



Law and Technology at Penn

2011-2012



Center for Technology, Innovation and Competition



About CTIC

The University of Pennsylvania Law School's Center for Technology, Innovation and Competition is dedicated to promoting foundational research that will shape and reshape the way policymakers think about technology-related issues. To do so, CTIC organizes events that explore the full range of scholarly perspectives.

The University of Pennsylvania is uniquely well positioned to support the Center's mission. The Law School is home to many of the nation's leading experts on intellectual property, Internet law, and technology policy. In addition, CTIC is able to draw on the expertise of scholars from across the University, including the Wharton School, the Annenberg School for Communication, the Cinema Studies Program, and the School of Engineering and Applied Science. Philadelphia is home to a vibrant high-tech legal community and many of the world's leading technology companies. CTIC's proximity to New York and Washington, D.C., allows it to enjoy frequent visits from key industry players and policymakers.

For more information and current events at CTIC, visit our web site at www.law.upenn.edu/academics/institutes/ctic.

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CTIC Directors (Left to Right):
Shyamkrishna Balganesh, Justin (Gus) Hurwitz, Gideon Parchomovsky, Christopher Yoo, R. Polk Wagner, and David Abrams

A Message from the Directors

This book celebrates five years of Penn Law's Center for Technology, Innovation and Competition.

The past year was our busiest year ever. We sponsored a conference on cloud computing held at the Penn Law School and a roundtable discussion about emerging issues in copyright and patent law at the National Law School of India University in Bangalore, India.

For the first time, CTIC hosted visiting scholars to work with CTIC faculty and participate in the intellectual life of the University for extended periods.

CTIC faculty taught an innovative and ambitious Global Research Seminar that brought students from Penn Law and the Technische Universität Dresden together for a comparative study of U.S. and European telecommunications law.

We also welcomed Gus Hurwitz as the Center's inaugural research fellow.

CTIC also expanded the opportunities for student participation, offering a new summer Public Interest Fellowship and starting a Student Fellows program to involve students directly in the work of the CTIC faculty. The Center continued its support of the student-run Penn Intellectual Property Group's annual symposium, which focused this year on fashion law. We are also delighted that Penn Law students, advised by CTIC faculty and for the second year running, won the western regional division of the American Intellectual Property Law Association's annual Giles S. Rich moot court competition.

As in previous years, we were pleased to host a number of top scholars in our annual workshop series.

Next year, CTIC will offer its most expansive scholarly program yet. Our planned lineup includes two major conferences, one on "The Evolving Internet" (co-sponsored by the Law Review) and one bringing together scholars from law and computer science. We will also hold day-long workshops on Natural Language Parsing and the Law, and the America Invents Act.

We extend our heartfelt thanks to all of our friends and supporters for bringing their perspectives, experiences, participation, and expertise to all that we do. We note, in particular, the support of the New York Bar Foundation, which has made much of our work possible through a generous multi-year grant. Through this and other support, CTIC has been able to build a successful foundation to continue serving as a leading academic center in technology and innovation policy.



Center for Technology, Innovation and Competition



CTIC Programs

Cloud Computing: Economic and Regulatory Implications

Patent and Copyright Law in India: Emerging Issues

Global Research Seminar:

Comparative Internet Law in the U.S. and Europe

Penn Intellectual Property Group: Symposium on Fashion Law

Visiting Scholars

Faculty Workshops

Cloud Computing: Economic and Regulatory Implications

February 24, 2012

One of the highlights of this year's program was our conference on cloud computing. This conference brought together practitioners, technologists, and top scholars to explore the ramifications of the increasing reliance on cloud computing by both industry and everyday computer users. The presentations and commentaries looked past the hype to examine the economic and legal ramifications of increased reliance on processing and storage located in remote data centers. In particular, the conference focused on the new regulatory and technical implications for industry structure, network architecture, reliability, security, privacy, and performance.





Opposite Page, Left to Right: Marjory Blumenthal, David Farber, Paul de Sa

Above: Christopher Yoo and panelists Andrew Stokes, Bajinder Paul and Joe Weinman



Cloud Computing: Economic and Regulatory Implications February 24, 2012

Welcome

Christopher Yoo

John H. Chestnut Professor of Law, Communication, and Computer & Information Science, University of Pennsylvania

Michael A. Fitts

Dean and Bernard G. Segal Professor of Law,
University of Pennsylvania Law School

CLOUD COMPUTING AND INDUSTRY STRUCTURE

Panelists

Bajinder Paul

Deputy Associate Administrator, Citizen Services and Innovating Technologies,
General Services Administration

Andrew Stokes

Chief Scientist, Deutsche Bank

Joe Weinman

Senior Vice President, Cloud Services and Strategy, Telx

Moderator

Christopher Yoo

John H. Chestnut Professor of Law, Communication, and Computer & Information Science, University of Pennsylvania

CLOUD COMPUTING AND NETWORK ARCHITECTURE

Panelists

Boon Thau Loo

Assistant Professor of Computer and Information Science,
University of Pennsylvania

Adam Preset

IT Technical Director for Systems and Services, Networking and
Telecommunications Group, University of Pennsylvania

Ajeet Bagga

Chief Scientist, Office of the CTO, VCE

Moderator

R. Polk Wagner

Professor of Law, University of Pennsylvania Law School

CLOUD COMPUTING AND REGULATION

Panelists

Christopher Yoo

John H. Chestnut Professor of Law, Communication, and Computer & Information Science, University of Pennsylvania

Dan Reed

Corporate Vice President, Technology Strategy and Policy
and Extreme Computing Group, Microsoft Research

Moderator

Kevin Werbach

Associate Professor of Legal Studies and Business Ethics, Wharton School,
University of Pennsylvania



Left to Right:
Jonathan Cave, Alexander Hoehn-Saric,
Andrew Stokes, Bajinder Paul
Kevin Werbach, Dan Reed, Christopher Yoo

SECURITY IN THE CLOUD

Panelists

Marjory Blumenthal

Associate Provost for Academics, Georgetown University

Edward Felten

Professor of Computer Science and Public Affairs, Princeton University;
Chief Technologist, Federal Trade Commission

Chris Boyer

Assistant Vice President for Public Policy, AT&T Services

Moderator

Andrea Matwyshyn

Assistant Professor of Legal Studies and Business Ethics, Wharton School,
University of Pennsylvania

PRIVACY IN THE CLOUD

Panelists

Neil Robinson

Research Leader, RAND Europe

Jonathan Cave

Senior Research Fellow, RAND Europe

Shanti Ariker,

Senior Corporate Counsel, salesforce.com

Alexander Hoehn-Saric

Deputy General Counsel for Strategic Initiatives, U.S. Department of Commerce

Moderator

Justin (Gus) Hurwitz

Fellow, Center for Technology, Innovation and Competition,
University of Pennsylvania Law School



Top to Bottom:
Andrea Matwyshyn, Marjory Blumenthal
Edward Felten, Chris Boyer

For further information, see <https://www.law.upenn.edu/institutes/ctic/conferences/cloud-computing.php>

Patent and Copyright Law in India: Emerging Issues

Co-sponsored by the University of Pennsylvania Law School
and the National Law School of India University

July 17, 2012

In July 2012, CTIC faculty visited the National Law School of India University (NLSIU) in Nagarbhavi, Bangalore, India, to participate in a roundtable discussion of India's evolving patent and copyright laws. This discussion, co-sponsored by Penn Law and NLSIU, included academics from the U.S. and India as well as a number of the policy-makers and industry representatives most directly impacted by India's evolving laws. The discussions considered both the domestic effects of the Indian Patents and Copyright Acts as well as how these Acts relate to international IP agreements and the laws of other countries. Throughout, the roundtable considered ways of integrating the perspectives of India's various policy, industry, and civil-society stakeholders into future discussions.



Dean Fitts and CTIC Faculty with representatives of the National Law School of India University and conference participants.

