Fusion program examines fundamentals powering The Internet of Things, the world’s 4th industrial revolution

Ranked 20th in the nation by U.S. News & World Report
The Spangenberg Center for Law, Technology & the Arts, supported by a $3 million gift from the Spangenberg Family Foundation, focuses on intellectual property, innovation and technology transfer. In a field where science, economics, philosophy and the law intersect, the center explores legal issues concerning biotechnology, computerization and the creative arts. The center offers a JD degree concentration in Law, Technology & the Arts, as well as a dual degree program with an MA in Art History and Museum studies. The center also offers a Masters in Patent Practice, a one-year program for science, engineering and technology graduates who want to learn patent law without earning a three-year JD degree. The center is nationally recognized, receiving an A+ in technology and intellectual property law from PreLaw Magazine in 2018 and is ranked 20th in the nation by U.S. News & World Report.

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Inside the Issue

4  Fusion program examines the fundamentals powering the world’s 4th industrial revolution
8  IP Venture Clinic helps launch student startup aimed at increasing efficiency in aerodynamics
12 Law school signs international partnership agreement with the IÉSEG School of Management in France
14 Graduating 3L Aaron Childs’ paper to be published in the Virginia Sports and Entertainment Law Journal
16 Great Lakes Sports & Entertainment Law Academy available online
18 Patent Pro Bono Program opens new doors for Ohio inventors

21 Professor Craig Nard coauthors new book, Intellectual Property and the Judiciary
22 Zahra Smith joins IP Venture Clinic as director
23 Masters in Patent Practice trains students to become patent agents without a JD degree
24 2018 WIPIP Colloquium
26 Faculty listing
Fusion program examines the fundamentals powering the world’s 4th industrial revolution

Law, management and science – each discipline has an inter-reliant role in the creation, protection and monetization of innovation, but they are not typically taught that way.

In 2009, Case Western Reserve University founded the Fusion program to serve as a half think tank, half workshop for graduate students in law, business, science, medicine and engineering to work together with cutting-edge researchers and inventors to analyze and commercialize new technology.

The program is a law school initiative with partnerships across multiple Case Western Reserve University schools, including the Weatherhead School of Management, the College of Arts and Sciences (including its renowned Science and Technology Entrepreneurship Program) and the Case School of Engineering.

“We’re bringing the West Coast to Cleveland, teaching the skills of entrepreneurship across multiple disciplines,” said Craig Nard, Director of the Spangenberg Center for Law, Technology & the Arts. “Regardless of the field someone is in, or what jobs they pursue after finishing school, understanding how their work applies to the bigger picture is invaluable.”

Each year, a new theme is selected for the multidiscipline student teams to work together to build a broad business strategy for a particular area of science and engineering, with previous technologies including advanced medical imaging, genetic diagnostics, neuromodulation and a water purification project that was developed in partnership with NASA.

The theme for this year’s class was The Internet of Things, or IoT.

In the last 20 years, the Internet of Things has developed from a science fiction concept into the next driver of explosive growth in the tech industry.

Working to streamline society through automation, sensors and cloud computing, IoT is a nickname for devices that connect wirelessly to the internet or each other, with common examples including Amazon’s Alexa, the Nest Learning Thermostat and Fitbit’s wearable technology marketed to health and wellness. Today, IoT is on pace to become one of the largest drivers of consumer technology, with the current 10 billion IoT-connected devices expected to swell to 1 trillion by 2025.
In the race to innovate and commercialize in this multitrillion-dollar industry, Cleveland has leveraged its significant industrial and manufacturing capacity to become a global leader in IoT technology.

“Globally, the connectivity of devices represents not only a multi-trillion dollar economic opportunity, but also an opportunity to improve quality of life for individuals, neighborhoods, regions and nations,” said Joseph Jankowski, CWRU’s Chief Innovation Officer and an instructor and co-founder of the Fusion program. “Concurrently, this opportunity is fraught with challenges and there are many problems to overcome, ranging from information security and privacy to career eradication and the potential for increased economic inequity and disparities. The power of innovation lies in its ability to address such problems in order to create value. This is a tenet of the Fusion program and a theme that is reiterated to our student innovators in most every class convening.”

