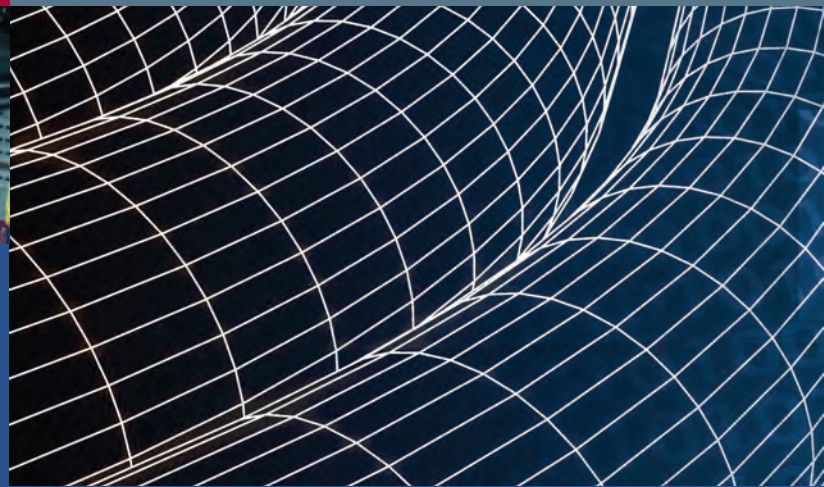


Law and Technology at Penn

2013-2014



Center for Technology, Innovation and Competition



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 website at www.law.upenn.edu/institutes/ctic.

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Left to Right:
Shyamkrishna Balganesh, Cynthia Dahl, R. Polk Wagner, Gideon Parchomovsky, David Abrams, Christopher Yoo, and Matt Corriel L'13.

A Message from the Directors

This book is a celebration of the Center for Technology, Innovation and Competition's seventh year, our most ambitious and successful year to date.

This year, we hosted several major conferences at Penn Law. Our December conference on patent reform featured a diverse lineup of scholars, industry professionals, and policymakers. Participants engaged in an open and balanced daylong examination of the empirical and theoretical foundations that can inform the future of patent law. In May, we hosted the second annual Private Law Consortium and the second annual Roundtable on Computer Science and the Law. The Private Law Consortium is a conference of private law scholars, hosted in rotation by its six member schools from five different countries. CTIC's Roundtable on Computer Science and the Law engaged policymakers, industry experts, and both established and emerging scholars in discussions that spanned multiple disciplines, from law to engineering to the social sciences.

As in the past, we have not limited CTIC programming to the Penn campus. In June, CTIC and the Penn Wharton Public Policy Initiative cosponsored a one-day conference in Washington, D.C. on Internet regulation, which assessed the empirical evidence on broadband deployment in Europe and the United States. CTIC also cosponsored two conferences abroad. The first was a two-day conference in April in Mannheim, Germany comparing current issues in Internet law in Europe and the U.S., which was cosponsored by the Mannheim Centre for Competition and Innovation (MaCCI) and the Centre for European Economic Research (ZEW). The second was a two-day conference on value pluralism in intellectual property, cosponsored and hosted by Hong Kong University.

As always, CTIC has continued to support Penn Law students in numerous ways. We worked closely with the student-run Penn Intellectual Property Group to help them organize their annual conference, which focused this year on patent law. CTIC also continued our summer public interest fellowship program and our student research fellowship program. We are proud that two of our students, under the guidance of CTIC faculty, advanced in the 2013 IP LawMeet to become National Finalists. And the Detkin Intellectual Property and Technology Legal Clinic completed its second successful year, giving students the opportunity to work in a transactional IP setting with both large and small clients.

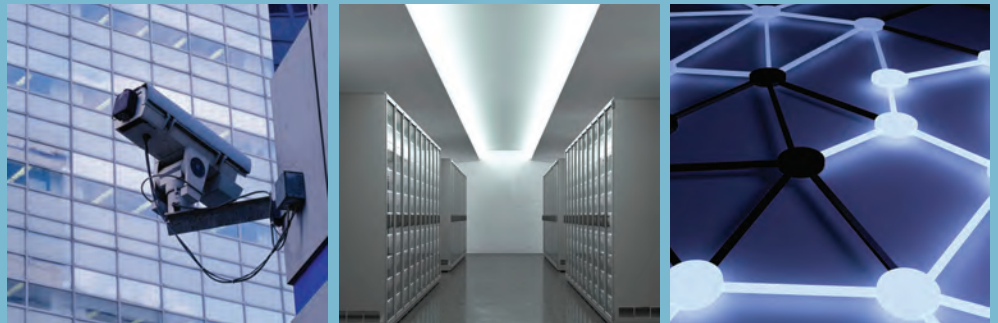
CTIC hosted more workshops this year than ever before. Of our ten workshops, the first six were part of a classroom colloquium series in which Penn Law students were active participants.

Looking ahead, CTIC welcomes executive director Jeffrey Vagle and its new faculty fellow, Camilla Hrdy. And in the fall of 2014, CTIC looks forward to welcoming the inaugural cohort of students into the University of Pennsylvania's new joint degree program in law and engineering. Students will earn a J.D. from Penn Law and a master's degree from Penn's School of Engineering and Applied Sciences.

Finally, CTIC is thankful to all of our friends and supporters for bringing their perspectives, experiences, participation, and expertise to our programs. Through their support, we have been able to continue serving as a leading academic center in technology and innovation policy.



Center for Technology, Innovation and Competition



CTIC Programs

Patent Reform: Theoretical Propositions and Factual Foundations

Current Issues in Internet Law in Europe and the U.S.

Private Law Consortium

Roundtable on Computer Science and the Law

Value Pluralism in Intellectual Property Law

Book Symposium on *The Dynamic Internet*

U.S. vs. European Broadband Deployment: What Do the Data Say?

Penn Intellectual Property Group Annual Symposium

Global Research Seminar: Emerging Issues in Internet Law and Policy

Workshops

Patent Reform: Theoretical Propositions and Factual Foundations

December 6, 2013

Our first major conference of the year brought together an exciting cross-section of scholars, policy makers, legal practitioners, and industry professionals. Together, we engaged in an open and constructive conversation on the state and future of patent law in the United States, placing a particular emphasis on empirical studies of patent law. The panels covered a wide range of topics of current interest, including software patents; nonpracticing entities; fair, reasonable, and non-discriminatory (FRAND) licensing; patent infringement remedies; and legislative and regulatory responses. As always, CTIC was careful to construct each panel to encompass the full range of perspectives on each of these issues. Video of the entire conference is available on our website (www.law.upenn.edu/institutes/ctic), and live tweets from the conference can be found on our Twitter feed (twitter.com/pennlawctic).





Above: Conference participants

Opposite Page: Jonathan Nuechterlein, Mark Lemley, John Golden, and Hon. William Sorrell



Patent Reform: Theoretical Propositions and Factual Foundations December 6, 2013

Welcome

Michael Fitts

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

Christopher Yoo

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

THE VALUE OF SOFTWARE PATENTS

Michael Meurer

Abraham and Lillian Benton Scholar and Professor of Law,
Boston University School of Law

Michael Risch

Professor of Law, Villanova University School of Law

David Abrams

Professor of Law, Business Economics, and Public Policy,
University of Pennsylvania

Peter Detkin L'86

Founder and Vice-Chairman, Intellectual Ventures

Christopher Yoo

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

Moderator

R. Polk Wagner

Professor of Law, University of Pennsylvania Law School

NON-PRACTICING ENTITIES

Robin Feldman

Professor of Law, University of California Hastings College of the Law

David Schwartz

Professor of Law, IIT Chicago-Kent College of Law

Steven Moore

Partner, Kelley Drye & Warren LLP

Laura Sheridan

Patent Counsel, Google

Moderator

R. Polk Wagner

Professor of Law, University of Pennsylvania Law School

STANDARD ESSENTIAL PATENTS AND FRAND

Michael Carrier

Distinguished Professor, Rutgers School of Law-Camden

Richard Epstein

Laurence A. Tisch Professor of Law, New York University School of Law

Christopher Yoo

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

Monica Barone

Senior Legal Counsel, Qualcomm

Moderator

Jonathan Nuechterlein

General Counsel, Federal Trade Commission



Left to Right:
Laura Sheridan
Peter Detkin L'86
Christopher Yoo and Richard Epstein

REMEDIES: INJUNCTION AND EXCLUSION

John Golden

Loomer Family Professor in Law, University of Texas School of Law

Mark Lemley

William H. Neukom Professor of Law, Stanford Law School

Hon. F. Scott Kieff L'94

Commissioner, U.S. International Trade Commission, and
Fred C. Stevenson Research Professor of Law,
George Washington University Law School (on leave)

Matt Levy

Patent Counsel, Computer and Communications Industry Association

Moderator

Shyamkrishna Balganesh

Assistant Professor of Law, University of Pennsylvania Law School

LEGISLATIVE AND REGULATORY RESPONSES

Patrick Coyne

Partner, Finnegan, Henderson, Farabow, Garrett & Dunner, LLP, and
President, Federal Circuit Bar Association

John Desmarais

Partner, Desmarais LLP

Krish Gupta

Senior Vice President and Deputy General Counsel, EMC Corp.

