements that occupy IP's negative space. This paper aims to look deeper into the nature of IP's negative space itself, seeking a unifying theory of what makes a type of work well suited to IP's negative space. The emerging theory sheds light onto what may make a lack of protection preferable to protection for certain types of works and gives us a new tool for optimizing intellectual property law to promote creation and innovation.

**Raniyal NIYADA, Inter University Centre for Intellectual Property Rights Studies, Cochin University of Science and Technology**

*A Case Study on Effectiveness of Protection of Plant Varieties and Farmers' Rights Act, 2001 in Promoting and Sustaining Farmers' Innovation*

The Indian Protection of Plant Varieties and Farmers' Rights Act, 2001, (herein after referred as the Act), contemplated a *sui generis* statutory protection for new varieties developed by modern breeders, as well as farmers. In order to promote farmers' innovation, the Act's Section 39(1)(i) read with Section 14 envisages a mechanism that enables the farmer to register new varieties bred or developed by him. In addition to this the Act also envisages registration of existing farmers' varieties. These provisions are intended to incentivize the farmer to develop new varieties using traditional methods. As per data available as of August 2020, there are 1720 traditional farmers' variety and 621 new varieties registered in India. Interestingly no new variety developed by the farmers is registered.

To find out whether registration incentives the farmer to innovate, a case study was undertaken in Kerala. In 2003, a farmer, K.J. Baby, from Kerala's (India) Idukki district and in 2009 K.J. Benny, a farmer from the same locality, developed a new white flower variety of small cardamoms, 'Ela', and a new higher yielding variety of small cardamom, called the 'Elarajan' respectively. Both were granted a plant variety registration under traditional farmers' variety in 2016 upon application filed with the help of local Agricultural Institution. Despite being a new variety, both of them had been registered as farmers' variety.



Possible reasons could be that the benefit of the registration under the Act is same and the procedural hurdles are limited.

The case study revealed that the farmers who bred and evolved these varieties did not enjoy the benefits under the Act. The inherent nature of the variety enabled the farmers in the locality to save the seed for repeated use which is permissible under the Act. Unlike in the case of modern hybrid varieties the cultivators need not go back to the farmers-breeder for the seeds. Despite this, the registered farmers have been selling the sapling before registration and there had been very good demand for the varieties' saplings. Further by the time the registration process was completed the farmers have received maximum economic returns from sales of saplings of the new varieties. Interestingly it was also found that nurseries around the area have been selling the saplings of the registered varieties without the permission of the farmers until 2018. Even though the demand went down, the farmers did not take any action under the Act to prevent the same, because of their ignorance about the Act. It is also interesting to note that despite competition in the market, the farmer-breeder has made reasonable profit out of sales of sapling without exploiting monopoly. Based on the study it is concluded that, even without the use of monopoly created under the Act the farmers were incentivized. It implies that the incentive structure of the granting monopoly over new variety developed by the farmers is not the motivating factor for the development of new varieties by farmers. Self-motivation, local recognition and the economic return based on initial sale in the market seems contributing factors in promoting innovation by the farmers.

**Saad NUSRULLAH, Punjab University Law College**

*Establishment of Specialized IP Courts in Pakistan for Effective IP Rights Enforcement-Expectations, Achievements and Future*

Intellectual property-related Issues are becoming more complicated than ever as a result of changing technologies and the rise in the number of innovations. Hence a specialized system with expert and competent professionals would contribute to an incessant development in this legal arena required to tackle these issues effectively. In the last few years intellectual property has been gaining ever increasing recognition in Pakistan. The Government of Pakistan is concerned about the impact of infringement, counterfeiting and piracy on Pakistan's economy, and is taking steps to curb infringing activities and ensure effective enforcement of intellectual property rights in the country. One such step is the establishment of separate intellectual property courts, as required under the Intellectual Property Organization of Pakistan Act, 2012. The idea of specialized courts or tribunals having exclusive jurisdiction over particular subject matters is not novel or without examples in the context of Pakistan. The constitution of Pakistan allows the establishment of such specialized courts. Therefore, in order to further strengthen IPR enforcement and to increase efficiency, separate IPR Tribunals having exclusive jurisdiction regarding IPR disputes have been established in Pakistan, based on modern IP judicial models. At present three courts have been established: one in Punjab, one in Sindh and another in the federal capital territory of Islamabad; the courts became functional on 1 October 2015 after the appointment of presiding officers. The Tribunals have the exclusive jurisdiction to hear cases regarding the infringement of IPRs or any other offence related to IP. Then any High Court having territorial jurisdiction over the tribunal can hear the appeals from the tribunals. The establishment of a specialized IP system is to ensure effective protection of IPRs and to encourage business and commercial communities to invest as weak enforcement of IPRs in some developing countries like Pakistan might discourage multinational companies to invest and start business in such countries due to the possibility of loss of their valuable rights. Therefore, the establishment of specialized IP courts in Pakistan was to improve the protection of IPRs and encourage multinational companies to invest more in Pakistan so

that its economy would grow further. However, for a developing country with limited resources like Pakistan having specialized intellectual property courts may represent both benefits and issues and challenges keeping in view factors such as poverty, corruption, nepotism, lack of expertise and lack of IP education. In my presentation I would talk about the expectations based on which IP Tribunals were established in Pakistan and the achievements and future of such Tribunals in Pakistan.

**Rami OLWAN, Faculty of Law and Justice, University of Southern Queensland**

*Innovation and intellectual property management for SMEs in the UAE*

Intellectual property management is increasingly important for Small and Medium-Sized Enterprises (SMEs) to promote innovation and increase business revenues. Many SMEs in the UAE are unaware of intellectual property rights (IPRs) and are not utilising them properly to formulate suitable management strategies to support competitiveness. The main challenges faced by SMEs in relation to the use of IP system are high costs of registration and legal fees, complexity of IP system, lack of IP awareness, uncertainty regarding IP benefits and enforcement, and insufficient government legal assistance. The presentation will critically assess the initiatives, policies and programs that were implemented by the UAE's Federal and local governments to encourage the effective use of the IP system. It proposes several suggestions and recommendations to strengthen and unify these efforts.

**Selin OZDEN MERHACI and Vehbi Umut ERKAN, Faculty of Law, Ankara University**

*The Statutory Pre-Emption Right According to Turkish Law on Industrial Property*

The statutory right of pre-emption for industrial property rights is laid down in Book Five titled 'Common and Other Provisions', Section One titled 'Common Provisions' Art. 148/3, Law on Industrial Property (LIP). Under LIP Art. 148/3, "*In case there is more than one owner of industrial property right, other stakeholders shall have pre-emption right when any of the owners sell its share partly or wholly to a third party. The sale shall be reported to other stakeholders by the buyer or seller. Pre-emption right shall be void when a period of three-month elapses after the date of the notification to right owner of sale and in any case when a period of two-year elapses after sale. If the parties cannot agree, pre-emption right shall be exercised by litigating against the buyer. The owner of pre-emption right shall be obliged to pay the selling price in cash to the place to be determined by the court within the period specified by the court prior to decision of transferring the share to the owner. The pre-emption right may not be used in forced sales.*" As this institution has been laid down within common provisions, it is applicable for all industrial property rights. Whereas the provision has already existed prior to LIP's entry into force regarding patents and designs, it is a new provision in terms of trademarks. As to geographical indications, they are unlikely to constitute subjects of right of pre-emption due to their nature in our opinion. In terms of its legal nature, this right is a formative right on share in co-ownership by defined shares which arises out property rights on industrial property and which limits the right of disposition. Besides, as the right is provided for in the statute, the parties are not required to conclude an agreement in order to create such right. In this respect, the right arises directly from statute. In order to exercise the right of pre-emption, more than one person shall hold property right on industrial property, pre-emption shall occur and the right shall be exercised within the term of prescription. The condition of multiplicity of persons holding property right implies that the industrial property right belongs to more than one shareholder on the basis of co-ownership by defined shares. As to event resulting in pre-emption, it is not merely limited to sales agreement but rather covers all kinds of legal

transaction equivalent to sale economically. Under Art. 148/3, the right of pre-emption is to be exercised by litigating against purchaser in case of disagreement between parties. In this connection no requirement for litigation to exercise statutory right of pre-emption in the context of industrial property rights. As soon as the right of pre-emption is exercised, the respondent of the right becomes bound to transfer the share to the rightholder and the rightholder becomes bound to pay the price.

**Justyna OZEGALSKA-TRYBALSKA, Faculty of Law, Jagiellonian University**

*Permitted digital educational use of works in cross-border teaching – the European approach*

In view of the progressive digitisation of life, the use of copyright-protected content on the Internet is on the agenda of international and national regulations and subject of case-law. Recent years, it is being widely discussed in the European Union in connection with the implementation of new Directive (EU) 2019/790 of the European Parliament and of the Council of 17 April 2019 on copyright and related rights in the Digital Single Market. Apart from other provisions providing new copyright exceptions, it introduces a permitted digital educational use of works in cross-border teaching for illustration purposes. This kind of permitted use has become particularly important in the current situation forced by the pandemic, in which learning takes place all over the world to a large extent in digital environment.

The aim of the paper is to discuss in detail the concept and scope of the new digital fair use and to analyze whether it meets needs of educational establishments, teachers, and students, and strikes the right balance between the interests of those entitled and those of users. An answer will be given as to whether the possible options for implementing the exception to the national copyright laws of EU countries will ensure harmonization in this area, enabling effective cross-border teaching in curricula implemented by educational institutions from different countries. National solutions implementing the exception in response to the pandemic will also be indicated, which may also be a reference point for discussion on similar solutions adopted in Asia and other regions.

**Zehra OZKAN UNER, Faculty of Law Ankara University**

*The Geneva Act of the Lisbon Agreement on Appellations of Origin and Geographical Indications: Could It Be an Opportunity for Turkey?*

The Geneva Act, which was adopted on May 20, 2015, came into force on February 26, 2020. Turkey is not yet a contracting party to the Lisbon Agreement nor the Geneva Act. While the improvement of the Geneva Act took place in the international arena, Law No.6769 on Industrial Property which strengthened the protection of geographical indications came into force in Turkey in 2017. Therefore, it is necessary to make an assessment of the possibility of Turkey becoming a party to the Geneva Act in the light of these developments.

In this context, the aim of this paper is to discover whether this Act is an opportunity for Turkey. In order to achieve this aim, the main features of the Geneva Act will be set out in Part I. Primary reason of a lack of enthusiasm for the Lisbon Agreement is the opinion that the system is not suitable for new world countries. However, some of the countries with a *sui generis* system did not sign the Agreement, either. Thus, a revision process to make the system much more attractive began. Although the novelties introduced are of great importance especially for the new world, the scope of the protection and the genericness issue in

particular is still seen as an obstacle for common law countries. In addition, the procedural crisis during the adaptation process and the budget issues has not facilitated increasing the popularity of the Act. The main feature of Turkish geographical indication system is dealt with in Part II. Turkey introduced a *sui generis* GI system in 1995 through the Decree-Law which was based on EU law. However, the system had lots of deficiencies such as lack of an efficient control system, high publication fees, and a relatively difficult registration procedure. All of these are eliminated through Law No.6769 which was based on international agreements and Regulation (EU) No 1151/2012. Furthermore, the protection of traditional specialties was introduced and using an emblem for registered GIs except for foreign ones became mandatory.

In the third part the compliance between the Geneva Act and the Turkish legislation and the policy will be evaluated. Turkish law is generally in line with the Geneva Act. Turkey places great importance on the registration of GIs particularly since the new Law no.6769 was enacted. Increasing the number of registered Turkish GIs, which have a potential to be exported, in foreign countries is determined as one of the strategic plans for 2018-2023. It seems that this policy has started to produce results both in Turkey and EU. All of these facts indicate that an international registration system like the one improved through the Geneva Act is an opportunity for Turkey. However, it seems that Turkey prefers to pursue a “wait and see” policy. If the interest in the Act increases via FTAs or through other means, I believe that Turkey is going to become a party to it.

**Saurabh PANDEY, School of Law, Graphic Era Hill University and Ravikant MISHRA, Department of Law, North Eastern Hill University**

*Standardization & Patent Ambush: Issues and Challenges Under Competition Law*

The threads of Competition Law and Intellectual Property laws are interwoven in an intricate web of legal rules, which seek to balance the scope and achieve the objective of both the policies. We see that the spirit of IPR laws is hurdled by Competition Law policies through the way of ‘Standard Essential Patent’ (SEP). A SEP is a patent, which, through a licensing process, achieves the interoperability of our day-to-day technological devices, such as, smart phones operating over 3G/4G networks, computers using Wi-Fi, or even the simple looking ear phone playing music from MP3 devices. To maintain the balance, between the IPR and Competition law policies, the SSO’s demand their members to grant SEP licenses on ‘Fair, Reasonable and Non-discriminatory terms’ (FRAND). The Objective of FRAND terms is to ensure easy availability of the standard and that each SEP owner benefits, from use of the patent without gaining an unfair bargaining advantage in the market. As the term FRAND has not been defined by SSOs; it depends upon the nature of the transactions between the SEP holder (“licensor”) and the SEP implementer (“licensee”). As the FRAND terms are not formally defined, this leads to some anti-competition issues. Other of the major problems, are of Patent Hold-up, Royalty Stacking and Patent Ambush. Patent ambush is the situation when the Patent owner does not disclose all about the patent and once the patent is promulgated as a standard, the SEP holder files the case of patent infringement. To prevent patent ambushes international standard setting institutions may have specific rules regarding information provision by member committees when they work together in setting a new standard.

Thus, the aim of this paper is to study existing situation of Patent Ambush in India. Further, the paper will analyze the position of Patent Ambush in SEP’s and its effect on market competition at national and international platform.

*Artificial Inventors: A Shift in Traditional Policy Paradigm*

There has been a constant resonance on the legality of mentioning artificial computing entity as an inventor, the world over. Artificial intelligence (AI) has indeed played an important role in studying extensive data, including patenting activities in technical areas such as chemistry, life-sciences, et al. and defining a predictive model for analyzing inventiveness as well as potential business whitespace availability. AI has already started making its impact on the development of the legal jurisprudence generally and the judicial system in particular. There have been various instances of judicial decisions with an elaborate commentary on the legality of a robot or AI becoming the inventor of a patent. While the origins of concepts developed by the machine being applied for a patent have been debated for a long time, (Saheb & Saheb, 2020), the legal implications of scientists putting AI as inventors have been recently brought into the limelight by a spurt in legal cases. Considering the legal implications of AI being the inventors of inventions through identifying gaps by analyzing tons of information through various big data analyzing means, a new policy framework is necessitated. The growth of records of consumer behavior in multiple databases by data securing social media, e-commerce websites, etc. has immensely benefited the consumer industry by analyzing the data through big data analysis means such as predictive analytics, user behavior analytics, et.al., systematically analyzing them with suitable data sets that would have been too big or complex for traditional data processing application software such as spreadsheets, editors, etc. This also has given an impetus of the result of such analysis from the big data means, which offers further scope for the development of a concept that could be identified as whitespace for patenting and securing exclusivity. However, the big question that arises is, should the development of such inventions and their consequent patenting should be disallowed as the recent judgments have made, or should there be regulations on inventorship of such patents and their resulting ownership. The present article attempts to give a prognosis for adapting a new legal viewpoint for considering the AI as an inventor rather than just rejecting them. This would be benign to the overall innovation environment and not seen as a stifling of innovation.

**Brinda PAULRAJ, School of Excellence in Law, Tamil Nadu Dr. Ambedkar Law University**

*Vows and Issues of GI Laws in Aiding Indian Economy*

The importance of origin has been recognised by GI laws and GI's have grabbed enough attention and limelight of late. India, as a party to the TRIPs Agreement enacted the Geographical Indications of Goods (Registration and Protection) Act, 1999. From the point of view of a developing country, one of the best elements of the Indian Act is the comprehensive definition given of GI, whereby natural, manufactured and agricultural goods all come within the ambit of GI. The object of the GI protection is to bring quality product to the market for public consumption. In India, small scale industries are playing a pivotal role in producing and supplying GI products. Moreover, it intends to allow small scale producers to enhance their economy and sell the products directly in the market and to facilitate them to effectively compete with big corporations. However, the definition of producer under the GI Act, 1999 clubs the entire supply chain in the category of producers, thus, leaving the real producer in a vulnerable position. A proper analysis of the definition makes it clear that it gives scope for unfair redistribution of margins. Intermediaries takes advantage of this and gain wrongful market access. Vazhakulam Pineapple, a variety which is less juicy and this feature is distinctively noticeable in pineapples grown in and around 60 Kms in Vazhakulam. It was granted GI tag. However, there is a feeling among the representatives of the farmers' association that as GI

is mainly intended to help the marketing of the product as it brings in more brand visibility, the farmers are not directly benefitted. Banarsi sari, Malabar pepper, Bikaneri Bhujia, Lucknow Chikankari, Kota Doria sarees have been granted GI tags but, the intermediaries gain and the local producers continue to suffer. The question of beneficiaries under the existing definition is ambiguous and vague. The author has made an attempt to analyse the legal conundrum in the definition of producer under the Geographical Indications of Goods (Registration and Protection) Act, 1999. An amendment of the same in a beneficial manner would help the rural population. Also, there is a need for post registration mechanism as a lot of unethical practices of selling fake products in the name of reputed products for the purpose of attracting better prices, is increasing day by day. Thus, the author has highlighted the need for quality checks and compliance post registration. The author concludes by suggesting amendments to the existing Act which would aid in developing the rural economy and will also help in increasing the demand for GI products.