From the recently announced IoT Collaborative initiated by Case Western Reserve and Cleveland State with $1.75 million in funding from the Cleveland Foundation, to the launch of the CWRU Institute for Smart, Secure and Connected Systems (ISSCS) in 2016 and the widespread adoption of IoT by the world-renowned Cleveland Clinic, the significant local footprint in the development and implementation of this technology made IoT the next logical theme for the Fusion curriculum.

“We pick tech where we know there is a lot of activity – research base, commercial base, startups – a real ecosystem,” said Ted Theofrastous, Managing Director of the Fusion program. “We start with the science, get our students to stop Googling for answers and talk to experts and then ask them what they’ll do with the technology, what intellectual property protection is needed, how do we build it and how do we make money.”

Under Theofrastous, the Fusion program partnered with Intwine Connect, a local self-funded startup that was spun into the university, providing students with real-world problems to solve while helping to foster the growth of critical skills required in the world of IoT.

(continued on pg. 7)
We didn’t interact like students – we were more like business colleagues and partners coming together as we would in the real world to solve problems.

*Candice Green, rising 3L law student*
“The existing relationship with the university and the exploding demand for IoT made Intwine a perfect choice for the Fusion program,” said Theofrastous. “They are a company with deep ties to the university, where they already lease lab space to develop hardware, software and data analytics for their product – a small server that goes inside a home or business with cellular and wireless reception, allowing objects with sensors to communicate with the computer to make calculated decisions to improve monitoring and efficiency.”

The Fusion program is divided into two core courses – Intellectual Property Management and Commercialization and Venture Finance and Transactions – with three elective courses, including IP Licensing, Patent Law and IP Strategy.

The IP Management and Commercialization course serves as an immersive introduction to technology commercialization by bringing students into a simulation centered around each year’s theme, where they work with real inventors and entrepreneurs to take their technology and simulate the development of a product.

“The business models, the paths to market and the IP strategies for IoT technologies can be very complex and difficult for students to understand, so giving them the opportunity to experience these challenges has real value,” said Kenneth Loparo, the faculty director of the ISSACS: Institute for Smart, Secure and Connected Systems at the Case School of Engineering and the co-academic director of the IoT Collaborative.

This year’s Fusion program started with Dave Martin, Intwine Connect’s CEO and a CWRU alumnus, briefing students about the company’s business strategy and technology, kicking off a semester-long simulation that challenged the four student teams to find new commercial applications outside of the company’s portfolio and develop comprehensive business models.

The six-person, mixed-discipline teams spent the next three months working together to create opportunity assessments to build on existing technology, identify potential partnerships and needs, and evaluate potential products’ fundability. By the conclusion of the class, the teams developed applications related to managing livestock, monitoring air quality through sensors on municipal vehicles, and healthcare applications, which they pitched to Intwine Connect’s CEO as their final test.

“I was excited to take the courses because of the way they combine law, business and technology,” said Candice Green, a 2L law student with a concentration on copyright and trademark law. “We didn’t interact like students – we were more like business colleagues and partners coming together as we would in the real world to solve problems.”

Green’s team examined the healthcare industry and positioned their product as a way for ambulances and hospitals to have seamless communication with each other, where a patient’s data is immediately sent to the hospital so that when they arrive, the valuable seconds that can determine a patient’s health outcome are not taken up by time-consuming paperwork.

“For this project, we looked at the product from every angle, with each team’s students providing important contributions in their areas of expertise,” said Green. “Ted was always there to guide us, but he gave us room to figure things out ourselves, making it a much more realistic experience where we learned how to market both our work product and ourselves.”

After completing the simulation, students moved on to study a range of topics involving intellectual property research and protection, including the fundamentals of creating, offering and closing a technology venture transaction.

