

4th Annual Texas A&M Intellectual Property Scholars Roundtable

FINAL PROGRAM

FRIDAY, OCTOBER 5, 2018

8:30 Breakfast

9:00 Welcoming Remarks

Dean Robert B. Ahdieh, Anthony G. Buzbee Endowed Dean's Chair, Texas A&M

University School of Law

Prof. Peter K. Yu, Director, Center for Law and Intellectual Property, Texas A&M

University School of Law

9:15 Panel 1: Copyright Law

Moderator: Prof. Marshall Leaffer, Indiana University Maurer School of Law

Presenters: Prof. Eric E. Johnson, University of Oklahoma College of Law

"The Misadventure of Copyrighting State Law"

Prof. Amanda Reid, UNC School of Media and Journalism

"Protecting Copyright Fair Use Through Constitutional Fact Doctrine"

Prof. Ned Snow, University of South Carolina School of Law

"Who Decides Fair Use—Judge or Jury?"

10:45 Coffee Break

11:15 Panel 2: International Intellectual Property Law

Moderator: Prof. Peter K. Yu, Texas A&M University School of Law

Presenters: Prof. Daniel C.K. Chow, Michael E. Moritz College of Law, Ohio State University

"U.S. Special 301 Investigation of China's Intellectual Property Violations"

Gail L. Maunula, Ph.D. Candidate, University of Turku Faculty of Law (Finland) "When the Dust Settles: Alternatives to the Intellectual Property Debates on the Data

Producer's Right and Their Implications"

Prof. V.K. Unni, Indian Institute of Management Calcutta (India)

"Agro-Biotech Patenting in India: Lessons from the Monsanto Litigation"

12:45 Lunch

2:00 Panel 3: Cyber Law

Moderator: Prof. Jeff W. Slattery, Texas A&M University School of Law

Presenters: Prof. Sydney Beckman, Duncan School of Law, Lincoln Memorial University

"The Torrential Rain of Torrents and Their Status Under U.S. Copyright Law"

Prof. Bryan H. Choi, Moritz College of Law, Ohio State University

"Crashworthy Code"

3:15 Coffee Break

3:45 Panel 4: Patent Law

Moderator: Prof. Lucas S. Osborn '00, Campbell University School of Law

Presenters: Prof. Samuel F. Ernst, Golden Gate University School of Law

"A Patent Reformist Supreme Court and Its Unearthed Precedent"

Prof. Stefania Fusco, Notre Dame Law School

"Dissemination of Academic Knowledge and Monetization of University Patents"

(with Francesco Lissoni, Catalina Martinez and Valerio Sterzi)

Prof. W. Keith Robinson, Dedman School of Law, Southern Methodist University

"Used Inventions"

Prof. Matthew Sipe, George Washington University Law School "Experts, Generalists, Laypeople—and the Federal Circuit"

5:30 Roundtable Adjourns for the Day

7:00 Dinner for Roundtable Participants

Waters

301 Main Street, Fort Worth

SATURDAY, OCTOBER 6, 2018

9:00 Breakfast

9:30 Panel 5: Trademark Law

Moderator: Prof. Robert Hu, St. Mary's University School of Law

Presenters: Prof. Llewellyn J. Gibbons, University of Toledo College of Law

"The Slippery Road from Tarnishment to Protected Commercial Speech: Unconstitutional

Trademark Dilution in the Light of *Tam*"

Prof. Doris E. Long, John Marshall Law School, Chicago

"Trademark's 'Investment Value' Conundrum"

Prof. Glynn S. Lunney, Jr., Texas A&M University School of Law

"Trade Dress: Functional Is as Functional Does"

11:00 Coffee Break

11:30 Panel 6: Patent Law

Moderator: Prof. Srividhya Ragavan, Texas A&M University School of Law

Presenters: Prof. Tabrez Y. Ebrahim, California Western School of Law

"Automation and Predictive Analytics in Patent Prosecution: USPTO Implications and

Policy"

Prof. Lucas S. Osborn '00, Campbell University School of Law

"Patentable Subject Matter and Digital Manufacturing Files (3D Printing)"