Welcome**Venkat Rao**

Vice-Chancellor, National Law School of India University

Opening Remarks**Michael Fitts**Dean and Bernard G. Segal Professor of Law,
University of Pennsylvania Law School**SECTION 3(D) OF THE INDIAN PATENT ACT AND THE NOVARTIS CASE****Panelists****K.M. Gopakumar**

Legal Advisor and Senior Researcher, Third World Network

Dr. K.S. Kardam

Deputy Controller of Patents & Designs, Indian Patent Office

Hon. D.P.S. Parmar

Technical Member (Patents), Indian Intellectual Property Appellate Board

Dr. T. Ramakrishna

Professor of Law, National Law School of India University

R. Polk Wagner

Professor of Law, University of Pennsylvania Law School

Moderator**Shyamkrishna Balganesh**

Assistant Professor of Law, University of Pennsylvania Law School

DATA EXCLUSIVITY AND CLINICAL TRIALS IN INDIA**Panelists****David Abrams**Assistant Professor of Law, Business, and Public Policy,
University of Pennsylvania**Shamnad Basheer**Ministry of Human Resource Development Chaired Professor in Intellectual
Property Law, National University of Juridical Sciences**Dr. Dilip G. Shah**

Secretary General, Indian Pharmaceutical Alliance (IPA)

Dr. Navneet Singh TewatiaProgram Coordinator, Forum of Parliamentarians on AIDS/HIV,
Joint United Nations Programme on HIV/AIDS (UNAIDS)**Mr. Zakir Thomas**Project Director, Open Source Drug Discovery, Council of Scientific
and Industrial Research (CSIR)**Moderator****Michael Fitts**Dean and Bernard G. Segal Professor of Law,
University of Pennsylvania Law School**LIMITATIONS AND EXCEPTIONS UNDER THE COPYRIGHT ACT****Panelists****Shyamkrishna Balganesh**

Assistant Professor of Law, University of Pennsylvania Law School

Mr. T.C. JamesDirector, National Intellectual Property Organization in India (NIPO);
Former Director, Intellectual Property Rights Division, Department of Industrial
Policy & Promotion, Indian Ministry of Commerce & Industry**Mr. Lawrence Liang**

Co-founder, Alternative Law Forum

David Nimmer

Professor from Practice, UCLA School of Law; Of Counsel, Irell & Manella LLP

Gideon Parchomovsky

Robert G. Fuller, Jr. Professor of Law, University of Pennsylvania Law School

Moderator**Dr. T. Ramakrishna**

Professor of Law, National Law School of India University

COPYRIGHT AND THE INTERNET**Panelists****Mr. Raman Jit Chima**

Sr. Policy Analyst, Google India

Yogesh PaiAssistant Professor & Executive Director, Research and Advisory Centre on
International Economic Law, National Law University (NLU-Jodhpur)**Mr. Pranesh Prakash**

Program Manager, Center for Internet & Society

Christopher YooJohn H. Chestnut Professor of Law, Communication, and Computer & Information
Science, University of Pennsylvania**Moderator****Jacques deLisle**

Stephen A. Cozen Professor of Law & Political Science, University of Pennsylvania

Global Research Seminar

Comparative Internet Law in the U.S. and Europe
Philadelphia, PA; Washington, D.C.;
Dresden, Leipzig, and Bonn, Germany; Brussels, Belgium

2011 — 2012 Academic Year

During the 2011–2012 academic year, CTIC faculty co-taught an innovative and ambitious Global Research Seminar that brought students from Penn Law and the Technische Universität Dresden together for a comparative study of U.S. and European telecommunications law. The U.S. and Europe have historically taken divergent approaches to the regulation of telecommunications. In more recent years, the approaches have begun to converge, due to the increasing globalization of the telecommunications market — as well as certain intellectual insights that have transformed conventional wisdom about economic regulation. Each student in the seminar undertook an intensive comparative study of a specific area in which the U.S. and Europe have historically followed different regulatory approaches. The results of these studies are being edited by CTIC faculty into a forthcoming book. As part of this seminar, students met with leading government and industry figures and policy makers. These visits offered students and CTIC faculty a hands-on understanding of the relevant institutions, technologies, and legal frameworks that shape telecommunications policy.





Opposite: GRS students and faculty at the Federal Communications Commission in Washington, DC

Above: GRS students and faculty outside the Bundesverwaltungsgericht (Federal Administrative Court) in Leipzig, Germany



Global Research Seminar

January 2, 2012 – Philadelphia, PA

Classroom meetings, University of Pennsylvania Law School

January 3, 2012 – Philadelphia, PA

Classroom meetings, University of Pennsylvania Law School

Comcast Corporation

Bret Perkins

Vice President for External and Governmental Affairs

David Don

Senior Director for Public Policy

Aljit Joy

Senior Vice President for Strategy and Product Development

Tour of Comcast Corporation Innovation Laboratory

January 4, 2012 – Washington, D.C.

U.S. Department of Justice, Antitrust Division

Laury Bobbish

Chief, Telecommunications and Media Enforcement Section

Ken Heyer

Chief, Competition Policy Section

Lawrence Frankel, L'93

Attorney, Telecommunications and Media Enforcement Section

Matthew Hammond

Attorney, Telecommunications and Media Enforcement Section

U.S. Court of Appeals for the D.C. Circuit

Hon. A. Raymond Randolph, L'69

Senior Circuit Judge

Federal Trade Commission

Hon. Jon Leibowitz

Chairman

Edward Felten

Chief Technologist

Tim Wu

Senior Policy Advisor

Deborah Matties

Attorney Advisor to Chairman Jon Leibowitz

Robert Mahini

Attorney, Office of General Counsel

Elizabeth Kraus

Deputy Director for International Antitrust

Markus Heydur

Counsel for International Consumer Protection

Michael Moiseyev

Assistant Director, Bureau of Competition

Jamie Hine

Senior Attorney, Division of Privacy and Identity Protection,
Bureau of Consumer Protection

Google, Inc.

Adam Kovacevich

Senior Manager for Global Communications and Public Affairs

Adrienne Biddings

Telecom Policy Counsel

Will DeVries

Privacy Counsel

Megan Stull

Telecom Policy Counsel

Seth Webb

Senior Policy Manager



Opposite: Thomas Fetzner, Hon. Dr. Kurt Graulich, Christopher Yoo
Left: GRS students and faculty at the Bundesnetzagentur
(Federal Network Agency) in Bonn, Germany

January 5, 2012 – Washington, D.C.

Deutsche Telekom, Washington Office

Reinhard Wieck
Managing Director

U.S. Senate Committee on Commerce, Science, and Transportation

David Goldman
Communications Counsel

Derrick Brent
Senior Counsel
Office of Senator Barbara Boxer

David Quinalty
Republican Senior Professional Staff

Will Carty
Republican Senior Professional Staff

U.S. House Committee on Energy and Commerce

Neil Fried
Senior Telecommunications Counsel

Roger Sherman
Democratic Chief Counsel for Communications and Technology

Shawn Chang
Senior Democratic Counsel for Communications and Technology

Jeff Cohen
Democratic Counsel for Telecommunications

Microsoft

Paula Boyd
Regulatory Counsel

January 6, 2012 – Washington, D.C.

