

KEVIN WERBACH

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EDUCATION

Harvard Law School, J.D., magna cum laude, 1994

Publishing Editor, Harvard Law Review; Publisher, Harvard Law Record

University of California at Berkeley, B.A., with highest distinction, 1991

Phi Beta Kappa; Emerging Leader Scholarship; Chancellor's Scholarship; National Merit Scholarship; Highest Honors in both Slavic and Social Science majors

EMPLOYMENT HISTORY

Wharton School, University of Pennsylvania, Liem Sioe Liong/First Pacific Company Professor (2021-present); Professor (2018-present); Assoc. Professor (2010-18); Asst. Professor (2004–10) Chair, Department of Legal Studies and Business Ethics. Research and write on topics including business implications of emerging technologies, blockchain, and Internet policy. Created courses on blockchain/cryptocurrencies, gamification, and law/ethics of AI and business analytics.

Federal Communications Commission, Advisor (2009-2010)

As a part-time employee, provided legal and policy analysis for broadband and Internet initiatives.

National Telecommunications & Information Administration, US Department of Commerce, Advisor (2009)

On a part-time basis, assisted in development of the Broadband Technology Opportunities Program, a major stimulus initiative. Recommended policy options and coordinated with other federal agencies.

Obama-Biden Transition Project, FCC Agency Review Co-Lead (November 2008-January 2009)

Evaluated substantive and process challenges facing the FCC as a member of the Presidential Transition Team. Participated in development of Obama Administration technology policy initiatives, personnel decisions, and overall strategy.

Supernova Group LLC, Founder (2002-present)

Serve as a technology analyst and consultant for corporations and government agencies on strategy and regulatory issues. From 2002-2010, organized Supernova, a leading executive conference on the business, technology, and public policy implications of the Network Age.

EDventure Holdings, Editor (1998-2002)

Responsible for all content in *Release 1.0: Esther Dyson's Monthly Report*, an influential publication on emerging technologies and their business implications. Analyzed trends, business models and companies. Co-organized annual PC Forum, a top technology industry conference.

Federal Communications Commission, Counsel for New Technology Policy (1994-1998)

Coordinated FCC's Internet policy efforts. Advised FCC Chairman and Commissioners on technology-related issues. Authored *Digital Tornado*, the first comprehensive analysis of the Internet and telecommunications. Organized FCC's first-ever broadband forum. Helped develop Clinton Administration's Framework for Global Electronic Commerce.

PUBLICATIONS

Works in Progress

Three Paradoxes in the Business Ethics of Big Data

Regulating Decentralized Finance

Systemically Important Technology Platforms

Books

AFTER THE DIGITAL TORNADO: NETWORKS, ARCHITECTURE, HUMANITY (edited volume) (Cambridge University Press, 2020)

THE BLOCKCHAIN AND THE NEW ARCHITECTURE OF TRUST (MIT Press, 2018)

- Translated into Chinese and Turkish
- Reviewed by *New York Times*, ZDNet, HR Executive, Jotwell, *Issues in Science & Technology*

THE GAMIFICATION TOOLKIT: DYNAMICS, MECHANICS, AND COMPONENTS FOR THE WIN, with Dan Hunter (Wharton School Press, 2015)

FOR THE WIN: HOW GAME THINKING CAN REVOLUTIONIZE YOUR BUSINESS, with Dan Hunter (Wharton School Press, 2012; revised and updated edition, 2020)

- Reviewed by *The Economist*
- Translated into Chinese, Japanese, Korean, Russian, Lithuanian, and Spanish

Scholarly Articles

Panopticon Reborn: China's Social Credit as Regulation for the Algorithmic Age, 2022 *U. ILL. L. REV.* __ (forthcoming 2022)

The Impact of Regulatory Actions on Cryptocurrency Trading Activity, 7 *J. FIN. REG.* 48 (2021), with Brian Feinstein (peer reviewed)

On the Application of Blockchains to Spectrum Sharing, 5 *IEEE Transactions on Cognitive Communications and Networking* 193 (June 2019), with Martin Weiss, Douglas Sicker, and Carlos Caicedo

Trust, But Verify: Why the Blockchain Needs the Law, 33 *BERKELEY TECH. L.J.* 489 (2018)

Contracts Ex Machina, 67 *DUKE L.J.* 313 (2017), with Nico Cornell

The Song Remains the Same: What Cyberlaw Might Teach the Next Internet Economy, 69 *FLA. L. REV.* 887 (2017)