Prof. Joshua Sarnoff, DePaul University College of Law "A New Old Theory of Design Patent Subject Matter"

1:00 Lunch

2:00 Panel 7: Intellectual Property and Innovation

Moderator: Prof. Saurabh Vishnubhakat, Texas A&M University School of Law

Presenters: Prof. Andrew C. Michaels, University of Houston Law Center

"Innovation, Virtual Ideas, and Artificial Legal Thought"

Prof. Emily Michiko Morris, University of Maine School of Law

"Pharmaceutical Exceptionalism"

Prof. Ana Santos Rutschman, Saint Louis University School of Law

"The Vaccine Race in the 21st Century"

3:30 Closing Remarks

Prof. Peter K. Yu, Texas A&M University School of Law

7:00 Dinner for Roundtable Participants

City Club of Fort Worth 301 Commerce Street, Fort Worth

Commentators

- Dr. Daniel Opoku Acquah, Faculty of Law, University of Turku (Finland)
- Prof. Robert Hu, St. Mary's University School of Law
- Prof. Marshall Leaffer, Indiana University Maurer School of Law
- Prof. Srividhya Ragavan, Texas A&M University School of Law
- Prof. Jeff W. Slattery, Texas A&M University School of Law
- Prof. Saurabh Vishnubhakat, Texas A&M University School of Law
- Prof. Wang Zican, Law School, South China University of Technology (China)
- Prof. Peter K. Yu, Texas A&M University School of Law

ABSTRACTS

Prof. Sydney Beckman, Duncan School of Law, Lincoln Memorial University

"The Torrential Rain of Torrents and Their Status Under U.S. Copyright Law"

It is estimated that the music industry alone loses approximately \$12.5 billion dollars each year to piracy. That figure is dwarfed by estimates associated with video piracy which is estimated to have cost the industry approximately \$31.8 billion dollars last year. Authored by a hacker turned law professor, this paper (the first in a series) examines the legalities of the use of digital tools known as Torrents to transfer information between users via the internet. Specifically this paper will examine the legal implications of torrent users from the perspective of those who provide the copyrighted material and will provide a solution which supports the theory that their actions will not violate the United States Copyright Act.

Prof. Bryan H. Choi, Moritz College of Law, Ohio State University

"Crashworthy Code"

Code crashes. Yet for decades, software failures have escaped scrutiny for tort liability. Those halcyon days are numbered: self-driving cars, delivery drones, networked medical devices, and other cyber-physical systems have rekindled interest in understanding how tort law will apply when software errors lead to loss of life or limb.

Even after all this time, however, no consensus has emerged. Many feel strongly that victims should not bear financial responsibility for decisions that are entirely automated, while others fear that cyber-physical manufacturers must be shielded from crushing legal costs if we want such companies to exist at all. Some insist the existing liability regime needs no modernist cure, and that the answer for all new technologies is patience.

This Article observes that no consensus is imminent as long as liability is pegged to a standard of "crashproof" code. The added prospect of cyber-physical injury has not changed the underlying complexities of software development. Imposing damages based on failure to prevent code crashes will not improve software quality, but impede the rollout of cyber physical systems.

This Article offers two lessons from the "crashworthy" doctrine, which was pioneered in the late 1960s in response to a rising epidemic of automobile accidents, and which helped push rapid improvements in crumple zones, seat belts, and other critical safety features. The first is that tort liability can be metered on the basis of mitigation, not just prevention. When code crashes are statistically inevitable, cyber-physical manufacturers may be held to have a duty to provide for safer code crashes, rather than no code crashes at all. Second, a shift to crashworthiness allows both engineers and lawmakers to focus heightened scrutiny on a narrower subset of code, i.e., only those modules necessary to handle fault tolerance. Requiring all code to be perfect is impossible, but demanding some code to be closer to perfect is feasible.

Crashworthy code solves the paralysis of the crashproof mindset, by reframing the software liability problem in terms that engineers can readily undertake.