Federal Communications Commission

Hon. Robert McDowell
Commissioner

Paul de Sa
Chief, Office of Strategic Planning and Policy Analysis

Marius Schwartz
Chief Economist

Sharon Gillett
Chief, Wireline Competition Bureau

Jennifer Tatel
Associate General Counsel

Robert Somers
Acting Director, International Visitors Program, International Bureau

Julie Saulnier
Deputy Chief, Strategic Analysis and Negotiations Division, International Bureau

Tracey Weisler
Senior Advisor for Europe, Strategic Analysis and Negotiations Division,
International Bureau

Mark Bykowski
Senior Economist, Office of Strategic Planning and Policy

William Sharkey
Senior Economist, Office of Strategic Planning and Policy

AT&T

Robert Quinn
Senior Vice President for Federal Regulatory Affairs and Chief Privacy Officer

Hank Hultquist
Vice President for Federal Regulatory Affairs

Chris Boyer
Assistant Vice President for Federal Regulatory Affairs

Richard Clarke
Assistant Vice President for Public Policy



March 5, 2012 – Dresden, Germany

Classroom meetings, Technische Universität Dresden

March 6, 2012 – Leipzig, Germany

Bundesverwaltungsgericht (Federal Administrative Court)

Dr. Kurt Graulich
Justice

March 7, 2012 – Bonn, Germany

Bundesnetzagentur (Federal Network Agency)

Dr. Iris Henseler-Unger
Vice President

Klaus-Udo Marwinski
Head of Directorate-General for International Policy Issues
and Regulatory Strategy

Dr. Michael Robert
Assistant Head of Section for Consumer Issues,
Universal Service

Deutsche Telekom

Dr. Jan Krancke
Vice President Public and Regulatory Affairs

Astrid Karabek-Broich
Senior Expert for Regulatory Affairs Pricing

Alfred Mutinelli
Senior Expert for Spectrum Policy

Tour of Deutsche Telecom T-Gallery

March 8, 2012 – Bonn, Germany

Bundesnetzagentur (Federal Network Agency)

Ernst-Ferdinand-Wilmsmann
Chairman of Ruling Chamber 3 - Regulation of Telecommunications
Wholesale Markets, Fixed and Mobile

Bundesministerium für Wirtschaft und Technologie
(Federal Ministry for Economics and Technology)

Dr. Mirko Paschke
Senior Staff for Telecom Policy
Hubert Schöttner
Head of International Affairs Department

Bundeskartellamt (Federal Independent Competition Authority)

Dr. Sybille Gerhardt
Head of Decision Division, Telecom & Media

March 9, 2012 – Brussels, Belgium

European Commission Directorate General for Information Society
and Media (DG INFSO)

Dr. Peter Stuckmann
Policy Officer and Desk Officer for Germany and Austria

European Commission Directorate General for Competition (DG COMP)

Kevin Coates
Head of Communications



Symposium on Fashion Law

Penn Intellectual Property Group
March 20, 2012

With support from CTIC, Penn Law's student-run Penn Intellectual Property Group held its annual symposium in March 2012. This year's symposium examined the present and future state of fashion law. The panels, moderated by CTIC faculty, brought together legal counsel from industry leaders as well as academics devoted to the subject to discuss the adequacy of current intellectual property law in keeping up with "fast fashion" and the changes that newly proposed legislation would have on the industry.



Left to Right:
Barton Beebe, Avery Fischer, Young Kwon, Susan Scafidi, Suzanne White

TRADEMARK AND THE FAST FASHION PHENOMENON

Panelists

Barton Beebe
Professor of Law, NYU School of Law

Avery Fischer
General Counsel, Ralph Lauren

Young Kwon
General Counsel, Forever 21

Susan Scafidi
Professor of Law, Fordham Law School

Suzanne White,
Associate General Counsel, Coach, Inc.

Moderator

Gideon Parchomovsky
Robert G. Fuller, Jr. Professor of Law, University of Pennsylvania Law School

COPYRIGHT FOR FASHION DESIGN: EVALUATING THE IDPPPA

Panelists

Johanna Blakley
Managing Director and Director of Research, Norman Lear Center, Annenberg School for Communications and Journalism, University of Southern California

David Faux
Fashion Law Committee Chair, New York State Bar Association

Barbara Kolsun
General Counsel, Stuart Weitzman

Michelle Marsh
Partner, Kenyon & Kenyon LLP

Staci Riordan
Partner, Fox Rothschild LLP

Moderator

Shyamkrishna Balganesh
Assistant Professor of Law, University of Pennsylvania Law School

Keynote Address

COPYRIGHT AND THE FALL LINE

David Nimmer
Professor from Practice, UCLA School of Law; Of Counsel, Irell & Manella LLP

Visiting Scholars

CTIC hosted three visiting scholars at Penn Law during 2011–2012. Each visiting scholar was hosted by an individual member of the CTIC faculty in order to facilitate collaborative research. In addition, visiting scholars participated in the intellectual life of Penn Law and the broader University, including participating in workshops, guest lecturing in classes, and otherwise interacting with the University community.

CTIC faculty plan to host three additional visiting scholars at Penn Law during the upcoming year. Christopher Yoo will host Thomas Fetzer, now Professor of Law at the University of Mannheim. Polk Wagner will host Lee Petherbridge, Associate Professor of Law at the Loyola Law School of Los Angeles. David Abrams will host Bhaven Sampat, Assistant Professor at Columbia University's Mailman School of Public Health and Professor at Columbia Law School (by courtesy).



Andreas Nicklisch

Assistant Professor of Microeconomics,
University of Hamburg

David Abrams hosted Professor Nicklisch as part of their research using virtual worlds to understand the incentive effects of compensation structures. During his stay, Nicklisch presented his ongoing work on "Sanctions under Uncertainty" at a CTIC workshop. He also participated in CTIC's regular Cyberlunch program and in Wharton Professor Iwan Barankay's Behavioral Economics class.



David Nimmer

Professor from Practice, UCLA School of Law;
Of Counsel, Irell & Manella LLP,
author of Nimmer on Copyright

Professor Nimmer was hosted by Shyam Balganesh, with whom he is engaged in ongoing work. Nimmer's visit was scheduled in conjunction with his keynote address at the Penn Intellectual Property Group's annual symposium. During his visit at Penn Law, Professor Nimmer was a guest lecturer in CTIC faculty members' classes and presented "Paper or Plastic: Copyright in the Cloud" at a CTIC workshop.



Endre Stavang

Professor of Law, University of Oslo

Professor Stavang was hosted by Gideon Parchomovsky. During his stay, Stavang led a discussion at a CTIC workshop about the "DVD-Jon" case, on which Stavang served as a judge in Norway's Borgarting Court of Appeal. This case involved the 15-year-old Norwegian boy who developed DeCSS, the first program that allowed individuals to make and distribute copies of DVDs on the Internet. Stavang used this case as a platform to discuss the use of economic analysis in Scandinavian law. Professors Parchomovsky and Stavang are working on a project that considers the effects that changes to corporate structure can have on incentives to invest in green technology.

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2011-2012 Faculty Workshops

Each year, CTIC invites top scholars to present cutting edge research to the Penn Law faculty as part of CTIC's ongoing workshop series. Six scholars presented their work during the 2011–2012 year, engaging the faculty with both formal presentations of their work, and the intense, informal discussions that follow.



Abraham Drassinower

University of Toronto

Copyright Infringement as Compelled Speech



Sonia Katyal

Fordham University School of Law

Contraband: Advertising, Art and Property in the Age of Corporate Identity



Peter Lee

UC Davis School of Law

*Transcending the Tacit Dimension:
Markets, Relationships, and Organizations
in Technology Transfer*



Josh Lerner

Harvard Business School

Inducement Prizes and Innovation



Orly Lobel

University of San Diego School of Law

*Innovation Motivation: Behavioral Effects of
Post-Employment Restrictions*



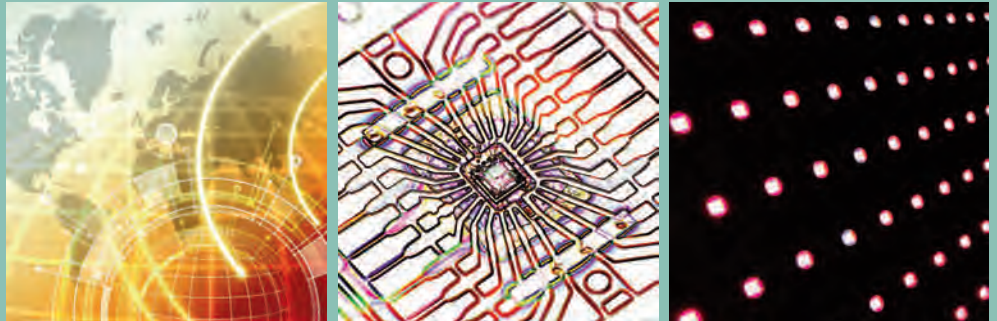
Pablo Spiller

University of California, Berkeley

Transaction Cost Regulation



Center for Technology, Innovation and Competition



CTIC News

Cynthia Dahl

Gus Hurwitz

Student Fellows

Public Interest Fellow

New York Bar Foundation Grant

Upcoming Events



Cynthia Dahl
Practice Associate Professor and Inaugural
Director of the Detkin Intellectual Property
and Technology Clinic

Cynthia Dahl joins the Penn Law faculty as Practice Associate Professor and Director of the new Detkin Intellectual Property and Technology Clinic. Cynthia is an accomplished intellectual property lawyer and leader with experience as both corporate counsel and law firm litigator. We are pleased to welcome her to the law school and as part of the CTIC faculty.