**Rika Ratna PERMATA, Tasya Safiranita RAMLI, and Yuliana UTAMA, Faculty of Law, Padjadjaran University**

*Copyright Infringement of Works in Electronic Media and the Principle of Fair Use during the Covid 19 Period*

Before the outbreak of the Covid-19 Pandemic in early 2020, opportunities for copyright were increasingly opened with the presence of electronic media. Now, with the changing pattern of people's lives with more users of electronic media, the opportunity for copyright will be even greater than before. This is due to the increasingly intense use of electronic media in all aspects of life including education. In the entertainment sector, copyright solutions can be found even more massive. Piracy of music, films, and other copyrighted works occurred more frequently during the Covid-19 pandemic. This is because people are looking for entertainment to get rid of boredom through electronic media. According to a recent study by Muso, as reported by Movie Web, Tuesday (28/4/2020), visits to illegal movie download and streaming sites increased by 41.4 percent in the United States (US) in the last week of March 2020. Meanwhile in UK, the increase was 42.5 percent. On the one hand, electronic media made it easier to spread copyright works, but on the other hand, piracy and copyright also became easier too. Indonesia has regulated legal protection against copyright. This is regulated in Law Number 28 of 2014 concerning Copyright. Before the Covid-19 pandemic, that Law had already received criticism about the weak law enforcement in the field of piracy. With the Covid-19 pandemic, which has made the use of electronic media increasingly massive in the search for entertainment content, it will result in an increasingly massive copyright. By the requirements needed a change so that law enforcement in the field of piracy is better. The purpose of this research is to find a model that determines the protection of works from copyright infringement in electronic media related to the principles of fair use during the Covid-19 pandemic and provides recommendations to overcome these problems that are most appropriate to be implemented in Indonesia. Given that Indonesia does not yet have limitations regarding fair use and reproduction.

**Liudmyla PETRENKO and Valentyna LAVRENENKO, Kyiv National Economic University**

*Oncological IP Commercialization Case: Ukrainian Response on Global Challenge*

Ukraine's experience because of cooperation with WIPO and rapid reforms in intellectual property and other areas is unique. The reform process embraced many spheres after the Revolution of Dignity in 2014 and the Association Agreement's signing with the EU. Reform priorities should be all policy domains of public

health, following the vision of WHO, WIPO, WTO, namely The Human Rights Dimension, innovation and public research policy, international trade, and domestic economic setting, IP law, management, and administration, regulation, public health framework. It is worth mentioning that Ukraine takes second place in Europe by cancer mortality. That is why effective cancer treatment is crucial for Ukraine nowadays. This problem is aggravated by the poverty of the population and the inability to buy expensive antitumor drugs. Scientists at the Research Institute of Experimental Pathology, Oncology, and Radiobiology named after Kavetsky (Kyiv, Ukraine) have developed a modern treatment for cancer patients - autoimmune vaccine (AAV). From 2019, the Technology Transfer Support Center (TISC) is part of the WIPO international project network created at the "Kyiv National Economic University named after Vadym Hetman." Cooperation for vaccine commercialization became the goal of a strategic partnership between the University TISC and the Institute. This experience may be useful to other countries. Among all types of cancer treatment, the segment of cancer immunotherapy has become popular and began to develop rapidly in the last two years. More than five thousand Ukrainian patients have already tested the vaccine. For the most part, the trials involved people to whom doctors were no longer able to help. The first patents for this technology of AAV were obtained back in the 80s when Ukraine was part of the USSR. There is no legal procedure in Ukrainian legislation to certify AAV as a drug, producing for each patient individually and can't be standardized and accordingly certified. Currently, the vaccine can be classified as a "laboratory approach to treatment." The drug is made individually for each patient. Certification of AAV is not possible under the existing Ukrainian legal requirements. Even though we are talking about "AAV patent portfolio," we are talking about the basic technology in the public domain. The strong point of this intellectual property is know-how. That is why we propose to commercialize this technology as a "turnkey laboratory" project. But we suggested looking at it from another angle. According to technology, a vaccine is an autograft. It means that the tissue was taken from an individual, and his cells were injected back into him. The transplantation law regulates this biological material and its transportation. Moreover, new Ukrainian legislation includes the norm about a cross-border movement of transplant material. It is opening new opportunities and markets. We expect that the AAV commercialization project receives a new legal and financial perspective because a large-scale program for the development of transplantation is on Ukraine's agenda.

**Deva PRASAD, Indian Institute of Management, Kozhikode**

*The Curious Case of Trade Secrets Protection in India: Is Statutory Protection A Solution?*

Trade secrets and confidential information are not governed by a comprehensive legislative framework in the Indian context. Even today, trade secrets are protected in the Indian context through the contractual law. Apart from this, the common law-based understanding of duty of confidence has been used by the judicial mechanism to protect the confidential information in Indian context. This article attempts to view the law and policy background of India's reticent approach towards evolving a statutory framework for trade secrets, including the erstwhile proposal of National Innovation Bill, 2008.

The judiciary has been proactive in its attempt to protect the trade secrets in India. At the same time, lack of a specific legislative framework brings in the issue of ambiguousness in the trade secret protection. The fragmented approach towards trade secrets emerge due to the absence of adequate attention to the economic value of confidential information. The trade secrets protection standard as required under the Article 39 of Trade Related Intellectual Property Rights Agreement 1994 gets discounted in many instances in the Indian context. Certain recent decisions such as *Steer Engineering v. Glaxosmith (Karnataka High Court 2019)* and *Claudio Simoe v. Actial Farmaceutica (Delhi High Court 2020)* in the Indian context are analysed to

explain the situation. Moreover, the recently introduced Personal Data Protection Bill, 2019 provides sweeping power to the governmental authorities to access anonymized personal data and non-personal data collected by the private enterprises. This again raises major question regarding the extent of confidential information protection in the Indian scenario. Against this backdrop, the requirement and feasibility of an enabling statute for the purpose of protecting trade secret in India is explored in this article.

**Ziyan QIU, Graduate School of Law, Nagoya University**

*Patent Infringement by Multiple Actors: A Comparative Study of China , Japan and US Law*

According to the fundamental principle of patent law, patent infringement arises when all of the limitations in a particular claim are practiced literally or equivalently. As patent law is initially designed to deal with the circumstance of unified infringement by a single actor, when multiple parties are engaged, difficulties arise in determining patent infringement and imposing liability upon a party who hasn't completed the entire patented claims alone. Traditionally, such problems are mainly resolved by the doctrine of joint infringement or indirect infringement. Nonetheless, loopholes remain to be seen through which parties can easily circumvent liability, such as the so-called "divided infringement" dilemma in US.

Furthermore, globalization along with the advancement of technology contribute to the rapid, cost-efficient dissemination of goods and information, resulting in increasing cases where patented inventions are practiced collectively by multiple actors from different jurisdictions. For instance, the manufacture of patented products is often modularized and involves cross-border production. Moreover, combined with computer networks, a patented system or patented process might be practiced as a result of aggregating separate work done by parties in different locations.

Besides the aforementioned multi-actor infringement problems, the territorial nature of patent law has added to the complexities of addressing these cases. From the perspective of substantial law, no country's patent law may cover such cross-border conducts, even if the inventor owns patents in each relevant country. From the perspective of private international law, when there is a conflict of law between countries, the extraterritorial application of foreign patent law may be denied due to the principle of territoriality.

Focusing on such scenarios, this article comparatively reviews the laws and cases of China, Japan and US, aiming to compare each country's interpretation of the principle of territoriality in legislative and judicial practices and put forward proposals to pave the way for extraterritorial patent right enforcement.

First, this article outlines the basic parameters of tort liability and patent infringement rules, and explores the evolution of doctrines in multi-actor infringement cases. The article later discusses the principle of territoriality, turning to courts' elaborations in patent infringement cases concerning cross-border conducts and legislation with a potential extraterritorial effect. To complete the analysis of multi-actor infringement at transnational level, the article employs several hypothetical examples, related to patented product and patented process, to evaluate the practicability of above-mentioned multi-actor infringement doctrines under circumstances where parties' resident in different jurisdiction. Finally, relying on the findings above, this article will provide specific proposals for the extraterritorial extensions of patent protection from legislative and judicial aspect.



**Laina RAFIANTI, Helitha NOVIANTY, and Rahmanisa Purnamasari FAUJURA, Faculty of Law, Univesitas Padjadjaran**

*Protecting Geographical Indication of Indramayu Gedong Gincu Mango: The Dilemma Between Lack of Production and Modernization*

Mangga Gedong Gincu Indramayu (Indramayu Gedong Gincu Mango) is one of the leading agribusiness commodities which has its own characteristics compared to Gedong Gincu mango in the surrounding area in West Java. The taste is sweeter and slightly sour, the aroma is distinctive, the color is green with an orange color at the base of the stalk, making Mangga Gedong Gincu Indramayu an exotic fruit because of its attractive appearance. The harvest period for Mangga Gedong Gincu Indramayu is in August to October. Agricultural produce during this harvest cannot meet market needs. In this regard, in the context of agricultural development as regulated in Law Number 22 Year 2019 concerning Sustainable Agricultural Cultivation Systems, the Government allows Mangga Gedong Gincu Indramayu farmers to carry out an agricultural development system, namely through a change in conventional mango production with the help of innovation and technology in accordance with the area's agro-ecosystem potential. In this case, farmers make a formula with a growth regulator called *paklobutrazol*, with the aim of being able to accelerate the growth of Mangga Gedong Gincu Indramayu with the success rate of producing mangoes out of season. The problem arises when there is a negative impact on the overuse of the formula which results in the Mangga Gedong Gincu Indramayu losing its distinctive features as a form of characteristic and reputation quality.

This phenomenon is the background for several legal problems as follows: First, what is the potential for the protection of Mangga Gedong Gincu Indramayu based on the provisions of the law of Geographical Indications nationally and internationally? Second, what is the impact of agricultural modernization on efforts to protect the geographical indication of the Mangga Gedong Gincu Indramayu?

The methodology used is a normative juridical approach with analytical descriptive research specifications. The research phase was carried out through literature studies to examine Law Number 22 of 2019 concerning Sustainable Agricultural Cultivation Systems and Law Number 20 of 2016 concerning Trademark and Geographical Indications as well as field studies to examine the existence of Mangga Gedong Gincu Indramayu and to investigate its agricultural modernization efforts. Protection of geographic indications of Mangga Gedong Gincu Indramayu is needed to be done as a form of supervision in the development of Mangga Gedong Gincu Indramayu agribusiness. The theory of 'link to the terroir' is used as a legal theory for this research in terms of quality, characteristics and reputation of geographically indicated products. Especially for the provisions of Geographical Indications in Indonesia, Law Number 20 of 2016 concerning Trademarks and Geographical Indications is used. Through this research, hopefully, the development of the Mangga Gedong Gincu Indramayu agribusiness both for its products and for its farmers is raising.

**Mas RAHMAH, Faculty of Law, Universitas Airlangga**

*Government Use and Compulsory License in Indonesia: A Panacea for Access to Essential Medications for COVID-19?*

In response to the deadliest pandemic Covid-19 outbreak, some pharmaceutical companies have patented their medications to combat Covid-19, including vaccines. These patents will likely be a promise to end the war against this mortal disease, however, the patent on Covid-19 medications will likely raise questions about how to access to the patented Covid-19 medications because patent protection provides an exclusive

right to patent holder to prevent someone else to procure and may profiteering with high scale up price. As the pharmaceutical companies may exploit their exclusive patent rights by escalating price over the affordable buying, patent may cause problem on access to such medications. Another health problem on availability of Covid-19 medications will emerge since with their exclusive rights, the pharmaceutical companies may prevent the competitors to produce the same drugs or refuse to give licenses to make the drugs available in the market. To address such problems, this essay aims at discussing the government effort to ensure availability and access to essential medications of Covid-19 under compulsory licensing and government-use scheme. For this purpose, before describe the schemes as a strategic alternative to access to essential medications for Covid-19 with the benefit and potential opportunity, this research will firstly highlight the problem of patent on access to essential medications. The paper will then review the policy, the regulation and the practice of compulsory license and government-use in Indonesia, including the cost and benefit of such mechanism as panacea to access to medications of Covid-19.

**Syed RAHMAN, Department of Information Technology, University of Technology and Applied Sciences**

*Artificial Intelligence as an Inventor – Dealing with Patents of Future*

Artificial Intelligence is a tool that helps and assists researchers to be creative and get an innovation to the output resulting in discovering new methodologies or promising approaches. Sometimes, the greater credit goes to the Artificial Intelligence itself for the resultant invention. In many cases, a particular software or algorithm generated by the system plays a prominent role in the whole invention giving the research a new direction. Especially in Computer Science, Artificial Intelligence is extremely superior in solving the problems in ways that are innovative and that human talent could never catch up with because of the capability of synthesizing enormous data. Seriously Artificial Intelligence has no limits as the rate of penetration in assisting the atomization process is exponentially large. Already there are proven examples of a machine assisting to its maximum in creating a new and innovative prototype of anything and time is not far when Artificial Intelligence can produce any invention by itself without human support. Human talent is not comparable to the machine intelligence, but to apply the creative idea to a problem needs machine assistance because of its multi-processing capability with unimaginable speed and accuracy. Any Research on improved Approaches and Algorithms for learning in any domain of computer science cannot be imagined without artificial intelligence. Here, arises the question of owning and inventing to be given a correct definition.

Of course every discovery or invention supported by Artificial Intelligence can be traced back to human talent but, there are companies hugely investing in AI Technologies and as a result, they may ask for these AI technologies to have a role mentioned when it goes for Intellectual Property. Dealing with these types of patent protection can be very challenging in future for the policy makers and intellectual property organizations dealing with Patent protection acts. So, the directions of the future policy of intellectual property should clearly define the procedures to be adopted when such context comes wherein there is a greater role of patented AI technology being an inventor. There is a need of common forum where all governments, inter-governmental organizations, industry, and society to discuss and draft guidelines to be followed by any Intellectual property organization and agency around the world. My study is focusing on finding the suitable criteria to define the standards, when such situation occurs and help the scope of Intellectual property rights. This research also attempts to address the questions raised by the AI supported inventions concerning the content created by such technologies when they come for patent protection. The

future work of the research will give a direction to a whole new level, when there might be serious challenges of a patented system generating its new inventions by itself and register for patents.

**K.D. RAJU, Rajiv Gandhi School of Intellectual Property Law, Indian Institute of Technology, Kharagpur**

*Patenting of Platform Technologies: Implications for the Development of Essential Medicines for Pandemics like Covid-19*

Platform technologies are technologies that enable the creation of products and processes without further research and development. This is also known as research tools, which are not embodied in the result. Pharmaceutical technologies other producers can manufacture instant products without any hassle. For example, if a researcher develops a new dosage for a particular drug and an optimized amount of excipients, other researchers can use a new drug delivery dosage based on the upstream technology Available without royalty payment. This decreases the cost of producing new drugs, immensely helping develop essential medicines for treating diseases like Malaria, TB, and HIV/AIDS. COVID-19 pandemic opened a further discussion on working on the patented drugs and quickly developing a drug for the pandemic. Calls to COVID-19 patented drugs available to governments and institutions worldwide are loud and clear from international organizations like WHO. However, the companies close to the vaccines are going to patent the drugs they invent. This can be feasible only when the companies are agreed not to file patents for these drugs or provide royalty-free patents for these drugs.

However, this process not so easy because such technologies are made on proprietary platforms such as vectors, mRNA-technology, etc. These technologies are covered by multiple patents presently, and if the existing technologies are incorporated, they require prior permission or license from the patent holders. These essential technologies become platform technologies and necessary for developing new drugs for the COVID-19 pandemic.

The emergence of technology platforms represents an essential stage in the research and development of new technologies, especially drugs and medicines. Platform technologies are formed after the collective vision of developing strategic research goals to reach innovation in specific technology areas. Platform technologies are common platforms from which new products can be created without any further process or other technology. If these technologies are patented, the entire set of products or a series of products is stalled due to proprietary rights protection. This paper analyses the implications of patenting of platform technologies, especially in pharmaceutical and biomedical research. This paper argues that upstream technologies should not be patented so that new products can be developed without massive amounts paid to the proprietary technology holders as royalties. Patenting of platform technologies is a barrier to develop new drugs for the pandemic like COVID-19.

**Philip C. ROGERS, Political Science Department, University of California at Berkley**

*Turning Problems to Rules: The IP Nexus in Supply Chain Disruption*

Trade tensions between the United States and China have disrupted global supply chains. What began in 2017 as a trade war focusing on intellectual property (IP) protection and the trade deficit has since expanded to areas such as health care equipment to address the Covid19 pandemic, national security, privacy and

industrial policy. The restrictive trade measures that have ensued- tariffs, export controls, economic sanctions, investment restrictions and countervailing and antidumping duties- continue to significantly implicate a variety of IP issues. While IP was the political initiator of decoupling between the United States and China, we contend that it is also part of the solution for companies and policy makers looking to navigate the resulting unpredictability and instability.

By combining data on IP-intensive industries from global patent offices, concordance data on patent classifications and trade data on IP intensive industries with qualitative reporting on shifts in tariff strategies, supply chains and off-shoring, we illustrate the centrality of IP in extended supply chains and document how IP rights associated with extended supply chains may be tracked. These insights suggest that instead of acting upon a binary security narrative around decoupling or engagement to address Chinese “techno-nationalism,” business leaders and policy makers may be better served by strategic diversification from China through creative management of IP portfolios that mitigate political uncertainties while supporting more resilient supply chains. In particular, we discuss the role that IP licensing can play and is playing in this process. We conclude by arguing that such diversification has the long-run potential to create a virtuous circle by placing additional competitive pressures on China, encouraging the development of IP regimes in economies competing with China where goods may be on-shored, and supporting better trade relations among supply-chain contributing economies. Viewing supply chain disruptions through this neglected IP lens likewise suggests additional modalities of further cross-disciplinary research in this evolving area.

**Subhash C. ROY, Chanakya National Law University**

*Patenting of Academic Research (Ph.D.) in Universities in India: Issues and Concern*

It is generally said that Academic Institutions have nothing to do with Patents. The industries are concerned with invention and Patenting of the same. Universities are institutions concerned for running certain academic courses and programs to impart Degree--- under Graduate, Post Graduate, Ph.D. Post-Doctoral (LL.D, D.Lit. D.Sc.).The doctoral Research are required for academic positions and career advancement. Hence all Universities have research wing and as per University Grants Commissions (UGC) Regulations and Guidelines, conduct Research Programs. The researchers take up the issues with social and industrial requirements in their respective disciplines. The Academic researchers do undergo Empirical data collection in social sciences and Lab experiment in Sciences. They have neither intention to collaborate their research with Industries, nor do they think about patenting, or aware of such mechanism-registration, licensing, marketing etc. They are merely interested in the publication of research papers and award of degree. The Academic institutions argue that it is in the interest of society and further the policy makers and lastly industries. The augment may be just, but the Universities along with the researchers lose economic gain in their invention.