Waldo Kuipers

Corporate Affairs Manager, Microsoft Corp.

Hon. William Sorrell

Attorney General, State of Vermont

Moderator

Cynthia Dahl

Practice Associate Professor,
Detkin Intellectual Property and Technology Legal Clinic,
University of Pennsylvania Law School



Top to Bottom:
Monica Barone
Hon. F. Scott Kieff L'94

Current Issues in Internet Law in Europe and the U.S.

Cosponsored by the Mannheim Centre
for Competition and Innovation (MaCCI)

April 29-30, 2014
Mannheim, Germany

In April, CTIC cosponsored a conference in Mannheim, Germany, with the Mannheim Centre for Competition and Innovation (MaCCI), hosted by the Centre for European Economic Research (ZEW). Bringing together scholars from both sides of the Atlantic, this two-day conference explored issues in all corners of Internet law, comparing European and American approaches to some of today's most pressing policy questions.





Above: David Lyons, Jonathan Liebenau, Justin (Gus) Hurwitz, and Pierre Larouche

Opposite Page: Thomas Fetzer and Roger Noll



Current Issues in Internet Law in Europe and the U.S.

April 29-30, 2014

Cosponsored by the Mannheim Centre for
Competition and Innovation (MaCCI)

April 29, 2014

Welcome

Thomas Fetzer

Chair of Public Law, Regulatory and Tax Law,
University of Mannheim Law School

Christopher Yoo

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

FEDERALISM

Daniel Lyons

Associate Professor, Boston College Law School

Ralf Müller-Terpitz

Chair for Public Law, Law of Economic Regulation and Media,
University of Mannheim Law School

SPECTRUM

Ellen Goodman

Professor, Rutgers School of Law-Camden

Martin Cave

Visiting Professor, Imperial College Business School

DOMINANCE

Roger Noll

Professor Emeritus, Stanford University Department of Economics

Martin Peitz

Professor of Economics, University of Mannheim

UNBUNDLING

Scott Wallsten

Vice President for Research and Senior Fellow, Technology Policy Institute

Martin Cave

Visiting Professor, Imperial College Business School

NETWORK NEUTRALITY

Justin (Gus) Hurwitz

Assistant Professor of Law, University of Nebraska College of Law

Pierre Larouche

Professor of Competition Law, Tilburg University

Left to Right:
Ingo Vogelsang, Gregory Rosston, and Scott Wallsten
Ellen Goodman

April 30, 2014

BROADBAND ROLLOUT

Ingo Vogelsang
Professor of Economics, Boston University

Jonathan Liebenau
Associate Professor (Reader) of Technology Management,
Department of Management, London School of Economics

Wolfgang Briglauer
Affiliate Researcher, Competition and Regulation Research Group,
Centre for European Economic Research

ANTITRUST VS. SECTOR-SPECIFIC REGULATION

Babette Boliek
Associate Professor of Law, Pepperdine University School of Law

Eike Frenzel
Visiting Professor at the Chair of Public Law, Financial and Tax Law,
Public Law and Media Law, University of Mannheim Law School

UNIVERSAL SERVICE

Gregory Rosston
Deputy Director and Public Policy Co-Director,
Stanford Institute for Economic Policy Research

Heike Schweitzer
Chair for Civil Law, Competition and Regulatory Law,
Free University of Berlin



Top to Bottom:
Pierre Larouche
Justin (Gus) Hurwitz

Private Law Consortium

May 11-12, 2014

CTIC and Penn Law proudly hosted the second annual Private Law Consortium, a rotating conference comprised of private law scholars from six member schools and five countries: the United States (University of Pennsylvania and Harvard University), Canada (McGill University), Israel (Bar-Ilan University), Italy (University of Trento), and Norway (University of Oslo). Over two days, scholars from around the world presented new work in private law, including works in contracts, torts, property, and intellectual property. The consortium gave everyone in attendance the opportunity to think across the spectrum of private law issues and to compare civil and common law regimes, North American and European approaches to similar questions, and a diversity of analytical methodologies.





Above: Eric Feldman, Yuval Feldman, Henry Smith, and Yotam Kaplan

Opposite Page: Miriam Bitton, Matt Corriel L'13, and Stephen Smith



Private Law Consortium

May 11-12, 2014

May 11, 2014

PANEL 1

GOOD FAITH AND FAIR DEALING AS AN UNDERENFORCED LEGAL NORM

Paul MacMahon

Climenko Fellow and Lecturer on Law, Harvard Law School

A PAN-EUROPEAN APPROACH TO ILLEGALITY AND IMMORALITY IN CONTRACTS?

Erik Røsaeg

Professor, Scandinavian Institute of Maritime Law, University of Oslo

Moderator

Tess Wilkinson-Ryan L'05

Assistant Professor of Law and Psychology, University of Pennsylvania

PANEL 2

"BETTER TO KILL THAN TO MAIM"? LOSS OF LIFE AS AN AUTONOMOUSLY RECOVERABLE DAMAGE OF THE PRIMARY VICTIM IN PERSONAL INJURY LAW

Umberto Izzo

Aggregate Professor of Civil and Comparative Law,
University of Trento Faculty of Law

Valentina Moscon

Research Fellow, Law and Technology Research Group,
University of Trento Faculty of Law

INEXCUSABLE WRONGS

John Goldberg

Eli Goldston Professor of Law, Harvard Law School

DUTIES TO TRY AND DUTIES TO SUCCEED

Stephen Smith

James McGill Professor, McGill University Faculty of Law

Moderator

Eric Feldman

Professor of Law, University of Pennsylvania Law School

PANEL 3

GOOD CAUSE STATUTES REVISITED: AN EMPIRICAL ASSESSMENT

Adi Ayal

Assistant Professor, Bar-Ilan University Faculty of Law

MANDATORY RULES AND DEFAULT RULES IN INSURANCE CONTRACTS

Tom Baker

William Maul Measey Professor of Law and Health Sciences,
University of Pennsylvania Law School

Moderator

Gideon Parchomovsky

Robert G. Fuller, Jr. Professor of Law, University of Pennsylvania Law School, and
Professor, Bar-Ilan University Faculty of Law

PANEL 4

PROPERTY REGISTRIES

Abraham Bell

Professor of Law, University of San Diego School of Law, and
Professor, Bar-Ilan University Faculty of Law

Gideon Parchomovsky

Robert G. Fuller, Jr. Professor of Law, University of Pennsylvania Law School, and
Professor, Bar-Ilan University Faculty of Law

THE ELEMENTS OF POSSESSION

Henry Smith

Fessenden Professor of Law, Harvard Law School

PROPERTY THEORY AND THE BALANCE BETWEEN LICENSED AND UNLICENSED SPECTRUM

Christopher Yoo

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

Moderator

Matt Corriel L'13

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



Left to Right:
Gideon Parchomovsky, and Abraham Bell
David Hoffman, Tess Wilkinson-Ryan L'05, and Malcolm Langford
Adi Ayal, Erik Røsaeg, and Umberto Izzo

May 12, 2014

PANEL 5

UNPLANNED COAUTHORSHIP

Shyamkrishna Balganesh

Assistant Professor of Law, University of Pennsylvania Law School

INTELLECTUAL PROPERTY SECURITIZATION

Miriam Bitton

Assistant Professor, Bar-Ilan University Faculty of Law

RESTRUCTURING OF THE ECONOMIC RIGHTS IN COPYRIGHT – SOME REFLECTIONS ON A POSSIBLE (OR IMPOSSIBLE) APPROACH

Ole-Andreas Rognstad

Professor, Department of Private Law, University of Oslo Faculty of Law

Moderator

R. Polk Wagner

Professor of Law, University of Pennsylvania Law School

PANEL 6

AN EXPERIMENTAL ANALYSIS OF THE EFFECT OF SPECIFICITY ON COMPLIANCE AND PERFORMANCE

Yuval Feldman

Associate Professor, Bar-Ilan University Faculty of Law

Henry Smith

Fessenden Professor of Law, Harvard Law School

JUDGING UNDER UNCERTAINTY: A GAME THEORY APPROACH

Malcolm Langford

Research Fellow, Norwegian Centre for Human Rights,
University of Oslo Faculty of Law