Cynthia is the inaugural director of the Detkin Intellectual Property and Technology Clinic. The creation of the new clinic was made possible by a generous gift from Peter Detkin EE'82, L'85. A noted IP entrepreneur and founder and vice chairman of Intellectual Ventures, Detkin currently serves on the Board of Overseers for Penn's School of Engineering and Applied Science.

The Detkin IP Clinic will work closely with Penn's Center for Technology Transfer, which is dedicated to commercializing research and technologies developed at Penn. The clinic will also collaborate extensively with Penn's Schools of Medicine, Engineering, the Wharton School, and other departments and programs involved in patenting and licensing processes and related research.

The Detkin Clinic's work will closely integrate with Penn Law's curriculum in law and technology and build upon the strengths of its research programs, including CTIC. Projects from the Clinic are expected to be used as case studies in non-clinical courses.



Justin (Gus) Hurwitz

CTIC Fellow

by Scott Klett, and Polk Wagner,
Gren Bar-Gill, and Gideon Parchomovsky

The CTIC faculty welcomed Gus Hurwitz as the Center's inaugural research fellow. Gus's research builds on his background in law, technology, and economics to consider the interface between law and technology and the role of regulation in high-tech industries.

In his first year as a member of the CTIC faculty, his research has focused on spectrum policy, the relationship between regulation and antitrust in high-tech industries, and how Internet architecture affects the structure of online institutions. In addition, he co-taught the Global Research Seminal on Comparative U.S. and European Telecommunications Law and participated at various scholarly events at the law school and in the broader community.

He joins the CTIC faculty following a Visiting Assistant Professorship at George Mason University Law School and having spent several years as a trial attorney with the United States Department of Justice Antitrust Division in the Telecommunications and Media Section. At the Antitrust Division, he worked on several high-profile matters, including the XM/Sirius, Verizon/Alltel, and Comcast/NBC merger investigations, in addition to working on or leading other public and non-public investigations. He received his JD from the University of Chicago Law School and holds a Masters in Economics from George Mason University.

Prior to law school, he worked for several years as a researcher at Los Alamos National Laboratory, where he was a member of the Research and Development in Advanced Network Technologies (RADIANT) team. He has a background in technology and is the recipient of professional awards from organizations such as the Federal Laboratory Consortium, *R&D Magazine*, Los Alamos National Laboratory, Institute for Electrical and Electronics Engineers (IEEE), Association for Computing Machinery (ACM), and the Corporation for Education Network Initiatives in California. In addition, he held an Internet2 Land Speed World Record with the Guinness Book of World Records.





Student Fellows

This past year, CTIC expanded its support for Penn Law students through two new student fellowship initiatives: the CTIC Student Fellowships and CTIC Public Interest Fellows.

Each semester, CTIC faculty designates a select group of Penn Law students to work with the Center as Student Fellows. Student Fellows provide research support to CTIC faculty and have the opportunity to become involved with CTIC events and projects. CTIC worked with three Student Fellows during the 2011-2012 academic year.

Julie Goldemberg, Penn Law class of 2012, worked with Professors Wagner and Yoo. She helped Professor Wagner in his research on the America Invents Act and the use of natural language processing to evaluate patent claims, and provided research support for Professor Yoo's investigation of the U.S. government's nationalization of the phone network during World War I.

Eric Hague, Penn Law class of 2013, worked with Professors Abrams and Balganesch. His work with Professor Abrams included providing research support for Professor Abrams research on the economics of virtual worlds. In addition, he has helped Professor Balganesch edit his forthcoming book on *Intellectual Property and the Common Law*.

Neel Rane, Penn Law class of 2013, provided research support for Professors Abrams's research on the effects of incarceration on deterrence and recidivism, and Professor Parchomovsky's research of property rights.

Levi Morris and Dafan Zhang, both Penn Law Class of 2014, started Student Fellowships during the summer of 2012. Dafan is working with Professors Abrams and Wagner in their ongoing research the use of Natural Language Processing techniques to evaluate patent claims and to other issues of textual interpretation. Levi is assisting with Professor Parchomovsky's work on property rights, and with Professor Yoo's research on empirical studies that are frequently used in telecommunications debates.

Top: Neel Rane, L'13; Eric Hague, L'13;
Julie Goldemberg, L'12
Bottom: Dafan Zhang, L'14; Levi Morris, L'14



Public Interest Fellow

Don Burk, Mark Lemley, Scott Kieft, and Polk Wagner,

Jonathan Barnett, Oren Bar-Gill, and Gideon Parchomovsky

Lauren Saltiel, Penn Law class of 2013, is CTIC's first Public Interest Fellow.

CTIC's Public Interest Fellowships help place Penn Law students in summer internships with public interest or government organizations doing work relevant to CTIC's focus on technology, innovation, and competition law. The fellowship includes a stipend to support the Fellow's work and assistance placing the Fellow with an appropriate organization.

Lauren's fellowship was with the International Intellectual Property Institute (IIPI) on the Institute's "Innovation Opportunity" in the Philippines. The goal of this project is to promote job creation and wealth in the Philippines by helping the country turn its science and technology research into patented inventions available in the marketplace. Lauren worked on IIPI's effort to help the Philippines identify patentable inventions, prosecute patent applications on inventions internationally, and monetize patented inventions through licensing and other techniques. IIPI's work in the Philippines also provides training and technical assistance for the establishment or augmentation of a working technology transfer office.

In addition, Lauren also helped the Institute prepare the programing for a fall 2012 State Department sponsored event to take place this fall in Beirut, Lebanon.

The purpose of this event is to raise awareness of the effect of media piracy on local artists and educate artists on how best to use IP rights to protect their work. Through her work with IIPI, Lauren is also involved with projects concerning the protection of visual artists' reprographic rights to their work, and studying the economic effects of grace periods for patent applications.



Lauren Saltiel, L'13, CTIC Public Interest Fellow



GRS students and faculty outside the United States Supreme Court in Washington, DC

New York Bar Foundation Research Grant

Many of CTIC's initiatives over the past year have been made possible by a three-year grant awarded to CTIC by the New York Bar Foundation to explore policy issues surrounding the Internet.

This grant is the unexpected byproduct of the landmark *Grinnell* litigation, in which the federal government successfully prosecuted a number of leading alarm monitoring companies for price fixing. The Supreme Court decision in this case established the standard that has governed all monopolization cases ever since.

Prominent Philadelphia attorney and Penn alumnus David Berger C' 32, L'36 represented plaintiffs in the private antitrust suits brought in parallel with the federal prosecution. When these cases were settled in 1971, a small amount was held in reserve for class members that the court could not identify. Parts of these funds were never claimed. They remained forgotten in an interest bearing account for nearly 40 years until they were discovered by Berger's son, Daniel Berger, after his father's death in 2007.