Sometimes questions also arise about who owns property rights in Academic Research ---The scholar, the Supervisor or the University. Who will take initiative and when-in the beginning or after the submission and evaluation of thesis or after award of degree? Since Patents registration is a lengthy process. Whether the patents Law allows the prior disclosure in any way before the submission of complete specifications?

The Bayh-Dole Act (BDA) of USA in 1980 brought revolution in US universities and the number of academic patenting increased. The Carnegie Mellon University of Pittsburgh Pennsylvania, USA famed its intellectual property policy issued in 1985—IP creation and ownership, Creative environment, course designing, awareness for creativity among –faculty students and staff, industry investment or collaboration,

generation and dissemination of knowledge to the society. The Government of India also drafted a Bill: “Protection and Utilisation of Public Funded Intellectual Property Act (PUPFIPA), 2008” on the pattern of Bayh-Dole Act (BDA), if enacted, might have on the innovation environment in India. The New IP Policy 2016 has intention for research and innovation environment in India and the Atal Innovation Mission (AIM) has become a milestone for ‘Creative India - Innovative India’ (CII) slogan. But the requirement of legislative support is still awaited. More so the PUPFIPA talks about public funded institutions only, whereas the private Universities have equally got similar infrastructure, objectives and mission.

In this context, the paper seeks to study the Pros and cons of Patenting of Academic Research in India at par with Western Universities. It aims to study the PUPFIPA 2008, IP policy 2016, Atal Innovation Mission and UGC policy and their relevance with academic Patenting, its scope, employment opportunities, technology transfer, migration check and brain drain, foreign currency saving and earning, modernization of education, in the interest of faculty, student staff, society, industry and the nation.

**Fiona SAJU, Inter University Centre for IPR Studies, Cochin University of Science and Technology**

#### *Challenges to Patent Law in the Internet of Things (IoT) Era*

We are into an era where everything in the world is connected and slowly becoming autonomous. Internet of Things (IoT) is taking up the world in a very fast pace making every object connected and interactive through internet. Development of artificial intelligence (AI) and implementation of AI in various fields is pointing to the development of autonomous technologies and objects. Importance of AI in the realization of IoT is so drastic. It has got applications in almost all sectors like health care, transportation, manufacturing, smart homes, smart cities, agriculture etc. The effects patent law can cause on technologies with such wide application potential is tremendous, especially when these technologies are in their nascent stages of development. First, the patentability of such technologies itself is a questionable aspect. When IoT technology utilizes a combination of multiple existing technologies with major contribution of software/algorithms (AI or non-AI) in its processes, the situation becomes more complicated. Second, the issues posed by patenting of AI related inventions and AI generated inventions create another headache to the patent law, which can question the existence of patent law itself in the IoT era. As the internet of things (IoT) makes use of multiple technologies together in a go, licensing of essential patents of such essential relevant technologies becomes inevitable. Communication technologies are one such technology essential to all sectors using IoT which are the backbone to the realization of internet of things (IoT). This creates patents in the telecommunication industry an upper hand in IoT which may cause issues in fair and reasonable licensing of such patents to all IoT developers which potentially includes almost all industry sectors. My work focuses on the issues mentioned above which is to be fulfilled by patent analysis of relevant patents of relevant technology sectors.

**Niharika SALAR, NALSAR University of Law**

#### *Intellectual Property's Negative Spaces: Is Legal Protection not Required?*

The underlying core idea of Intellectual Property (“IP”) protection is the need of monetary incentives to create. The crux continues to remain that exclusivity provides an avenue for reward. With exclusivity comes the ability to extract fees for one’s work, and people will create more if they know that they can do so. As a result, according to incentive theory, if we want to promote creation, we must give creators exclusive rights.

IP's *negative space* defies this conventional wisdom. It takes its name from art, where "negative space" is the area surrounding a figure that makes the figure stand out: the background against which an object exists. In IP law, negative space is considered to be specific areas where creation and innovation thrive in the absence of intellectual property protection. In art, negative space is as important as the positive space: it defines the subject, and brings balance to a composition.

Raustiala and Sprigman were the first legal scholars to coin the term IP's negative space. They defined it as encompassing any "substantial area of creativity" in which intellectual property laws do not penetrate or provide only very limited propertization. Put differently, the industries in IP's negative space exist in a "low-IP equilibrium," where intellectual property protection is absent, or largely so, but creation continues. However, this does not mean that the ease of copying in today's technological age redefines every creative or inventive industry as negative space. Rather, the premise of negative space is that the absence of strong IP protection not only fails to hinder low-IP industries, but actually helps them thrive.

Norm based Intellectual Property system has received the much-required attention in the previous few years and there is growing literature which continues to find comfort in a set of informal social and IP norms to structure creative production and mediate relationships within their industry. Many of these industries include (but not restricted to) comedy, cuisine and the art of tattooing. Each of these individual, but limited studies, explore such creative communities and industries that could theoretically be governed by IP law, but instead exist in a space outside of it. Together, this body of scholarship challenges the canonical justification that IP incentives are central to innovation and creativity.

Most scholarship in the area has focused on case studies of particular industries and social movements that occupy IP's negative space. This paper aims to look deeper into the nature of IP's negative space itself, seeking a unifying theory of what makes a type of work well suited to IP's negative space. The emerging theory sheds light onto what may make a lack of protection preferable to protection for certain types of works and gives us a new tool for optimizing intellectual property law to promote creation and innovation.

**Shahrina Anis SAMSUDIN & Nazura ABDUL MANAP, Faculty of Law, Universiti Kebangsaan Malaysia**

*Protection of Indigenous Design in Malaysia in light of Malaysia's new Trademarks Act 2019*

Indigenous designs do not only have spiritual meaning, serve different functions such as a portrayal of identity, beliefs, heritage, and culture, it has also become a source of economy for the Indigenous communities. Due to the increase in global demand for ethnic or Indigenous-based products, many outsiders are using the Indigenous designs for commercial products, as a trade mark and up to the point of registering the designs as their own trademark. As a result, the owner/guardian community are being denied from using their own designs themselves. In light with Malaysia's new Trademarks Act 2019, this work-in-progress analyses the protection provided by the new Act compared to the old 1976 Trade Marks Act, with some reference of trademarks laws of other jurisdictions. Data is collected from primary and secondary sources, primarily statutes, case laws, journal articles and text books. This study also uses the design of Pua Kumbu (hand-woven textile) and the tribal tattoo belonging to the Iban communities in Sarawak, Malaysia as a case study. The result is expected to provide input on how the Indigenous communities can utilise the trademark law in protecting their designs and what further improvement can be done with the Trademarks Act 2019 in protecting the Indigenous designs.

**Annamma SAMUEL, Gujarat National Law University**

*Music Sampling: Administration and Distribution of Musical Works in the Blockchain Era*

The digital age has caused a massive expansion in the ways that people consume music, including different types of digital music services. With the advent of Internet and developments in sound technologies it has made more convenient to integrate a sample to their own song. This technique of sampling is used by many content creators to create music without securing permission of original copyright owner. With the increasing popularity of sampling, there is a greater need to understand its implications with regard to copyright law, even more so in India, where this field is not that developed. “Sampling” can be described as extracting fragments of existing musical works or sound recording to create a new musical work. The amount used can vary from a single drum loop or guitar riff, to an entire chorus. If such sampling is used without securing proper license, it can lead to the creator being liable for copyright infringement. However, there are ways in which a creator can avoid such a situation by obtaining the proper licenses.

By virtue of Section 14 (a) of Copyright Act 1957, the owner of musical work has the exclusive right to make any adaptation of the work. Adaptation under Indian copyright law involves the making of a new work from a pre-existing work is analogous to Section 106(2) of United States Copyright Law, which deals with derivative work. Though there is no legal provision explicitly dealing with sampling of sound recordings. Indian copyright law provides the owner of copyright bundle of several exclusive rights in order to protect their work or substantial part of their work. Digital sampling is having a major impact not just on the music industry but on individual creative authors as well. From the moment of creation of a copyrighted work, author has the exclusive right to reproduce, distribute, perform, publicly display, and even to make a derivative work. Transcription of musical work or any act involving re arrangement or alteration of an existing work done without the permission of the copyright owner will infringe the copyright holders exclusive right to make any adaptation work and therefore from this interpretation of the section, music sampling can be said to fall under the ambit of adaptation works.

As license should be obtained for each copyrighted work, necessary royalties should be paid to the original creator for the musical work created by way of sampling. Working of Copyright Societies and their royalty management processes in respect of copyright licensing and sharing royalties with right holders is increasingly becoming difficult in the digital music services. Blockchain technology is best described as secure, reliable transaction process which has the capacity to store music files embedded with smart contracts. This function will facilitate music licensing simpler and will protect content creator’s work. Effective management techniques of block chain technology will also help to record transactions and tracking of legitimate use of digital copyright work.

**Balachandran SATHYAN, Department of Economics, University of Madras**

*The Challenges of Asymmetric Information and Labelling in the Indian Food Industry: A Detailed Economic and Legal Study*

At the crossroads between the Agreement on Technical Barriers to trade and the TRIPS Agreement, domestic food labelling measures pose a high risk of being potentially discriminatory against imported food products. WTO members have increasingly relied on labelling standards to regulate market access by requiring the display of certain information in order to guarantee consumer protection. Such policies aim at allowing market players to make more informed choices. The fact that product labelling responds quicker

to consumer demands and so contributes to shape consumer's habits may result in alterations to the flow of both domestic and international food trade. While consumer protection is interpreted as the underlying reason for the adoption of food labelling standards, the WTO Appellate Body reports in US-Tuna II (Mexico) (WTO United States – Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products [16 May 2012] WT/DS381/AB/R) and US – COOL (WTO United States – Certain Country of Origin Labelling [COOL] Requirements [29 June 2012] WT/DS384/AB/R and WT/DS386/AB/R show that they are often used as justification for the imposition of trade – distortion measures.

The relevance of intellectual property law for international trade in food can be drawn from both the predominately economic nature and essentiality of trademarks. In between food safety and quality, the need to label a product, whether it is by means of a trademarked brand or a sign of origin, remains essential for successful market access. Trademark creates goodwill by imprinting in the public perception a guarantee of constant and unique satisfaction that will eventually (re)sell the good. Hence, the effectiveness of a trademark's selling power is directly proportional to its degree of distinctiveness.

The underlying assumption in trademarks is that consumers based on previous satisfactory experiences, will consider all goods bearing a particular trademark as being of high quality. Since the quality function of trademarks appears to be an economic rather than legal nature, its protection is rarely guaranteed through enforcement mechanisms. When any product lacks the information of the nature of the good being sold to the consumers, such as the date of manufacturing, expiry date, the calorific value, preservatives added, ingredients used, etc. the consumers suffer from the problem of asymmetric information and the trade in such goods are hindered.

This paper attempts to analyse the gap between the Law in India and the Economics of Asymmetric information in the domestic and international trade of food, taking sweets market as a case study. Further this paper describes how the creations of new trademarks are hindered by the noncompliance to the Food Safety and Standards (Packaging and Labelling) Regulations, 2011, in the Indian food industry. This paper attempts to find the ways and means to resolve the same.

**Sachin SATHYARAJAN, Jindal Global Law School, O.P. Jindal Global University**

*Time to Adopt a Nagoya Protocol-plus Approach on Access and Benefit Sharing on Genetic Resources?*

The Nagoya Protocol on access to genetic resources and the fair and equitable sharing of benefits arising from their utilization (the Nagoya Protocol to the Convention on Biological Diversity) reaffirms the sovereign rights of States over their natural resources and calls for fair and equitable sharing of benefits when such resources and associated traditional knowledge is used. It explicitly discourages anyone from using such resources and associated traditional knowledge without prior informed consent and mutually agreed terms. However recent advances in science and technology, especially biotechnology and synthetic biology, have devised new ways of using the genetic information. In a number of instances, the digital sequence information (DSI) is displacing the need to have physical access to any genetic resource. Developments in the use of digital sequence information (DSI) over the past decade make it possible to synthesize new organisms and products using DSI that are currently available publicly and are also held in private. Synthetic biology and sequencing technologies has the potential to bypass the Nagoya Protocol entirely.



Researchers or hobbyists can take genetic code that has been uploaded online, and using a DNA synthesizer, recreate and modify that code to produce new substances and perhaps even new organisms, with no meaningful way to track the origin of the genetic information that formed the basis for the patented invention. To accommodate these concerns, some countries have started explicitly incorporating DSI-related language into their ABS legislative, administrative, and policy measures, or alternatively interpreting the language in their existing ABS measures to include DSI. Some megadiverse countries like Brazil and India have gone beyond access requirements and included benefit sharing provisions for utilization of DSI. Brazil, have in their domestic Access legislation clauses exerting their rights over DSI even on their marine resources. The paper looks at the initiatives taken by different countries on creating a Nagoya Protocol “plus” approach.

**Keita SATO, Chuo Law School, Chuo University**

*Some Ideas for Tackling Problems on Artists’ Resale Rights Legislation: Difficulties for Asian Countries*

In 2012, Senegal and Congo (Brazzaville) proposed at WIPO SCCR that artists’ resale right (*droit de suite*) should be included copyright treaty obligation. This proposal is so influential that nearly 90 countries introduced resale right as a domestic law. However, only a few Asian countries introduced it. What are difficulties for Asian countries? This is the topic of my presentation. Also, many countries that introduced resale right have no collection scheme. That means “resale right” might turn out to be a pie in the sky. I would focus on detail what kind of scheme an inexperienced country should introduce for effective resale right. Especially, 3 issues will be discussed.

Issue 1 EU’s Auction model might not be world standard. Artists’ resale right was established in France around 1893, and introduced to European countries as EU directive in 2001. But this European model is based upon “Auction model”. Unfortunately, most Asian countries have no auction house tradition. Especially in Japan, most art transactions are through sales division of “department store” or through art dealers. In such circumstances, appropriate collection of royalty requires that every art transaction should be reported to the collecting society. This tax-like scheme seems to be very difficult to introduce. For example, many painters in Ha Noi draw paintings and sell them at art shop in old town. They have never asked who bought their paintings. Ms. Nandita Saikia wrote, “it is extremely unclear how this right would be enforced particularly in a country such as India which does not appear to have clear structures governing the documentation of the provenance of the work of art.”

Issue 2 Rationale. The resale right scheme adopted in Europe are based upon a rationale that a certain percentage of the profits from later transactions should be delivered to the painter or the bereaved family. However, bereaved family members sometimes refuse accepting royalty, because he/she would not like to be involved in the controversy over the authenticity of the art work. Art trading is always a battle against counterfeiting. So, if bereaved family member would like to escape burden checking authenticity, he/she might hide their existence. In such cases, even if a collecting society gets royalty from later transactions, the collected money will not deliver to the person who was designed under the system. Just collecting society might grow up, since the resale right system does not assume the cases to refund the royalties once collected. I will check several collecting societies’ actual mechanism, then report it in the presentation.

Issue 3 Enforcement in case of non-payment. Also, it is uncertain what the remedy is for non-payment of royalties. Is it copyright infringement? Then, what is the subject of the injunctive relief?

**Viktoriia SAVINA, Russian State Academy of Intellectual Property**

*Intellectual Property and Freedom of Speech in Russian Federation*

This article analyzes the characteristics of public-law restrictions and prohibitions, as well as their relation with the norms of IP Law. Russian IP Law regulates not only IP rights, but also contains restrictions (prohibitions), including those caused by the need to protect a public order. So, for example, according to the Art. 1473 of the Civil Code, the corporate name of a legal entity cannot contain designations that contradict moral norms, principles of humanity and public interests. Art. 1483 of the Civil Code establishes prohibits regarding the state registration as trademarks of designations which are including false or misleading of the consumer elements about a product or its manufacturer, or contrary to public interests, principles of humanity and morality. Copyright protection is the protection of the form, not the content of a work of science, literature and art, therefore, the creation of a work of any content, even one that is contrary to morality and ethics, does not directly violate copyright norms. Moreover, the introduction of certain requirements for the content of a work as its conditions for its legal protection can be considered as a form of censorship, which directly contradicts the norm of Art. 29 of the Constitution of the Russian Federation, according to which everyone is guaranteed freedom of speech. However, in the opinion of the author of this article, the publication of a work, public performance, bringing to the public is quite capable of contradicting the principles of humanity and morality, going against the norms of public or private law (in case of violation of the rights and legitimate interests of a particular person as a result of these actions). Thus, according to Federal Law "On Information, Information Technologies and the Protection of Information" (2006), it is prohibited to disseminate information aimed at promoting war, inciting national, racial or religious hatred and enmity etc. A closed list of information, access to which may be limited on the basis of decisions of authorized bodies (pornographic images of minors, information on the methods of development of narcotic drugs and committing suicide, etc.). Such materials may be works of science, literature and art, but they cannot be freely used on the territory of the Russia due to such restrictions. The same applies to the use of extremist materials, including the works of the leaders of the National Socialist Workers' Party of Germany, the Fascist Party of Italy, publications substantiating or justifying national, racial superiority, or justifying the practice of committing war or other crimes aimed at the destruction of any ethnic, social, racial, national or religious group (Law on Countering Extremist Activities). Next, Art. 148 of the Russian Criminal Code contains clear disrespect for society and committed in order to offend the religious feelings (publication of work, public performance, bringing it to the public etc.).

**Devanshi SAXENA, Faculty of Law, University of Antwerp**

*Geographical Indications and Post-Colonial Theory*

The historical origins of Geographical Indications (GIs) cannot be dissociated from the history of European countries. In the 19<sup>th</sup> century when modern GI law as enshrined in the international treaties finds its roots – the conditions of international trade were in favor of European producers and coloniality played a role in the strategies used to develop agricultural policy to favor European producers. The colonizers did not see value in protecting the local, cultural and heritage products of the colonized and were not interested in patronizing local systems of production in the colonies. The products that were imported into non-European colonized countries sometimes evolved their own stories in the hands of the colonized populations, however they could not be allowed to grow to an extent that they pose any competition to European producers (e.g. Pisco). Some accounts on the history of GIs mention unabashed that the colonies did not have any traditions. This also connects to the discourse on how words such as knowledge, innovation and creativity are defined

and by whom. There is a perception that certain countries, certain kinds of innovators and creators are makers of knowledge and certain other countries are (mis)users of such knowledge.