Prof. Daniel C.K. Chow, Michael E. Moritz College of Law, Ohio State University

"U.S. Special 301 Investigation of China's Intellectual Property Violations"

On August 19, 2017, under directions from President Donald J. Trump, the United States Trade Representative (USTR) initiated an investigation under Section 301 of the Trade Act of 1974 of China's practices related to violations of U.S. intellectual property rights. Section 301 contains a procedure under which the U.S. can file a parallel action in the World Trade Organization (WTO) that will proceed

simultaneously with a Section 301 investigation. Although the U.S. has brought a parallel WTO case in every Section 301 investigation for the past 20 years, in this instance the U.S. decided to proceed under U.S. law only.

In its final report issued on March 18, 2018, the USTR found that China had violated U.S. intellectual property rights through the use of practices that include a technology transfer regime that forces U.S. companies to transfer their intellectual property to Chinese entities; a technology licensing scheme that discriminates against U.S. companies; a scheme to invest in U.S. companies for the purpose of acquiring U.S. intellectual property assets; and a scheme of computer and cyber-enabled intrusions into U.S. computer and commercial networks for the purpose of acquiring U.S. intellectual property assets. As a result of these findings of the Special 301 investigation, the U.S. imposed a punitive 25 percent tariff on \$50 billion worth of goods from China.

Under the rules of the WTO, member countries are allowed to impose trade sanctions on other WTO members only under certain limited circumstances authorized by the WTO. In the case of the Special 301 investigation the U.S. did not follow any of these rules but acted unilaterally to impose sanctions on China. This U.S. unilateral action in defiance of the WTO has provoked China to respond by imposing retaliatory tariffs, also in disregard of WTO rules, on U.S. goods. Unilateral and retaliatory tariffs by the U.S. and China in the area of intellectual property and other areas of trade have led to the brink of a full blown trade war that will cause serious damage to both countries and the global economy for years to come.

Prof. Tabrez Y. Ebrahim, California Western School of Law

"Automation and Predictive Analytics in Patent Prosecution: USPTO Implications and Policy"

Artificial intelligence (A.I.) technological advancements bring automation and predictive analytics into patent prosecution. The information asymmetry between inventors and patent examiners is expanded by A.I., which transforms the inventor-examiner interaction to machine-human interactions. In response to automated patent drafting, automated office action responses, "cloems" (computer-generated word permutations) for defensive patenting, and machine learning guidance (based on constantly updated patent prosecution big data), the USPTO should reevaluate patent examination policy from economics, fairness, time, and transparency perspectives. By conceptualizing the inventor-examiner relationship as a "patenting market," economics principles suggest stronger efficiencies if both inventors and the USPTO have better information in an A.I.-driven market. Based on economics of information and institutional design perspectives, the USPTO should develop a counteracting A.I.-unit in response to A.I.-proliferation.

Prof. Samuel F. Ernst, Golden Gate University School of Law

"A Patent Reformist Supreme Court and Its Unearthed Precedent"

How is it that the Supreme Court, a generalist court, is leading a project of innovation reform in our times while the court of appeals established to encourage innovation is having its precedent stricken down time and again? This decade the Supreme Court has issued far more patent law decisions than in any decade since the passage of the Patent Act of 1952. In doing so, the Supreme Court has overruled the Federal Circuit at a high rate. From 2000 to the present the Supreme Court has vacated or reversed the Federal Circuit in 74% of the patent cases in which it has issued opinions. In most of these cases, the Supreme Court has established rules that favor accused infringers over patent holders, and the result has been an era of patent litigation reform far more impactful than anything Congress has achieved. Scholars have observed that the Supreme Court tends to overrule Federal Circuit decisions that (1) impose rigid legal rules as opposed to flexible standards; (2) adopt special rules for patent law cases rather than applying general principles of law and equity applicable to all federal cases; and/or (3) fail to grant sufficient discretion to the district courts. This paper examines the twenty-eight Supreme Court opinions overruling the Federal Circuit since 2000 to discover that, while these reasons are often invoked, the Supreme Court's most