The cy pres doctrine requires that such funds be used for charitable purposes that are closely related to the issues that were the focus of the original litigation. Daniel Berger worked with Howard Shecker L'68, a partner with Reed Smith and a past president of the Penn Law Alumni Society, and Lesley Friedman Rosenthal, the Chair of the New York Bar Foundation's Cy Pres Committee, to identify an appropriate recipient. The fact that early alarm technologies represented an important precursor to the modern Internet led them to recommend CTIC as the beneficiary of these funds. Their recommendation was subsequently approved by Chief Judge Loretta A. Preska of the U.S. District Court for the Southern District of New York in December 2010.

Over the past year, this grant has funded the Center's Conference on Cloud Computing, Visiting Scholars and Research Fellow programs, CTIC faculty research, and helped to fund new student initiatives, including the Global Research Seminar on Comparative U.S. and EU Telecommunications Law and new fellowships for Penn Law students. The grant will continue to help CTIC with these and other programs in the coming year. CTIC is grateful for the opportunity to help honor *Grinnell's* legacy.



Upcoming Events

CTIC is looking forward to the upcoming year, which promises to offer our most expansive scholarly program yet.

The CTIC faculty will host two major conferences during this upcoming year. In October, CTIC and the *University of Pennsylvania Law Review* will co-sponsor a conference on “The Evolving Internet,” which will feature work by CTIC’s Christopher Yoo and Gus Hurwitz, in addition to top scholars in Internet and Telecommunications law from around the world. In the spring semester, Professor Yoo will convene a multi-day conference to bring legal and technical scholars together to discuss the relationship between Computer Science and the Law.

In addition to these conferences, the CTIC faculty will host two day-long roundtable discussions, each to intensely consider a specific topic. This fall, Professors Abrams and Wagner will host a roundtable to consider legal application of Natural Language Parsing technologies, especially in patent claim construction. And in February, concurrent with the effective date of the America Invents Act, Professor Wagner will lead a discussion on the implications that this legislation has for innovation in the United States.

This next year will also be the first year of the Penn Law’s new Detkin Intellectual Property and Technology Clinic. The CTIC faculty looks forward to working with its newest member, Cynthia Dahl, on the establishment of this new cornerstone of the law school’s technology and intellectual property programs.

CTIC also expects to continue expanding our student programs in the coming year, building on the groundwork laid over the past year. We will have a full complement of student fellows and look forward to continuing to integrate them into the Center’s research and activities. We also look forward to continuing to support Penn Law students. The Penn Intellectual Property Group is a thriving student group, which CTIC faculty are proud to support through advice and participation. And CTIC faculty are advisors to students participating in events such as the American Intellectual Property Law Association’s Giles S. Rich moot court competition and Drexel University’s IP Transactional Lawyering Meet.

We anticipate adding additional programs in the months to come. We are excited about our plans for the upcoming year and hope that our friends and supporters feel the same way.



Center for Technology, Innovation and Competition



CTIC Faculty

The Center for Technology, Innovation and Competition is privileged to draw on the cross-disciplinary expertise from across the University of Pennsylvania. In addition to the Law School, CTIC brings together faculty from the top-ranked Wharton School, the University's School of Engineering and Applied Science, the Cinema Studies Program, and the Annenberg School for Communication.



CTIC Primary Faculty



David S. Abrams

Assistant Professor of Law, Business, and Public Policy

David Abrams is one of the leading young economists working in empirical law and economics. His work covers a range of topics, tied together by goal of understanding and measuring how individuals respond to incentives in various legal contexts. In his work on Intellectual Property law, he has investigated the expected impact of the America Invents Act, examined the effect of patent duration on innovation, and is using natural language processing to establish more reliable measures of patent value. He has also done substantial work in Criminal justice, investigating questions including whether longer sentences deter crime, how defendant race impact judicial decisions, to what extent attorney skill affects case outcomes, and how much individuals value freedom. He has additional interests in law and health economics, labor economics, and corporate finance.



Shyamkrishna Balganesha

Assistant Professor of Law

Shyam Balganesha's scholarship focuses on understanding how intellectual property and innovation policy can benefit from the use of ideas, concepts and structures from different areas of the common law. His most recent work tries to understand copyright law's pre-requisite of "copying" for liability, as a mechanism of pluralistic decision-making that allows it to incorporate both utilitarian and rights based considerations into its functioning. Balganesha received his J.D. from the Yale Law School, where he was an Articles and Essays Editor of the Yale Law Journal and a Student Fellow at the Information Society Project (ISP). Prior to that he spent two years as a Rhodes Scholar at Balliol College, Oxford, and received a B.C.L. and an M.Phil in Law from Oxford University. He is currently editing a collection of scholarly essays on the topic of intellectual property and the common law, scheduled to be published by the Cambridge University Press in 2012.



Cynthia Dahl

Practice Associate Professor and Inaugural Director of the Detkin Intellectual Property and Technology Clinic

Cynthia Dahl, an accomplished intellectual property lawyer and leader with experience as both corporate counsel and law firm litigator, is the inaugural Director of the University of Pennsylvania Law School's new Detkin Intellectual Property and Technology Clinic. Dahl comes to Penn Law with broad experience in every aspect of intellectual property and technology law and its business applications. After graduating from Stanford Law in 1998, she went to work as an intellectual property litigation associate for law firms in New York and Denver, CO. In 2001, Dahl became a corporate counsel at TruePosition, Inc., a technology-driven international wireless location company based in Berwyn, PA, where she helped the firm's patent portfolio grow from 20 to more than 125 patents worldwide. She was promoted to senior counsel of the 400-employee firm in 2005 and won company leadership awards in 2007 and 2010.



Justin (Gus) Hurwitz

CTIC Fellow

Gus joins the faculty as the Center's inaugural fellow. His work draws on his background in law, technology, and economics to consider the interface between law and technology and the role of regulation of high-tech industries. He has previously been a Visiting Assistant Professor at George Mason University Law School. Prior to that he was a Trial Attorney with the United States Department of Justice Antitrust Division, Telecommunications and Media Enforcement Section. He has a background in technology and is the recipient of professional awards from organizations such as the Federal Laboratory Consortium, R&D Magazine, Los Alamos National Lab, IEEE & ACM, and the Corporation for Education Network Initiatives in California. In addition, he held an Internet2 Land Speed World Record with the Guinness Book of World Records.



R. Polk Wagner

Professor of Law

Professor Wagner focuses his research and teaching in intellectual property law and policy, with a special interest in patent law. He has written over 20 articles on topics ranging from an empirical analysis of judicial decision-making in patent law to the First Amendment status of software programs. He is the co-author of *Patent Law (Concepts and Insights)* (Foundation 2008) (with Craig Allen Nard). He is a frequent lecturer on intellectual property topics worldwide. Prior to joining the Penn Law faculty in 2000, Wagner served as a clerk to Judge Raymond C. Clevenger III of the U.S. Court of Appeals for the Federal Circuit.



Gideon Parchomovsky

Robert G. Fuller, Jr. Professor of Law

Professor Parchomovsky specializes in intellectual property law, property law, and cyberlaw. He has already made significant contributions to the field through his wide-ranging scholarship, having written numerous articles for major law reviews on property and liability rules, insider trading, trademarks, domain names, and patents. Most recently, he has been advocating the need for a comprehensive property theory and the need to introduce a value-oriented theory. Parchomovsky has received the A. Leo Levin Award presented to the best teacher of a first-year course.



Christopher S. Yoo

John H. Chestnut Professor of Law, Professor of Communication, and Professor of Computer and Information Science

Professor Yoo has emerged as one of the nation's leading authorities on law and technology. His research focuses on how technological developments and economic theories of imperfect competition are transforming the regulation of the Internet and other forms of electronic communications. He has been a leading voice in the "network neutrality" debate that has dominated Internet policy over the past several years. He is also pursuing research on copyright theory as well as the history of presidential power. He is the author of four books, including *Networks in Telecommunications: Economics and Law* (Cambridge 2009) (with Daniel F. Spulber), as well as nearly fifty articles and book chapters. Yoo testifies frequently before Congress, the Federal Communications Commission, and the Federal Trade Commission. Before entering law teaching, Yoo clerked for Justice Anthony M. Kennedy of the Supreme Court of the United States and Judge A. Raymond Randolph L'69 of the U.S. Court of Appeals for the D.C. Circuit.