A Capabilities Approach to Communications Equity, 16 *COLORADO TECH. L.J.* 11 (2017)

More Than Just a Game: Ethical Issues in Gamification, 18 *ETHICS IN INFO. TECH.* 157 (2016), with Tae Wan Kim (peer reviewed)

Is Uber a Common Carrier?, 12 *I/S: J. LAW & POL'Y FOR INFO. SOC'Y.* 135 (2015)

Reflections on Network Transitions and Social Contracts for a Broadband Era, 13 *COLORADO TECH L.J.* 101 (2014)

- No Dialtone: The End of the Public Switched Telephone Network, 66 *FED. COMM. L. J.* 203 (2014)
- The Death and Life of a Great American Agency, 31 *CRIT. STUD. MEDIA COMM.* 160 (2014)
- (Re)Defining Gamification: A Process Approach, *Persuasive 2014, LNCS 8462, pp. 266-272 (A. Spagnolli et al, eds. 2014)*
- The Spectrum Opportunity, 8 *INT'L J. COMM.* 128 (2014), with Aalok Mehta (peer reviewed)
- The Network Utility, 60 *DUKE L. J.* 1761 (2011)
- The Wasteland: Anticommons and the Fallacy of Spectrum, 53 *ARIZ. L. REV.* 213 (2011)
- Castle in the Air: A Domain Name System for Spectrum, 104 *Nw. U. L. REV.* 613 (2010)
- Off the Hook, 95 *CORNELL L. REV.* 535 (2010)
- Higher Standards: Regulation in the Network Age, 23 *HARV. J. L. & TECH.* 179 (2009)
- Connections: Beyond Universal Service in the Digital Age, 7 *J. TELECOMM. & HIGH TECH L.* 67 (2009)
- The Centripetal Network: How the Internet Holds Itself Together, and the Forces Tearing it Apart, 42 *UC DAVIS L. REV.* 343 (2009)
- Only Connect, 23 *BERKELEY TECH. L. J.* 1234 (2008)
- Sensors and Sensibilities, 28 *CARDOZO L. REV.* 2321 (2007)
- The Federal Computer Commission, 84 *N.C. L. REV.* 1 (2005)
- Breaking the Ice: Rethinking Telecommunications Law for the Digital Age, 4 *J. TELECOMM. & HIGH TECH. L.* 59 (2005)
- Supercommons: Toward a Unified Theory of Wireless Communication, 82 *TEXAS L. REV.* 863 (2004)
- A Layered Model for Internet Policy, 1 *J. TELECOMM. & HIGH TECH. L.* 37 (2002)
- Looking it Up: Dictionaries and Statutory Interpretation, 107 *HARV. L. REV.* 1437 (1994)

Book Chapters and Essays

Contracts Ex Machina, in *SMART CONTRACTS: TECHNOLOGICAL, BUSINESS & LEGAL PERSPECTIVES* (Marcelo Corrales, Mark Fenwick & Stefan Wrbka, eds., Hart/Bloomsbury, 2021), with Nico Cornell

The Siren Song: Algorithmic Governance by Blockchain, in *AFTER THE DIGITAL TORNADO: NETWORKS, ARCHITECTURE, HUMANITY* (Kevin Werbach, ed., Cambridge University Press, 2020)

Blockchain in Financial Services, in *FINTECH: LAW AND REGULATION* (Jelena Madir, ed., Edward Elgar, 2019), with Colleen Baker

Bitcoin Dreams, *LA Review of Books*, August 19, 2019

Reflecting on Twenty Years Under the Telecommunications Act of 1996, 68 *FED. COMM. L. J.* 73 (2016)

Gamification and the Enterprise, in *THE GAMEFUL WORLD* (Steffen Walz & Sebastian Deterding, eds., 2015), with Ethan Mollick

Telecommunications: Network Strategies for Network Industries?, in *NETWORK-BASED STRATEGIES AND COMPETENCIES* (Wharton School Publishing 2009)

The Implications of Video P2P on Network Usage, in *PEER TO PEER VIDEO AS A MASS MEDIUM* (Columbia Institute for Tele-Information 2009)

Steering to the Edge of Trust, *The Publius Project, Harvard University Berkman Center*, at <http://publius.cc/2008/05/13/kevin-werbach-steering-to-the-edge-of-trust/>.