“The whole motivation of Fusion is to be less doctrinal and more experiential, with a strong focus on managing risk and understanding financial, technological and intellectual property potential,” said Theofrastous. “Whether you are a student in engineering, business, medicine or law, understanding the viability of a product and the work required to move something from concept to commercial application is invaluable in the 21st-century economy. We’re teaching students the fundamental skills of the modern entrepreneur.”
On paper, becoming an entrepreneur is simple. “Find a problem and solve it,” said Prince Ghosh, the latest wunderkind to come from Case Western Reserve University’s School of Engineering. “If the problem is large enough and the solution is innovative enough, then you can offer something people didn’t think was possible. That’s when you have a business.”

Ghosh already found his problem to solve and, at just 20 years old, is working to create a solution with a potential multibillion-dollar global impact.

Growing up in New Jersey, Ghosh was a typical teenager. He played four years of varsity tennis, participated in the school’s robotics team and worked for a summer at Subway. Today, he is the founder of Boundary Labs, a company that is converting promising research with plasma into commercial applications in wind turbines and the aviation industry with help from Case Western Reserve University School of Law’s Intellectual Property Venture Clinic (IPVC).

His transition to an energy entrepreneur began two years ago while researching a project on chaos theory. Known in
pop culture from movies like ‘Jurassic Park’ and ‘The Butterfly Effect’, Ghosh was drawn to a particular area of chaos theory stemming from his life-long interest in flight – turbulence. Diving deeper into his research, he came across the work of George M. Zaslavsky, a Russian mathematical physicist who pioneered research in the 1960s on reducing turbulence by creating an electric field using plasma.

“The further I looked into it, something jumped out at me. No one had gone beyond the theoretical math and physics,” said Ghosh. “NASA and the University of Notre Dame had done some extensive research, but that’s where it stopped. I decided to make a prototype.”

He spent the summer of 2017 in a lab working on a unique application based on Zaslavsky’s concept – a dielectric barrier discharge plasma actuator. In layman’s terms, he made a futuristic duct tape that could be retrofitted to an airplane wing or wind turbine blade and, when connected to power, ionize the surrounding turbulent air into a streamlined state. By the end of the summer, his project was a success. Lab tests showed a four to six percent improvement in efficiency.

That fall, he signed on as a client with the IPVC and launched his startup, Boundary Labs.

HELP FROM THE “HIDDEN GEM”

In 2013, the School of Law launched The Intellectual Property Venture Clinic with $50,000 in grant funding from Tarolli, Sundheim, Covell & Tummino LLP and a to-date total of $829,400 from the Burton D. Morgan Foundation. The foundation’s grant is part of a large-scale effort to foster innovation and spur economic development in northeast Ohio, allowing the law school to not only provide one-of-a-kind training for law students in the business world but also offer free legal and business expertise to student inventors and local startup companies as they enter the market.

“Boundary Labs is one of the dozens of clients the clinic has worked with since its inception, taking on promising inventors like Ghosh and helping them through the complex and expensive legal process of launching a company, filing patents and eventually, taking on investors,” said Zahra Smith, the director of the IPVC. “We are working to remove the financial barriers that prevent many startups from ever reaching the stage of being a commercial property while giving our law students significant experience in corporate and intellectual property law.”

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Partnering with Boundary Labs, Rodger and I helped them work through the legal issues that go with starting a business... It was an incredible hands-on learning experience.

Daniel Murray '18
For Ghosh and his three partners in the newly formed company Boundary Labs, the clinic’s services and the entrepreneur-friendly environment at the university played an essential role in converting his vision into a reality.

"Case has been so instrumental in our ability to start this company," said Ghosh. "In the last year, I’ve talked to student entrepreneurs from universities around the world and they are shocked to hear about the resources that have been made available to us. The university’s progressive IP policy has allowed us to retain 100 percent of our intellectual property, even though our work was developed with help from faculty advisors and lab technicians who knew the intricacies of aerospace components, how to fabricate the adhesive and integrate the electronics so the system ran correctly."

"The biggest hidden gem is the IPVC, by far," Ghosh added. "No other school has something that does as much as the IPVC, and they do it for free."