common rationale is that the Federal Circuit has disregarded or cabined its older precedent from before the 1982 creation of the Federal Circuit, from before the 1952 Patent Act, and even from before the 20th Century. The Court has relied on this rationale in twenty-one of the twenty-eight cases. The paper then seeks to probe beneath the surface level patterns to discover the deeper roots of the discord between the Supreme Court and the Federal Circuit. Constitutional law scholars have observed that the Supreme Court's policy preferences are the primary, unstated motivation behind its decisions. The Court writes opinions that rely on the flexible tools of precedent and stare decisis in order to implement its policy choices while maintaining its institutional reputation for neutrality. The Court does this by influencing precedent vitality; the Court selects which of its precedent to rely upon and augment and which of its precedent to distinguish and narrow. This process runs in direct conflict with the Federal Circuit, a court that was originally conceived and viewed by some of its members as a court intended to bring uniformity to patent law in a way that would reinvigorate patent rights. The Federal Circuit would implement the 1952 Patent Act in a way that would draw patent law out of the nineteenth century. But for the Supreme Court, the 1952 Act was a mere codification of patent law as developed by the courts for over a hundred years. In other words, the Federal Circuit seeks to influence precedent vitality at direct cross-purposes with the Supreme Court. The result of the Supreme Court's project has been a new era of common law patent reform in favor of accused infringers, which is gaining momentum as the Supreme Court decides far more patent cases than it has since the passage of the Patent Act of 1952.

Prof. Stefania Fusco, Notre Dame Law School

"Dissemination of Academic Knowledge and Monetization of University Patents" (with Francesco Lissoni, Catalina Martinez and Valerio Sterzi)

In recent years, scholars have intensively studied the activity of Non-Practicing Entities (NPEs) in various disciplines. Nevertheless, numerous important aspects of the NPE operations within the U.S. patent system remain unclear. As a result, there is a strong interest in learning more about these companies, their strategies, and their possible impacts on innovation in different fields. While universities have been recognized as an NPE category (Lemley, 2008), the literature lacks broad empirical studies on academic institutions acting as NPEs; furthermore, research studies have failed to address important questions about how university patent enforcement and monetization may impact the university mission, and society more generally. Because academic institutions play significant roles in both producing and disseminating knowledge, additional empirically-grounded research can add to the ongoing debate on university patent monetization, which thus far has focused almost exclusively on licensing. Although licensing and the creation of spinoffs are still the two most common strategies used to monetize patented inventions developed by universities, the aim of this study is to show that the transfer of university patents to other entities, including other NPEs, is becoming important. In this context, relevant questions include: How often do universities rely on PAEs and patent intermediaries in general to monetize their patents? What are the characteristics of the patents transferred to PAEs? Are there implications of transfer of university patents for the dissemination of academic knowledge?

In this paper, we employ the USPTO Patent Assignment Dataset described in Graham et al. (2018) to examine the transfer of university patents and technology dissemination, building a new publicly-available dataset that reflects university patent transfers exclusively. By studying post-transfer events in the life of these patents, such as citations, renewals and international filings, we determine the impact that such assignments have on academic innovation. We also investigate university patent transfers by comparing those that have been assigned to other types of NPEs (or PAEs) with the assignments that universities make to all other assignees, in order to assess how these transactions differ across attributes. Over the last two decades, NPEs in the U.S. have perfected patent monetization strategies that allow universities to collect substantial revenues. Investigating the universities' responses as well as the aftermath of university patent assignments will enable scholars to more fully understand the effects of NPEs on the production and dissemination of academic innovation.

Prof. Llewellyn J. Gibbons, University of Toledo College of Law

"The Slippery Road from Tarnishment to Protected Commercial Speech: Unconstitutional Trademark Dilution in the Light of *Tam*"