Open Spectrum: The Great Wireless Hope, in *BROADBAND EXPLOSION* (*Harvard Business School Press 2005*)

Using VOIP to Compete, *Harvard Business Review* (*September 2005*)

The Coming Spectrum Explosion: A Regulatory and Business Primer, *ABA COMMUNICATIONS LAWYER, Fall 2003* (*with Greg Staple*)

Syndication: The Emerging Model for Business in the Internet Era, *Harvard Business Review* (*May/June 2000*)

White Papers and Reports

The Decentralized Finance (DeFi) Policy-Maker Toolkit, Editor (World Economic Forum, June 2021)

Regulatory Considerations for Token Offerings, Editor (Zicklin Center for Business Ethics Research, June 2018)

The Development of Fixed Broadband Networks (Organization for Economic Cooperation and Development, June 2014)

The Development and Diffusion of Digital Content (Organization for Economic Cooperation and Development, December 2012)

Radio Revolution: The Coming Age of Unlicensed Wireless (New America Foundation and Public Knowledge, December 2003)

Open Spectrum: The New Wireless Paradigm (New America Foundation Spectrum Series Working Paper No. 6, October 2002)

Digital Tornado: The Internet and Telecommunications Policy (FCC Office of Plans and Policy Working Paper No. 29, March 1997)

General and Trade Press Publications

What Is Decentralized Finance? An Expert on Bitcoins and Blockchains Explains the Risks and Rewards of DeFi, *The Conversation*, August 5, 2021

Finance 3.0: DeFi, Dapps, and the Promise of Decentralized Disruption, *The Reboot*, July 15, 2021

The Opportunities and Dangers of Decentralizing Finance, *Knowledge@Wharton*, June 10, 2021

DeFi Is the Next Frontier for Fintech Regulation, *Regulatory Review*, April 28, 2021

Don't Fear Cryptocurrencies. Manage Them, *New York Times*, April 14, 2021 (with Brian Feinstein)

Yes, Trading Is a Game, Just Not the One Many Investors Signed Up For, *Barrons*, February 11, 2021

How Data Centralization Ends by 2030, *CoinDesk*, September 16, 2020

Does Regulation Chill Cryptocurrency Trading? (with Brian Feinstein), *Regulatory Review*, August 31, 2020

5G Won't Be the Disruptive Change Many Claim It Will Be, *CNN.com*, February 3, 2020

China is Pushing Toward Global Blockchain Dominance, *Wired*, November 12, 2019

Will Facebook's Libra Change the Way the World Banks?, *Foreign Affairs*, July 29, 2019

- The Real Reason for Facebook's New Cryptocurrency, *New York Times*, June 20, 2019
- A Trump 5G Plan That Progressives Should Embrace, *New York Times*, March 6, 2019
- People Don't Trust Blockchain Systems – Is Regulation a Way to Help?, *The Conversation*, February 5, 2019; syndicated in *Slate*, *San Francisco Chronicle*, *International Business Times*, and elsewhere
- Why You Shouldn't Fear the Blockchain Regulators, *CoinDesk*, December 8, 2018
- Why We Must Regulate the Blockchain, *Salon.com*, November 25, 2018
- What the Russia Hack Indictments Reveal About Bitcoin, *New York Times*, July 22, 2018
- Blockchain isn't a Revolution: It's Two Big Innovations and One Promising Idea, *Medium*, June 18, 2018
- When Crises Come, Ethically Challenged Firms Such as Uber are Most Vulnerable, Wharton Prof Says, *Philadelphia Inquirer*, April 15, 2018
- Why Porn on the Blockchain Won't Doom Bitcoin, *Wired*, March 29, 2018 (with Arvind Narayanan and James Grimmelmann)
- The Assault on the Open Internet Rules, *American Constitution Society Blog*, July 24, 2017 (with Gigi Sohn)
- Slack Makes the World Go Round, *Backchannel*, June 6, 2016
- Here We go Again: Regulation, Disruption, and the Internet of Everything, *Wharton Magazine* (Summer 2015)
- Gamification Harnesses the Power of Games to Motivate, *The Conversation*, March 19, 2015
- Playing Politics With the Internet?, *Huffington Post*, February 20, 2015 (with Phil Weiser)
- The Perfect and the Good on Network Neutrality, *Huffington Post*, April 27, 2014 (with Phil Weiser)
- Sharing Spectrum to Fuel Growth and Opportunity, *The Hill Online*, January 30, 2014
- Why the Court's Net Neutrality Decision is Not So Bad, *The Atlantic Online*, January 15, 2014
- Don't Call Us Rock Stars, *Chronicle.com*, October 25, 2013
- MOOCs: A View from the Digital Trenches, *PandoDaily*, April 15, 2013
- Turn Your Customers into Players, *Think With Google*, November 2012
- Why Network Neutrality is Good for Business, *Harvard Business Review Blog*, August 18, 2010
- The Microsoft of VOIP?, *VON Magazine*, February 2005
- The Surging Tides of a Digital Torrent, *BusinessWeek Online*, January 26, 2005
- Controlling VOIP, *VON Magazine*, January 2005
- Tip-Toeing On Top of VOIP?, *VOIP Central*, December 3, 2004
- The Year of Living Dangerously, *VON Magazine*, November/December 2004
- Hail to the VOIP, *VOIP Central*, October 29, 2004
- Wireless Cities, *The Feature*, October 26, 2004
- The First Virtual Telco, *VON Magazine*, September/October 2004
- The Race for White Space, *The Feature*, September 23, 2004
- VOIP and Internet Freedom, *VOIP Central*, September 10, 2004