Over the next six months, law students Daniel Murray and Rodger Bramley worked closely with Boundary Labs as they began work setting up the business’s structure.

"It was a great experience for me," said Murray. "I have an undergraduate degree in mechanical engineering and am going to work in IP law after graduating. Partnering with Boundary Labs, Rodger and I helped them work through the legal issues that go with starting a business - performing due diligence, analyzing other existing inventions to formulate an IP strategy and filing provisional patents. We also provided full corporate legal services, helping set up an operating agreement, ownership shares and cap tables. It was an incredible hands-on learning experience."

"It was everything we needed to get started. Frankly, I would have had no idea how to set up otherwise," said Ghosh. "Startups fail because they can’t afford the exorbitant legal fees of patent protection, facing them with the difficult decision to take out personal lines of credit to front legal costs or not patent at all and risk having a company come in and steal their technology. The IPVC is a tremendous asset for us, lowering an otherwise high barrier of entry."

BUILDING A BUSINESS

Turbulence costs money.

For airlines in 2018, money spent on fuel makes up nearly a quarter of their annual operating costs at about $188 billion. Even a single percentage point improvement in efficiency could provide substantial savings in an industry that runs on razor-thin margins.

While the dielectric barrier discharge plasma actuator tape was initially conceived with commercial flight in mind, Ghosh was turned on to the idea of using his invention in the wind energy sector as well, where additional efficiency is no less critical to the bottom line.

Working with students in the university’s Institute for Smart, Secure and Connected Systems (ISSACS), Boundary Labs created a two-part solution to maximize energy output for energy producers in the wind sector.

"As we’ve gotten more and more familiar with the challenges faced by wind energy producers, we expanded our company’s initial scope," said Ghosh. "Downtime for maintenance in wind turbines comes at a significant cost. Over time, turbine gearboxes wear down, so we created a low-cost sensor system that monitors vibration signals coming off gearboxes to aggregate data and predict the maintenance cycle needed to keep the turbines running, allowing for them to be serviced on low-wind days and not miss time when energy production is at its highest."

Boundary Labs’ work with wind turbines is already underway, with beta testing beginning in June. Meanwhile, they are moving forward with the longer timeline of integrating their tape application in the aerospace industry, testing across weather conditions, power consumption and dozens of variables that need to be sorted out before the product can come to market. When the technology is close to being ready, they will turn to the IPVC again for help as they look to take on investors and hopefully fulfill the promise of the young company.

"You’re always moving so fast, so you never stop to think about it – the progress we’ve made from a year ago," said Ghosh. "It can often be lonely to be an entrepreneur because every day something that you need to work is failing and the pressure is enormous. But I have a great team now and with the resources of the university behind us, anything is possible."
This summer, the law school entered into an International Cooperation Agreement with the IÉSEG School of Management in France. The partnership will enable the two schools to engage in joint staff exchanges, training, publication, research and conferences.

The partnership will focus on intellectual property and the fashion industry, building on a recent co-sponsored conference between the two schools in Paris, titled, “Trademarks and Fashion. A comparative and interdisciplinary perspective.”
CTE: A legal defense?
Every year, more than five million Americans participate in organized tackle football, ranging from youth sports for children as young as five to the multi-billion dollar leagues of the NCAA and the NFL.

While that number may appear to be a healthy reflection on the sport’s popularity, it is actually an indication of a gathering storm on the horizon. Participation in organized football is down an estimated 35% in the last decade, a result of a new understanding of the damaging, long-term effects of concussions.

Chronic Traumatic Encephalopathy (CTE) is now a term in the public space, a fear of every player subjected to dozens of high-speed collisions per game. The disease, first discovered in 2002, is caused by repetitive hits to the head and affects a person’s ability to control mood and emotion.

With a pool of millions of current and former players combined with a modern scientific understanding of CTE’s effects, its use as a defense in court is only a matter of time.


“I wanted to write about something that I was passionate about,” said Childs. “I’ve loved sports my whole life, and this paper was a chance to merge my interests with my studies.”