The strongest and most famous of trademarks are protected against dilution. Federal trademark dilution law protects famous trademarks from dilution by blurring and dilution by tarnishment. There is also a substantial body of state anti-trademark dilution law. However, this article will focus on The Trademark Dilution Revision Act of 2006 (TDRA) and its impermissible regulation of commercial speech. Dilution by burring is an association between the famous mark and another mark that lessens the capacity of the famous mark to serve as a unique identifier. One doubts whether a rational owner of a famous mark would ever litigate a positive association that improves the reputation or value of the mark. Dilution by tarnishment is an association between a mark and the famous mark that harms the reputation of the famous mark. Dilution by blurring is arguably content neutral; however, dilution by tarnishment punishes the content of the speech. This non-content neutral impermissible result is the same under either federal or state anti-trademark dilution law. Section 43(c) of the Lanham Act only prohibits negative associations that tarnish the mark. This impermissible content-based prohibition raises significant first amendment issues. Recently, the U.S. Supreme Court considered §2(a) of the Lanham Act. The Court held that the disparaging clause of §2(a) was an impermissible content-based regulation of speech. By analogy, the analysis in *Matal v. Tam* applies with equal force to the law of tarnishment of famous marks which prohibits only negative associations with the famous mark. Instead of tarnishment Congress could have used the term disparagement and forbidden dilution by disparagement with equal rhetorical and legal force. Although § 43(c) has vigorous protections for non-commercial free speech uses of the mark, these protections arguably do not protect commercial speech or commercial-speech-uses of the famous mark. This article will analyze trademark dilution and the first amendment implications of Tam, and it will conclude by questioning the continued viability of dilution by tarnishment absent congressional action amending §43(c).

Prof. Eric E. Johnson, University of Oklahoma College of Law

"The Misadventure of Copyrighting State Law"

Various states have used assertions of copyright to block public access to state law. This is obnoxious to foundational principles of justice, and it is unjustifiable on economic grounds.

This paper aims to contribute on this topic by explaining, in a concise way, why copyrighting the law is wrong and bad. First, this paper collects and bundles the obvious: that blocking access to primary information about the law is fundamentally contrary to values of fairness, democracy, due process, and the rule of law. These reasons can be found scattered among various articles, notes, and cases—sometimes stated haltingly or vaguely. Here I aim to set them out clearly, plainly, and forcefully. Second, this paper will tackle questions of practicality and economics. To do this, I ask the question of why it is that a state might want to use copyright to create a barrier to public access to the law. I tackle the plausible and implausible answers to that question one by one, laying bare economically fallacious thinking and linguistic game-playing, such as the incantation of the phrase "public-private partnership."

Prof. Doris E. Long, John Marshall Law School, Chicago

"Trademark's 'Investment Value' Conundrum"

Quasi-market regulation tool, quasi-investment property; trademark's historical role as both consumer-information signifier and producer-investment asset has led to increasingly confusing dichotomous treatment internationally. The potentially borderless markets of cyberspace, with their new marketing techniques and new competitive spaces, and the newly acknowledged role of trademarks as tools in support of the public interest have only heightened this confusion. Stumbling attempts to extend protection for marks beyond traditional notions of trademark use and consumer confusion to encompass the investment

protection side of trademarks, such as the development of domestic anti-dilution laws and the use of investor state arbitration mechanisms to protect trademarks, only serve to twist trademark law into unnecessary and ultimately useless contortions. Instead of ignoring the dichotomous nature of trademarks, it is time to acknowledge their evolved nature as traditional reputation-based source designators, nontraditional investment assets, and public interest tools, and revise present laws to reflect the different protection norms required to secure rational protection for all three critical roles, including carefully crafted limitations and exceptions.

Prof. Glynn S. Lunney, Jr., Texas A&M University School of Law

"Trade Dress: Functional Is as Functional Does"

In 1982, Judge Giles Rich of the Court of Custom and Patent Appeals radically weakened the functionality limitation on the protection of trade dress. Nearly twenty years later, the Supreme Court in *TrafFix Devices*, *Inc. v. Marketing Displays, Inc.* significantly strengthened it. This article presents an empirical analysis of federal appellate resolution of trade dress cases since such protection first began in 1976. It finds a consistently low success rate for trade dress plaintiffs over that entire period. This consistently low success rate suggests that trade dress plaintiffs litigate not to prevent consumer confusion but as a form of anticompetitive rent-seeking.