- Not Your Parents' Phone System, *VOIP Central*, August 25, 2004
- The Real Future of Mobile Video, *The Feature*, August 23, 2004
- Wiretapping and the Politics of Fear, *VOIP Central*, August 19, 2004
- The VOIP Train Has Left the Station, *VOIP Central*, August 2, 2004
- Icebergs Dead Ahead, *VON Magazine*, July/August 2004
- Will the FCC Let VOIP Flourish?, *VOIP Central*, July 27, 2004
- Tune In, Turn On, Skype Out, *VOIP Central*, July 1, 2004
- Bad Signs on the Horizon, *VOIP Central*, June 17, 2004
- VoWLANS Go to Work, *The Feature*, June 17, 2004
- In the Land of the One-Eyed Men, *VON Magazine*, May/June 2004
- A New Day for Voice, *VOIP Central*, April 26, 2004
- The End of Spectrum Scarcity, *IEEE Spectrum*, March 2004 (with Greg Staple)
- A Fine Mesh, *The Feature*, March 30, 2004
- What Should Michael Do, *VON Magazine*, March/April 2004
- You Can Take it With You, *The Feature*, February 16, 2004
- Telecom's Red Pill, *VON Magazine*, January/February 2004
- Time to Regulate VOIP, *VON Magazine*, November/December 2003
- Goodbye Spectrum, *Telephony*, November 2003
- The Triumph of Good Enough, *The Feature*, November 18, 2003
- U.W.Be Careful What You Wish For, *The Feature*, October 22, 2003
- Microsoft and the Future of Internet Chat, *Philadelphia Inquirer*, October 16, 2003
- The End of Spectrum, *The Feature*, October 2, 2003
- FCC Bakes Up Free WiFi Connections, *The Feature*, August 19, 2003
- Anticipating a Post-Web, Post-PC World, *CNet News.com*, May 22, 2003
- The Real Michael Powell, *Slate*, February 19, 2003
- AOL Knocked Out?, *Philadelphia Inquirer*, January 19, 2003
- Party Like It's 1995, *Slate*, January 2, 2003
- Full Spectrum: Why There Need Never Be a Tragedy of the Radio Commons, *Wired*, January 2003
- Tapping into Grid Computing, *Release 1.0*, November 2002
- Death by Spam, *Slate*, November 18, 2002
- Tech's Big Challenge: Decentralization, *CNet News.com*, October 24, 2002
- It's in the Chips, *The Feature*, July 8, 2002
- Amazon's Secret Sauce, *Business 2.0*, June 2002
- Who Controls Information? *Release 1.0*, May 2002
- Optimizing the Internet From the Edges, *Release 1.0*, April 2002