The literature on IP & Race has unearthed shocking accounts of the outcasts from these definitions. These narratives also influence the methods to measure innovation e.g., prioritising the patents applied for and patents granted or counting scientific publications. Political participation of countries at the time major decisions were being taken on IP also matters and has had an impact on GIs at the national level. Even today, a small group of countries dominate how GIs should be defined and how they should be protected. There exist several examples of countries opting for the GI protection laws of the coloniser countries and that says a lot about the long-lasting impact of colonization in this area. GI scholars Rosemary Coombe and S Ali. Malik also caution against GI systems that normalize exploitative labor conditions and land access based on historical legacies of disenfranchisement. For the countries that are 'new' entrants to the pre-defined legal categories and hierarchies in GI law, it is difficult to find their own way and negotiate in the favor of their own interests. This becomes especially challenging once GIs are connected to the idea of development and sustainable development. The development discourse itself has been challenged for being patronizing and pushing a universal idea of growth. The idea of 'sustainable development' has also been challenged by critics as old wine in a new bottle. Can post-colonial theories and the questions they pose help in decolonizing the law of geographical indications? My presentation will highlight the need for decolonizing the discussion around geographical indications and will discuss the impact that such an exercise will have.

**Mayuree SENGUPTA and Vivek KUMAR, Indian Institute of Management Kashipur**

*Dynamic Role of Patents in Business Management: A Review*

This piece consolidates the state of academic research on the dynamic role of patents in business management at various levels of sector, organization and technology. Aiming towards uniformity, IP regulations were gradually modified in WTO member countries post phased implementation of Trade Related Intellectual Property Rights (TRIPS) starting from 1995. A standardized IP regime envisioned by TRIPS paved the way for deliberations about striking the right balance between incentives for innovation and access to innovation. This was bound to have a direct bearing on how patents were perceived and managed globally. Patent has long been identified and studied as an indicator of innovation. However, extant literature indicates that lately, the role of patents is not restricted but encompasses other vital organizational strategy perspectives. Patents show promise in analyzing (1) patterns of innovation and their effects on trade and production across jurisdictions; (2) firm performance and industrial structure based on innovation matrices; (3) technology trajectory across different technical fields and industrial sectors; (4) links between university research and technology commercialization. We comprehensively explore role of patents in management literature over a sixty-year period to emerge with transpiring themes and resultant patterns.

**Shrawani SHAGUN, Mody University of Science and Technology, Rajasthan**

*Role of Women in Protecting Traditional Knowledge and Traditional Cultural Expressions from Commodification: Case of Madhubani Painting*

The 2030 Agenda for 17 Sustainable Development Goals is the most ambitious development agenda in human history as it is a roadmap to end poverty, protect the planet and ensure gender equality. The World Intellectual Property Organization contributes to the SDGs by enabling the member states to use the

intellectual property to achieve these goals. The gender aspects of traditional knowledge protection highlight the important link between Intellectual Property rights, TK, women and sustainable development. Indigenous and local women's TK is not only distinct and relevant, but also crucial for accomplishing the United Nations Sustainable Development Goals. SDG 9 (industry, innovation and infrastructure) explicitly recognizes the link between economic and social progress and innovation. The SDG to ensure gender equality can be achieved if traditional knowledge preserved and carried forward through generations by women and their understanding of Traditional Cultural Expressions deep-rooted in the culture is valued more and their role is acknowledged. Women are considered in Indian Culture as the custodian of the traditions of the family, society and of the country and thus their knowledge as protector and collectors of TCEs should be protected from the corporates who intend to commodify TK & TCEs and take the privilege out of the domain of public knowledge and transplants it in the fictional 'inventive knowledge' and quoting designs as originals in order to make profit by commercializing TK, TCE and Folklores. The economic significance of TK and its trade value make it an enabler of sustainable development and women's economic empowerment, in light of the World Trade Organization's Declaration on Trade and Women's Economic Empowerment.

The approach to look down upon traditional knowledge as backward and under developed needs a relook. Women who just don't survive alone but also ensure life of traditions that that is expressed through different TCEs and TKs, must be ultimately recognized and women's rights to traditional knowledge need to be legalized that may have effect of elevation of women's status from 'dominated' to 'survivors'. The continuous exclusion of women from the world of inventive knowledge needs to be replaced by inclusion of women's traditional knowledge in the efforts of the governments to eradicate discrimination prevailing in the society. No development can be sustainable if the governance ignores the knowledge of the half of the humanity that is protected and depicted through traditions, cultural expressions, etc. National governments and international organizations dealing with TK should pay attention to gender aspects of the issue. Policies and initiatives that ignore gender aspects of TK can have serious implications for the survival and development of Indigenous and local communities (ILCs) and TK itself as a dynamic and living body of knowledge.

The paper is proposed to take qualitative research specifically case of Madhubani Painting of India which falls under Traditional knowledge and Traditional Cultural Expressions domain and also protected under Geographical Indications. Also, the paper is proposed to highlight the role of women in protecting and preserving TCEs through rituals and customs. It is also proposed to study various case laws, Acts, International treaties and other secondary data relevant to the study. The study establishes that due to attempts of commodification of traditional knowledge women's position will be less recognized that bears serious implications on gender equality. The sustainable development goal of gender equality needs to be combatted by providing due acknowledgement and protection to the traditional knowledge by women. The goal cannot be reached by merely providing 'authorship' of traditional knowledge to women rather more efforts are needed that will be discussed in detail with certain examples of such custodian of TKs and TCEs.

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

*Protecting GIs Sans Protection in the Country of Origin*

This paper explores whether GIs should be protected even if protection is lacking in the country of origin. Article 24(9) of the TRIPS Agreement states that WTO Members are not obliged to "protect geographical indications which are not or cease to be protected in their country of origin, or which have fallen into disuse

in that country.” The author argues that article 24(9) of the TRIPS Agreement fails to consider reputation of a GI as a distinctive sign. Rather, this article 24(9) was probably included in the Agreement for political reasons. The author argues that protection in the country of origin has no consequence on the reputation of a GI in the country of protection. This is because it is the consumer of the country of protection who is being misled by the misuse of the GI and not that of the country of origin. Similarly, the question whether a GI is generic is also to be considered from the perspective of the country of protection. Moreover, a GI may be sufficiently distinctive in the country of origin as consumers have been exposed to it for a long time and can easily avoid being misled. On the other hand, the consumers in the country of protection are more prone to being misled with regard to a foreign GI. The author provisionally concludes that countries are better off without such a requirement in their national laws primarily to avoid confounding reputation in the country of origin, which may not need specific protection, with that of reputation in the country of protection where consumers are more likely to be misled. From another perspective, the author argues that reputation of geographical indications by its very nature and use is more durable and broader than that of a trademark. Reputation of GIs is with regard to a group of people established over a long a period of usage and consumption. On the other hand, reputation under trademark law is for a specific commercial entity and may not be based on a long duration of time. The author argues that if a trademark can be protected based on reputation in the country of protection, which is irrespective of protection in the country of origin or domicile, a GI has a much stronger claim on protection based on reputation in the country of protection without requiring the GI to be protected in the country of origin.

**Ajay Kumar SHARMA, Rajiv Gandha School of Intellectual Property Law, Indian Institute of Technology, Kharagpur**

*Criminal Enforcement of Trademark Counterfeiting: Perspective and Practice in Asia*

The wide employment of criminal law to protect IP raises the question of how criminal law intersects with IP law because the intellectual property violation is very different. The proprietor of IP will likely rely on civil remedies for passing-off, trademark infringement, and so forth. It is not because there are no criminal sanctions relating to offences involving counterfeit goods, but because the relevant criminal provisions have developed in a piecemeal fashion, which has produced less than satisfactory results in the past. Yet, the intersection between IP law and criminal law is very important for scholars to investigate because, in certain specific cases, IP law goes beyond the scope of private right regime to become a public policy that has a direct impact on public interests. These are the cases where IP rights violations hamper the socio-economic health of the respective nations, as they involve transnational organized criminal networks generating huge monetary benefits out of such illegal activities of counterfeiting.

Against this backdrop, the present research aims at analyzing the scope of criminal law enforcement in IP violations, particularly in trademark counterfeiting. While criminal enforcement in IP cases has begun to catch scholars’ attention, it remains a very delicate aspect in contemporary law-making of intellectual property and more research is needed. Moreover, IP scholars frequently perceive criminal enforcement entering into the domain of private law as an intrusion or, alternatively, as too technical, since it involves more procedural aspects rather than fundamental theoretical questions. This debate is crucial in our society, both for those who support the strong criminal enforcement systems, in particular against criminal organizations and networks, and for those who express concerns about the application of criminal sanctions against individuals or innocent infringers.

In this research, an effort will be made to analyze the intersection of criminal law and IP law through a blend of analytical and empirical methods. This blend will enable to, first, situate the criminal law discussion in the domain of IP rights and to explain how far the elements of crime may be identified in IP violations, particularly ‘trademark counterfeiting’ such that the criminal sanctions are justified. Second, the nature of IP crimes, as a form of economic offence as distinguished from traditional offences, will be drawn. In this regard, the comparison of legal provisions of India, and some regional regime like ASEAN, SAARC etc, as well as the most recent international developments will be undertaken, to show the trend towards criminal enforcement as the best possible protection for legitimate businesses and consumers. Analysis of secondary data from the international institutions like OECD, IMF, World Bank etc. will be done by using statistical-software to reach the conclusion.

**Dilip SHARMA, ICFAI Law School, Hyderabad**

*Non-Conventional Trademarks: Issues and the Road Ahead*

Trademark is defined as a mark which is capable of distinguishing the goods or services of one proprietor from others. The rationale behind the emergence of trademark law is to protect the goodwill and reputation associated with the goods or services. Traditionally, the scope of trademark protection was limited only to words, letters, numbers, figures, signs, slogans or symbols etc. in two-dimensional form which were used to distinguish the goods or services of one proprietor from others. However, in recent years, the horizon of trademark has expanded further to include various new forms of visible and non-visible marks such as colour, smell, shape, position, touch, taste, sound and motion mark. In the present era of competitive market, various proprietors adopt these unique innovative marks to distinguish their goods or services from others in the market. Some of the famous non-conventional marks include Nokia tune, Tiffany turquoise blue colour, Vanilla fragrance on office files and folders, Lamborghini’s motion mark on movement of car doors, Organon’s orange flavour to anti-depressant medicine, shape of Coca-Cola bottle, iconic purple velvet pouch touchmark of Crown royal, three stripe’s position on Adidas shoes etc. Though the above examples clearly demonstrate that the concept of trademark is dynamic and continuously evolving but still there are some key issues related to the protection and registration of non-conventional trademarks.

The major issues in the protection of non-conventional marks include the criteria of graphical representation, functionality, sensual perceptibility and distinctiveness of non-conventional trademarks. Though, the TRIPS agreement laid down only the minimum standards of protection but it provides wide discretionary power to member nations to adopt higher standard of protection. Subsequently, a number of member nations including India adopted the graphical representation as a mandatory criterion for the trademark protection wherein for a number of non-conventional marks such as sound, smell, taste and touch mark etc., the graphical representation is not directly possible however, in some cases, they can be represented through chemical formula or description or musical notations etc. Similarly, under the functionality doctrine, it strictly prohibits the registration over the functional features of a product which are evolved out of the nature of the product or due to the presence of any essential element which are integral part of the good or service e.g., the blue colour of fertilizers due to the presence of nitrogen in it.

The third and most important issue in the protection of non-conventional marks includes the issue of distinctiveness wherein sometimes, it is quite difficult to distinguish between two similar or closely connected marks e.g., two different shades of same colour. Further, many of these marks are based on the sensory perceptibility and the degree of recognition of such marks varies among individuals leading to the enforcement of these marks as inconsistent and unpredictable. Hence, the author in his deliberation will

focus on various forms of non-conventional marks while analysing the key issues in the protection of these marks under the ambit of trademark law in India, EU, USA and various other jurisdictions around the globe.

The author will also include his suggestions for protection of non-conventional trademarks based on his analysis of international treaties, conventions, TRIPS agreement, national laws and judicial precedents from various jurisdictions across the globe.

**Kavita SHARMA and M. PADMNAVATI, Rajiv Gandhi School of IP Law, Indian Institute of Technology Kharagpur**

*Artificial Intelligence and Patents in Indian Healthcare Sector: Legal Issues and Challenges*

Artificial Intelligence is set to revolutionize drug research and trials. As such, its role in healthcare has attracted investment. With a promise of enhancing performance in the healthcare sector and complementing human skills, Artificial Intelligence has considerably expanded the scope of human activities. Whether it is the detection of fractures and skin lesions or improving efficiency inpatient admission and discharge, the use of Artificial Intelligence is diverse and complex. Reports suggest that by 2035 Artificial Intelligence will become a significant business driver in India. Some states in India have begun to provide support to Artificial Intelligence start-ups with the help of policy framework and fund. The top Indian healthcare companies have already entered into tie-ups with Artificial Intelligence companies. Indian pharmaceutical companies are not far behind, with most of them using Artificial Intelligence for drug discovery such as targeted molecule discovery. Be it in the manufacturing of medical equipment and supplies or medical insurance, rapid application of Artificial Intelligence is already being realized. With the growth of Artificial Intelligence in the Indian healthcare sector, the filing of patents is expected to increase considerably concerning pharmaceutical products. However, the patent eligibility requirements for Artificial Intelligence-based inventions would be restrictive in India as the implementation of Artificial Intelligence utilizes advanced software programming. Therefore, it is essential to analyze how Artificial Intelligence-based claims or systems would be prosecuted or otherwise dealt with by the patent office in India. The present study seeks to identify comparative patent prosecution of Artificial Intelligence-based inventions in a patent family. Further, identifying the scope of the Indian Patents Act, 1970 concerning Artificial Intelligence-based inventions would provide an understanding of the prospects and challenges of Artificial Intelligence in the Indian healthcare sector.

**Rudra SHARMA, National Law College, Tribhuvan University, Kathmandu**

*Intellectual Property, Society and Economic Development*

When Nepal was being member of World Trade Organization (WTO) in 2004, the nation (Nepal) was deeply divided into to opinions namely "yes" WTO and "No" WTO. Those who advocated for Nepal's accession to WTO were asked thousands of times about the compliance of intellectual property in Least Developed Country (LDC) like Nepal. The advocates of WTO tried to convince the people and created conducive environment for Nepal's accession to WTO saying that compliance of WTO in LDC like Nepal would not hinder the economic development rather the compliance of IPR would be instrumental for economic development.

Now, most of the concessions for compliance of IPR in the capacity of LDC are coming to an end. Nepal soon needs to be prepared for full compliance of IPR. Once the point of full compliance of IPR starts soon, what will be situation in the ground? The situation of 2020 is much different than that of 2004 as there have been more prominent global issues in terms of compliance of IPR like copyright in social network and social media, e-commerce, e-governance and Artificial Intelligence (AI). An artificial intelligence called Sophia has already made demonstration in Kathmandu and an AI serves food in KFC Kathmandu. In such situation, Nepal compares its position with China which joined WTO as a developing country just two years ago than Nepal and India which joined WTO as a founding member. As Nepal lies between India and China (the sea of humanity, the greatest market of the world and the economic power house of the world), the compliance of IPR in Nepal affects these to giant economies too especially in the areas of protection of well-known trademark, investment, trade etc.

This being the case, Nepal compares its situation with other LDCs as to how to integrate the intellectual property, society and economic development. What can be the acceptable standard for compliance of IPR for LDC like Nepal once all concessions will come to end? The cycle of integration between intellectual property, society and economic development is not much commercialized in LDCs like Nepal. However, IPR is the pre-condition for investment, it is the basis of investment and it is the medium for enhancement for business in LDCs like Nepal. Therefore, there is much scope of discussion and interaction at this point. The global scholarship on IPR should think of it and institutions like WIPO, WTO and others including regulators should consider seriously on this situation.

**Arunima SHASTRI, Kalinga University**

*Analyzing the Intellectual Property Rights framework of Visual Art with Special reference to Graffiti and Street Art in Common Law Countries*

With the rise of public appreciation for visual artwork, several conflicts have emerged with respect to artists and their rights. Street art is consistently copied and reprinted on clothing, posters, and merchandise. It gets used for commercial and non-commercial gains in other works such as television, books, and music videos and is even excavated from its surface for exhibition and sale in auction houses and galleries. In some parts of the world, graffiti has even become a tourist attraction. While a number of these artists have attempted to assert copyright, courts have not yet had the occasion to direct a legal framework or creation of space within existing law in which street artists can reliably protect their work. Where their 'recognizable stature' as an art invites multiple interpretations, the truest test of legality might lie outside the scope of Copyright law/framework yet to be ventured upon. With the increasing appropriation of their work, it poses several questions on the Copyright -ability and protection under Copyright law as envisaged, also, how should they be able to prevent the unauthorized copying, sale, removal or destruction of their work are a gamut of problems which needs to be addressed under the existing regimes offering IP Rights.

Through this research, an attempt will be made to understand the contours of work of Art under Copyright regimes and the right of the street and graffiti artists over their creations vis à vis the property right of the owner. The analysis will be made through ascertaining the lines drawn by criminal codes to testify legality of the Art. The study would also cover cultural rights, digital rights to foresee that the work of Art isn't exploited and goes unnoticed in the blooming world of creativity. The research will enable the authorities and artists to foster the right values of attribution, integrity, propriety into the society with an economic upliftment in terms of incentives and acknowledgment of their work in the global scenario.