CTIC Secondary Faculty



Anita L. Allen

Henry R. Silverman Professor of Law, and Professor of Philosophy

Professor Allen is an expert on privacy law, bioethics, and contemporary values and is recognized for her scholarship about legal philosophy, women's rights, and race relations. She is a member of the Presidential Commission for the Study of Bioethical Issues. Her books include *Unpopular Privacy* (Oxford 2011); *Privacy Law and Society* (Thomson/West 2011); *The New Ethics: A Guided Tour of the 21st Century Moral Landscape* (Miramax/Hyperion 2004); *Why Privacy Isn't Everything: Feminist Reflections on Personal Accountability* (Rowman and Littlefield 2003); and *Uneasy Access: Privacy for Women in a Free Society* (Rowman and Littlefield 1988). She co-edited (with Milton Regan) *Debating Democracy's Discontent* (Oxford 1998). Allen writes for popular magazines and blogs and has frequently appeared on nationally broadcast television and radio programs.



Cary Coglianese

Edward B. Shils Professor of Law; Professor of Political Science; and Director, Penn Program on Regulation Administrative Law and Regulatory Practice.

Cary Coglianese specializes in the study of regulatory policy and processes, with a particular emphasis on the empirical evaluation of alternative regulatory strategies and on the role of conflict and cooperation in business-government relations. He teaches administrative law, regulatory policy, and environmental regulation and is the founding director of the university-wide Penn Program on Regulation, he. He is also the founder and current advisor to *RegBlog.org* and has served as Penn Law's Deputy Dean for Academic Affairs. He founded the Law & Society Association's international Collaborative Research Network on Regulatory Governance, served as a founding editor of the peer-reviewed journal *Regulation & Governance*, and currently co-chairs the American Bar Association's Administrative Law and Regulatory Practice Section's committee on e-government. He is the editor or co-editor of five books, including most

recently *Regulatory Breakdown: The Crisis of Confidence in U.S. Regulation and Import Safety: Regulatory Governance in a Global Economy*, and is the author or co-author of over a hundred articles, chapters, reports, and essays on various aspects of regulation and the regulatory process. Previously a member of the faculty of Harvard University's John F. Kennedy School of Government for over a decade, he holds his J.D., M.P.P., and Ph.D. from the University of Michigan and has served as a visiting professor of law at Stanford University and Vanderbilt University



Seth Kreimer

Kenneth W. Gemmill Professor of Law

Professor Kreimer's first article, *Allocational Sanctions: The Problem of Negative Rights in a Positive State*, set the terms for a generation of discussion of unconstitutional government manipulation of public benefits. His subsequent work has shaped analysis of governmental control of private information, abortion regulation, assisted suicide, and gay marriage. He has explored the implications of DNA testing in criminal justice, free speech on the Internet, and the dangers of abuse in the "war on terror." Kreimer has represented plaintiffs in a wide array of litigation. He served as co-counsel in *Ferguson v. City of Charleston* (U.S. Supreme Court 2001), establishing the right of obstetrical patients to refuse non-consensual drug testing; *In Re R.B.F.* (Pa. Supreme Court 2002), securing the right of gay and lesbian parents to establish families by second parent adoption; *Nixon v. Commonwealth of Pennsylvania* (Pa. Supreme Court 2003), successfully challenging the constitutionality of lifetime disqualification of sex-offenders from employment; and *Buck v. Stankovic* (M.D. Pa. 2007), enjoining denial of a marriage license to a citizen who wished to marry an undocumented non-citizen. Prior to joining the Penn Law faculty, Kreimer clerked for Judge Arlin M. Adams L'47 of the U.S. Court of Appeals for the Third Circuit.

CTIC Affiliated Faculty



Matthew Blaze

Associate Professor of Computer and Information Science
 Professor Blaze focuses his research on the architecture and design of secure systems based on cryptographic techniques, analysis of secure systems against practical attack models, and finding new cryptographic primitives and techniques. He is especially interested in the use of encryption to protect insecure systems such as the Internet. He was a designer of swlPe, a predecessor of the now standard IPSEC protocol for protecting Internet traffic. Another project, CFS, investigated and demonstrated the feasibility of including encryption as a file system service. Recently, he has applied cryptologic techniques to other areas, including the analysis of physical security systems. This work yielded a powerful and practical attack against virtually all commonly used master-keyed mechanical locks.



Gerald R. Faulhaber

Professor Emeritus of Business and Public Policy,
 Wharton School

Professor Faulhaber served as Chief Economist at the Federal Communications Commission from July 1, 2000 to June 30, 2001, where he worked on many telecommunications and Internet issues, including the AOL-Time Warner merger. His current research focuses on public policy and broadband infrastructure and the political economy of regulation. He has published widely in professional journals and is the author of several books, including *European Economic Integration: Technological Perspectives* (Springer 1991) and *Telecommunications in Turmoil: Technology and Public Policy* (Harper 1988). He has served on numerous scholarly boards and review committees and was Vice-President of the Board of Directors of the Telecommunications Policy Research Conference in Washington, D.C. He was an Associate Editor of the *Journal of Industrial Economics* and serves on the Board of Editors of *Information Economics and Policy*. Prior to his academic career, Faulhaber was Director of Strategic Planning and Financial Management at AT&T, after holding the position of Head, Economics Research at Bell Laboratories.



Peter Decherney

Associate Professor of Cinema Studies, English Department
 Peter Decherney is Associate Professor of Cinema Studies, English, and Communication and the Director of the Cinema Studies Program at the University of Pennsylvania. He is the author of *Hollywood's Copyright Wars: from Edison to the Internet and Hollywood* and the *Culture Elite: How the Movies Became American*. He regularly testifies before the Copyright Office of the United States, and in 2011 he filed an amicus brief in the Supreme Court Case of *Golan v. Holder*. Prof. Decherney has been an Academy of Motion Picture Arts and Sciences Scholar and a fellow of the American Council of Learned Societies.



Michael Kearns

Professor of Computer and Information Science with Secondary Appointment in the Wharton School in Operations and Information Management and Statistics. Since 2002, Professor Kearns has been on the faculty of the Computer and Information Science Department at the University of Pennsylvania, where he holds the National Center Chair. He is the Founding Director of the new Singh Program in Market and Social Systems Engineering (www.mkse.upenn.edu), and holds secondary appointments in the Statistics and Operations and Information Management (OPIM) departments of the Wharton School. He has worked closely with a quantitative trading group at SAC Capital in New York City, and is actively involved in a number of technology startup companies. He has also served as a consultant and expert witness on a number of technology and regulatory matters. For more information, see www.cis.upenn.edu/~mkearns.



Monroe E. Price

Director of the Center for Global Communication Studies, Annenberg School for Communication. Monroe E. Price is director of the University of Pennsylvania's Center for Global Communication Studies (CGCS) at the Annenberg School for Communication, where he works with a wide transnational network of regulators, scholars, and practitioners in Europe, Africa, Latin America, and Asia, as well as in the United States. Price also founded the Programme in Comparative Media Law and Policy at Oxford University and remains a research fellow there. He chairs the Center for Media and Communications Studies at Central European University, a project instituted and encouraged by CGCS. Price has served on the President's Task Force on Telecommunications Policy and the Sloan Commission on Cable Communications (both in the 1970s) and on the Carter-Sagalaev Commission on Radio and Television Policy (in the 1990s). He was a long-time member of the International Broadcasting Institute (now the International Communications Institute). His publications include *Media and Sovereignty: The Global Information Revolution and its Challenge to State Power*, *Owning the Olympics: Narratives of the New China*, *Self Regulation and the Internet*, and *Objects of Remembrance: A Memoir of American Opportunities and Viennese Dreams*.