- The End of an Error, *CNet News.com*, April 30, 2002
- Back to the Frontier: The 2002 PC Forum Roundup, *Release 1.0, March 2002* (with Esther Dyson)
- Bringing it all Together: Infrastructure for Collaboration, *Release 1.0, February 2002*
- Distributed Distribution: Here, There, Everywhere, *Release 1.0, January 2002*
- Monster Mesh: Decentralized Wireless Broadband, *The Feature, January 21, 2002*
- Realtime Computing: Beyond the Refresh Button, *Release 1.0, December 2001*
- Spectrum of the World Unite! *The Feature, December 3, 2001*
- Open Spectrum: The Paradise of the Commons, *Release 1.0, November 2001*
- Here's a Cure for the Bandwidth Blues, *ZDNet News, November 28, 2001*
- Web Services, Part II: New World Order, *Release 1.0, October 2001*
- Web Services Part 1: Back to the Future of Software, *Release 1.0, September 2001*
- In Search of Broadband: To the Last Mile and Beyond, *Release 1.0, July/August 2001*
- The Webification of TV is Happening, *CNet News.com, July 26, 2001*
- Postmodern Knowledge Management, *Release 1.0, June 2001*
- Why the Next Best Thing May Be the Next Big Thing, *The Feature, June 21, 2001*
- Mapping the Net: Revenge of the Physical World, *Release 1.0, May 2001*
- Glimpses of the New Network: The Real Convergence Story, *Release 1.0, April 2001*
- Define Yourself! 2001 PC Forum (n.) –, *Release 1.0, March 2001* (with Esther Dyson)
- How Safe is Your Site? Turning Security Inside Out, Release 1.0, February 2001*
- One Device or Many?, *The Feature, February 8, 2001*
- From User Confusion to User Inclusion: Online Customer Experience, *Release 1.0, January 2001*
- The Phone Network as an Application Platform, *The Feature, January 8, 2001*
- Peering into the World of Peer-to-Peer, Part II, *Release 1.0, December 2000*
- Peering into the World of Peer-to-Peer, Part I, *Release 1.0, November 2000*
- Wireless Peer to Peer, *The Feature, November 27, 2000*
- What Wall Street Can Learn From Greenspan, *Fortune, November 13, 2000*
- Let Them Eat Cable, *Industry Standard, November 6, 2000*
- E-Commerce Enablers: What it Takes to Make a Market, *Release 1.0, October 2000*
- Life After Wires, *Industry Standard, October 16, 2000*
- Clicks and Mortar Meets Cap and Gown: Higher Education Goes Online, *Release 1.0, September 2000*
- Mobile Interfaces of Tomorrow, *The Feature, September 4, 2000*
- It's not Dead Yet, *Industry Standard, August 14, 2000*
- Following the Money: Financial Services and the Net, *Release 1.0, July/August 2000*
- Location-Based Computing: Wherever You Go, There You Are, *Release 1.0, June 2000*
- Look Who's Talking: Voice-Based Services Arrive, *Release 1.0, May 2000*

Data Soup: The Client is the Server, *Release 1.0, April 2000*

Making the Virtual Real and the Real Virtual: PC Forum 2000, *Release 1.0, March 2000 (with Esther Dyson)*

Innovation and Large Companies, *Release 1.0, January 2000*

Meta Service Providers: The Internet's SS7 Network, *Release 1.0, December 1999*

Cable Operators vs. ISPs, *Internet World, December 15, 1999*

The Next Medium, *Release 1.0, November 1999*

Now in Syndication, *Red Herring, November 1999*

How to Make a Buck on the Internet, *Release 1.0, October 1999*

Is the Price Right?, *Industry Standard, October 1, 1999*

E-merging Markets, *Release 1.0, September 1999*

Body LANguage, *Business 2.0, August 1999*

The Web Goes Into Syndication, *Release 1.0, July/August 1999*

Living on the Web: The Rise of Post-Groupware, *Release 1.0, June 1999*

IPv6: The Net Grows Up, *Release 1.0, May 1999*

The Final Frontiers of Networking, Part 2: You Are the Network, *Release 1.0, April 1999*

Back to Reality: The 1999 PC Forum Prospectus, *Release 1.0, March 1999 (with Esther Dyson)*

The Architecture of Internet 2.0, *Release 1.0, February 1999*

Search and Searchability, *Release 1.0, January 1999*

The Final Frontiers of Networking, Part 1: Home at Last, *Release 1.0, December 1998*

Making Software Work Better, *Release 1.0, October 1998*

Closing the Interactive Loop, *Release 1.0, September 1998*

How to Get Ahead in Washington, *Business 2.0, September 1998*

How to Price a Bit, *Release 1.0, June 1998*

Levels and Boundaries: Another Look at Internet Content, *Release 1.0, May 1998*

COURSES TAUGHT

LGST 242/642: Big Data, Big Responsibilities

LGST 244/644: Blockchain and Cryptocurrencies: Business, Legal, and Regulatory Considerations

LGST 612: Responsibility in Business

LGST 299/799: Blockchain, Cryptocurrency, and Distributed Ledger Technology

LGST 240/640: Digital Game Design Techniques for Business: Rules, Incentives, Applications