**Rujitha SHENOY, National Law University Odisha**

*Post-Merger and Acquisition of Pharma Companies: Impact on Access, Competition and Innovation*

In India, it has been realized globally mergers and acquisitions is the only way for gaining competitive advantage domestically and internationally and as such the whole range of industries are looking for strategic acquisitions within India and abroad. Indian firms, including Sun Pharma, Cipla etc. are entering in to merger and acquisition deals. The pharmaceuticals sector in India is currently open for 100% Foreign Direct Investment (FDI). Mergers and Acquisitions (M&A) can act as a source of capital, productivity and innovation but can potentially jeopardize the capability of Indian pharmaceutical industry in relation to 'Access to Medicines', which is one of the major goals of the health system. This paper examines whether merger and acquisition in pharma industries promotes innovation or not by way of analyzing the merger and acquisition of Pharma companies taken place recently. The recent years witnessed merger and acquisition of pharma companies in bound and out bound.

The major reasons for merger and acquisition of pharma companies are it will help the acquirer to expand their product portfolio thereby they could gain access to the distribution channels and market of the acquiring company. As far as the company being acquired is concerned merger could gain them financial stability. The local manufacturing units of the foreign company would benefit drastically to cut down the cost of medicines in the market and the need for obtaining FDA. The merger of Ranbaxy and Sun pharma, Abbot's acquisition of primal are some of these. The merger of Ranbaxy and Sun Pharma led to the emergence of one of the biggest pharma companies in India. The deal valued at US\$4 billion is also one of the biggest merger and acquisition transactions in India. The attempt is to examine by case studies of M&A of pharma companies in India and United States to examine the impact of M&A on access, innovation and completion ie., whether able to attain dynamic efficiencies by lowering the cost and promotes innovation, thereby lessening the competitive constraint.

**Neeti SHIKHA and Urvashi SHAHI, Center for Insolvency and Bankruptcy, Indian Institute of Corporate Affairs**

*Intellectual Property Rights and Insolvency: India's Next Challenge*

Paul Romer, worlds' leading economics expert has opined that "*If [a developing country] offers incentives for privately held ideas to be put to use within its borders (for example, by protecting foreign patents, copyrights and licenses, and by permitting direct investment by foreign firms), its citizens can soon work in state-of-the-art productive activities.*" There is no gainsay in stating that for a developing country like India, intellectual property rights ("IPRs") protection is fundamental to its economic growth and increase in foreign investment. Equally important is its laws on insolvency that allows settlement of intellectual property rights issues when the companies undergo insolvency. Despite most of the companies value their business in terms of IPRs, it does not become an obvious subject of attention while developing insolvency framework. Since at IPRs embody a significant value of business, there are a number of issues concerning their status, protection and valuation. These issues are brought into particularly sharp relief when insolvency intervenes, for example, disposal of rights is contemplated or their continued availability. Such issues become central to a successful outcome for any insolvency case.

India stood at 40th place out of 53 economies in global IP Index and in the same year, it had 63<sup>rd</sup> rank in ease of doing business. Literature has shown that there is a strong correlation between foreign investment and the ease of doing business ranking. They also find that this result is primarily driven by the *Doing Business* ease of trading across borders component. Literature also shows a strong correlation between IPR protection and foreign direct investment. Thus, it is imperative for any economy, especially developing country like India, to ensure that laws relating to insolvency, IPR and its interplay is clear. While first two are substantially developed independently, the concerns regarding the intersection of insolvency and IPR needs legislative attention from two fronts. Firstly, there needs to be clarity on IPR enforcement and Licensing agreement during the time the companies undergo insolvency and secondly there is need for consistency in treatment of IPR in cross border insolvency. Internationally, there has been a considerable increase in efforts to streamline cross-border insolvencies, the lack of legislative and regulatory schemes to meaningfully address challenges posed by cross-border intellectual property rights poses on distressed companies can find value in their intellectual property portfolio. Given that India's international insolvency regime is still developing, it is important that these questions are investigated. In this paper, authors intend to explore intellectual property issues in insolvency process with focus on cross border insolvency and suggest way forward for India.

**Dingnan SI, National Cheng Kung University**

*Understanding of Competitive Relationship in the Application of Unfair Competition Law: Based on the Practices of Internet Advertisement Block in China*

The development of internet technology is very fast and its innovative commercial competition has various ways. Promoting a fair and free competitive environment, as well as the consumer protection, are the major concerns. In order to cope with the new-tech practices, the Unfair Competition Law in Germany (Gesetz gegen den unlauteren Wettbewerb, UWG) has several amendments. The Unfair Competition Law in China has also been revised. There are also the US case law which has addressed the unfair competition disputes for internet related industry. By comparing a few court cases among China, Germany, and US, this paper will analyse whether "competitive relationship" is a core consideration for dealing with unfair competition dispute. The "free + advertisement" business model is able to be challenged by other network operator or not, and by what legal theory. How the unfair competition law can help to maintain a fair competitive commercial environment for internet related industry. "Competitive relationship" was recognized by many cases in China as one of the constitutional elements of unfair competitive behavior. In the *Tencent v. 360* unfair competition case, *Youku v. CM Brower* unfair competition case, etc., the courts all address the key issue by relaying on the establishment of "competitive relationship".

Due to the characteristic of internet industry, the use of technology does not have to be among competitors having the same business or the same targeting customers. Such as in these court cases, the advertisement blocker is providing the services, while not providing any video or information on line. They are actually not in the same business with website provider. By solving these disputes, the courts have to give interpretation on what is "competition". After the amendment of China Unfair Competition Law in 2018, the recent case shows a different tendency. The *Tencent v. the World Browser* shows that the "free + advertisement" business model is not a solid shelter for the business operators in advance. The benefits of consumers and the business innovation are also important. The *Adblock Plus* case in Germany, and the *Zango Inc. v. Kaspersky Lab Inc.* case in US provide different approach to understand the unfair competition in internet industry. Based on these and more of the other cases, this paper will conclude the applicable theory with regard to the understanding of "competitive relationship".

**David A. SIMON, George Washington University Law School**

*Off-Label Innovation*

Modern medicine faces two significant challenges. The first is a dwindling pipeline of new treatments. The second is the routine practice of physicians prescribing approved drugs for unapproved uses—so-called “off-label” uses. These problems seem very different. The lack of new treatments is an innovation problem: novel drug discovery has become more difficult, and firms lack incentives to research and develop new uses of old drugs. The problem of off-label uses, on the other hand, is one of safety and efficacy: off-label uses are risky because they aren’t supported by the same level of evidence as approved uses. While descriptively accurate, this is not the only accurate description. Each of these problems is also one of information—a lack of information about the safety and efficacy of prescribing approved drugs for unapproved uses. Because all new uses of approved drugs are off-label uses, gathering information about the safety and efficacy of off-label uses, in effect, produces safety and efficacy information for many new uses. Not only that, but some off-label uses may be new: physicians may innovate by prescribing drugs off-label. Reframing these two seemingly disparate problems in terms of a common information deficit enables a single, information-based solution. This solution—which draws on the existing suite of innovation policy levers—incentivizes providers, rather than pharmaceutical companies, to generate the information needed to address both problems.

**Shreynash SINGH and Pragyan Deep AGRAWAL, Centre for WPO Studies, Ministry of Commerce and Industry**

*FRAND or Foe: The Interface of SEP Licensing and 5G Technology*

World is at the cusp of digital revolution. The emerging 5G technology will play a key role in establishing essential infrastructure for this revolution to take place. Services like E-commerce, financial services, professional services, etc. will rely significantly on 5G technology making it even more important. Despite the commercial benefits the mainstream discourse on 5G is limited to surveillance, privacy, national security. United States (US) and China are at loggerheads over 5G technology thereby making it a geopolitical issue. The US has called upon ‘freedom loving’ nations and companies to join the ‘Clean Network’ initiative aimed at safeguarding privacy from alleged Chinese intrusion. China’s answer to ‘Clean Network’ is ‘Global Initiative on Data Security’ (GIDS) which is primarily aimed at maintaining stable supply chain of global ICT products and services. This geopolitical struggle regarding 5G has eclipsed legal aspects which require deeper analysis such as Intellectual Property (IP) issues, international trade obligations, etc. IP in particular is a fundamental pillar in the development of any new technology and hence a detailed analysis with regard to 5G is imperative.

Licensing of Standard Essential Patents (SEPs) is central to Information and Communication Technology (ICT) industry. Standardization of technology has led to interoperability, quality enhancement and overall affordability of ICT products and services. The success of standardization in ICT has been due to the commitment of some companies in contributing their technologies towards the development of these standards and making them accessible on Fair, Reasonable and Non-Discriminatory (FRAND) terms. The notion of FRAND revolves around two doctrines: ‘License to all’ and ‘Access to all’. ‘Access to all’ requires the patent holder to ensure access to its SEPs by licensing it to the end device producer only. Whereas under ‘License to all’ the patent holder is required to grant license to all the entities throughout the supply chain. Understanding the implications of both these doctrines is essential in application of FRAND in ICT sector.

This paper is aimed at exploring the interface of SEP licensing and 5G technology. The paper will take into account the jurisprudence and historical development in determining the appropriate doctrine which will ensure licensing of SEPs for 5G on FRAND terms. The paper becomes even more relevant in light of 5G patents limited to only few nations. The paper will also analyze international regulation and agreements in this regard. As an outcome the authors hope to put forth policy suggestions for developing countries on this crucial issue.

**Alaknanda SINGH, Amity Law School, Amity University, Noida**

*A Critical Analysis of Implementation of Access and Benefit Sharing in India*

There are millions of species across the world and India has tremendous varieties of such species including plants, animals and biological resources and also traditional knowledge of the indigenous people. These resources can be extensively used in various types of innovation, research and production of useful materials which can benefit people at large and contribute towards growth and development of the country. The Government of each of the biologically rich country must take initiatives for the protection and recognition of indigenous traditional knowledge of the country including giving monetary benefits and compensation to the local people. Regulation of access to these resources is imperative and need of the hour. The corporate giants and business organizations including some developed countries often tend to exploit these genetic resources without any approval from the Government or without any due credit to the local indigenous people of the country. This leads to bio piracy and exploitation of the rich resources of the country. It also endangers the value, origin and recognition of rich genetic resources and traditional knowledge of the country. Lack of awareness amongst some primitive tribes and local people is one of the major reasons for easy exploitation of biological resources in India. The research paper focuses on the issues related to the patent system and access to benefit sharing in India. Being a member of International convention on Biological Diversity, India has a responsibility of protecting genetic resources and governing access and benefit sharing. In compliance with international conventions India has enacted Biological Diversity Act which provides for the protection of biological resources and regulation regarding access and benefit sharing of these resources for patents and commercial use within or outside India. The objective of the research paper is to revisit the biological diversity law and framework in India and analyze the implementation of access and benefit sharing with respect to some recent cases such as Neem and Turmeric. The research paper also focuses on the objective of analyzing judicial doctrines and developments for the protection of biodiversity in India and balancing patent with public welfare and rights of the indigenous people in India.

**Kshitij SINGH, Faculty of Law, University of Delhi**

*Race, Gene and Patents: Decoding the Complex Trilogy*

US patent system has remained the bedrock of innovation based on nicely balanced policy levers, incentivizing inventors on one hand and promoting public good on the other. Having explicit recognition and mandate of the US Constitution, it has been working so well to promote industrial and economic progress. It has been revised from time to time through legislative initiatives and judicial constructions to accommodate new realities, however, race has seldom emerged as the core patent issue in patent discourse, triggering reforms in those channels which block the accessibility of patent system for a racial marginalized group. Patent system ideally does not exclude any race of inventor from filing a patent yet there are other impediments that prevent the people of colour from participating in patent process.

The inadequate representation of a racial group (black Americans) in the US Patent System has numerous reasons embedded in the varying historical practices, prevalent in different timelines. In the earliest phase of patent system, enslaved people were not considered American Citizens and the provisions of the Constitution were not applicable to them. Moreover, states enacted laws that prevented enslaved people from owning any kind of property, presumably including patents. Even when they were either born free or acquired freedom, substantial legal barriers still existed. Despite these barriers, they invented a range of useful path breaking inventions. Inventors in this phase used invention as a tool to buy freedom and empower themselves and their families. Contemporary black Americans do not face the same legal and social hurdles to the patent system and many among them met with enormous success, however, the proportion of black inventors is still very low as compared to their white counterparts. The underlying reasons for this is not explicit and needs an in-depth inquiry in the light of numerous integers: education gaps, lack of mentorship, complex and non-accessible nature of academia and industry, inadequate exposure to innovation, lack of financial support etc.

In this context, gene patents reflect an interesting paradox, in which racial overtones of patent system pop up, raising contentious issues pertaining to the underrepresentation of black and Hispanic American inventors in the system and misappropriation of human genetic material of targeted racial population groups. Genetic and genomic advances coupled with the new wave of personalized/precision medicine expose these racial population groups to genetic research and clinical trials, which are focused upon deriving benefits through patents without securing an equitable benefit to the research subjects. Race is used as a genetic category to obtain patent protection and drug approval, enclosing racial identity within the proprietary realm. This further deteriorates the condition of an already underrepresented racial group in patent discourse. Against this backdrop, the focus of this paper will be twofold; first to trace and analyze the racial overtones in the US Patent System in different phases of history and examine the factors responsible for the underrepresentation of the racial marginalized groups (particularly black Americans) in the System and; second how this underrepresentation affects the trilogy of gene, race and patents in the given contextual setting.

The paper advocates a more inclusive and diverse participation of inventors in the patent system for not only bringing the social parity but also ensuring innovation with a diverse range of creative solutions to the real-world problems. The paper emphasizes that patent system, as a tool of human empowerment needs to be made more accessible,

**Priyadarshini SINGH, Rajiv Gandhi School of Intellectual Property Law, Indian Institute of Technology, Kharagpur**

*Analysis of Intellectual Property Management System Concerning Innovation*

Intellectual Property Management (IPM) drives players who aim to be ahead in the race of innovation. Any Intellectual Property (IP) generated is aimed to reach its full value while commercialized. The institutes and research establishments generating IP aim to exploit it for wealth creation commercially. The exploitation may be done by various ways of IP commercialization such as selling, licensing, joint venture, etc. As Dennemeyer Group says, Intellectual Property Management System (IPMS) has been about catching a cloud and pin it down, which is regarded as capture something as ethereal as an idea and apply it to concrete, value-adding business activities. The academic writings suggest that area concerning IPM is least worked upon and is open to new studies and revelations. Intellectual property (IP) has become a crucial aspect in modern management practices with respect to innovative technology-based organizations. Correspondingly,

a growing number of studies are conducted each year to address various aspects of IP management (IPM). The IPMS can only function and survive if the IPM is done structurally and periodically, amending the components and their behavior. Moreover, the policy of the institute lubricates these activities and is vital for successful IPMS. Nevertheless, the IPMS is still relatively fragmented, and researchers lack a systematic understanding of the existing body of knowledge. There are several software programs that claim to conduct the process of IPMS for an organization. The current study will present an analysis of such software and patents and highlight the relevance and delivery of IPMS concerning innovation.

**Ayushi SINGH, United Nations Economic and Social Commission for Asia and the Pacific, and Bhavya SINGH, University of Allahabad**

*Protection of New Plant Varieties and Farmers' Rights in Asia - Battles won and the Challenges Ahead*

The World Trade Organization (WTO) requires its members to provide Intellectual Property Rights (IPR) protection to new plant varieties under the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). The protection can be provided either through patent or a *sui-generis* system. One such *sui-generis* system is the International Convention for the Protection of New Varieties of Plants (UPOV Convention) which recognises both plant breeder's rights and farmers' rights. The third amendment to the UPOV Act, 1991 provides the discretion to its member countries whether or not to include farmers' rights in their plant variety protection legislation. Some countries have developed their own *sui-generis* legislation while some follow the UPOV model.

Among the countries in South Asia, India is first to formulate and implement a *sui-generis* plant variety protection legislation to meet the TRIPS requirements. The Protection of Plant Variety and Farmers' Rights Act (PPVFRA), 2001 of India provides for the farmers' rights intending to balance them against the plant breeders' rights. On the other hand, Sri Lanka follows the UPOV model of 1991 in its Protection of New Plant Varieties (Breeders' Rights) 2001 (draft) legislation which does not recognize the farmers' rights. Nepal has no plant variety protection laws yet. Thailand diverts from the UPOV model in its *sui-generis* legislation, The Plant Variety Protection Act, 1999 that provides for the protection of local farming communities simultaneously with the promotion of IP rights of the breeders. China in East Asia follows the 1978 version of the UPOV Convention in its various Regulations concerning the new plant variety (NPV) rights protection. It allows the self-use of the propagation material of a protected NPV by farmers for breeding and propagation, which does not seem very promising as far as the protection of farmers' interest is concerned. India, comparatively, provides for the most efficient farmers' rights protection system. However, this position received a fatal blow when Pepsico India brought cases against potato farmers of Gujarat for "illegally" growing its potato variety registered under the PPVFRA. The compensation demanded by the company from these poor farmers was Rs. 15 million each. The cases were although later withdrawn by the company due to humongous protest the incidence raised some serious questions on the effectiveness of the farmers' interest protection system. In this setting, it becomes important to question how effectively do the countries protect their farmers' rights against the plant breeders' rights to protect them from being harassed by the Multinational Companies. This paper will comparatively analyze the plant variety protection laws of select Asian countries with an aim to find the correct balance between breeders' IP rights and farmers' interests.

The paper will attempt to determine the loopholes and drawbacks in the current laws, with special focus on the Pepsico case, and will also provide suggestions for more efficient systems.