Gail L. Maunula, Ph.D. Candidate, University of Turku Faculty of Law (Finland)

"When the Dust Settles: Alternatives to the Intellectual Property Debates on the Data Producer's Right and Their Implications"

Internet of Things (IoT) technologies create human value through the offer of connected devices embedded with sensors that receive and extract valuable data. To fully harness the value in this data exchange, the European Commission is advancing the notion of a Data Producer's Right. This right would govern the free-flow of the non-personal data stemming from the routine use of these devices and open competition channels. The proposed Data Producer's Right assigns a transferable property right over non-personal, machine-generated data to the IoT device owner or long-term user. The implications of this assignment of ownership triggered research, analysis, and debate among intellectual property scholars. While the IP scholarship surrounding a data producer's right intensified, data privacy scholars seemed to remain on the periphery of the issues at hand, perhaps due to the hyper-focus on personal data and compliance leading up to the implementation of the General Data Protection Regulation in May 2018. Our larger research on this topic offers the intense data-protection centered analysis of the Data Producer's Right that is long overdue. We deeply analyze the contradictory language within the proposal, challenge the notion of anonymization of data in the IoT environment and call upon lawmakers to realign the language in the proposal with the intention of the information technology (IT) disciplines that give rise to these technological capabilities.

But what of the IP discussions surrounding the Data Producer's Right? We delve into the imperative analysis of how this data-protection centered research shifts the IP concerns over the Data Producer's Right. We, in essence, reel in the existing discussions on the topic and attempt to relaunch them after the initial application of data protection, justified by the context and sensitivity of this type of data. The shift in the methodological lens from IP to data protection calls for a reconsideration and repositioning of standing IP debates over the proposed Data Producer's Right.

Prof. Andrew C. Michaels, University of Houston Law Center

"Innovation, Virtual Ideas, and Artificial Legal Thought"

This article will explore how technology could change the way we think (or not) about law, and whether such changes would be beneficial. Part I will use the novel Ready Player One to consider how virtual reality technology might distract people from reality. Considering a hypothetical patent on a virtual reality idea

from the novel, Part II will discuss the evolving law of patentable subject matter and abstract ideas. Part III will consider predictions that legal thought of the type done in the previous part will become automated, and will consider some potential drawbacks of replacing legal thought with artificial legal thought. This article will then briefly conclude by questioning whether in the future anyone will be thinking about the law, and whether it matters.

Prof. Emily Michiko Morris, University of Maine School of Law

"Pharmaceutical Exceptionalism"

The pharmaceutical industry is exceptional in many ways. Pharma operates under a unique regulatory and statutory environment and, as a result, faces unusually high research and development costs. Moreover, as the one field in which patents are believed to create real incentives for innovation, the pharmaceutical industry is also one of the most criticized for the potentially anticompetitive effects of its patenting and other market practices. Reverse-payment settlements, "product hopping," "evergreening," and even branding and advertising are all brand-name pharmaceutical practices within that have been criticized as anticompetitive.

The larger question, however, are these activities are in fact anticompetitive? The answer depends on which baseline you use for comparison. The most common baseline seems to be the argument that, but-for these practices, lower-priced generic drugs would be able to enter the market. An alternative and perhaps a more useful baseline, however, is not this but-for world but rather comparison to practices in other patented technologies. Under this latter baseline, only some of brand-name pharma's criticized practices can be seen as anticompetitive while the remainder are arguably no different than those in other technologies, even under pharma's unique regulatory and statutory conditions. This strongly suggests that many expect the pharmaceutical industry to behave not like other profit-maximizing industries but rather like a nonprofit organization, making the pharmaceutical industry yet more exceptional amongst otherwise commercial market players.

Professor Lucas S. Osborn '00, Campbell University School of Law

"Patentable Subject Matter and Digital Manufacturing Files (3D Printing)"

There is good reason to be concerned about "digital" copyright and patent infringement based on the technology. Unfortunately, much of the literature's treatment of 3D printing fails fully to understand the technology, which brings to mind Judge Easterbrook's warnings against multidisciplinary dilettantism. Although most people refer to 3D digital files that can be 3D printed as "CAD files," in fact there are three different file types involved in moving from digital design to digital manufacturing. Failure to understand the technology and its ecosystem has led to an unidentified gap in patent protection for objects that can be 3D printed. As part of my on-going book project, this talk will analyze that gap in terms of patent doctrine in several major jurisdictions and in terms of patent policy more generally.