LGST 621: The Government and Legal Environment of Business

LGST 222: Internet Law and Policy

LGST 101: Introduction to Law and the Legal Process

FACULTY AWARDS

Wharton Teaching Excellence Award (2018–20)

Wharton MBA Program, Teaching Commitment and Curricular Innovation Award (2012)

Wharton Iron Prof competition for faculty research, Inaugural Winner (2010)

SERVICE

University-Affiliated

Wharton Personnel Committee (2019-20; Chair, 2020-21)

Dean's Advisory Council, The Wharton School (2010-11, 2014-16, 2019-20)

Faculty Fellows (inaugural class), The Wharton School (2016)

Faculty Fellow, Analytics at Wharton (2020-present)

Faculty Affiliate, Penn Center for Technology, Innovation, and Competition (2010-present)

Faculty Affiliate, Warren Center for Network and Data Sciences (2013-present)

Faculty Affiliate, Penn Program on Regulation (2020-present)

Faculty Affiliate, Wharton AI for Business (2020-present)

Course Head, MBA Core, Department of Legal Studies & Business Ethics (2020-present)

Co-Host, The Digital Show on SiriusXM Business Radio (2014-2017)

Faculty IT Advisory Committee, The Wharton School (2013-2019)

Faculty Affiliate, Penn Wharton Public Policy Initiative (2013-2019)

Instructor, Coursera Massive Open Online Course (MOOC) on Gamification (2012-present)

Scholarly Commons Advisory Committee, University of Pennsylvania (2012-2018)

Editorial Board, Wharton School Press (2011-present)

Chair, Faculty Committee on Open Access Publishing, University of Pennsylvania (2009-2010)

Global Advisory Board, Future of Advertising Project, The Wharton School (2008-2018)

Faculty Advisory Council, SEI Center for Advanced Studies in Management (2007-2018)

Advisory Board, Knowledge@Wharton (2005-2019)

Other Academic Service

Faculty Affiliate, Ostrom Workshop, Indiana University (2019-present)

Fellow, Columbia University Institute of Tele-Information (2016-present)

Advisory Board, MIT Cryptocurrency Research Review (2019-present)

Editorial Board, Ohio State Technology Law Journal (2006-present)

Editorial Board, Info: The Journal of Policy, Regulation and Strategy for Telecommunications, Information and Media (2010-present)

Editorial Board, Journal of Information Policy (2010-present)

Professional Affiliations

Board Member, Digital Health Engagement Institute (2021-present)

Advisory Council, Blockchain for Europe (2021-present)

Academic Advisory Body, International Association for Trusted Blockchain Applications (2019-present)

Director, Public Knowledge (2011-2020; Treasurer, 2013-2020)

Co-Chair, Federal Communications Bar Association Mid-Atlantic Chapter (2014-2017)

Advisory Council, Institute for the Future (2012-2016)

Advisory Board, Just Press Play Project, Rochester Institute of Technology (2011-2015)

Advisory Board, Open Spectrum International (2004-2010)

Fellow, Global Institute for Communications (GLOCOM), Japan (2002-present)

Director, TPRC Conference on Communication, Information and Internet Policy (2003-2009)

Advisory Board, Genesys Angelbridge Fund (2000-2009)

Advisory Board, Socialtext (2003-2008)

Advisory Board, Nokia Innovent (2003-2006)

Co-Founder, Open Park Project (2003-2005)

Invited Testimony

US House Judiciary Committee, Hearing on Cloud Computing and the Electronic Communications Privacy Act, September 23, 2010

National Telecommunications and Information Administration, US Department of Commerce, Roundtable on Broadband Stimulus Grants, March 23, 2009

US Senate Commerce Committee, Hearing on Voice Over Internet Protocol, February 24, 2004

Federal Communications Commission, Voice Over Internet Protocol Forum, December 1, 2003

Awards

Aspen Institute Ideas Worth Teaching Award (2021)

NESTA Decentralised Future Prize, First Place (2020)

UBRI Educator Award for Outstanding Blockchain Teacher (2020)

Academy of Legal Studies in Business, Ralph Bunche Award, Finalist (2020)

Gamification Summit, Special Achievement Award for Greatest Contributions to the Field of Gamification (2013)

American Academy in Berlin, Berlin Prize in Law (2011) (declined)

Dissertation Committees

Konstantinos Stylianou (S.J.D., University of Pennsylvania Law School, 2015)