**Sonal SINGH, National Law University, Odisha**

*Pharmaceutical Patents and Clinical Test Data Exclusively in Asian Countries: Utilization of Compulsory Licensing for Access to Medicines*

The 2001 Doha Declaration on TRIPS and Public Health provides that the TRIPS agreement does not and should not prevent members from taking measures to protect public health. The agreement should be interpreted and implemented in a manner supportive of WTO members' right to protect public health and promote access to medicines for all. Pursuant to this, WTO members have right to protect public health and to promote access to medicines for all. The Doha Implementation Decision recognized the legitimate role of compulsory licensing in facilitating access to medicines. However, the TRIPS compulsory licensing under the Doha Paragraph-6 System has been largely underutilized because of various reasons. The 2013 World Intellectual Property Organisation trilateral co-operation with the WTO and the WHO on Promoting Access to Medical Technologies and Innovation articulates that "*the flexibilities and pro-public health interpretation in the Doha Declaration cover the TRIPS Agreement as a whole and therefore apply to test data protection under Article 39.3.*"

With increase in drug prices, medical care is becoming costlier for Asian nations. Apart from other factors, standards of intellectual property protection play an important role in affecting drug prices. When it comes to medicines, patent protection and test data exclusivity become the relevant form of TRIPS provisions affecting drug prices. In this background, this paper aims to examine the utilization of compulsory licensing of patents and clinical test data exclusivity in Asian developing nations. The paper would address the research question: "*How much compulsory licensing of patents and clinical test data has been used in developing countries in Asia as a means for ensuring access to medicines?*"

**Vandana SINGH and Sukriti YAGYASEN, University School of Law and Legal Studies, Guru Gobind Singh Indraprastha University**

*Innovation and Incarceration: Economic Analysis of IP with Special Reference to Counterfeiting and Piracy*

Intellectual property has two sides same as any other human invention, on one hand it gives business to be more fruitful and the scientists with the help of IP can share their data or any research almost instantly whereas on the other hand it also gives criminals an opportunity or tool to commit crimes and escape from them very easily. The problem lies in the fact that how such type of criminal behavior can be controlled because the crime is committed behind the technology. States which are considered as leaders in innovations have provided strong mechanism for IP protection. If only valid or legal use of IP is made then that could benefit the society at large.

The author deals with importance and protection of IPRs with special reference to counterfeiting. How protection of IPR has become so important with respect to its economic analysis. The paper indicates about direct sale, importing, modifying, falsifying the prospectus or adding a leaflet in another language, applying falsified packaging, ads, online, by media. The paper analyses the laws on the selling and counterfeiting of drugs, as well as the international regulations on the subject, as well as the steps that can be taken to reduce the risk of their use. This paper will also study the effect of the counterfeiting and illicit drug sales on the intellectual property rights and society at large.

*Local Working as a Patent Requirement within the Framework of Indonesian Law*

One of the terms of patent rights is that it can be applied in the industry. Application in the industry requires patent holders to carry out their patents by making products or using the process. Intellectual property rights are territorial rights. It causes the product or process that is the exercise of the patent to be carried out within the territory where the patent is registered. Article 20 of Law No. 13 of 2016 on Patents requires patent holders to make products or use the process in Indonesia. The rule is considered problematic because it is contrary to the rules in the TRIPs agreement. Article 27 paragraph 1 of the TRIPs states that patents should be available and used without discrimination regarding the place of invention, the field of technology and whether the product is imported or locally produced. That is one of the causes of patent changes in Article 107 number 2 of Law No. 11 of 2020 on Job Creation, the obligation to make products or use processes in Indonesia is revised to be the obligation to carry out patents in Indonesia. Furthermore, the implementation of such patents includes not only making or licensing but also importing. The terms of import as the implementation of patents are also considered a problem in itself. This research will use the method of comparing the law, especially between the applicable law in Indonesia and international law. The study found that article 5 paragraph 1 of the Paris Convention does not prohibit importation as the exercise of patents. Although in the next paragraph it is stated that the government has an obligation to regulate the misuse of patents by patent holders, one of which is due to the failure of the implementation of such patents. Therefore, this research is expected to be an input for policy makers in the field of patents.

**Lakshmi SRINIVASAN, Jindal Global Law School, O.P. Jindal Global University**

*Intermediary Liability through the Eyes of Copyright Infringement*

With the current EU Directive specifically calling out on online platforms or OCSSPs for their liability in infringement, many questions have arisen. It is true that the provisions call for a stronger liability on certain kind of intermediaries to infringement. But the potential impact is yet to be seen. Also, in the long run, if intermediaries' standards of illegality are blanket, it may not serve its purpose for the rightsholders. The safe harbor rules in many jurisdictions currently provide some immunity on conditions of their role. However, the key is that most issues concerning intermediary liability stem from their involvement in the acts of infringement concerned and the role they play. What if their liability is ascertained not by their function but by the issue at hand and a basic definition of the role these intermediaries play in a transaction? Where would the exceptions to copyright infringement be placed at this juncture? If done so, what would the benefits or drawbacks be for the other stakeholders? These are questions that move beyond the horizontal and vertical that EU and USA represent. In jurisdictions like EU, which have inclusive definitions of 'intermediaries', certain liabilities only pertain to a certain kind. Similarly, in jurisdictions like India, all kinds of intermediaries are included within the ambit of one definition, but the liability carved is different. At this juncture, categorization of liability on different issues within copyright and based on the functions of the recognized intermediary in the transaction could prove to be a right step in the right direction for the current scenario.

The aim of this paper is to examine three aspects – First, how has the current regime assisted the rightsholders in promoting their works in the digital sphere? Second, for ascertaining liability of intermediaries would categorization as per their basic functions and issues of copyright by way of policy



and legislation improve status quo? Third, while holding an intermediary to highest standards of care, should their liability be measured through their level of interaction with the users and the impact of such content? While recognizing that infringement can be of any recognized form of IP, this paper focuses on copyright infringement. The study is doctrinal and normative as it suggests the possibility of a different perspective. There will be references to cases, statutes, scholarly writings and governmental websites for data, policy insights and proposed solutions.

**P. Sree SUDHA, Damodaram Sanjivayya National Law University**

*E-Sport and IP – A Complex Relationship*

Among the notable developments associated with the rise in computer gaming has been the emergence of a small but growing cadre of professional gamers. Millions of people play computer games as avocation or amusement, but some exceptionally skilled players are intent on making a living at what has been dubbed “e-sports.” The advent of this new vocation has been supported and accompanied by the development of a nascent professional infrastructure with features familiar from the world of physical sports and entertainment, including tournaments, leagues, fans, teams, team owners, player contracts, sponsors, and the like. Yet many gaps and ambiguities remain in these supporting institutions, including significant uncertainties in the law needed to define the formal relationships among the various actors. In this Paper, I consider a fundamental set of legal issues, integral to e-sports, that concern the ownership and control of rights in player performances. The nature of such competitions presents a new and fairly complex practical configuration for legal analysis. Analogous questions regarding the ownership of physical performances have certainly arisen in the past, but the nature of e-sports generates certain novelties in the analysis. Unlike physical sports, where player activity is observed and recorded directly for broadcast and similar dissemination, e-sports competitions are by definition mediated by computer game software that is itself the subject of various intellectual property rights. This characteristic of e-sports adds to the legal discussion an additional layer of complexity, implicating the interests of additional rights-holding entities not found in negotiations over competitive performances in physical sports. E-sports deserves attention, perhaps as a fascinating aspect of the burgeoning computer entertainment industry, but perhaps also as an emerging computer entertainment phenomenon in its own right. Admittedly, its social and commercial significance remains to be seen. Even if e-sports does not become as prominent as anticipated, exploring a new and expanding entertainment infrastructure is valuable because it highlights both lingering and emergent difficulties in applying current proprietary rights regimes to digital media. Analysis of e-sports underscores the issues of user participation, interactivity, and collaboration that are common to information and communication technology, with which copyright seems particularly unequipped to deal. The alternative regimes I consider also display related shortcomings when applied to e-sports, suggesting a pervasive and potentially debilitating set of juridical gaps that yet remain unaddressed in the context of digital media.

**Agung SUJATMIKO, Faculty of Law, Airlangga University**

*Trademark Registration Certificate as Fiduciary to Support Financing for Small and Medium Industry*

Legal protection for mark in Indonesia is regulated under Law no. 20 of 2016 concerning Marks and Geographical Indication. Such protection shall commence once the mark is registered, for which a mark registration certificate is issued. Mark registration certificate is legally regarded as the most definitive evidence of rights when it comes to the proprietorship of a mark. As a valuable document, mark registration

certificate has the economic value to be used as collateral for debts. Mark registration certificate characteristically suits the fiduciary purpose, which requires the debtor to assign to the creditor legal proprietorship of movable and immovable assets, tangible or intangible. Registered mark rights are intangible asset and is transferable to any other party through assignment agreement. One of the acceptable agreements is fiduciary agreement. This research shall discuss several problems with mark registration certificate as fiduciary, for instance concerning appraisal of its economic value, as well as to legal seizure in the case of loan default. Apart from those above, further potential risks and dispute settlement thereof will also scrutinized in this paper. Those problems shall be analyzed using deductive approach, taking from more general concept towards more specific one. In the end, this research shall result in a legal fact that registered mark rights is suitable as fiduciary. This will be important for debtors, particularly those who are small and medium enterprises so as to increase their competitiveness in the market. This research is very useful to support fiduciary bank practicing.

**S K SULOK, Inter University Centre for Intellectual Property Rights Studies, Cochin University of Science and Technology**

*Concept of Quality, Reputation and Other Characteristics under the Indian Geographical Indications Act*

Geographical Indications (GIs) essentially links a product to a place. There are three ways one can establish the link between the product and a place that is through 'quality', 'reputation' or 'other characteristics'. Thus quality, reputation and other characteristics form the basis for treating GI as intellectual property. It is therefore crucial that one understands how this notion is construed in a national jurisdiction. The objective of my research is to understand how the concept of quality, reputation and other characteristics is articulated in the Indian scenario. Part I of the research, deals with introductory remarks on the concept of quality, reputation and other characteristics and a brief overview of the Pre-TRIPS position of the concept in India. Part II deals with how the concept is handled under the TRIPS Agreement as the Indian definition of GI is based on the TRIPS definition. In Part III, the Geographical Indications Bill, the Bill introduced in the Parliament of India for domestic implementation of the TRIPS obligations relating to GI, is explored to understand the legislative intent regarding quality, reputation and other characteristics. Part IV discusses the present understanding of the concept under the Geographical Indications Act, (the Act), the Geographical Indications Rules (the Rules) and the Manual of Geographical Indications (the Manual) as these three forms the primary statutes governing the legal regime of GI in India. Part V look at the judicial contribution towards the concept. Finally, Part VI concludes with the findings of the research, the lacunas in the articulation in the Indian scenario and suggestions.

Some of the broad conclusions reached to are that during Pre-TRIPS period the subject matter of GI was primarily protected under the trademark regime. The concept of quality, reputation and other characteristics protected during the Pre-TRIPS period was narrower in scope. It was the aftermath of the TRIPS Agreement that resulted in a sui-generis system. The TRIPS Agreement does not define the terminologies quality, reputation or other characteristics, and it is the full flexibilities to countries concerned to articulate the same. Nevertheless, the TRIPS debates give some guidance as to how these terminologies are to be interpreted from which India can gain insights. The debates on the GI bill does not provide any additional information as the House did not seem to have an in-depth understanding of the new subject matter in hand. The present concept of quality, reputation, or other characteristics under the Act, Rules and Manual needs to be more clearly articulated. It can help in providing better guidance to courts, GI application examiners and others.

The judicial contribution towards the understanding of the concept remains minimal. The reason being that the few cases that have come before the courts deal with the concept as a passing reference and there is yet to be a judicial decision delving deep into it.

**Ranggalawe SURYASALADIN, Faculty of Law, Universitas Indonesia**

*A Cup of GI Coffee: The Challenges and Impacts of Utilization of Geographical Indication to Indonesia Coffee Farmers and Industry*

Coffees are products that most registered as GIs in Indonesia since 2001. Not less than 22 local Indonesia coffees being registered as GI by coffee farmer communities or local authority in the last decades, hence Indonesia coffee farmers and producers still facing many challenges to benefit from the GI protection. The research being conducted by UI Faculty of Law researcher in 2019 reveals that some GI coffee communities in Indonesia faced difficulties in managing their GI, while the consumers of Indonesia GI coffee have little attention to the use of GI as means to give assurance of quality standard of GI coffees. Furthermore, many of roastery and cafes in Indonesia put little attention to GI that indicate the source of origin. One of many reasons to this condition is because the consumers of single origin coffees only constitute not more than 30 percent of coffee customers. Most of coffee sold by downstream sellers (cafés) offers Blended coffee which the 'recipe' or blended compositions (and or 'coffee origins') being undisclosed to consumers or competitor as to offer 'their own' unique and distinct blended coffees. Our presentation will focus to elaborate and analyze the issues and challenges of the utilization of GI in coffee industry in Indonesia, especially how to improve the management of GI coffee organization /association in order to support Coffee farmers and stakeholders to gain benefit from GI system.

**Yasmine Lee R. TADEO, School of Law, Saint Louis University, Sheena T. RIMA, Department of Education-Central Office, Tristan Joseph O. RONDOLO, Department of Education-Legal Division, and Clifford C. CHAN, Institute of Management, University of the Philippines Baguio**

*Lacking Copyright: A Study on the Prohibition on the Public Education Sector of the Philippines to Own Copyright and its Consequences*

The COVID-19 pandemic has certainly brought a series of deleterious effects upon the community whether socially or economically. The education sector has not been isolated from the effects of the pandemic, having to largely suspend face-to-face classes, its traditional approach to learning, in favor of alternative modalities in teaching. In a bid to continue learning by students despite the difficulties caused by the pandemic, the Department of Education - Philippines has had to promulgate a series of DepEd Orders directing public and private schools to adapt to alternative methods of learning. Most notable among these is DepEd Order No. 12, s. 2020 which refers to the "Adoption of the Basic Education Learning Continuity Plan for School Year 2020-2021 in the Light of the COVID-19 Public Health Emergency." Alternative methods of learning had already long been recognized by Philippine laws and DepEd itself through its various issuances. However, these alternative methods of learning had been compressed to the following modalities on an area-to-area basis based on the severity and risk of contraction of COVID-19: face-to-face, distance learning, blended learning, and homeschooling.

These modalities, especially online distance learning would never have been implemented in such a massive nationwide scale as in the past. This forced the schools, their teachers, and their staff to adapt to various

measures to develop new material or source existing material from the internet to serve as teaching aids. In a bid to assist private schools in coping and adapting to the demands of the basic education continuity learning plan, DepEd has likewise made its learning materials readily available and accessible for their use. The resort to the different learning modalities brings about untold possible issues and consequences faced by the basic education sector relative to intellectual property rights such as but not limited to: inability of the government to assert copyright over its work, the valuation of learning materials, monetization of material when hosted in various social media platforms, cross-border agreements with respect to licenses, enforcement in the online world amidst territorial restrictions.

This paper seeks to study the potential impacts brought about by the shift to the new learning modalities to either submit to or forward a change in enduring copyright doctrines; and most importantly to balance private interest that values protection, innovation, and integrity with public interest which requires the promotion of free exchange of idea and dissemination of communication.

### **Chamila S. TALAGALA, Australian Centre for Intellectual property in Agriculture**

#### *Copyright Law and Access to Knowledge in the Context of Education: Lessons from Sri Lanka*

There is a mismatch between the needs and interests of the developed and the developing world when it comes to copyright protection. This is mainly because, while most of the developed countries are producers of copyright protected works, the vast majority of developing countries are only users of those works. Despite this mismatch, the international copyright law (*Berne Convention*, *TRIPS Agreement* and other initiatives) mandates both developed and developing countries to equally uphold uniform or near-uniform copyright protection standards in their domestic copyright laws. These “one-size-fits-all” copyright protection standards prescribed by international copyright law have created severe problems and issues for developing countries like Sri Lanka, particularly in the context of ensuring and promoting access to knowledge in the context of education.

One of the primary purposes of this paper is to examine the extent to which copyright law of Sri Lanka, which conforms with the obligations of the *Berne Convention* and the *TRIPS Agreement*, acts as a barrier to people’s access to knowledge in the context of education, which is also recognized as an implied fundamental right guaranteed by the *Constitution of Sri Lanka*. As this paper will argue and point out, while the copyright law of a country needs to strike a balance between the interests of those who create intellectual works (copyright owners) on the one hand and, the interests of those who use those intellectual works (users of copyright protected works) on the other, the present copyright law of Sri Lanka, which has been enacted to uphold the international copyright obligations imposed by the *TRIPS Agreement* and the *Berne Convention*, has failed to strike this balance, particularly in view of the fact that the standards of protection therein have been set at a higher level without providing commensurate exceptions to copyright owners’ rights.

This paper also aims to explore the possibilities of reforming the present copyright law of Sri Lanka in a manner that would ensure and promote access to knowledge in the context of education while complying with Sri Lanka’s international obligations relating to copyright at the same time, since it is unlikely that Sri Lanka would be able to do away with these obligations in view of the country’s trade and other economic interests.

**Corinne TAN, Nanyang Business School, Nanyang Technological University**

*Copyright, Interrupted: Building Trust in Blockchain-Based Content Platforms*

Are blockchains the solution to the disruption of copyright on digital content platforms? While the fundamental features of blockchains, being permanence, transparency and their quality of being decentralized records, may appear suited to fill the gaps left by copyright laws and alleviate some problems for content owners, there are challenges to their use. I argue in this article that trust is a necessary element for blockchain-based content platforms to fulfil their revolutionary potential in the copyright realm.

**Ufuk TEKIN, Faculty of Law, Eskişehir Osmangazi University**

*Invalidity of Geographical Indications under Turkish Law*

Turkish industrial property law was regulated by decree-laws until 2017. From then on industrial property legislation has been amended in order to take into consideration the current developments in European law, and these decree laws were combined under the Industrial Property Code no. 6769 (IPC). As it is stated in the general preamble of IPC, it is necessary to revise the legislation on the protection of the geographical indications in a way to bring solutions to the developments in the international arena and the problems encountered in practice. In the enactment of the regulations of IPC on geographical indications, in addition to the international agreements that Turkey is obliged to implement [e.g. The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)] and the EU Regulation No 1151/2012 on Quality Schemes for Agricultural Products and Foodstuffs has been taken as a model. Legislation regarding geographical indications prepared under the effect of these international regulations is regulated between the art. 33-54 of IPC. In the presence of certain conditions, the invalidity, which is explained as the legal protection provided by this Code for the registered geographical sign shall be deemed not to have arisen, is regulated in the art. 50 and 51 of IPC. In this article, invalidity request, grounds for invalidity and effects of invalidity on geographical indications will be explained under Turkish law with the light of court decisions and aforementioned international regulations about geographical indications.