Prof. Amanda Reid, UNC School of Media and Journalism

"Protecting Copyright Fair Use Through Constitutional Fact Doctrine"

I am interested in exploring whether copyright fair use determinations should be reviewed de novo under the Constitutional Fact Doctrine on the grounds that the Supreme Court has constitutionalized fair use by embedding First Amendment interests within fair use. First, I want to examine how First Amendment interests have been safeguarded through the Constitutional Fact Doctrine. Second, I plan to explore the extent to which the Supreme Court has constitutionalized fair use by embedding First Amendment interests within fair use. And lastly, I plan to examine whether fair use should be review under the constitutional fact doctrine in order to fully protect Fair Use and the First Amendment interests therein.

Prof. W. Keith Robinson, Dedman School of Law, Southern Methodist University "Used Inventions"

Emerging technologies are allowing billions of everyday devices to connect with each other via the Internet. This phenomenon is referred to as the Internet of Things ("IoT"). The IoT is a technology that allows everyday devices to (1) become "smart" and (2) communicate with other smart devices. Estimates indicate that the market for smart appliances, such as wearables, will grow to \$70 billion dollars in the next ten years. Like many other emerging technologies, the entrepreneurs and companies developing these applications will seek patent protection for their inventions. In turn, the current U.S. patent system will present challenges for IoT technologies.

Many of the patent issues that were prevalent for Internet Age inventions will also be of concern for IoT technology. Specifically, IoT technology raises questions concerning divided infringement. Divided infringement occurs when more than one party performs every step of a method claim such that their collective performance infringes the claim. In the last ten years, the Federal Circuit has changed the law to make it easier for patent owners to assert method claims infringed by divided performance. What it means for an alleged infringer to "use" an invention has changed. This article assesses the Federal Circuit's application of its expansive used invention doctrine. In doing so it asks what impact the expansion will have on innovation.

Prof. Ana Santos Rutschman, Saint Louis University School of Law

"The Vaccine Race in the 21st Century"

In a world in which infectious diseases are spreading increasingly faster, the development of new human vaccines remains a priority in biopharmaceutical innovation. Legal scholars have addressed different aspects of vaccine regulation and administration, but virtually no attention has been paid to the role of laws governing innovation during the stages of research and development(R&D) of vaccines.

This Article provides the first legal analysis of the race to develop new vaccines in the 21stcentury. Drawing on interviews with project directors, advisors and lawyers at partnerships focused on vaccine R&D, as well as an analysis of selected contractual provisions regulating the ownership and transfer of emerging vaccine technologies, the Article identifies a set of emerging trends: a move towards public-private partnerships as the backbone of innovative vaccine R&D; a limited, albeit occasionally detrimental, role of patent-based incentives to R&D; a consequent shift towards R&D incentives complementary to, but not centered on, strong proprietary rights; and the adoption of flexible contractual frameworks regulating transfers of vaccine technology.

While the new dynamics of vaccine R&D have already yielded new vaccine candidates, the Article also shows that current innovation regimes are insufficient to promote socially desirable levels of vaccine R&D. The Article argues that additional legal interventions are required to promote sustained innovation in the field of vaccines, and offers one such proposal: the adoption of a "take-and-pay" regime based on liability rules, enabling access to vaccine technology by follow-on innovators.

Prof. Joshua Sarnoff, DePaul University College of Law

"A New Old Theory of Design Patent Subject Matter"

Design patent subject matter – the "ornamental" appearance of an "article of manufacture"—is increasingly important, both to the expanding protections provided for parts and fragments of larger articles and to the issue of what the design patent right attaches to for damages (in light of the Apple-Samsung case). To the extent that design patents are not a category error *ab initio*, the question remains regarding for what the design patent right should be available. Notwithstanding early (and continuing) protection for statues and

the expansion by the Patent Office and the courts over time, focused on separate production and sale, the Patent Office at an early stage and later commentators thought the design patent right should be available only for a functional product that is "useful in itself." Similarly, based on basic principles of statutory construction, the Patent Office and Courts were wary of extending design patent protection to "machines." This paper argues for a return to that understanding, supplying a more precise theory of "useful in itself" based on "genericness" of intended functions. This approach would preclude design patents on separately manufactured parts that are useful only in combination for performing specific functions. Further, it provides a basis for protecting parts of machines, so long as they are useful in themselves.