Working with Professor Nard, Childs examined the plausibility of using CTE as a defense by comparing it to conditions with similar effects on cognition and judgment.

“Without any legal precedent to go by, I used conditions with similar symptoms as a way of gauging what a court might rule,” said Childs. “I analyzed similar defenses used in cases like insanity, postpartum depression and post-traumatic stress disorder in military veterans.”

Ultimately, Childs concluded that with further medical advancement in the detection of CTE, the known effects of the disease will allow attorneys to shape it into a viable defense.

“Past court decisions have shown that defendants suffering from similar mental diseases during the commission of crimes have been relieved of criminal culpability. Therefore, CTE will ultimately prove to be a successful defense for many players. No matter how CTE shapes criminal law, the NFL and other football organizations should prepare for enhanced scrutiny and further controversy surrounding CTE.”
Great Lakes Sports & Entertainment Law Academy

Now available online

Launched in the summer of 2011, The Great Lakes Sports & Entertainment Law Academy (GLSELA) gives students the opportunity to gain exposure and real-world experience in sports and entertainment law.

The courses are offered online to all law students at American Bar Association-recognized law schools who are in good academic standing following the completion of their first year.

“The Academy has been a great success for the last few years, giving students intense exposure to sports and entertainment law,” said Craig Nard, director of the Spangenberg Center for Law, Technology & the Arts. “These industries have their roots at the local level, so it makes sense to offer the academy in a way that helps students take what they learn online and use that to tap into their communities.”

Academy students choose between two concentrations – Sports Law and Entertainment Law – with each concentration comprised of two courses and four total credits. The courses focus on doctrine, drafting and negotiation in simulation-based exercises.

Additionally, students have the option to compete for high-profile externships in the sports and entertainment industries following completion of the coursework. GLSELA has partnered with several institutions, including the Rock and Roll Hall of Fame, Lake County Captains, SPIRE Institute (an Olympic Training Site), Cleveland State University Athletic Department, Case Western Reserve University Office of General Counsel & Athletic Department, Dietz Trott Sports & Entertainment, Vuguru Studios and the Greater Cleveland Film Commission.
Chris Harrington
In-House Counsel, Cleveland Cavaliers
former student & GLSELA executive assistant
fostering entrepreneurship
Patent Pro Bono Program opens new doors for Ohio inventors

When the Leahy-Smith America Invents Act went into effect in 2013, it represented the most significant overhaul of the U.S. patent system in more than 60 years.

In addition to changing the “first-to-invent” system to a “first-to-file,” the law and subsequent executive actions directed the United States Patent and Trademark Office (USPTO) to work in partnership with intellectual property law associations across the country to create pro bono programs designed to assist financially under-resourced independent inventors and small businesses in all 50 states.

For Craig Nard, director of the Spangenberg Center for Law, Technology & the Arts, and Ted Theofrastous, managing attorney of the IP Venture Clinic and distinguished practitioner-in-residence, it was an opportunity that the law school couldn’t pass up.

“The goal of our center is to become a regional leader in intellectual property law, not just as it relates to the education of our students, but also in the development of our local economy as well,” said Nard. “Case Western and the Cleveland community have deep ties going back more than a century, so being able to give back to a region that has supported us for so long is important.”

As the Cleveland Intellectual Property Law Association’s (CIPLA) committee began work on a plan to roll out the new statewide program, Nard and Theofrastous volunteered the services and resources of the law school to assist with the launch.

“At the time, we were already in the process of putting together the IP Venture Clinic and building a robust back-end administrative system to handle client intake and screening,” said Theofrastous. “CIPLA’s biggest need was something we were already putting in place, so it made sense for us to take the ball and run with it.”

As a result, the Spangenberg Center added a new flagship institution to an expanding portfolio that now includes the Fusion Program, IP Venture Clinic and the Great Lakes Sports & Entertainment Law Academy.

BUILDING THE PLANE WHILE FLYING IT

With the near-simultaneous launches of the Patent Pro Bono Program and the IP Venture Clinic in 2014, Theofrastous and Nard’s challenge was to spin up two resource-intensive programs where nothing previously existed.