INTUITIONS ABOUT CONTRACT FORMATION

David Hoffman

James E. Beasley Professor of Law, Temple University Beasley School of Law

Tess Wilkinson-Ryan L'05

Assistant Professor of Law and Psychology, University of Pennsylvania

Moderator

Miriam Bitton

Assistant Professor, Bar-Ilan University Faculty of Law

PANEL 7

REVERSING POLARITY? ECONOMIC CRISIS AND FINANCIAL ENGINEERING THROUGH THE PRIVATE LAW CONCEPT OF OBLIGATION

Vincent Forray

Assistant Professor, McGill University Faculty of Law

THE PROBLEM OF PRIVATE COST

Yotam Kaplan

S.J.D. Candidate, Harvard Law School

Moderator

Abraham Bell

Professor of Law, University of San Diego School of Law, and
Professor, Bar-Ilan University Faculty of Law

CLOSING REMARKS

Shyamkrishna Balganesh

Assistant Professor of Law, University of Pennsylvania Law School

Roundtable on Computer Science and the Law

May 13-14, 2014

Last year, CTIC launched a roundtable that brought together scholars and professionals working at the intersection of law and computer science. The first roundtable was a resounding success, nurturing productive dialogue between scholars in different disciplines and facilitating understanding and a common language between legal academics, engineers, social scientists, and others. CTIC held the second roundtable in May 2014. The event began with a tutorial that helped create a body of terminology that everyone could use throughout the two-day conference and establish a baseline understanding of certain technical issues. The roundtable also included ten paper presentations and tutorials that each served as a starting point for broader discussions. We concluded the conference with an open discussion about future directions the roundtable should take. Encouraged by this year's success and by the comments received at the concluding discussion, CTIC plans to hold its third annual roundtable on Computer Science and the Law in May 2015.





Above: Steven Bellovin

Opposite Page: Walter Johnson and Nico van Eijk



Roundtable on Computer Science and the Law

May 13, 2014

Welcome and Technical Tutorial

Christopher Yoo

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

SESSION 1

SECURITY ECONOMICS IN THE HTTPS VALUE CHAIN

Nico van Eijk

Professor of Media and Telecommunications Law,
University of Amsterdam Faculty of Law

DIGITAL DARK MATTER AND THE ECONOMIC CONTRIBUTION OF APACHE

Shane Greenstein

Kellogg Chair in Information Technology, Kellogg School of Management,
Northwestern University

Moderator

Jonathan Liebenau

Associate Professor (Reader) of Technology Management,
Department of Management, London School of Economics

SESSION 2

SPECTRUM POLICY AND EMERGING WIRELESS ARCHITECTURES

William Lehr

Research Associate, Computer Science and Artificial Intelligence Laboratory,
Massachusetts Institute of Technology

PROPERTY THEORY AND THE BALANCE BETWEEN LICENSED AND UNLICENSED SPECTRUM

Christopher Yoo

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

Moderator

Justin (Gus) Hurwitz

Assistant Professor of Law, University of Nebraska College of Law

SESSION 3

DIFFERENTIAL PRIVACY

Aaron Roth

Raj and Neera Singh Assistant Professor of Computer and Information Science,
University of Pennsylvania

LAW AND GOVERNANCE IN THE INTERNET DESIGN PROCESS

Sandra Braman

Professor of Communication, University of Wisconsin-Milwaukee

Moderator

Jonathan Smith

Olga and Alberico Pompa Professor of Engineering and Applied Science,
University of Pennsylvania

Left to Right:
Sandra Braman
Aaron Roth
Jonathan Liebenau



May 14, 2014

SESSION 4

METADATA

Steven Bellovin
Professor of Computer Science, Columbia University

COMPUTATIONAL POLICIES TO ENFORCE MULTIPARTY AGREEMENTS AND MAINTAIN SOFTWARE DESIGN FLEXIBILITY

David Gordon
Ph.D. Candidate in Engineering and Public Policy, Carnegie Mellon University

Moderator

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

SESSION 5

MONITORING AND SHAPING THE ALGORITHMS OF FINANCE

Frank Pasquale
Professor of Law, University of Maryland Francis King Carey School of Law

AUDITING ALGORITHMS: A RESEARCH METHOD FOR DETECTING DISCRIMINATION ON INTERNET PLATFORMS

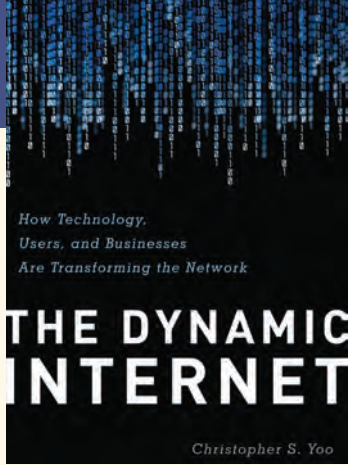
Christian Sandvig
Associate Professor of Communication Studies and Information,
University of Michigan

Moderator

Rahul Telang
Professor of Information Systems and Management, H. John Heinz III College,
Carnegie Mellon University



Top to Bottom:
Shane Greenstein
Frank Pasquale



Book Symposium on *The Dynamic Internet: How Technology, Users, and Businesses Are Transforming the Network*

December 9, 2013

CTIC founding director Christopher Yoo's latest book has been lauded as "striking the right balance for Net governance and public policy in the information age." In December, CTIC brought three former public servants and distinguished scholars together to discuss *The Dynamic Internet* in a symposium before an audience of Penn Law faculty.

Welcome

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

THE DYNAMIC INTERNET:
HOW TECHNOLOGY, USERS, AND BUSINESSES
ARE TRANSFORMING THE NETWORK

Michael Powell

Former Chairman of the Federal Communications Commission
and President and CEO of the National Cable and
Telecommunications Association

Douglas Sicker

Former Chief Technologist of the Federal Communications Commission,
Former Chief Technology Officer of the National Telecommunications
and Information Administration, and Professor and Director of the
Interdisciplinary Telecommunications Program at the University of Colorado

Justin (Gus) Hurwitz

Assistant Professor of Law at the University of Nebraska College of Law,
who previously served as CTIC's first faculty fellow

Moderator

Sally Gordon
Professor of Law, University of Pennsylvania Law School



U.S. vs. European Broadband Deployment: What Do the Data Say?

Christopher S. Yoo
John H. Chestnut Professor of Law, Communication,
and Computer and Information Science at the
University of Pennsylvania
Founding Director of the Center for Technology,
Innovation and Competition



Center for Technology, Innovation and Competition

U.S. vs. European Broadband Deployment: What Do the Data Say?

Cosponsored by the Penn Wharton Public
Policy Initiative

June 4, 2014

CTIC and the Penn Wharton Public Policy Initiative teamed up in June to present a conference in Washington, D.C. on Internet regulation. This event examined the mapping studies conducted by the U.S. and European regulatory authorities as well as other government data and concluded that, contrary to many press reports, the U.S. is not falling behind Europe in the broadband race. These data also shed light on the debate over network neutrality, in which some advocate regulating the Internet as a public utility, while others contend that the Internet should continue under the light-touch regulatory approach that the FCC has followed for the past few decades.

Keynote Address

Christopher Yoo

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

PANELISTS

Blair Levin

Communications & Society Fellow, Aspen Institute
Communications and Society Program, and former Executive Director,
Omnibus Broadband Initiative, Federal Communications Commission

Doug Brake

Telecommunications Policy Analyst, Information Technology and Innovation
Foundation

Moderator

Gerry Faulhaber

Professor Emeritus of Business Economics and Public Policy,
Wharton School, University of Pennsylvania



Value Pluralism in Intellectual Property Law

Cosponsored by the Law and Technology Center,
Hong Kong University Faculty of Law

June 10-11, 2014
Hong Kong

In June, CTIC and Hong Kong University Faculty of Law cosponsored a conference in Hong Kong on normative values in intellectual property law. Beginning with the premise that utilitarianism is today the dominant approach to the thinking about intellectual property law, the conference explored how intellectual property regimes successfully incorporate a variety of different values in both their structure and in their functioning. The conference brought together intellectual property scholars to examine the means, mechanism, devices, and even the very desirability of intellectual property attempting to incorporate these plural values into its design.