Deke Kassabian (Ed.D., University of Pennsylvania Graduate School of Education, 2014)

Wharton Cases Developed

65: *NTP versus Research in Motion (2011)*

81: *Foursquare Labs (2012; updated 2014), with Justin Dunham*

82: *Club Psych (2012), with Justin Dunham*

83: *Evo Media Group (2012), with Justin Dunham*

94: *Objective Logistics (2014), with Komal Rathi*

Conferences Organized

Wharton Cryptogovernance Workshop (2019)

Reg@Tech Workshops on Cryptocurrencies and Digital Assets (2017-21)

After the Digital Tornado: Networks, Algorithms, Humanity (2017)

After Broadband (2015)

Gameful Approaches to Motivation and Engagement (2015)

For the Win: Serious Gamification (2012)

Wharton Colloquium on Media and Communications Law (2004-10)

Supernova executive technology conference (2002-10)

Invited Presentations (Since 2010)

Balancing New Regulation with Innovation: Blockchain-supported Video Distribution (virtual panel),
Blockchain's Rule in Video, Columbia Institute for Tele-Information (June 29, 2021)

Governance of Decentralized Finance (virtual panel), Workshop on Decentralised Network
Governance, EU Blockchain Observatory and Forum (June 9, 2021)

Decentralized Finance: A Toolkit for Policy-Makers, Stanford Center for Blockchain Research
(virtual) (May 12, 2021)

China's Social Credit as Regulation for the Algorithmic Age, Tel Aviv University Law & Information
Technology Workshop (virtual) (December 14, 2020)

Central Bank Digital Currency (CBDC) and the Future of Digital Money (panel), 6th International
Workshop on P2P Financial Systems, University College London (virtual) (December 1, 2020)

The Siren Song: Algorithmic Governance by Blockchain, University of Pittsburgh Virtual Seminar on
Networked Governance (virtual) (October 7, 2020)

Panopticon Reborn, Academy of Legal Studies in Business Conference (virtual) (August 7, 2020)

Coronavirus, Blockchain, and the Meaning of Life (virtual panel), Consensus:Distributed (May 11, 2020)

Blockchain and the Future of Finance, Wharton Alumni Webinar (May 7, 2020)

Panopticon Reborn, Law and Ethics of Big Data workshop (virtual) (April 10, 2020)

Blockchain in the Business School Curriculum, American Association of Collegiate Schools of Business Webinar (December 11, 2019)

Tech Tools: The Means to an Authoritarian End (panel), How Technology Advances Autocracy and What Democracies Can Do About It, Center for Ethics and the Rule of Law, Philadelphia, PA (November 21, 2019)

Private Digital Currencies or Central Bank Digital Currencies? (panel), Federal Reserve Bank of Philadelphia Fintech Conference, Philadelphia, PA (November 15, 2019)

Emerging Risks and Legal Issues in Moving Digital Assets Mainstream (panel), Fordham Law Blockchain Regulatory Symposium, New York, NY (November 11, 2019)

Crypto (Macro)economics and the Global Financial System (panel), DC Fintech Week, Washington DC (October 23, 2019)

Notes on the State of Cryptogov, MIT Cryptoeconomic Systems Summit, Cambridge, MA (October 5, 2019)

Regulation (panel), SPOT Cryptocurrency Conference, Hong Kong (July 29, 2019)

Technology and Business Ethics, ComplianceNet, Villanova, PA (June 4, 2019)

The Demand for Ethical Supply, Blockchain as a Force for Global Good, New Canaan, CT (June 7, 2019)

Distributed Ledger Technology Innovations: Industry Trends and Specific Use Cases for Financial Markets (panel), SEC Fintech Forum, Washington DC (May 31, 2019)

The Basics of Blockchain, Initial Coin Offerings (ICOs) and Cryptocurrencies (panel), FINRA Annual Conference, Washington DC (May 15, 2019)

Future Fiat: The Question of Central Bank Digital Currencies (panel), Consensus 2019, New York, NY (May 14, 2019)

The Blockchain and the New Architecture of Trust, Talks at Google, Mountain View, CA (May 8, 2019)

Can We Trust the Blockchain?, Stanford SIEPR, Palo Alto, CA (May 8, 2019)

The Blockchain and the New Architecture of Trust, HBCU Blockchain Summit, Morgan State University, Baltimore, MD (May 3, 2019)

The Blockchain and the New Architecture of Trust, Future of Privacy Forum, Washington, DC (April 30, 2019)