They needed money and manpower from the legal community.

“At the end of the day, lawyers go into this profession to make money, just like any other job,” said Theofrastous. “But this program doesn’t generate any revenue, so we had to find the right pitch with an appeal to the legal community to participate. Where we are now would not be possible without the generous commitment of our volunteers and donors.”

With funding from the Burton D. Morgan Foundation; Tarolli, Sundheim, Covell & Tummino LLP and CIPLA, the law school constructed office space for the IP Venture Clinic, hired staff and designed a cloud-based infrastructure to handle the client management services of both programs.

As applications from inventors around Ohio began streaming in, the next challenge was building the volunteer base.

“It’s match.com for entrepreneurship,” said Theofrastous. “The demand for these services was always there, but now we were charged with providing the supply. When we launched, we had three volunteers and a goal of 50. Three years later, we have 44 volunteers and a goal of 100 as we look to expand out further across the state. This program, and anything it accomplishes, is a credit to the dozens of lawyers who have stepped up to help simply because they believe giving back is the right thing to do.”

The Patent Pro Bono Program streamlines the attorney-client match through screening and tracking systems that identify client readiness, maintain case continuity and ensure volunteers are connected only with serious inventors.

“The people who apply to this program are garage inventors and makers – grassroots people – but they lack the financial resources to retain patent counsel,” said Theofrastous. “The program’s most important job when we first bring them in is to put key barriers like patentability or venture financing aside while we just see whether there is a good idea there.”

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FOUNDING FIRMS AND ALL-STARS

After three years of recruitment, the Patent Pro Bono Program for Ohio is showing promising results built on the commitment from a group of firms nicknamed, “The Founding Firms,” – Benesch Friedlander Coplan & Aronoff LLP; McDonald Hopkins; Renner Otto; Tarolli Sundheim Covell & Tummino LLP and Squire Patton Boggs. The firms were the first to commit pools of billable hours to the program and lay the foundation for the 48 attorney-client matches it has created so far.

In April 2018, the Patent Pro Bono Program for Ohio, CIPLA and the USPTO held an award ceremony to honor the top firms and individuals who donated time to work with clients. Mark Guinto, an associate with McDonald Hopkins, was selected for the All-Star Volunteer Award for his donation of more than 50 hours to work with clients. The award ceremony came just a few weeks after the program held its second annual Patent Pro Bono Breakfast, where 30 attorneys and qualified inventors met on a Saturday morning at the law school to review inventions and potential protection strategies.

“The success of these programs is highly predicated on the people that run them,” said Grant Corboy, staff attorney for the USPTO’s Office of Enrollment Discipline. “Of the 22 regional programs, the Patent Pro Bono Program for Ohio has the highest per capita rate of attorney-client matches, which is a credit to the tremendous work that Ted and Case Western have done.”

Though the program is still in its early stages, Theofrastous believes that the win-win nature will continue to appeal to attorneys and inventors alike, leading to strong growth in the coming years.

“Good ideas can come from the average person’s garage,” said Theofrastous. “If we help these inventors out while providing the patent bar a way to give back to their communities that’s in their wheelhouse, we can organically grow a segment of our local economy while giving younger attorneys precious client-facing responsibilities that they don’t always get right away. Everyone benefits.”
Professor Craig Nard co-authors new book, *Intellectual Property and the Judiciary*

*Intellectual Property and the Judiciary* (Edward Elgar Publishing) explores the role of the judiciary in the elaboration and interpretation of intellectual property law, exploring how IP doctrine and policy are developed and the manner in which judges construct and apply norms in different court systems. The authors engage in a comparative exploration of various national, European and international judiciaries and appraise the competing and complementary roles of governing bodies. The book offers an examination of both common law and civil law traditions in the context of judicial treatment of intellectual property.