Above: Shyamkrishna Balganesch

Opposite Page: Gideon Parchomovsky, Alice Lee, and Haochen Sun



Value Pluralism in Intellectual Property Law

June 10-11, 2014

Cosponsored by the Law and Technology Center,
Hong Kong University Faculty of Law

June 10, 2014

Welcome

Douglas Arner

Professor and Head of the Department of Law,
University of Hong Kong Faculty of Law

Christopher Yoo

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

Shyamkrishna Balganesh

Assistant Professor of Law, University of Pennsylvania Law School

A ROUNDTABLE DISCUSSION ON UTILITARIANISM AND CONSEQUENTIALISM IN INTELLECTUAL PROPERTY THINKING

Moderators

Shyamkrishna Balganesh

Assistant Professor of Law, University of Pennsylvania Law School

David Abrams

Professor of Law, Business Economics, and Public Policy,
University of Pennsylvania

CULTURAL PRODUCTION, PROGRESS, AND INTELLECTUAL PROPERTY

Anne Barron

Associate Professor (Reader) in Law, Department of Law,
London School of Economics

Kelvin Kwok

Assistant Professor of Law, University of Hong Kong Faculty of Law

Peter Lee

Professor of Law and Chancellor's Fellow, UC Davis School of Law

Commentator

David Llewelyn

Professor of Intellectual Property Law, King's College London,
Deputy Dean and Professor of Law (Practice),
Singapore Management University School of Law

Moderator

Marcelo Thompson

Assistant Professor of Law, University of Hong Kong Faculty of Law

RIGHTS-BASED THINKING IN INTELLECTUAL PROPERTY

Christopher Yoo

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

Haochen Sun

Assistant Professor of Law, University of Hong Kong Faculty of Law

Commentator

Kung-Chung Liu

Research Fellow, Institutum Iurisprudentiae, Academia Sinica, and
Professor of Law, Institute of Law for Science and Technology,
College of Technology Management, National Tsing Hua University (Taiwan)

Moderator

Anne Cheung

Professor of Law, University of Hong Kong Faculty of Law

HUMAN DEVELOPMENT, THE CAPABILITIES APPROACH, AND INTELLECTUAL PROPERTY

Brett Frischmann

Professor of Law and Director, Benjamin N. Cardozo School of Law,
Yeshiva University

David Lametti

Associate Professor, McGill University Faculty of Law

Madhavi Sunder

Professor of Law, UC Davis School of Law

Moderator

Simon Young

Professor, University of Hong Kong Faculty of Law



Left to Right:
Peter Yu
David Abrams, Matt Corriel L'13, and Anne Barron
Madhavi Sunder and Brett Frishmann

June 11, 2014

EASTERN VALUES IN INTELLECTUAL PROPERTY

Jacques deLisle

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

Alice Lee

Associate Professor and Associate Dean for Academic Affairs,
University of Hong Kong Faculty of Law

Peter Yu

Kern Family Chair in Intellectual Property Law, Drake University Law School

Moderator

Hualing Fu

Professor of Law, University of Hong Kong Faculty of Law

INCOMMENSURABILITY OF VALUES IN INTELLECTUAL PROPERTY

Shyamkrishna Balganesh

Assistant Professor of Law, University of Pennsylvania Law School

Matt Corriel L'13

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

Gideon Parchomovsky

Robert G. Fuller, Jr. Professor of Law, University of Pennsylvania Law School,
and Professor, Bar-Ilan University Faculty of Law

Commentator

Scott Veitch

Paul K C Chung Professor in Jurisprudence,
University of Hong Kong Faculty of Law

Moderator

Yahong Li

Associate Professor and Deputy Head of the Department of Law,
University of Hong Kong Faculty of Law



Top to Bottom:
Peter Lee
Jacques deLisle

Penn Intellectual Property Group Annual Symposium Patent Law: The New, the Disruptive, and the Debate

March 20, 2014

The student-run Penn Intellectual Property Group's seventh annual symposium focused on some of the most cutting edge issues in patent law today. Topics included the impact of the America Invents Act on innovation, the influence of patent law on genetics studies in the wake of *Association for Molecular Pathology v. Myriad Genetics, Inc.*, analyses of standards of review in patent cases, the rise of 3D printing, and more. Judge Alan Lourie of the United States Court of Appeals for the Federal Circuit delivered a keynote address in which he responded to some criticisms of the Federal Circuit and suggested several areas for legislative action. The symposium concluded with a lively Oxford-style debate with six debated statements about the proposed Goodlatte Patent Litigation Reform Bill. Live tweets from the symposium are available on CTIC's Twitter account (www.twitter.com/pennlawctic).



Opposite Page, Left to Right: R. Polk Wagner and Joseph Drayton L'97; Hon. Alan Lourie
Left: Hon. Kent Jordan

Welcome

Jenny Liu L'15 & Jordan Romanoff L'15
Symposium Co-Directors, Penn Intellectual Property Group

R. Polk Wagner
Professor of Law, University of Pennsylvania Law School

Keynote Address

Hon. Alan Lourie
Circuit Judge, United States Court of Appeals for the Federal Circuit

PANEL 1: NEW AND EMERGING ISSUES IN PATENT LAW

Matthew Pearson L'05
Partner, Akin Gump Strauss Hauer & Feld LLP, and
Lecturer in Law, University of Pennsylvania Law School

R. Polk Wagner
Professor of Law, University of Pennsylvania Law School

Struan Grant
Associate Professor of Pediatrics and Assistant Professor of
Pediatrics in Genetics, Perelman School of Medicine,
University of Pennsylvania

Moderator

Joseph Drayton L'97
Partner, Cooley LLP

PANEL 2: DISRUPTIVE FORCES IN AMERICAN PATENT PRACTICE

Jacques DeLisle
Stephen A. Cozen Professor of Law, Professor of Political Science,
and Director, Center for East Asian Studies, University of Pennsylvania

Jannie Lau L'02
Executive Vice President, General Counsel, and Secretary, InterDigital, Inc.

Robert Katz
Partner, Banner & Witcoff, Ltd., and Adjunct Professor of Law,
Georgetown University Law Center

Moderator

Patrick Coyne
Partner, Finnegan, Henderson, Farabow, Garrett & Dunner LLP, and
President, Federal Circuit Bar Association

OXFORD-STYLE DEBATE

Moderator

Hon. Kent Jordan
Circuit Judge, United States Court of Appeals for the Third Circuit, and
Adjunct Professor of Law, University of Pennsylvania Law School

PRO:

Matthew Pearson L'05
Partner, Akin Gump Strauss Hauer & Feld LLP, and
Lecturer in Law, University of Pennsylvania Law School

Ognian Shentov
Partner, Jones Day, and Vice Chair, U.S. Patent Law Committee,
Intellectual Property Owners Association

CON:

Sarah Kao-Yen Tsou
Partner, Kirkland & Ellis LLP

Patrick Coyne
Partner, Finnegan, Henderson, Farabow, Garrett & Dunner LLP, and
President, Federal Circuit Bar Association

Global Research Seminar

Global Perspectives on Emerging Issues in Internet Law and Policy

2013-2014 Academic Year

Philadelphia, PA; Washington, D.C.;

Berlin and Bonn, Germany; and Brussels, Belgium

Led by CTIC faculty members Christopher Yoo and Thomas Fetzer, students in the 2013-2014 Global Research Seminar examined and compared the regulatory approaches taken in the U.S. and other countries—especially European. With emphasis on the vibrant debate that has emerged over which legal principles and policies best promote broadband deployment and entrepreneurship, students studied the ways in which the regulatory approaches of different nations have converged over time and the ways they have remained distinct. In the process, the seminar provided an introduction to EU law, covering both the EU's institutions and lawmaking process. During field research trips to Washington, D.C., in January and to Germany and Belgium in March, students toured relevant government and industry facilities and met key thinkers and policy makers, facilitating a hands-on understanding of the institutions, technologies, and legal frameworks that shape telecommunications policy around the world.





Above: Seminar group with Peter Eberl at DG Connect in Brussels, Belgium

Opposite Page: Office of the German Federal Parliament



Global Research Seminar

2013-2014 Academic Year

January 6, 2014 – Washington, D.C.

Federal Trade Commission

Hon. Maureen Ohlhausen
Commissioner

U.S. House Committee on Energy and Commerce

David Redl, Majority Chief Counsel,
Subcommittee on Communications and Technology
Kelsey Guyseman, Majority Counsel,
Subcommittee on Communications and Technology
Grace Koh, Majority Counsel, Subcommittee on Communications and Technology
Genaro Fullano, Majority Detailee
Shawn Chang, Minority Chief Counsel,
Subcommittee on Communications and Technology
Margaret McCarthy, Minority Professional Staff Member
Kara van Stralen, Minority Policy Analyst
Patrick Donovan, Minority Detailee

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

John Branscome, Majority Senior Communications Counsel
Shawn Bone, Majority Communications Counsel
Travis Litman, Majority Communications Counsel
Sydney Paul, Majority Legislative Assistant
Jeff Farrah, Minority Counsel
Jason Van Beek, Minority Deputy General Counsel
Greg Orlando, Minority Counsel, Communications, Technology, and
the Internet Subcommittee
Hap Rigby, Minority Professional Staff Member

January 7, 2014 – Washington, D.C.