Andrea M. Matwyshyn

Assistant Professor of Legal Studies and Business Ethics, Wharton School

Professor Matwyshyn joined the Wharton School in 2007. Her research and consulting focus on corporate information security regulation, consumer data privacy law, and technology regulation. She is the editor of *Harboring Data: Information Security, Law and the Corporation* (Stanford Press 2009), and, most recently, has been a visiting faculty member at Notre Dame Law School (Fall 2011) and the Oxford Internet Institute (Summer 2011). A list of her most recent publications and talks is available at <http://www.andreamm.com>.



Katja Seim

Assistant Professor of Business and Public Policy,
Wharton School

Professor Seim specializes in applied microeconomics and industrial organization. Her research focuses on two areas. First, she studies how firms make product placement and entry decisions, how they assess the competitive implications of different market entry strategies, and how their decisions are affected by public policies and regulatory interventions. Second, she analyzes firm and consumer behavior in information and communications industries. Specific topics she has worked on in this area include consumer adoption of online services; consumer choice among the commonly offered nonlinear pricing plans for such services; and the effect of entry on the characteristics of such sophisticated pricing strategies. Her research has been published in leading journals such as *American Economic Review*, *American Economic Journal*, *Microeconomics*, *Marketing Science*, *Quantitative Marketing and Economics*, and the *Rand Journal of Economics*.



Jonathan M. Smith

Olga and Alberico Pompa Professor of Engineering and
Applied Science

Professor Smith's research interests are in computer networking and computer security. He is developing network architectures for new services and applications, such as the Terabit Edge Research Activity (TERA), which is focused on the coupling between parallel processing and parallelism in transmission systems, and implications for host software and network control. He has recently worked on Zodiac, an intrinsically assurable mobile ad-hoc network, where many challenges ensue as router and host become indistinguishable, and is investigating Dynamic Trust Management (DTM), which is focused on "situation-aware" authorizations for privileged actions, such as emergency situations. From 2004 to 2006, Professor Smith served as a Program Manager for the Defense Advanced Research Projects Agency (DARPA), for which he was awarded the OSD Medal for Exceptional Public Service in August 2006.



Joseph Turow

Robert Lewis Shayon Professor of Communication,
Annenberg School for Communication

Professor Turow is a recipient of the National Communication Association's Distinguished Scholar Award and is an elected Fellow of the International Communication Association. A 2005 *New York Times* magazine article called Professor Turow "probably the reigning academic expert on media fragmentation." He has authored nine books, edited five, and written more than 100 articles on mass media industries. His most recent book is *The Daily You: How the New Advertising Industry is Defining Your Identity and Your Worth* (Yale University Press 2012). Turow's continuing national surveys of the American public on issues relating to marketing, new media, and society have received a great deal of attention in both the popular press and the research community. The recipient of a number of conference paper and book awards, Turow has lectured widely and been invited to give the Pockrass Distinguished Lecture at Penn State University and to be a Chancellor's Distinguished Lecturer at Louisiana State University. Turow currently serves on the editorial boards of the Journal of *Broadcasting and Electronic Media*, *Poetics*, and *New Media & Society*.



Kevin Werbach

Associate Professor of Legal Studies and Business Ethics,
Wharton School

Professor Werbach is a leading expert on the business, policy, and social implications of emerging Internet and communications technologies. While serving as Counsel for New Technology Policy at the FCC during the Clinton Administration, Werbach was named by *Wired* magazine as "one of the few policy wonks who really got it." He is the founder of the Supernova Group, a technology analysis and consulting firm. He advises companies, writes about emerging trends in communications and information technology and organizes Supernova, a major executive technology conference. He co-led the review of the Federal Communications Commission for the Obama-Biden Transition Project and currently serves as an advisor to the National Telecommunications and Information Administration for the broadband stimulus grant program. A sought-after speaker and commentator, Werbach appears frequently in print and broadcast media.

Adjunct Faculty



Thomas Fetzer

Lecturer in Law

Thomas Fetzer is Professor of Law at the University of Mannheim Law School, Germany, where he holds a Chair of Public Economic Law and Taxation. Before taking up his current position he was Professor of Law at the TU Dresden Law School, Germany. He has been a guest lecturer at the Vanderbilt University Law School, the University of Freiburg, Germany, and the University of Jena, Germany. Moreover he is an Adjunct Professor at the Mannheim Business School. His fields of expertise include telecommunications law, media law, and privacy/data protection law. He has also published several articles on tax law and European community law and co-authored books on Internet law, telecommunications law, and public economics law.



The Honorable Kent A. Jordan

Judge, U.S. Court of Appeals for the Third Circuit

Judge Jordan was appointed in 2006 to serve as a Judge on the United States Court of Appeals for the Third Circuit. Prior to that appointment, Judge Jordan served as a United States District Judge for the District of Delaware from 2002 to 2006. Before taking the bench, Judge Jordan served as an Assistant United States Attorney for the District of Delaware, having served as Civil Chief in that office in 1991 and 1992. He has also been an officer and member of the boards of directors of privately held businesses and was a partner in a Wilmington, Delaware, law firm, where his practice focused on intellectual property, corporate, and commercial litigation.



Osagie Imasogie L'85

I Grant Irey Adjunct Professor of Law

Osagie Imasogie has over twenty-five years of experience in the fields of law, finance and business management, healthcare and the pharmaceutical industry. Prior to co-founding Phoenix IP Ventures, an IP-based Merchant Bank, Imasogie conceptualized and established GlaxoSmithKline Ventures and was its founding Vice President. Imasogie led GSK Ventures in concluding thirty worldwide transactions within a three-year period. He currently serves on the Board of Directors of Genaera Corporation, a publicly traded biopharmaceutical company, and is Chairman of the Board of Directors of iCeutica Pharmaceuticals, Inc., and the former Chairman of Ception Therapeutics, Inc., a biopharmaceutical company that he also co-founded. He is a member of the Board of Overseers of the University of Pennsylvania Law School and a member of the Wilson Council of the Woodrow Wilson International Center for Scholars, in addition to a number of other non-for-profit companies and institutions. Osagie also served as a Senior Consultant to the President's Emergency Plan For Aids Relief (PEPFAR), a unique initiative by the United States Government to fight the global AIDS epidemic.



Matthew Pearson L'05

Lecturer in Law

Matthew Pearson focuses his practice on intellectual property litigation. He received a J.D. in 2005 from the University of Pennsylvania Law School. He earned a Ph.D. from Cornell University in biochemistry, molecular and cell biology in 1999. As a graduate student at Cornell University and a postdoctoral fellow at the National Institutes of Health, he studied the three-dimensional molecular structures of proteins using x-ray crystallography. Mr. Pearson earned B.S. degrees in 1993 in biochemistry and chemistry from Michigan State University. Mr. Pearson served for two years as a law clerk to the Honorable Kent A. Jordan of the U.S. District Court for the District of Delaware and the U.S. Court of Appeals for the Third Circuit.



Center for Technology, Innovation and Competition



CTIC Research

Research output is a core function of the Center for Technology, Innovation and Competition. By providing a forum where faculty can engage with one another across multiple disciplines, the Center seeks to encourage informed, high-quality research that will advance the understanding of technology and innovation policy.

Listed in the next several pages is a sampling of recently published papers related to technology, innovation, and competition by CTIC faculty members. All primary and secondary faculty appointments are in the University of Pennsylvania Law School unless otherwise noted. All affiliated and adjunct faculty appointments are in the University of Pennsylvania.



Primary Faculty

David S. Abrams

Assistant Professor of Law, Business, and Public Policy

Is Pleading Really a Bargain, 8 J. EMPIRICAL LEGAL STUD. 200 (2011).

Optimal Bail and the Value of Freedom: Evidence from the Philadelphia Bail Experiment, 49 ECON. INQ. 750 (2011) (with Chris Rohlfs).