The book is co-authored by Christophe Geiger, Professor of Law, Director General and Director of the Research Department, Centre for International Intellectual Property Studies (CEIPI), University of Strasbourg, France; Craig Allen Nard, School of Law, Case Western Reserve University, Ohio, US; and Xavier Seuba, The Centre for International Intellectual Property Studies (CEIPI), University of Strasbourg, France.
In Summer 2017, Zahra Smith joined Case Western Reserve University School of Law’s Intellectual Property Venture Clinic (IPVC) as the new director and practitioner-in-residence, where she is working closely with the entrepreneurs and area startups while expanding the clinic’s reach throughout the Northeastern Ohio region.

Prior to joining the IPVC, Smith graduated from the University of Pennsylvania with a degree in civil engineering and then earned her law degree at Emory University. Following law school, she worked in civil litigation for the city of New York and as an intellectual property lawyer with Greenberg Traurig LLP before joining a group of friends’ startup company as legal counsel.

“For me, working at a startup was a great situation,” said Smith. “It was dynamic, fast-paced and gave me broad exposure to the law. Instead of being siloed into one specialization, I was more of a Swiss army knife, doing a little bit of everything from working on administrative issues, business, intellectual property, labor and employment law, purchase and sales agreements, risk and data privacy.”

Ted Theofrastous, the managing attorney and co-founder of the clinic, saw Smith as a natural fit for the job.

“Zahra brings a lot to the table as an experienced civil engineer and intellectual property attorney,” said Theofrastous. “She was an excellent choice to take the work that we started four years ago and further build out our vision for the clinic.”

Under Smith, the clinic’s goal is to deepen the experience of the students while expanding the law school’s footprint by raising awareness of the IPVC’s services through satellite offices in Kent State, Baldwin Wallace University, Lorain County Community College and here at Case Western Reserve University.

“We want to get the word out in the community about what we can do for them,” said Smith. “From there, our goal is to stand out through the depth of the assistance we provide clients and the quality of our instruction to students.”
Masters in Patent Practice
trains students to become patent agents without a JD degree

In Fall 2015, the Spangenberg Center for Law, Technology & the Arts launched the Masters in Patent Practice Program (MPP), the first of its kind in Ohio and one of only a handful in the nation.

The program prepares students with undergraduate degrees in engineering, computer science and physical or biological science to quickly become a patent agent – a career with a national median income of $124,000 in 2015 and an average salary of $95,000 here in Cleveland, Ohio.

For Lydia Beard, a research assistant in the Markowitz Colon Cancer Laboratory at Case Western Reserve University, the program was an ideal fit to broaden her career options and give her the tools to deepen her involvement in the lab’s research.

After earning a bachelor of science in biology and a master’s degree in insect physiology, Beard has spent nearly two decades of her career in colon cancer research.

“When I heard about the Masters in Patent Practice Program, I thought it would be a great opportunity to broaden my horizons,” said Beard. “A critical part of our research involves filing patents on the work produced by our research team. I became interested in that aspect of our projects and saw this as the perfect opportunity to go back to school to learn more about the patent process, continuing my education from a different vantage point in a field that I am passionate about.”

The MPP is an alternative for students who want to utilize their technical training to enter a field with growing demand. According to the USPTO, there are about 11,000 registered patent agents.

Rather than earning a three-year JD, students can become patent agents in just one year by taking the courses full-time. Or, like Beard, they can enroll in the program part-time.

“What made the degree so attractive to me was that it didn’t require a long-term commitment to return to school,” said Beard, who is taking the classes while continuing to work full-time at her job. “The material that I’m learning will greatly enhance the job prospects that will be open to me.”

“Coming from a long career in science, learning the law has been a fascinating experience,” said Beard. “In science, one plus one is two, but the law is a different animal, where everything is subject to interpretation – the coursework has taught me to think very differently. It’s been a really great experience.”

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On February 16-17, Case Western Reserve University School of Law hosted the 2018 Works-In-Progress Intellectual Property Colloquium, one of the largest intellectual property scholarship conferences in the U.S. Scholars from the United States and around the world presented their cutting-edge projects in development, took questions and comments from the audience and received early stage feedback on their ongoing research. The conference featured multiple concurrent sessions grouped across the broad spectrum of intellectual property law and a private evening dinner at Cleveland’s Rock and Roll Hall of Fame.