Deutsche Telekom AG

Reinhard Wieck
Managing Director, Washington Office

U.S. Department of Justice, Antitrust Division, Telecommunications and Media Enforcement Section

Scott Scheele, Chief
Lauren Fishbein, Trial Attorney
Peter Gray, Trial Attorney
Matthew Hammond, Trial Attorney
David Lawrence, Trial Attorney
Robert Lepore, Trial Attorney
Yvette Tarlov, Trial Attorney
Carl Willner, Trial Attorney
Fred Young, Trial Attorney

Comcast Corporation

Rebecca Arbogast, Vice President for Global Public Policy
Joe Waz, Senior Strategic Advisor
Rudy Brioché, Executive Director and Counsel for Global Public Policy
Elizabeth Chernow, Senior Manager for Public Policy
Jordan Goldstein, Executive Director for Regulatory Affairs
David Green, Vice President for Public Policy, NBC Universal

E. Barrett Prettyman U.S. Courthouse and William B. Bryant Annex

Hon. A. Raymond Randolph L'69, Senior Circuit Judge,
U.S. Court of Appeals for the D.C. Circuit

Intel Corporation

Peter Pitsch, Executive Director of Communications Policy and
Associate General Counsel



Left to Right:
Seminar group with Hon. A. Raymond Randolph L'69
Seminar group at Comcast Corp.
Seminar group with Hon. Maureen Ohlhausen

January 8, 2014 – Washington, D.C.

Federal Trade Commission

Joshua Wright, Commissioner
Jonathan Nuechterlein, General Counsel
Joel Marcus, Assistant General Counsel
Andrew Gavil, Director, Office of Policy Planning
Tara Koslov, Deputy Director, Office of Policy Planning
Elizabeth Kraus, Deputy Director for International Antitrust
Hui Ling Goh, Counsel for International Consumer Protection
Guilherme Roschke, Counsel for International Consumer Protection
Michael Moiseyev, Assistant Director, Bureau of Competition
Katherine Brin, Senior Attorney, Bureau of Consumer Protection

Verizon Communications Inc.

David Young, Vice President, Federal Regulatory Affairs
Sanjay Udani, Executive Director for Internet and Technology Policy

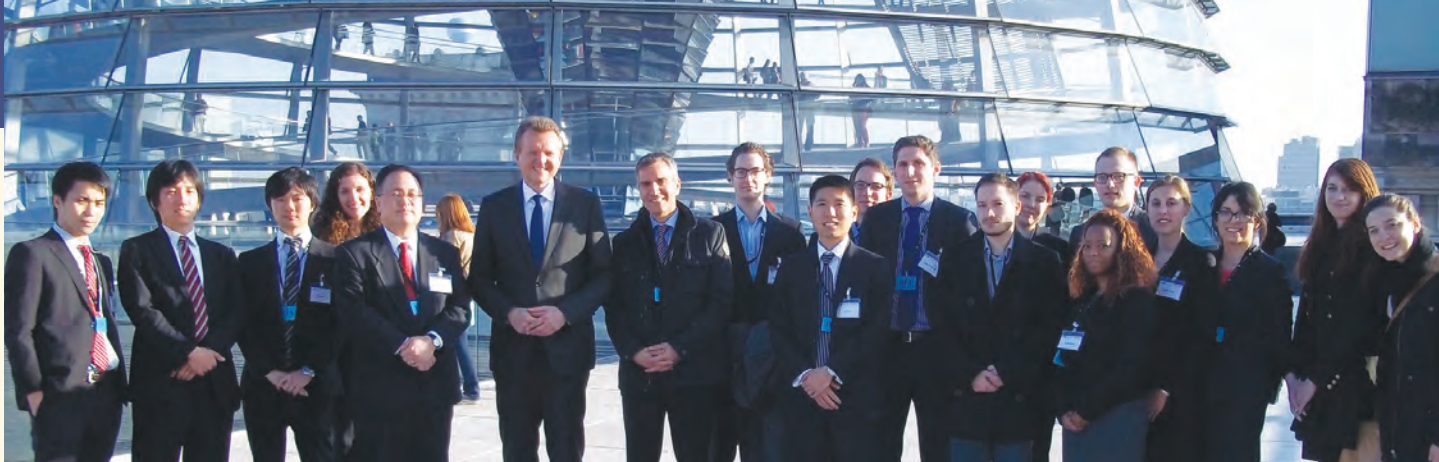
January 9, 2014 – Washington, D.C.

Federal Trade Commission

Jonathan Chambers, Chief, Office of Strategic Planning & Policy Analysis
Henning Schulzrinne, Chief Technology Officer
Jonathan Levy, Deputy Chief Economist,
Office of Strategic Planning & Policy Analysis
Evan Kwerel, Senior Economist, Office of Strategic Planning & Policy Analysis
William Sharkey, Senior Economist,
Office of Strategic Planning & Policy Analysis
Timothy Stelzig, Deputy Chief, Competition Policy Division
Douglas Klein, Attorney, Office of General Counsel
Walter Johnston, Chief, Electromagnetic Compatibility Division,
Office of Engineering and Technology
James Miller, Senior Attorney Advisor, Office of Engineering and Technology
Brett Tarnutzer, Assistant Chief, Incentive Auctions Task Force
Edward Smith, Special Counsel, Incentive Auctions Task Force
Heidi Lankau, Attorney, Wireline Competition Bureau
Richard Lerner, Deputy Chief, International Bureau Strategic Analysis and
Negotiations Division
Arthur Lechtman, Senior Attorney Advisor

Microsoft Corporation

Michael Nelson, Principal Technology Policy Strategist



Global Research Seminar

January 10, 2014 – Washington, D.C.

National Telecommunications and Information Administration

Cyril Dadd, Congressional Affairs Liaison, Office of Congressional Affairs

Jade Nester Gray, Senior Advisor to the Assistant Secretary

John Morris, Director, Office of Policy Analysis and Development

Suzanne Radell, Advisor for International Affairs

Peter Tenhula, Spectrum Advisor to the Assistant Secretary

Doug Kinkoph, Director, Broadband Technology Opportunities Program

Anne Neville, Director, State Broadband Initiative

AT&T Innovation Center

Brent Olson, Vice President of Public Policy

Rich Clarke, Assistant Vice President of Public Policy

March 10, 2014 – Berlin, Germany

Federal Administrative Court of Germany

Dr. Kurt Graulich

Justice

ePlus Group, Inc.

Christian Wohlrabe

Head of Digital Public Affairs

German Parliament (Deutscher Bundestag)

MP Martin Dörmann

Chairman, Committee on Culture and Media and Advisory Board Member,
German Federal Network Agency (BNetzA)

March 11, 2014 – Berlin, Germany

Medienanstalt Berlin-Brandenburg (mabb)

Eva Flecken

Head of Digital Projects, Web and Media Policy

Bertram Gugel

Video Expert

German Federal Network Agency (BNetzA) Consumer Protection and Universal Service Division

Caroline Garbe

Desk Officer, Division of Consumer Protection and Universal Service

Federal Ministry for Economic Affairs and Energy (BMWi)

Andreas Hartl

Deputy Head of Unit



Left to Right:
Seminar group with Martin Dörmann
Thomas Fetzer, Andres Hartl, and Christopher Yoo

March 12, 2014 – Bonn, Germany

Deutsche Telekom AG

Jan Krancke

Head of Regulation Strategy and Economics

Andreas Fier

Head of Academic Relations and Senior Economist

German Federal Network Agency (BNetzA)

Ernst-Ferdinand Wilmsmann

Chairman, Ruling Chamber 3

March 13, 2014 – Bonn, Germany

German Federal Network Agency (BNetzA)

Mirko Paschke

Senior Staff for Telecom Policy

Soeren Nuebel

Deputy Head of Unit

German Federal Cartel Authority (BKartA)

Markus Wagemann

Head of Telecommunications Department

Holger Dubberstein

Spokesman

March 14, 2014 – Brussels, Belgium

**European Commission Directorate General for Communications
Networks, Content & Technology (DG Connect)**

Peter Eberl

Deputy Head of Unit for Electronic Communications Regulation

European Commission Directorate General for Competition (DG Comp)

Kevin Coates

Head of Unit, Cartels



Top to Bottom:
Ernst-Ferdinand Wilmsmann
Seminar group

2013-2014 Workshop Series

Every year, CTIC invites scholars to campus to present new work in fields related to CTIC's research. This year we hosted more scholars than ever before. Six of our workshops were conducted in conjunction with a classroom colloquium series co-taught by CTIC faculty member Shyamkrishna Balganesh and CTIC Faculty Fellow Matt Corriel L'13. Our final four workshops were presented in the usual manner, before an audience of Penn Law faculty, who offered constructive comment and critique.



Stefan Bechtold

ETH Zurich

The Causal Effects of Competition on Innovation: Experimental Evidence



Barton Beebe

New York University School of Law

Bleistein, Copyright Law, and the Problem of Aesthetic Progress



Tun-Jen Chiang

George Mason University School of Law

Forcing Patent Claims



Gerry Faulhaber

Wharton School, University of Pennsylvania

*The Future of Telecommunications...
Near and Far*



Jane Ginsburg

Columbia Law School

Fair Use: For Free, or Permitted-but-Paid?



Petra Moser

Stanford University

Dead Poets' Property



David Lametti

McGill University Faculty of Law

The Concept of the Anticommons: Useful, or Ubiquitous and Unnecessary?