Priority Rules: An Empirical Exploration of First-to-Invent Versus First-to-File, U. PA. INST. FOR LAW & ECON. RESEARCH PAPER No. 11-29 (2011) (with Polk Wagner).

Poisoning the Next Apple? How the America Invents Act Harms Inventors, 65 STAN. L. REV. (with Polk Wagner) (forthcoming 2012).

Estimating the Deterrent Effect of Incarceration using Sentencing Enhancements, 4 AM. ECON. J.: APPLIED ECON. 32 (2012).

Do Judges Vary in Their Treatment of Race?, 42 J. LEGAL STUD. (forthcoming 2012) (with Marianne Bertrand & Sendhil Mullainathan).

A Market for Justice, 14 J. BUS. L. (forthcoming 2012) (with D. Chen).

The Prisoner's Dilemma: A Cost-Benefit Approach to Incarceration, 98 IOWA L. REV. (forthcoming 2013).

How Do We Decide How Long to Incarcerate?, in EMPIRICAL LEGAL STUDIES OF JUDICIAL SYSTEMS (forthcoming 2013).

Shyamkrishna Balganesesh

Assistant Professor of Law

"Hot News": The Enduring Myth of Property in News, 111 COLUM. L. REV. 419 (2011).

The Obligatory Structure of Copyright Law: Unbundling the Wrong of Copying, 125 HARV. L. REV. 1664 (2012).

Quasi-Property: Like, But Not Quite Property, 160 U. PA. L. REV. 1889 (2012).

The Future of the Hot News Misappropriation After Barclay's Capital, Inc. v. Theflyonthewall.Com, 112 COLUM. L. REV. SIDEBAR 134 (2012).

The Normativity of Copying in Copyright Law, 62 DUKE L.J. (forthcoming 2012).

INTELLECTUAL PROPERTY AND THE COMMON LAW (Shyamkrishna Balganesesh ed., Cambridge forthcoming 2012).

The Normative Structure of Copyright Law, in INTELLECTUAL PROPERTY AND THE COMMON LAW (Shyamkrishna Balganesesh ed., Cambridge forthcoming 2012) (with Gideon Parchomovsky).

The Role of Unfair Competition in the Common Law, in INTELLECTUAL PROPERTY AND THE COMMON LAW (Shyamkrishna Balganesesh ed., Cambridge forthcoming 2012) (with Gideon Parchomovsky).

Justin (Gus) Hurwitz

CTIC Fellow

Trust and Online Interaction as Verifiable but Non-Observable Conduct, 161 U. PA. L. REV. (forthcoming 2013).

Gideon Parchomovsky

Robert G. Fuller, Jr. Professor of Law

Partial Patents, 111 COLUM. L. REV. 207 (2011) (with Michael Mattioli).

The Best Available Technology Standard, 112 COLUM. L. REV. 1194 (2011) (with Lital Helman).

The Case for Imperfect Enforcement of Property Rights, 160 U. PA. L. REV. 1927 (2012).

The Relational Contingency of Right, 98 VA. L. REV. (forthcoming 2012) (with Alex Stein).

The Role of Unfair Competition in the Common Law, in INTELLECTUAL PROPERTY AND THE COMMON LAW (Shyamkrishna Balganesesh ed., Cambridge forthcoming 2012) (with Shyamkrishna Balganesesh).

R. Polk Wagner

Professor of Law

Life After Bilski, 63 STAN. L. REV. 1315 (2011) (with Mark A. Lemley, Michael Risch, & Ted Sichelman).

Priority Rules: An Empirical Exploration of First-to-Invent Versus First-to-File, U. PA. INST. FOR LAW & ECON. RESEARCH PAPER No. 11-29 (2011) (with David Abrams).

Guest Post: An Empirical Exploration of First-to-Invent Versus First-to-File, PATENTLY-O, August 31, 2011.

Poisoning the Next Apple? How the America Invents Act Harms Inventors, 65 STAN. L. REV. (2012) (with David Abrams).

Unenforceable Patents, U. PA. INST. FOR LAW & ECON. RESEARCH PAPER No. 11-29 (2012) (with Lee Petherbridge & Jason Rantanen).

Did Phillips Change Anything? Empirical Analysis of the Federal Circuit's Claim Construction Jurisprudence, in INTELLECTUAL PROPERTY AND THE COMMON LAW (Shyamkrishna Balganesesh ed., Cambridge forthcoming 2012) (with Lee Petherbridge).

Christopher S. Yoo

John H. Chestnut Professor of Law, Professor of Communication, and Professor of Computer and Information Science

CRITICAL CONCEPTS IN INTELLECTUAL PROPERTY LAW: COPYRIGHT, 2 volumes (Edward Elgar Publishing 2011).

Promoting the Buildout of New Networks vs. Compelling Access to the Monopoly Loop: A Clash of Regulatory Paradigms, 4 J.L. & ECON. REG. 7 (2011).

Cloud Computing: Architectural and Policy Implications, 38 REV. INDUS. ORG. 405 (2011).

Rough Consensus and Running Code: Integrating Engineering Principles into Internet Policy Debates, 63 FED. COMM. L.J. 341 (2011).

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Technologies of Control and the Future of the First Amendment, 53 WM. & MARY L. REV. 747 (2011).

Are Those Who Ignore History Doomed to Repeat It?, 78 U. CHI. L. REV. 1627 (2012) (reviewing Tim Wu, THE MASTER SWITCH (2010)) (with Peter Decherney and Nathan Ensmenger).

THE DYNAMIC INTERNET: HOW TECHNOLOGY, USERS, AND BUSINESSES ARE TRANSFORMING THE NETWORK (AEI Press 2012).

Coase Revisited: Property Theory and Emerging Technologies, 160 U. PA. L. REV. 2189 (2012).

When Antitrust Met Facebook, 19 GEO. MASON L. REV. 1147 (2012).

Internet Policy over the Next Five Years: Does One Size Still Fit All?, in LAW AND COMMUNICATIONS POLICY IN THE DIGITAL AGE: THE NEXT FIVE YEARS (Randolph J. May ed., Carolina Academic Press forthcoming 2012).

When the Past Is Not Prologue: Bringing Internet Policy into the 21st Century, 91 TEX. L. REV. (forthcoming 2012).

Network Neutrality and the Need for a Technological Turn in Internet Scholarship, in HANDBOOK OF MEDIA LAW AND POLICY: A SOCIO-LEGAL EXPLORATION (Monroe E. Price & Stefaan G. Verhulst eds., Routledge forthcoming 2012).

The Impact of New Technologies, in HANDBOOK OF CONSTITUTIONAL LAW (Thomas Fleiner, Cheryl Saunders, & Mark Tushnet eds., Routledge forthcoming 2012) (with Thomas Fetzler).

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Internet Policy and the Limits of Layering, 161 U. PA. L. REV. (forthcoming 2013).

Secondary Faculty

Anita L. Allen

Henry R. Silverman Professor of Law and Professor of Philosophy

PRIVACY LAW AND SOCIETY (2d ed., West 2011).

EVERYDAY ETHICS: OPINION-WRITING ABOUT THE THINGS THAT MATTER MOST (Univ. Readers 2011).

UNPOPULAR PRIVACY: WHAT MUST WE HIDE (Oxford 2011).

Configuring the Networked Self: Shared Conceptions and Critiques, CONCURRING OPINIONS, March 6, 2012.

Cary Coglianese

Edward B. Shils Professor of Law, Professor of Political Science, and Director of the Penn Program on Regulation

Business and Environmental Law, in OXFORD HANDBOOK OF BUSINESS AND THE NATURAL ENVIRONMENT (Tima Bansal & Andrew J. Hoffman eds., Oxford 2011) (with Ryan Anderson).

Federal Agency Use of Electronic Media in the Rulemaking Process, Report to the Administrative Conference of the United States (2011).

Making the Rulemaking Process Accessible to Ordinary Citizens, REGBLOG (September 6, 2011).

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