**Bessy TITUS and Indu GOVIND, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum**

*Journey of MedTech from Lab to Market*

India's medical device market is heavily import dependent and around 70-90 % of the critical medical devices are imported. Based on this statistics, EEPC India-Deloitte report recommends India to aim for import substitution of the medical devices. Indian medical device manufacturing sector is still in its nascent stage and government is taking up new initiatives to make the sector innovation dependent rather than import dependent. But indigenous medical technology or device development is quite a tedious process as it involves many stake holders and require infrastructure and funding, to support the research activity. Researchers often face challenges in translating their innovation into a product that has the potential to replace the imported competitors. There are a lot of innovative technologies from research institute and universities that are lost in the journey from lab to the market. This paper is an overview of the journey of medical devices from ideas/concept stage to design, validation and finally to commercialization and how to manage all these steps efficiently and effectively as possible.

**Avin TIWARI, Rajiv Gandhi School of Intellectual Property Law, Indian Institute of Technology, Kharagpur**

*Intellectual Property in Cross Border Mergers and Acquisitions: Issues and Opportunities*

Intellectual property (IP) is a highly valued, divisible, intangible category of property and one of the main assets that a corporation owns today. In nearly every type of corporate transaction, intellectual property is making its value felt. It is, therefore, imperative to be aware of how intellectual property fits into corporate transactions. In particular, IP has become a significant value driver, especially for cross-border mergers and acquisitions (CBM&As). Unlocking IP value is a key component of any company sale, as it differentiates a business from its competitors, provides a major revenue stream through licensing agreements, attracts new buyers, forms a key part of an enterprise's marketing activities, and even serve as collateral when securing loans. The cruciality of IP for a prosperous cross border M&A should not be overstated, as it comprises of myriad intellectual property issue and opportunities like due diligence and IP Valuation to name a few.

Cross-border mergers and acquisitions, by way of consolidating multiples corporate entities into one or one company taking control of the other, lead a corporate legal entity to either increase or decrease in size. Either way, both entails negotiating deals and exchanging the properties and rights of others, which in cross-border mergers and acquisitions afford special emphasis to IP issues and opportunities.

The author makes a qualitative attempt in this doctrinal work to value the importance of IP in cross-border mergers and acquisitions by reviewing the function, effects and impacts of IP on each stage of the cross-border M&A process, along with the issues and opportunities involved. The author finds, using various economic indicators and estimates that IP is arguably an organization's most valuable asset, essential to fostering innovation and driving economies. IP allows parties to seek cross-border transactions, perhaps to gain a foothold in a new market, to boost worldwide market share and to gain an edge over rivals. In evaluating the specific selling proposals of the target and in assessing whether the target's business model and goods are free of third-party rights and whether there is any room for future IP conflicts, IP is of particular importance. Cross-border M&A activity is increasingly driven by IP. Moreover, acquirers pay higher premiums for companies in countries with better IPR protection.

**Kuhu TIWARI, Niharika Sahoo BHATTACHARYA, Rajiv Gandhi School of IP Law, Indian Institute of Technology, Kharagpur**

*Post-Patent Carry Over Effects of Pharmaceutical Branding: Persuasion or information?*

A patent is a critical asset in the pharmaceutical industry. However, once a drug is off-patent, its commercial exploitation becomes competitive with the emergence of competing, lower-cost generic drugs in the market. At such a phase, during its period of exclusivity, the brands in the form of trademark play a crucial role in acquiring a strong reputation through marketing. The trademark as a means of differentiation helps the consumers in identifying a product as per the need. It has often been said that brands are the true expression of democracy because they thrive in situations where choice is unrestricted and 'perfect competition' exists. However, in the pharmaceutical industry, the end-consumers, in the absence of technical ability to understand, get orchestrated in purchasing the branded drug available at a higher price, subsequently restricting the market for generic drugs. The manufacturers utilize the trademarks to extend the exclusive monopoly of branded pharmaceuticals in the market even after the expiration of the patent protection.

*Inter alia*, a manufacture's ability to maintain the monopoly in the post-patent phase, can be attributed to the physicians' brand loyalty towards the trademark acquired through continuous and prolonged use during the period of patent protection. Also, unlike branded drugs, the absence of economic incentives to prescribe a cheaper alternative boosts the role of brand loyalty. In this case, the end-consumers who are more susceptible and receptive to the price considerations lack the technical ability to understand. Similarly, for over the counter (OTC) drugs, the strategy of marketing and advertising, the brand has become a common practice in the pharmaceutical industry, which captures consumers' minds. Another common technique is 'second brand strategy,' where the two versions of the same product are being sold in the same market to treat the same condition, albeit as different brands with a substantial price differential by one manufacturer—for instance, Pfizer's introduction of a chemically identical version of Viagra as Avigra. The success of AstraZeneca's marketing strategy is another example, where the company, after popularising the patented drug Prilosec as 'purple pill' using trade dress, later launched another brand as Nexium, an enhanced version of the drug and reallocated Prilosec's trade-dress to its newly patented medication. These strategies demonstrate that branded drug manufacturers prefer to avoid the licensing of drugs under different brand names during the patent period. This gives the manufacturer leverage to manipulate consumers into buying a costlier version of the drug, inhibiting the market for generic competition, ultimately dipping the healthcare market's efficiency. The paper executes a comparative, interdisciplinary exploration of the pharmaceutical industry's licensing framework, following the trademark and patent law regime. It also dwells into the applicability of competition law provisions in different jurisdictions like the United States (US) and India, where the pharmaceutical market structures are substantially different. We try to put a comparative picture of the implications of such a branding strategy.

**Mahima TRIPATHI and Niharika S BHATTACHARYA, Rajiv Gandhi School of Intellectual Property Law, Indian Institute of Technology, Kharagpur**

*An Asian Perspective on IP and EST: Challenges and Opportunities*

Environmentally Sound Technologies (ESTs) are the technologies having significantly improved environmental performance potential relative to other technologies. United Nations Agenda 21 developed by UN Conference on Environmental Development [UNCED], following Rio Conference, 1992 defined ESTs as technologies protecting the environment, which are less polluting, use resources in a sustainable manner, recycle more of their wastes and products, and handle all residual wastes in a more environmentally acceptable way than the technologies for which they are substitutes. The impact of intellectual property in relation to ESTs is important as it majorly dictates the way through which countries can achieve the Sustainable Development Goals. Intellectual properties directly or indirectly affect the development and diffusion of ESTs. Many a times ESTs are guarded by patents and other forms of intellectual property rights which may create certain challenges for the effective transfer of such ESTs.

ESTs are complex technologies protected by different types of IPRs mostly by Patents. The Montreal Protocol, for ozone layer depletion, witnessed most of the technology developer countries went for patenting their technology. So far it is observed that the innovations of ESTs are generally concentrated in developed countries. Most of the inventions in climate-mitigation technology are concentrated in the top 12 countries out of which nine are OECD (Organization for Economic Co-operation and Development) countries, and three are emerging countries like China, Russia, Brazil. In recent times, the developing countries are the victims of the global climate crisis and confronted with the challenges of promoting a fast-growing economy with fewer mature capital markets and inferior technologies. So, countries are focusing more on ESTs and effective transfer of related technologies. There are instances when the IPRs that too particularly patents

acts as a hurdle for diffusion of ESTs. IPRs are negative rights and create monopoly in the market. There are instances when IPR owner refuses to share his technology and also the know-how. ESTs being the goods and services which is of greater importance not only to any particular nation but to the entire world needs special attention for matters related to it.

In relation to ESTs and the IPRs two thoughts or approach are can be seen. One supports that IPRs are barriers for ESTs diffusion. This approach is supported by most of the developing countries. They argue that, the strict laws or compliances because of which ESTs diffusion is affected should be considered properly. Towards achieving the sustainable development goals, developing nations are adopting national policies and regional cooperation for creation and diffusion of ESTs. Also, TRIPs have also incorporated various provisions for the promotion, protection and diffusion of inventions or technologies. TRIPS Agreement also emphasizes that developed nations should aid and disseminate the technologies and the know-how to the developing or least developed countries to create a balance. However, the effective dissemination of ESTs have not been achieved so far. In this context, this study focuses on the Asian countries and their endeavors towards IP protection, technology transfer of ESTs. This paper will further try to analyze and summarize the major challenges and policies in the development and dissemination of ESTs among the Asian countries.

**Mahatab UDDIN and Saleemul HUQ, International Centre for Climate Change and Development, Independent University of Bangladesh**

*Title: Protecting Soft Adaptation Technologies under Intellectual Property Rights system*

Technology can be both ‘hard’ and ‘soft’ in nature. While both kinds of technologies are applicable for climate change mitigation technologies, the latter kind is more appropriate for climate change adaptation. This is because unlike mitigation technologies, most of the adaptation methods involve some form of technology that broadly cannot be considered as mere product or equipment. Instead, these technologies are broadly considered as various forms of ‘knowledge’ or ‘know-how’. While the mostly ‘product’ or ‘tool’ based ‘hard’ kinds of mitigation technologies are protected by intellectual property rights (IPRs) and brings financial benefit to the IPRs holders, typically ‘knowledge’ or ‘information’ based ‘soft’ kinds of adaptation technologies are vastly considered as ‘public good’, which are not protected by IPRs, nor bring any financial profit for the knowledge generators or the original knowledge holders. This paper assesses whether these soft kind of ‘knowledge’ or ‘know-how’ climate change adaptation technologies can be brought under modern IPRs system as such considered as commercially valuable. The study suggests some modification of existing system, where necessary. Finally, the study suggests introducing a ‘*sui generis*’ protection for community knowledge or traditional knowledge adaptation technologies.

**Szu-Yuan (John) WANG, Graduate Institute for Intellectual Property and Communication Technology Law, Shih Hsin University**

*An Analytical Study of the Interplay between Copyright Law and Sui Generis Indigenous Cultural Expressions Protection Law*

This work-in-progress research is an attempt to explore an emerging conundrum: what will happen when a jurisdiction has two copyright laws, one for everyone and one for indigenous peoples, coexisting and operating side by side? Conventional copyright law regulates the ownership and exercise of rights in creative



works. It vests both economic rights and moral rights in the creators of works of authorship. Economic rights are a collection of time-limited and alienable exclusive rights, including the right to produce copies, to make derivative works, to publicly perform, to communicate to the public, and to distribute copies to the public. These economic rights are not absolute. Copyright law imposes a variety of exceptions and limitations on the scope of rights. Moral rights encompass the author's right to be recognized as the creator of the work, right to disclose the work to the public, and right to prevent alterations to the work that are deleterious to the creator's reputation. Moral rights are perpetual and inalienable rights. Justifications for copyright range from natural rights of the author to utilitarian perspective that such rights will incentivize the creation of works for the greater benefit of society. It is also established that copyright should be limited and granted only where necessary because it imposes social costs. "The Protection Act for Traditional Intellectual Creations of Indigenous Peoples" is a *sui generis* copyright law (or rights modelled on copyright) enacted to "promote the cultural development of indigenous peoples". It creates "exclusive right to use intellectual creations", which are perpetual and inalienable rights over property rights and moral rights over any "expression of the cultural achievements of indigenous peoples". The "exclusive right to use intellectual creations" covers both property rights and moral rights. These rights are acquired by registration. By February 2021, 76 "intellectual creations" have been registered. As collective rights, only a people, a tribe or the indigenous peoples as a whole can be the owner. Very few exceptions are imposed to limit the scope of the right. The justification for such rights is unclear. Their benefits and costs remain to be explored.

**Afzal WANI, University School of Law and Legal Studies, Guru Gobind Singh Indraprastha University**

*Child Creators and Innovators: Positioning Next Generations to IPR Culture and Better and Better Civilisation*

Many toddlers proved themselves as stars in the world of Bollywood and Hollywood. From a 6-year-old Imran Khan to a 4-year-old Sridevi and even a 14-month-old Aftab Shivdasani, they have all displayed their talent and professionalism right from the time they were toddlers. But there is another side of the story also. Many unknown child artisans and weavers also work all the day, as elders do, in their small spaces making beautifully self-designed toys, pieces of decoration, attractive garments, objects of worship and aesthetic crockery, pottery and artifacts, though living undignified life in half garments with half meals. They, certainly with naturally endowed smart brains, have no 'luck' to wear even the smallest 'turban' or 'ceremonial cap' of primary/elementary education. I see these unattended gems often in certain localities of Delhi and ceaselessly on certain roads of this capital town of largest democracy of the world. Some of them are excellent natural performers, musicians and singers, certainly then to perish/not to prosper into meaningful adolescence or life after. Their carrier as toddlers in self-employment or child worker may definitely end in beggary, child marriage and a kind of bonded labor. The childhood is lost, the brain abrades, and talent croaks, the creativity mutters, the vision hazes, the potential mumbles, and the 'garden' around gets filled with emaciated blossoms. The most unfortunate are the mothers, who had given them birth, have failed and the nation is disappointed. Certainly, the humanity remains drenched in unwiped tears. Important, *inter alia*, is that why governance systems fail to convert their young talent into knowledge, wealth and potential for contribution and service, contra to what is actually happening. Can anyone be complacent to the adversity? Unfortunately, the generality is so in the mother land. Can anyone appreciate the beauty and genuine wealth in the potential child performers and producers and develop a viable system to make it possible without *babu* culture and street goon-exploitation? IPR is a big answer, if understood in real context beyond the ordinary inane investor's perspective. The humanity has to move ahead into real realization of the potential of IPR for children and much more.

**Kasim Musa WAZIRI and Gwom SOLOMON, Faculty of Law, University of Abuja**

*Disclosure of Origin in Patent Applications and Protection of Biodiversity: Indonesia and Nigeria in Perspective*

The protection of biodiversity within the world's national territorial boundaries, especially in developing countries, has gained so much momentum owing to threats depletion and of biopiracy by researchers, powerful multinationals and pharmaceutical manufacturing companies. This has led developing countries like Indonesia and Nigeria, which are parties to the Convention on Biodiversity to develop their national biodiversity strategy on biodiversity protection. One of the methods adopted nationally for the conservation of biodiversity is in the application for the grant of patents by inventors, where inventors submit a written description of the invention that enables a person skilled in the relevant technical field to both make and use the invention. This paper aims to compare and contrast the protection of biodiversity in the Indonesian and Nigerian patent systems to understand their different approaches or the lack thereof. The paper employs the doctrinal approach in discussions. It finds that Indonesia is one of the countries that protect its biodiversity through a requirement for the disclosure of origin of the source of genetic resources and associated traditional knowledge in its local patent applications. Nigeria has no such provision in its local patent regime. Even though the Nigerian and Indonesian patent systems have British origins, they have adopted different patent practice methods. The paper further recommends a need for the Nigerian patent regime to adopt the Indonesian requirements regarding the acquisition of genetic material in patent applications in its local patent regime. It finally concludes that while the Indonesian patent regime on patent applications has, in no small extent, curbed biopiracy and conserved the country's biodiversity, the Nigerian patent system has not done so, and therefore has a long way to go.

**Ryan WHALEN, Sourav MEDYA and Brian UZZI, Faculty of Law, National University of Singapore**

*Predicting Patentability*

Science becomes a tangible solution to problems through patenting. Thus, the process we used to distinguish between patentable and unpatentable inventions is the bedrock of both the patent system and innovation policy more generally. With the explosive growth and extreme specialization of types of technology there has been a recognition that the 200-year-old review process may itself be improved through new technology. Indeed, the process has become notorious for its luck-of-draw unpredictability and costliness that overlooks potentially valuable innovations and reduces incentives to patent. Yet, despite the growth and diversification of technology, the process continues to be a subjective one. Despite the critical role of patenting in converting ideas into actionable technologies, the patent review process remains an essentially subjective and qualitative process that is notorious for its unpredictability, costliness, and drag on innovation. We study the patent review process from an artificial intelligence (AI) perspective. To explore AI's potential role in quantifying and objectifying the innovation process, we used new and comprehensive data on almost four million patent applications and their patent office review decisions to specify an AI model and test its accuracy on a half million out-of-sample applications.

We report three key findings. First, AI makes patentability assessments that closely agree with human experts at levels that are 30% better than simpler statistical models. Second, AI provides two additional predictive benefits that human decision-makers have been unable to make with the current process: (a) accurate predictions of an invention's future citation impact at the time of its application, a critical finding for estimating a technology's future influence, and (b) confident estimates of the length of the patent

examination process, speeding up discovery time and bench to bedside inventions. Third, we discover that the AI model's advantages appear to come from its capacity to exceed the capacity of human patent examiners by ingesting millions of patent documents, and making linear and non-linear combinations amongst them. These findings put us on the doorstep of faster discoveries in health and medicine, provide new insights into the highest impact inventions of the future, and a possible means for reallocating scarce human expertise to other productive innovative purposes.

**Padmaja WIJESOORIYA, General Sir John Kotelawala Defence University**

*Recognizing Medicinal Plants as Traditional Knowledge: A Critical Analysis of Sri Lankan Endemic Medicinal Plants*

Wealthy pharmaceutical corporations in the world tapped into the Traditional Medicinal Knowledge (TMK) owned by the various indigenous communities in the world. In the veil of protection of bioprospecting, these pharmaceutical corporations are damaging the biodiversity in the developing countries with the unconditional support of developed countries. Sri Lanka is an excellent example for such biodiversity damage in the South Asian region. Complying with the international agreements which welcomes the bio-theft, Sri Lanka still waiting to enact a proper legal framework to protect her biodiversity. Protecting TMK is the newest debate that has emerged at the international level after the Convention on Biological Diversity (CBD) at the earth summit in 1992. CBD took many noticeable steps to protect biological diversity in the world. However, the CBD wealthy nations have agreed for some restrictions on TMK by enacting the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement), 1994 by the World Intellectual Property Organization (WIPO). WIPO made a timeline for developing countries to change their laws related to intellectual property rights (IPR) complying with the TRIPS Agreement. This step is harmful for the protection of biological diversity even if the developing countries have ratified the CBD. Therefore, a debate is underway at the international level to find possible ways to protect biological diversity from bio-piracy. As a protective method, WIPO introduced two different systems known as positive protection and defensive protection. The positive protection welcomes the written legal framework whereas the defensive protection welcomes the defensive strategies including the use of documented TMK to preclude, oppose or invalidate the patents already exist. Therefore, it is topical to discuss the appropriate system to protect TMK in the world, to gain insights that would be relevant to understand the future legal framework for Sri Lanka.