Haochen Sun

University of Hong Kong Faculty of Law

Living Together in One Civilized World: How Luxury Companies and Consumers Can Fulfill Their Ethical Responsibilities to the Poor



Peter Menell

UC Berkeley School of Law

This American Copyright Life: Reflections on Re-Equilibrating Copyright for the Internet Age



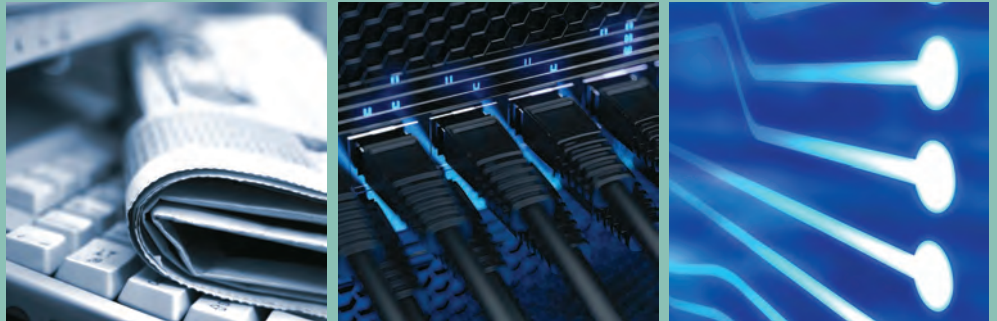
Madhavi Sunder

UC Davis School of Law

Learning by Doing



Center for Technology, Innovation and Competition



CTIC News

Joint Degree Program in Law and Engineering

Executive Director Jeffrey Vagle

Detkin Intellectual Property and Technology Legal Clinic

Faculty Fellow Camilla Hrdy

Student Achievements and Fellowships



Jonathan Smith and Christopher Yoo

Joint Degree Program in Law and Engineering

Since the University of Pennsylvania Law School and the School of Engineering and Applied Science (SEAS) first announced a new joint degree program in August 2013, preparations have been in full swing for the arrival of our first cohort of joint degree students in Fall 2014. Our Penn Law admissions team has expanded their recruitment efforts to reach populations not previously targeted for a legal education. Faculty at both Penn Law and Penn Engineering have been rethinking their syllabi to better teach the issues the joint degree program is designed to address. And industry actors have reached out to Penn, eager to know more about the exciting new kind of educated professional our program will produce.

CTIC has been both the foundation and the inspiration for this joint degree program, which will provide lawyers and engineers with the training needed to work on cutting edge issues in law and technology. The program will offer a four-year joint J.D./master's degree, where the master's degree will either be a Master of Science in Engineering (MSE) or a Master of Computer and Information Technology (MCIT), depending on which program the individual student is admitted to at SEAS. The academic program will culminate in a capstone course co-taught by faculty from the Law School and SEAS, addressing precisely the kind of unsolved legal, technical, and policy problems students will face when they enter the workforce.

With this program, Penn Law and Engineering are positioning themselves to produce research and curricular programs that will inform the national and global agendas on law and technology across many related areas, such as computer and information technology, bioengineering, patent, robotics, and privacy. This program will not only produce a new generation of dually educated practitioners with advanced training in both disciplines, it will also encourage a body of interdisciplinary, collaborative research in an already vibrant intellectual community and reinforce the bridges that CTIC has long been building between Penn Law and SEAS.



CTIC Executive Director Jeffrey Vagle

Jeffrey Vagle is the inaugural CTIC Executive Director. His research interests include cryptography, cybersecurity, electronic privacy, the mechanisms and societal effects of surveillance, Internet architecture, and networked economies and societies.

Mr. Vagle writes and speaks regularly on privacy, data security, and other cyberlaw-related topics, and his recent articles include *Has Katz Become Quaint? Use of Big Data to Circumvent the Fourth Amendment* and *Furtive Encryption: Power, Trust, and the Constitutional Cost of Collective Surveillance*. He is an active member of the Philadelphia Bar Association, where he currently chairs the Cyberspace & E-Commerce Committee, and of the American Bar Association Privacy and Information Security Committee, for which he regularly contributes to the Committee's blog, *The Secure Times*. He is also a member of the American Bar Association Cyberspace Law Committee of the Business Law Section, and currently serves as a member of the Cybercrime Working Group.

Mr. Vagle was formerly an attorney in the Privacy, Security, and Data Protection Practice Group of Pepper Hamilton LLP. Prior to legal practice, Mr. Vagle was a software researcher and developer in the information security and defense industries, where his work included efficient implementations of cryptographic algorithms, artificial intelligence research, and security in distributed, ad-hoc networks. He also is a contributor to multiple free and open source software (FOSS) projects, including the Linux Kernel (PPC platform) and GnuPG.

Mr. Vagle received his B.A. in mathematics, *cum laude*, from Boston University, and his J.D. from Temple University Beasley School of Law, where he was Editor-in-Chief of the *Temple International and Comparative Law Journal*.



Jeffrey Vagle



Detkin Intellectual Property and Technology Legal Clinic

During 2013-2014, Penn Law's Detkin Intellectual Property and Technology Legal Clinic completed its first full academic year under the direction of CTIC's Cynthia Dahl. Designed as an upper-level IP course, the Detkin Clinic is part seminar and part IP law firm, where students take primary responsibility for helping their clients commercialize innovation.

The Detkin Clinic is unique in that it consciously introduces law students to the types of professionals they will meet in practice, especially business, technology, science, and the arts.

At the core of the curriculum are opportunities for clinic students to work on projects with students from the Wharton School, the School of Engineering and Applied Science (SEAS), the Perelman School of Medicine, and other schools at Penn. Law students learn to leverage and value different perspectives and to consider nonlegal as well as legal aspects to client challenges.

The Detkin Clinic's client work is also unique in that Penn's Detkin Clinic is one of very few clinics in the country to work with a university commercialization venture, in this case, the Penn Center for Innovation (PCI).

This past year, clinic students counseled several Penn laboratories with early stage discoveries, helping them to analyze their legal and business options and choose their best path to commercialization.



In addition to the client work for PCI, Detkin Clinic students also resolved a variety of legal issues for a range of clients, including counseling a 3D printing company, an educational software company, and a financial services startup on how to avoid infringement in their crowded fields; developing a branding strategy for a company that gathers plastics from the developing world to recycle into first world goods; drafting and negotiating a contract between a large arts nonprofit and its program creators; and advising an Internet company that sells sports-related images and crowd-sourced artwork on rights of publicity, trademark, DMCA, and copyright infringement issues.

Next year, Detkin Clinic students will continue their “hands-on” application of practical legal skills by counseling twenty-four new clients, chosen in part for the interesting and challenging range of IP issues they present.

The Detkin Clinic will increase opportunities for interdisciplinary learning by having students formally partner with Wharton students to jointly counsel clients, and allowing Detkin Clinic students to act as general counsel for teams of Penn entrepreneurial engineers.

Students will also impact the greater community by joining forces with Philadelphia practitioners under the America Invents Act pro bono program on patent prosecution assignment, and by partnering with other Penn and city-based organizations to provide general advice on IP issues.



Top to Bottom:
Cynthia Dahl and Detkin Clinic students
Detkin Clinic student providing counsel to a client



Faculty Fellow Camilla Hrdy

CTIC welcomes its new Research Fellow, Camilla Hrdy. Camilla joins CTIC from the Information Society Project (ISP) at Yale Law School (YLS). While at Yale, she led YLS's patent law reading group, co-organized the ISP's Innovation Law Beyond IP Conference, and also served as a Thomas Edison Innovation Fellow at George Mason University School of Law. She is a regular blogger on the popular patent law blog, *Written Description*. This spring she will be co-teaching patent law with Professor Wagner.

Camilla's scholarship focuses on patent law, innovation policy, and the intersection between research, technology, and economic development. Her current work compares different incentives for technology commercialization, such as patents, tax, and venture capital, and explores asymmetries in how federal, state, and local governments respond to market failures in innovation.



Camilla holds a J.D. from Berkeley Law, a B.A. from Harvard University, and an M.Phil. in the History & Philosophy of Science (HPS) from the University of Cambridge. She has received various awards for her writing, including Harvard's Hoopes prize and HPS's Redhead Prize. From 2010-2011, she clerked for U.S. District Judge Janis Graham Jack in the Southern District of Texas.

Student Achievements

CTIC is proud that two of our students were East Coast Champions and National Finalists in the 2013 IP LawMeet. We congratulate Francesco DeProspero L'14 and Gina Russoniello L'15 on their achievement! Francesco and Gina were advised by CTIC faculty member Cynthia Dahl.

Top to Bottom:
Camilla Hrdy
Gina Russoniello L'15, Francesco DeProspero L'14, and Cynthia Dahl



Student Fellowships

CTIC Student Fellows

Every year, CTIC selects a handful of Penn Law students to work closely with CTIC faculty as research assistants. Our student fellows often have backgrounds in the relevant technology or intellectual property fields. Many also have special skills—whether in a discipline like economics or in a foreign language—which make their help particularly invaluable to CTIC faculty. This year for the first time we engaged an all-LL.M. corps of student fellows. Our student fellows were Beril Boz, Ananth Padmanabhan, Aled Richards-Jones, and Bumpei Sugano, all Penn Law LL.M.'14. Ananth Padmanabhan will continue at Penn Law as an S.J.D. student under the supervision of CTIC faculty member Shyamkrishna Balganesh.