Thank you to all of this year’s attendees for making the conference a success!
Spangenberg Center faculty

CRAIG NARD  
Galen J. Roush Professor of Law; Director, Spangenberg Center for Law, Technology & the Arts and the FUSION Certificate Program in Design, Innovation & IP Management

Craig A. Nard is the Galen J. Roush Professor of Law and the director of the Spangenberg Center for Law, Technology & the Arts. He is also a senior lecturer at the World Intellectual Property Organization Academy at the University of Torino, Italy, and principal advisor to the Center for Studies and Research in Intellectual Property in Calcutta, India. He is also the author of the patent law casebooks, The Law of Patents and The Law of Intellectual Property.

THEODORE THEOFRASTOUS  
Distinguished Practitioner in Residence

Ted Theofrastous has extensive experience in complex technology commercialization, both as a business architect/manager and as a legal professional. Through his legal practice and ThetaSquared, a strategic technology commercialization firm, Theofrastous counsels institutions, large corporations and startups on a range of issues related to IP management, venture formation and investment transactions. He has served as a member of the CWRU faculty for 19 years.

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Professor of English and Law

Martha Woodmansee, whose teaching and research focus is at the intersection of culture, economics and intellectual property law, holds a PhD from Stanford University and is a recipient of fellowships from the Guggenheim and Fulbright foundations. She is a founding director of the International Society for the History and Theory of Intellectual Property (ISHTIP). Her books include Making and Unmaking Intellectual Property: Creative Production in Legal and Cultural Perspective (U Chicago Press 2011).

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Professor of Law

Aaron Perzanowski teaches copyright, trademark, and property law. His research on the intersection of intellectual and personal property explores the notion of ownership in a digital economy, and his work on IP and social norms considers the ways in which informal governance influences creative production. He is the co-author of The End of Ownership (MIT Press 2016) and Creativity Without Law (NYU Press 2017).

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Raymond Ku is professor of law and director of the Center for Cyberspace Law and Policy at Case Western Reserve University School of Law. He has also served as associate dean for academic affairs and co-director of the Spangenberg Center for Law, Technology & the Arts. An internationally recognized scholar, Professor Ku writes on legal issues impacting individual liberty, creativity, and technology, and is the author of Cyberspace Law: Cases & Materials (4th ed.), the original casebook dedicated to the study of cyberspace law.
PETER CARFAGNA  
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Peter A. Carfagna is the distinguished visiting practitioner and co-director of the Great Lakes Sports & Entertainment Law Summer Academy. He is Chairman/CEO of Magis, LLC, a privately owned sports marketing, management and investment company, including family ownership of the Lake County Captains, Cleveland Indians Class A Affiliate. Peter also directs the sports law programs while teaching as a visiting lecturer at Harvard Law School and at the University of Miami School of Law.

ZAHRA SMITH  
*Lecturer in Law*

Zahra Smith is the director of the Intellectual Property Venture Clinic and a practitioner-in-residence at the Milton A. Kramer Law Clinic Center. She received her JD from Emory University, where she was director of the Emory University School of Law’s legal clinic. Smith has counseled early stage ventures and Fortune 500 companies on maintaining robust intellectual property portfolios. In 2016, Smith was selected as a SuperLawyers Rising Star for her work in intellectual property. Smith previously worked as a civil engineer.

RICKY VOLANTE  
*Executive Director of the Great Lakes Sports & Entertainment Law Academy*

Ricky Volante is an attorney of counsel at Buckley King LPA, where he primarily focuses on legal issues related to sports, film, and music. He co-founded Sixth City Sports & Entertainment, a sports and film consultancy, and serves as Chief Executive Officer for the Historical Basketball League. Ricky focuses on the intersection of sports, film, culture and race. Also, Ricky is the Executive Director of the Great Lakes Sports & Entertainment Law Academy at CWRU Law.

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WHAT MAKES US STAND OUT

$3 million: Our IP Law Center Endowment

20: U.S. News & World Report ranking of our IP Law program

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