**Joy Y. XIANG, Peking University School of Transnational Law**

*IP Licensing, Competition Law, and Access to Essential Technologies*

This project intends to examine whether and how competition law may be used to calibrate the enforcement of IP rights – e.g., IP licensing – so to facilitate needed access to essential technologies, especially by developing countries. The WTO TRIPS Agreement grants member countries the power to adopt appropriate measures to prevent practices such as abuse of intellectual property rights by right holders that unreasonably restrain trade or adversely affect international technology transfer. Competition law is one of such measures. The international community has explored using competition law for accessing to essential pharmaceutical technologies. For example, in 2014, the United Nations Development Programme provided a report guiding low- and middle-income countries in using competition law to promote access to health technologies. In 2018, the WTO TRIPS Council discussed in-depth on promoting public health through competition law and

policy. It seems not much attention has been given in using competition law to promote access to essential clean technologies and essential digital platform technologies.

Part I of the project discusses the conceptual linkages among IP licensing, access to essential technologies, and competition law. Part II of the project examines the current reality for access to essential pharmaceutical, environmentally-friendly, and digital platform technologies. Part III of the project, also the intended contribution of the project, will explore whether and how competition law may be used to enhance access to essential technologies, particularly by developing countries, which likely need to overcome particular hurdles.

**Monika YADAV, ICFAI Law School, The ICFAI University Jaipur**

*Social Media and its Implications on Intellectual Property Rights*

The internet system is spreading at a faster pace and indeed engulfing the entire of the globe. Ideas always change one's life. We are indeed living within the patent age of new inventions and concepts. In fact, world has been evolving and revolutionizing itself into a way accelerating technologically advanced zone. Advent of technology has made the planet a matter of just click or one touch—the Internet. Internet has even infringed someone's personal right. Internet, broadly the Social Media may be a term coined to depict online interaction of individual and exchange of user information's and more so content. The very existence of social networking applications have sometimes mollified intentions which merit regulation as if there's a society, there has got to be some rules and regulations need stringent enforcement. It is true for these internet societies too. Property Rights (IPR) have well been recognized globally together powerful tool of fundamental legal provision. For protecting one's rights. Broadly the main IPR issues with regards to Social Media are Patent, Trademark, copyright, secret and Defamation. One among the basic issues in internet is determining the border between private use and public se.

The copyright law is that the most potent instrument effective for tackling the IPR issues on the web. In Indian context copyright Act, originally enacted in 1957, was comprehensively amended in 1994. With these amendments it's become a forward looking piece of legislation and therefore the general opinion is that the amended Act is capable of facing the copyright challenges of digital technologies including those of Internet. The IPR Act has adapted itself to the digital era. It, however, depends on how case laws develop when IPR problems with Internet are taken to the court. Like all copyright laws of the planet. The Indian copyright Act also makes a distinction between reproducing for public use and personal use. They're Internet challenges and IPR which are yet to earn a focused attention in resolving the difficulty in all earnest endeavors due to the complex matrix involved. The fraternity of law features a great role to play in formulating most adaptive laws during a synergic dimension involving rights of individuals, social justice and order that deserve further research. There has been an inherent connection between Internet Challenges and IPR issues. Social and legal due diligences are the world that require factorization before resolving the difficulty during a social and legal platform.

This paper making an effort to deal with the perceptions through extensive literature and secondary research work like frame-working of the difficulty of concern, impact assessment studies of social media, insight to the varied provisions and problems with IPR, role of legal fraternity and therefore the way forward and recommendation.

*Is Artificial Intelligence an Author?*

Artificial intelligence (“AI”) now infiltrates our culture. From Apple’s Siri to Tesla’s auto-driving car and Netflix’s film offering service, we live in a world of AI goods. The advent of AI-powered technologies increasingly affects people’s life across the globe. AI does not come without any problems. The upsurge of these novel technologies is at the center of public debate and policy considerations. Some segments of the society have vocally raised their concerns: “robots are taking over”. As a tool for productivity and cost-efficiency, AI also shapes our economy and welfare. AI-generated works are becoming more popular. Copyright industries are amongst them that AI profoundly impacts. AI tools and devices are currently being used in these industries to create poems, novels, news texts, computer programs and games, music, paintings, fashion designs, films and even musicals. When we talk about AI-generated works, we instead focus on the fruits of innovation -easily produced works and more fulfilment of customer expectations- without paying heed to who the author is in these works. Authors invest a lot of talent, time, and finances into creating their works. AI accelerates this time-consuming and labor-intensive process.

An AI device’s ability to generate copyright works raises the question of who will own the intellectual property rights over them. Will it be the user who hires or contracts with the AI programmer? Will it be the programmer? Or will it be the AI itself? Or will it be a joint work? This study will essentially look at these questions. It will begin with the question of what AI is. Then it will explore the legal framework on the authorship in the EU, the UK, the USA and Turkey. The possible solutions for the identification of the authorship over AI-generated works will be next topic to discuss. Later, this study will look inside the AI technologies to examine whether they are autonomous creative agents. A policy proposal will next be put forward to suggest that AI-generated works be protected under copyright laws through devising of legal norm. And this will be built upon a three-step test to single out the human author(s) from the relevant actors around the AI technologies.

**Dai YOKOMIZO, Graduate School of Law, Nagoya University**

*Digital Platform and Conflict of Laws*

The development of a digital platform, which is a digital infrastructure enabling the interaction between several groups, has brought different business models such as a platform as an advertisement just targeted towards potential clients, a matching platform, crowd-working, and social network and online-video game. Whereas the cross-border nature of the Internet has already brought challenges for conflict of laws (private international law) such as the difficulty of finding the connection between an act on the Internet to a certain territory for the determination of the international adjudicatory jurisdiction and the applicable law, these business models through the digital platform give rise to additional difficulties. For example, since individuals participate in activities on the digital platform not only as consumers but also providers of goods and services, there is more room for protecting weaker parties in conflict of laws as well as in substantive law. However, a question arises as to whether existing conflict-of-laws rules mainly focusing on consumers and employees for the protection of weaker parties is sufficient to protect weaker parties in the context of platform business. Should we consider new rules relating to the protection of weaker parties on the platform? In this presentation, some important conflict-of-laws issues with regard to digital platform will be discussed, including liability of a platformer with regard to a cross-border transaction of IP infringing products.

**Helen YU, Faculty of Law, University of Copenhagen**

*'The Good, The Bad and The Ugly': Implications of Intellectual Property on Publicly Funded Innovations to Combat COVID-19*

In response to the COVID-19 pandemic, significant public funds have been invested worldwide into the research and development of pharmaceutical products to combat the novel coronavirus. For example, €16 billion in pledges from international donors worldwide has been used to fund R&D to develop diagnostics, treatments, and vaccines for COVID-19. Furthermore, in the spirit of openness, unity, and global cooperation, the WHO launched the COVID-19 health technology access pool (C-TAP), a voluntary initiative to support rapid collaborative research and development efforts by removing legal barriers to existing or new innovations to enable the sharing of available knowledge.

The WHO also launched the Solidarity Trial as an international collaborative clinical trial effort to rapidly assess promising treatment options by enrolling patients in one single randomized trial, thereby reducing the time for clinical trials. As new innovations approach market readiness and the prospects of commercialization become a reality, intellectual property (IP) positions are being taken, affecting global access to much needed medical solutions. Traditionally, IP rights have been justified in the pharmaceutical sector because of the time and cost of drug discovery and development. However, if the cost of research associated with COVID-19 related innovations have largely been subsidized by the public through public research grants, and the time for development has been significantly reduced through open and collaborative efforts such as C-TAP and the Solidarity Trials, should traditional IP rights be asserted on innovations that in reality have already been paid for by the public?

In response to a global pandemic, there must be a clear legal and regulatory framework informed by policy objectives, such as principles of 'responsible research and innovation' and 'global public good' to ensure that outcomes of publicly funded collaborative efforts can ultimately reach the public. This would require pharmaceutical companies to permit worldwide production while still being remunerated with fair and reasonable royalties without giving up their IP rights. At the WHO's 2020 World Health Assembly, the concept of "vaccine nationalism" was discussed to describe the growing trend of countries prioritizing the health interests of their own citizens at the expense of others. This suggests that in addition to private interests arising from IP rights, the fight for access can get ugly particularly for countries that opted out of issuing a compulsory license for importing patent protected treatments manufactured elsewhere. However, without any access and production conditions associated with the use of publicly funded efforts, worldwide supplies to medical solutions that benefited from these public health initiatives to respond rapidly to the pandemic can be frustrated. This paper proposes a legal framework that needs to be in place to mitigate the very real access and availability problems we will soon be facing.

**S.H. YULIA, Faculty of Law, Malikussaleh University**

*The Potential for the Protection of the Aceh's Community Handcraft as a Geographic Indication in Indonesia*

Geographical indications indicate the place of origin from which a product derive its characteristics, which are influenced by natural factor or human factor, or a combination of the two. Indonesia had protection of GIs in Law of Number 11 Year 2016 concerning Trade Mark and Geographical Indication. The protection of GIs given after registration to General Directorate of Intellectual Property Rights was confirmed on the

Government Regulations of Number 51 Year 2007 concerning Geographical Indication. The product was registered as GI, but in between, are Gayo Coffee, Kintamani Coffee, Salak Pondoh, Jepara Carving Furniture, Aceh Nilam Oil, Jeruk Keprok Gayo. Handicraft as GIs who is affected human factor, including Aceh's handicraft. This article analyses the protection of Aceh's handicraft as GIs. In Indonesia, laws protect GIs by Sui Generis. Therefore, Aceh's handicraft as society creativity has potential protection under GIs.

**Mahua ZAHUR, Department of Law, University of Dhaka**

*'Encouraging innovation' and 'Ensuring access to medicine' vis-a-vis 'Economic graduation': An overview of the future pharma patent regime of Bangladesh*

Bangladesh, under the agenda of UN Sustainable Development Goal, has committed to ensure access to affordable medicine to its citizens by 2030. To achieve this, Bangladesh has built a robust generic pharmaceutical industry which produces medicines in affordable prices. Moreover, Bangladesh now has the capacity to export medicines in other economically vulnerable countries. This capacity is achieved by using the concession granted to Bangladesh for its LDC status by World Trade Organization. For this concession, Bangladesh has no obligation to grant patent for pharmaceutical innovation. This position has helped the growth of generic pharmaceutical industries ensuring access to medicine in affordable price. However, new economic development of Bangladesh in last few years has brought the possibility of its graduation from LDC to a middle-income country by 2024/2025. This graduation will bring the possibility of withdrawal of the concession enjoyed by Bangladesh in pharmaceutical IP regime. Would that be a case, Bangladesh will have to grant IP protection to pharmaceutical innovation under TRIPs obligation.

The paper puts forward the view that, this situation might possibly block the growth of generic pharmaceutical industries which consequently would interfere with access to medicine in affordable price. Hence, the achievement of SDG goal of universal health coverage will be jeopardized. The paper holds the opinion that the crafting of a patent law using TRIPs flexibility would be a practical solution. In this regard the paper will also shed light on TRIPs provisions like, principle of exhaustion, compulsory licensing scheme etc. The paper will also examine provisions from different jurisdiction which help prevent the 'ever greening' of pharmaceutical patent. The paper further opines that, proper implementation of newly enacted competition law of Bangladesh may also ensure affordable medicine by keeping healthy competition in pharmaceutical sectors. The paper draws the conclusion that, a well-crafted pharmaceutical patent regime in Bangladesh can ensure affordable medicines for its citizens and will create a congenial environment for local pharmaceutical innovation.

**Chutian ZHANG, Faculty of Law, University of Exeter**

*The Protection of Traditional Chinese Medicine*

A broad range of organisations and countries from governments to the World Intellectual Property Organization (WIPO) have expressed concern about the protection of traditional medicine (TM). One aspect of this is that the significance of TM has become prominent. Restricted by economic factors, low- and middle-income countries and regions are highly dependent on TM instead of expensive modern medicines and patented medicines. And even in developed countries, due to cultural and social factors, TM has not been completely replaced as expected, and there is even a trend of revival. In addition, the advantages of TM in the treatment of chronic diseases have also been gradually realized by the public. On the other hand,

the increasing awareness of protecting intellectual property rights has greatly enhanced the determination of governments to protect traditional knowledge (TK) and TM. Some countries, especially those rich in TM and genetic resources, are calling for prior informed consent and profit sharing for the commercialization of local TM. Some even consider that TM is the raw materials for some new drug development, and further propose to share royalties with pharmaceutical companies.

However, at least internationally, the protection of TM has not achieved substantial results. Since 2000, the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC) has not been successful in enacting an obligatory agreement for TM. One of the reasons is the complexity of the content within TM, which embodies the dual attributes of TK and medicine. If TM is simply protected as a typical TK, the protection might not be enough to cover its medical property in sustaining the demands of the pharmaceutical industries, and WIPO had not yet introduced a clear TK treaty. Conversely, patent rights, which have developed into a predominant measure for TM protection, have demonstrated an incompatibility with TM. Another obstruction of TM protection comes from pharmaceutical companies. They worry that the cost and efficiency of R&D will be compromised if there is an international agreement to protect TM. Besides, some researchers are wary that enhancing the protection of TM may be at the expense of the existing patent system.

Taking traditional Chinese medicine (TCM) as the main research object of TM protection has obvious advantages. (1) TCM is widely spread and practised, which means that the protection of TCM has a large number of stakeholders and a broad market. (2) TCM has thousands of documented literature, which means TCM protection is convenient for research and easy to discuss the related cases and issues. This presentation will briefly analyze the current status of TCM protection, and the issues and difficulties of TCM protection. It will outline the research project which investigates the incompatibility between the patent system and the protection of TCM and related TM, and analyses the reasons to explore new methods to protect TCM and TM.

**ZHANG Naigen, Faculty of Law, Fudan University**

*The Issues of International Law about Public Health relating to Intellectual Property*

The public health is highly significant for the common interests of mankind. The norms of international law about public health relating to intellectual property were firstly provided by the Article 8 of the Agreement on Trade-Related Aspects of Intellectual Property Rights as the part of general principles. Those norms were interpreted with limited scope by the dispute settlement of the World Trade Organization in respects of the public health and intellectual property, and promoted by the relevant declaration and amendment of the related agreement in considering the needs of developing and least developed countries for accessibility and affordability of medicines. However, in general, it is still very limited in the norms of international law about public health relating to intellectual property.

Facing great challenge against the COVID-19 pandemic, China proposed to build a global community of health for all by strengthening the rules of international law. By reviewing the origin and evolution of the issues of international law about public health relating to intellectual property, it might be better to understand the lack of the norms of applicable international laws. Accordingly, the research on the problems of intellectual property in international cooperation against COVID-19 will be helpful to improve the relevant rules of international law.



**Keshva NAND, ICAI Law School, ICAI University Jaipur**

*The Protection of Intellectual Property Rights in Cyberspace: A Critical Study with Special Reference to Indian Legal Framework*

The virtual space where all communications take place is often referred as “Cyberspace”. Cyberspace cannot be spatially located. It is made of intangible objects, such as social networks, websites, blog, email accounts, personal information. Cyberspace is the electronic medium of computer networks, where individuals can interact to exchange ideas, share information, conduct business, create artistic media, and engage in political discussions etc. Cyberspace is a new concept and is the common heritage of mankind but unfortunately some people misuse the common heritage and therefore, it is also a new frontier of different type of crimes. The digital means are prone mischievous elements and unfortunately misused by them for fulfilling their illegal purposes. New inventions and discoveries have widened the scientific scope as well as brought the new challenges for legal world. In absence of any geographical barrier to commit cyber-crimes there is no of uniform international legal framework to cope with cyber criminals. These crimes are like as the attack on the secured personal information of individuals, corporations, or governments. These types of attacks do not take place on a physical body but on the personal or corporate virtual body. Over the past two decades, technology has surged into businesses, communities, and the lives of individuals, altering the way that people communicate, study, work, and interact. People in various parts of the world can communicate in real time on a variety of devices such as cell phones, tablets or computers. In a few seconds, a photo, video, text message, or email which is shared by a single individual may be viewed by hundreds or thousands of users and may go viral. Despite such a great influence of computers and internet on day-to-day lives, the fact remains that only a fraction of people know what computer and internet is all about? There is a need of systematic study which elaborately discusses the basic concepts of crime, cyber-crime, cyberspace and meaning, types, characteristics, major components of cyber-crime and the laws to protect specifically intellectual property rights in the cyberspace. In this paper the author has tried to delt with the protection of intellectual property rights which has though reached to the maturity stage but many question are yet to be answered .Thus a general overview of trade mark and copyright protection ,followed by examination of the infringing act of copying and trade marks in the cyberspace , the techno-legal protection measures used to access control ,examining situations after The Trade Marks Act, The Copyright Act, Information Technology Act, and the WIPO. The legal backing for the technical measures, concludes that the techno-legal measures used to access control mechanism may be appropriate answer in the light of piracy menace but whether it is on the cost of doctrine passing off, fair use or rights of user, if so then precautions have to be taken to balance both rights.

**Paula Caroline ZITO, Adelaide Law School, University of Adelaide**

*Geographical Indications: What is Their Worth for Regulating the Connection Between Australian Regional Food and Origin?*

This presentation assesses the value of using a food Geographical Indications (GI) framework to protect the connection between Australian regional food and origin. It analyses the current Australian consumer protection, trade mark and passing off laws that regulate the usage of Australian regional names on food labels to make an origin claim. It identifies their deficiencies and problems resulting from them for Australian regional food producers and the wider Australian food and agrifood industries. It analyses the current regulation of Australian regional names used on wine labels, in the form of wine GIs, and emphasizes the vast differential treatment that exists in the regulation and protection of Australian regional names used

on food labels vis-à-vis on wine labels. Accordingly, this presentation highlights the strong case that exists for the implementation of an Australian food GI framework at a national level. Additionally, this presentation explains that a food GI framework is not only important for the Australian food industry at a national level; it is also crucial at an international level. This is particularly relevant given the negotiations between Australia and the European Union in relation to the *Australian-European Union Free Trade Agreement*. It is also pertinent given that many of Australia's neighbouring countries are looking to trade with countries that protect food GIs pursuant to a dedicated food GI framework.

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