CTIC Summer Public Interest Fellows

CTIC's Public Interest Fellowship program is meant to help Penn Law students pursue summer internships with public interest or government organizations doing work relevant to CTIC's focus in technology policy, intellectual property, cyber law, privacy, and related fields. All Penn Law students are welcome to apply. This year CTIC sponsored Ross Slutsky L'16 and Konstantinos Stylianou S.J.D.'14, both of whom enjoyed summer internships with the Federal Communications Commission. Ross held an internship in the Competition Policy Division and had the opportunity to observe and participate in decision-making concerning net neutrality, antitrust issues, broadband deployment, and more. Konstantinos was part of the Wireless Telecommunications Bureau, and was part of a team that prepared legal documents, conducted research on rulemakings and proceedings, and assimilated comments on rulemakings.



Top to Bottom:
Konstantinos Stylianou S.J.D.'14 and Ross Slutsky L'16



Center for Technology, Innovation and Competition



CTIC Faculty

The Center for Technology, Innovation and Competition is privileged to draw on 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 Abrams

Professor of Law, Business Economics, and Public Policy
David Abrams is one of the leading young scholars working in empirical law and economics. His work strives to understand and measure 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. In his latest empirical work he shows that long-held views on patent value and citations do not hold and introduces a new model of innovation to account for the findings. He has also done substantial work in criminal justice, including investigating whether longer sentences deter crime, how a defendant's race impacts judicial decisions, to what extent attorney skill affects case outcomes, and how much individuals value freedom. His interests also include law and health economics, labor economics, and corporate finance. His work has appeared in top peer-reviewed journals and law reviews including the *Stanford Law Review*, *University of Chicago Law Review*, *University of Pennsylvania Law Review*, *American Economic Journal: Applied Economics*, and *Journal of Legal Studies*.



Matt Corriel L'13

CTIC Faculty Fellow

Matt Corriel is CTIC's second faculty fellow. His work focuses on intellectual property theory, property theory, and personal property. His current projects include a paper on the recovery of copyright after abandonment and a larger project on constructive abandonment. In 2014-2015, Matt will clerk for the Honorable Kermit V. Lipez on the U.S. Court of Appeals for the First Circuit.



Cynthia Dahl

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

An accomplished intellectual property lawyer and leader with experience as both corporate counsel and law firm litigator, Cynthia Dahl is the inaugural Director of the University of Pennsylvania Law School's new Detkin Intellectual Property and Technology Legal 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 litigated patent and trademark cases at Pennie and Edmonds in New York and at Holland and Hart in Denver, Colorado. In 2001, Dahl became a Corporate Counsel at TruePosition, Inc., a technology-driven international wireless location company based in Berwyn, Pennsylvania, where she grew the patent portfolio from 20 to more than 125 patents worldwide and developed the IP portfolio of TruePosition's three spin-off entrepreneurial subsidiaries. She was promoted to Senior Counsel in 2005 and won company leadership awards in 2007 and 2010.



Shyamkrishna Balganes

Assistant Professor of Law

Shyam Balganes'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 examines the possible role that third party funders may play in copyright litigation and the related phenomenon of "copyright trolling." He is currently editing a collection of scholarly essays on the topic of intellectual property and the common law, published by the Cambridge University Press in 2013.



Camilla Hrdy

CTIC Faculty Fellow

Camilla Hrdy is CTIC's third faculty fellow. Her work focuses on patent law, innovation policy, and the intersection between research, technology, and economic development. She holds degrees from Berkeley Law, Harvard University, and the University of Cambridge. She is also a Visiting Fellow at the Information Society Project at Yale Law School and was a Thomas Edison Innovation Fellow at George Mason University School of Law.



Gideon Parchomovsky

Robert G. Fuller, Jr. Professor of Law

Gideon 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.



R. Polk Wagner

Professor of Law

Polk Wagner focuses his research and teaching on intellectual property law and policy, with a special interest in patent law. He has written over twenty 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.



Jeffrey Vagle

CTIC Executive Director

Jeffrey Vagle is the inaugural Executive Director of the Center for Technology, Innovation and Competition at the University of Pennsylvania Law School. His research interests include cryptography, cybersecurity, electronic privacy, the mechanisms and societal effects of surveillance, Internet architecture, and networked economies and societies. Mr. Vagle most recently served as an associate in Pepper Hamilton's Privacy, Security and Data Protection Group. He earned his JD from Temple University School of Law, where he was Editor-in-Chief of the *Temple International and Comparative Law Journal*. Mr. Vagle writes and speaks regularly on privacy, data security, surveillance, and other cyberlaw-related topics, and is the author of several law review and technical articles, including, most recently, "Furtive Encryption: Power, Trust, and the Constitutional Cost of Collective Surveillance," forthcoming in the *Indiana Law Journal*.



Christopher Yoo

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

Christopher Yoo has emerged as one of the nation's leading authorities on law and technology. His research focuses on understanding how technology and economic theories of imperfect competition shed new light on the regulation 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, standard essential patents, Internet governance, and cyberwar. He is the author of four books, including *The Dynamic Internet: How Technology, Users, and Businesses Are Transforming the Network* (AEI 2012), as well as over seventy 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

Vice Provost for Faculty and Henry R. Silverman Professor of Law and Professor of Philosophy

Anita Allen is an expert on privacy law, bioethics, and contemporary values. 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 *Debating Democracy's Discontent* (Oxford 1999 with Milton Regan). Allen has written more than one hundred scholarly articles and has also written for popular magazines and blogs. She has frequently appeared on nationally broadcast television and radio programs. In June 2014, Allen was presented with a Lifetime Achievement Award by EPIC, the Electronic Information Privacy Center in Washington, D.C.



Cary Coglianese

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

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 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 *Does Regulation Kill Jobs?*, *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 has served as a visiting professor of law at Stanford University and Vanderbilt University.



Seth Kreimer

Kenneth W. Gemmill Professor of Law

Seth 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. 2001), establishing the right of obstetrical patients to refuse non-consensual drug testing; *In re R.B.F.* (Pa. 2002), securing the right of gay and lesbian parents to establish families by second parent adoption; *Nixon v. Commonwealth* (Pa. 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,
School of Engineering and Applied Science

Matthew 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

Gerry 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

Professor of Cinema Studies and English,
School of Arts and Sciences;

Peter Decherney is Professor of Cinema Studies and English at the University of Pennsylvania, with a secondary appointment at the Annenberg School for Communication. 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*, as well as the co-editor of the journal *Critical Studies in Media Communication* and co-editor of the forthcoming book *Iranian Cinema in a Global Context*. He has testified before the Copyright Office of the United States and filed amicus briefs in several cases, including the Supreme Court Case of *Golan v. Holder*. Decherney has been an Academy of Motion Picture Arts and Sciences Scholar, a fellow of the American Council of Learned Societies, and a U.S. State Department Arts Envoy to Myanmar. He has won multiple teaching awards at Penn, and he is a *Forbes.com* contributor.



CTIC Affiliated Faculty



Ali Jadbabaie

Alfred Fitler Moore Professor of Network Science, School of Engineering and Applied Science
Ali Jadbabaie has been at the University of Pennsylvania since 2002. He is the Director of the Raj and Neera Singh Program in Networked and Social Systems (NETS) at Penn Engineering, a new interdisciplinary undergraduate degree program that blends network science, operations research, economics, and computer science with information and decision systems. He is a faculty member of the General Robotics, Automation, Sensing, and Perception (GRASP) Laboratory, and the Warren Center for Network and Data Sciences. He is an IEEE Fellow and the inaugural Editor-in-Chief of the new journal, *IEEE Transactions on Network Science and Engineering*. Jadbabaie is the recipient of an NSF Career award, an ONR Young Investigator Award, the O. Hugo Schuck Best Paper Award of the American Automatic Control Council, and the George S. Axelby Outstanding Paper Award of the IEEE Control Systems Society. His current research interests are on collective decision-making, multi-agent coordination and control, network science, and optimization with applications to social and economic networks and robotics.



Michael Kearns

National Center Professor of Management and Technology, School of Engineering and Applied Science; Professor of Operations and Information Management and Statistics, Wharton School

Since 2002, Michael 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 also holds secondary appointments in the Operations and Information Management (OPIM) and Statistics departments of the Wharton School. He is the Founding Director of the Warren Center for Network and Data Sciences and the Faculty Founder of Penn Engineering's Networked and Social Systems Engineering (NETS) Program. He has worked extensively with quantitative trading groups on Wall Street 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.