Prof. Matthew Sipe, George Washington University Law School

"Experts, Generalists, Laypeople—and the Federal Circuit"

A natural experiment is currently unfolding in the patent world. The same validity issues are sent to a diverse range of adjudicators: administrative patent judges, with technical and scientific expertise; district court judges, who range from classic legal generalists to de facto patent law specialists; and juries, composed of layperson novices. The findings made at the trial level, regardless of forum, are in turn reviewed by a singular controlling entity—the Court of Appeals for the Federal Circuit. This Article capitalizes on the current adjudicatory structure of patent law, analyzing more than two thousand Federal Circuit orders and opinions, each hand-coded for validity findings and their disposition on appeal issue-by-issue. The result is a uniquely complete and clear dataset, offering a window into these tribunals' different mutual relationships—and one into the varying effects of expertise and specialization in the patent world overall.

A straightforward empirical analysis of the data, moreover, challenges several longstanding and widespread anecdotal assumptions about patent adjudication. In brief, the data suggest that the Federal Circuit affirms findings made by the PTAB reliably more often than findings made by district court judges—particularly when the findings involve questions of fact rather than questions of law. Whether the district court judge (or district itself) has more prior experience with patent cases appears to be irrelevant. Whether the finding was made by a jury, on the other hand, is highly relevant, with those findings affirmed at the highest rate of all. Moreover, PTAB findings that invalidate patent claims are affirmed more often than findings that uphold patent claims. No similar pattern exists in district court appeals. And the underlying technological subject matter of the patent at issue does not seem to perceptibly influence results on appeal for either.

Prof. Ned Snow, University of South Carolina School of Law

"Who Decides Fair Use—Judge or Jury?"

For more than two hundred years, the issue of fair use has been the province of the jury. The Federal Circuit recently changed that in *Oracle America*, *Inc. v. Google LLC*. At issue was whether Google fairly used Java-programming design in Google's smartphone operating system. The jury found Google's use to be fair, but the Federal Circuit reverse d. Importantly, the Federal Circuit applied a de novo standard of review to reach its conclusion, departing from centuries of precedent.

The *Oracle* case raises a fundamental question in jurisprudence: Who decides an issue – judge or jury? For fair use, the answer turns on two constitutional Amendments. First, the Seventh Amendment guarantees a right to a jury where an issue would have been heard by English common-law courts in 1791. Fair use is such an issue: early copyright cases establish that juries decided fair-use issues at common law. Second, the First Amendment requires that procedural standards facilitate speech-protective doctrines. Fair use is a speech-protective doctrine, providing breathing space for speech within the confines of copyright law. To protect free speech, then, appellate courts should apply a deferential standard in reviewing jury findings that favor fair use. Finally, in addition to these constitutional arguments, juries are simply better positioned to decide issues of fair use. Those issues often call for subjective judgments that turn on cultural

understandings and social norms. Unlike judges, juries bring a heterogenous composition of life experiences and values to the application of fair-use principles. The diverse composition of a jury is particularly well suited for this inquiry. Thus, the Federal Circuit wrongly applied a de novo standard. The Constitution and sound policy mandate clear error.

Prof. V.K. Unni, Indian Institute of Management Calcutta (India)

"Agro-Biotech Patenting in India: Lessons from the Monsanto Litigation"

India's accession to the WTO forced the country to revamp its intellectual property laws to make them compatible with the TRIPS Agreement. The high profile battles over pharmaceutical patents which happened during the initial years have now shifted to patents from Information Communication Telecom (ICT) sector and biotechnology sector. The Indian judiciary is now called upon to prove its expertise in various new spheres of technology like agricultural biotechnology and wireless technology. This presentation will highlight the recently decided patent infringement case involving Monsanto and an Indian company wherein the patent of Monsanto was revoked by the Delhi High Court. The decision of the court raises some serious questions about the approach taken by judiciary while dealing with infringements involving biotechnology patents.