Andrea M. Matwyshyn

Senior Policy Advisor and Academic in Residence, U.S. Federal Trade Commission; Assistant Professor of Legal Studies and Business Ethics, Wharton School (on leave)

Andrea Matwyshyn joined the Wharton School in 2007. She is currently serving as the Senior Policy Advisor and Academic in Residence at the U.S. Federal Trade Commission. Her research and consulting focus on corporate information security regulation, consumer data privacy law, and technology regulation. She is also an affiliate scholar at the Stanford Law School Center for Internet and Society and an advisory board member of the Network of Excellence in Internet Science project at the Oxford Internet Institute.



Monroe E. Price

Director of the Center for Global Communication Studies, Annenberg School for Communication

Monroe 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). He is the author and editor of numerous publications including *Media and Sovereignty: The Global Information Revolution and its Challenge to State Power* (MIT 2002); *Owning the Olympics: Narratives of the New China* (Michigan 2008), and the *Routledge Handbook of Media Law* (Routledge 2012).



Katja Seim

Assistant Professor of Business and Public Policy, Wharton School

Katja 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, School of Engineering and Applied Science

Jonathan Smith is currently the Olga and Alberico Pompa Professor of Engineering and Applied Science and a Professor of Computer and Information Science at the University of Pennsylvania. He was previously at Bell Laboratories and Bell Communications Research, joining Penn in 1989. He served as a Program Manager at the Defense Advanced Research Projects Agency (DARPA) from 2004-2006 and was awarded the Office of the Secretary of Defense Medal for Exceptional Public Service in 2006. Among the research programs he managed was the "Quantum Information Science and Technology" (QuIST) program. He is an IEEE Fellow.



Joseph Turow

Robert Lewis Shayon Professor of Communication,
Annenberg School for Communication

Joe Turow is a recipient of the National Communication Association's Distinguished Scholar Award and is an elected Fellow of the International Communication Association. In 2012, the TrustE Internet privacy-management organization designated him a "privacy pioneer" for his research and writing on marketing and digital privacy. He has authored nine books, edited five, and written more than 150 articles on mass media industries. His most recent books are *Media Today: Mass Communication in a Converging World* (Routledge, 2014) and *The Daily You: How the New Advertising Industry Is Defining Your Identity and Your Worth* (Yale 2012). Joe'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. He was awarded a Lady Astor Lectureship by Oxford University and has received several conference paper and book awards. He also has lectured widely, including being invited to give the McGovern Lecture at the University of Texas College of Communication, the Pockrass Distinguished lecture at Penn State University and the Chancellor's Distinguished Lecture at LSU. Turow currently serves on the editorial boards of the *Journal of Broadcasting and Electronic Media*, *Poetics*, and *Media Industries*.

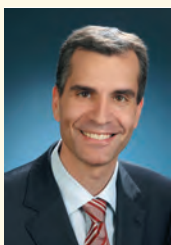


Kevin Werbach

Associate Professor of Legal Studies and Business Ethics,
Wharton School

Kevin 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 conference firm. He co-led the review of the Federal Communications Commission (FCC) for the Obama-Biden Transition Project and subsequently served as an advisor to the FCC and the National Telecommunications and Information Administration. Werbach is also a pioneer in the emerging field of gamification and developed one of the first and most successful Massive Open Online Courses (MOOCs). He was named the Wharton School's first "Iron Prof" in 2010.

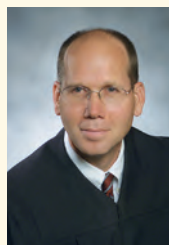
Adjunct Faculty



Thomas Fetzer

Professor of Law, University of Mannheim;
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, Regulation and Taxation. Furthermore, he is academic director of the Mannheim Centre for Competition and Innovation (MaCCI). 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 Law School, the University of Freiburg, and the University of Jena. He is also 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;
Adjunct Professor of Law

Kent 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 held appointments as a United States District Judge for the District of Delaware from 2002 to 2006 and as an Assistant United States Attorney for the District of Delaware, serving as Civil Chief for 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 law firm in Wilmington, Delaware, where his practice focused on intellectual property, corporate, and commercial litigation.



Osagie Imasogie L'85

Senior Managing Partner, Phoenix IP Ventures;
Adjunct Professor of Law

Osagie Imasogie has over thirty years of experience in the fields of law, finance, 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 VP. He led GSK Ventures in investing over thirty GSK R&D non-progressed assets into existing companies and/or as the basis of starting new companies. Osagie has been the founder and Chairman of several biotech and pharmaceutical companies such as Ception Therapeutics, Trigenesis, iCeutica, and Iroko Pharmaceuticals. Imasogie holds post-graduate degrees from the London School of Economics and the University of Pennsylvania Law School. In addition, he is a member of the Board of Overseers of the University of Pennsylvania Law School and a member of the Board of Trustees of the University of Pennsylvania.



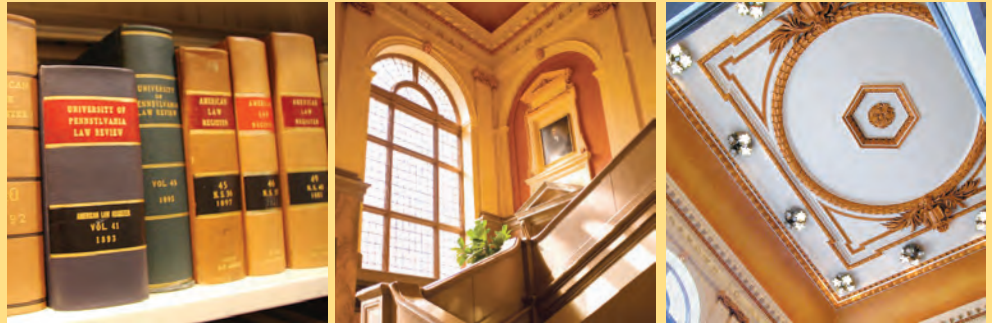
Matthew Pearson L'05

Partner, Akin Gump Strauss Hauer & Feld LLP;
Lecturer in Law

Matthew Pearson concentrates on patent litigation. He received a J.D. in 2005 from the University of Pennsylvania Law School. As a Ph.D. 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. He 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, secondary, and adjunct faculty appointments are in the University of Pennsylvania Law School unless otherwise noted. All affiliated faculty appointments are in the University of Pennsylvania.



Primary Faculty

David Abrams

Professor of Law, Business Economics, and Public Policy

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Shyamkrishna Balganesh

Assistant Professor of Law

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Introduction: Exploring an Unlikely Connection, in *INTELLECTUAL PROPERTY AND THE COMMON LAW 1* (Shyamkrishna Balganesh ed., Cambridge 2013).

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The Constitutionalization of Indian Private Law, in *THE OXFORD HANDBOOK OF THE INDIAN CONSTITUTION* (Sujit Choudhry, Madhav Khosla & Pratap Mehta eds., Oxford forthcoming 2015).

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Matt Corriel L'13

CTIC Fellow

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Camilla Hrdy

CTIC Faculty Fellow

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Gideon Parchomovsky

Robert G. Fuller, Jr. Professor of Law

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R. Polk Wagner

Professor of Law

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Jeffrey Vagle

CTIC Executive Director

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Christopher Yoo

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

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Secondary Faculty

Anita L. Allen

Vice Provost for Faculty and Henry R. Silverman Professor of Law and Professor of Philosophy

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Cary Coglianese

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

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Affiliated Faculty

Matthew Blaze

Associate Professor of Computer and Information Science, School of Engineering and Applied Science

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Peter Decherney

Professor of Cinema Studies and English, School of Arts and Sciences

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Gerald R. Faulhaber

Professor Emeritus of Business and Public Policy, Wharton School

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Ali Jadbabaie

Alfred Fittler Moore Professor of Network Science, School of Engineering and Applied Science

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Michael Kearns

National Center Professor of Management and Technology, School of Engineering and Applied Science; Professor of Operations and Information Management and Statistics, Wharton School

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Andrea M. Matwyshyn

Senior Policy Advisor and Academic in Residence, U.S. Federal Trade Commission; Assistant Professor of Legal Studies and Business Ethics, Wharton School (on leave)

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Katja Seim

Assistant Professor of Business and Public Policy, Wharton School

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Jonathan M. Smith

Olga and Alberico Pompa Professor of Engineering and Applied Science, School of Engineering and Applied Science

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Kevin Werbach

Associate Professor of Legal Studies and Business Ethics, Wharton School

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Adjunct Faculty

Thomas Fetzer

Professor of Law, University of Mannheim;
Lecturer in Law

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Osagie Imasogie L'85

Senior Managing Partner, Phoenix IP Ventures; Adjunct Professor of Law

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Center for Technology, Innovation and Competition
University of Pennsylvania Law School
3501 Sansom Street
Philadelphia, PA 19104-6204

www.law.upenn.edu/institutes/ctic/



3501 Sansom Street
Philadelphia, PA 19104-6204