The Blockchain and the New Architecture of Trust, USC Annenberg School, Los Angeles, CA (April 18, 2019)

The Blockchain and the New Architecture of Trust, Carnegie Mellon University CyLab Distinguished Seminar, Pittsburgh, PA (April 8, 2019)

ICOs: The Next Generation, South By Southwest Interactive, Austin, TX (March 14, 2019)

The Blockchain and the New Architecture of Trust, Penn Club of New York (March 19, 2019)

The Blockchain and the New Architecture of Trust, Center for Information Technology Policy, Princeton, NJ (March 26, 2019)

Blockchain: Hope or Hype?, organized by Penn Law Center for Technology, Innovation, and Competition, San Francisco and Mountain View, CA (February 21-22, 2019)

The Blockchain and the New Architecture of Trust, Fordham Center for Law and Information Policy, New York, NY (February 7, 2019)

SCALE: When and Why to Use Blockchain, McKinsey & Company, New York, NY (February 7, 2019)

The Blockchain and the New Architecture of Trust, New York University Stern School of Business, Department of Information, Operations & Management Sciences, New York, NY (January 31, 2019)

Briefing on Regulatory Issues for Blockchain and Cryptocurrencies, Penn Wharton Public Policy Initiative, Washington DC (January 29, 2019)

The Future of Governance on the Blockchain, Blockchainge Conference, Washington DC (January 15, 2019)

Building Trust and Regulatory Clarity in Blockchain and Digital Assets, Ripple Expert Views, San Francisco, CA (December 12, 2018)

The Blockchain and the New Architecture of Trust, Mozilla Foundation, San Francisco, CA (December 12, 2018)

The Blockchain and the New Architecture of Trust, Aspen Institute Society of Fellows, San Francisco, CA (December 11, 2018)

The Blockchain and the New Architecture of Trust, Keynote, Block|FS conference, New York, NY (November 30, 2018)

Governing the Blockchain, Harvard Kennedy School of Government, Cambridge, MA (November 19, 2018)

Blockchain in Government, Washington, DC (November 6, 2018)

The Blockchain and the New Architecture of Trust, Philadelphia Ethereum Blockchain Meetup, Philadelphia, PA (October 23, 2018)

Algorithms as Law, Boston University, Boston, MA (October 4, 2018)

The Blockchain as a New Architecture of Trust, MIT Digital Currency Initiative, Cambridge, MA (October 4, 2018)

Understanding Blockchain and Cryptocurrencies, Pennsylvania Bar Institute 2018 Cyberlaw Update, Philadelphia, PA (July 26, 2018)

Using Blockchain to Solve Government Problems, Penn Wharton Budget Model Spring Conference, Washington, DC (June 22, 2018)

Trust the Blockchain, Wharton Global Forum, New York, NY (June 15, 2018)

ICO Market Trends, IOSCO Annual Meeting, Budapest, Hungary (May 8, 2018)

Blockchain and Cryptocurrencies, Penn Law Inn of Court, Philadelphia, PA (February 13, 2018)

Smart Contracts, Penn Business Law Journal Symposium, Philadelphia, PA (February 3, 2018)

Data Science and Societal Implications, Wharton Neuroscience Initiative Summit (February 2, 2018)

The Blockchain: A New Architecture of Trust?, Telepresence talk to Penn Wharton China Center (December 11, 2017)

The Siren Song: Algorithmic Governance by Blockchain, After the Digital Tornado: Networks, Algorithms, Humanity, Philadelphia, PA (November 18, 2017)

The Blockchain Game: How the Virtual World Turned into the Real World, Lastowka Memorial Lecture, Rutgers Law School, Camden, NJ (November 6, 2017)

Trust, But Verify: Why the Blockchain Needs the Law, Indiana University Kelley School of Business, Bloomington, IN (October 20, 2017)

The Blockchain, Law, and Trust, University of Mississippi School of Law Business Law Network Annual Fall Conference, via videoconference (October 6, 2017)

The State of Blockchain Legal Research, RegTech@Wharton Workshop on Token Offerings, Philadelphia, PA (September 17, 2017)

Principles to Guide Policy, Aspen Institute Communications and Society Conference, Aspen, CO (August 14, 2017)

Trustless Trust?, Blockchain Financial Assets and Beyond: Legal and Regulatory Perspectives, LSE Law and Financial Markets Project Conference, London, UK (May 26, 2017)

Blockchain: The Rise of Trustless Trust?, Penn Wharton Public Policy Initiative B-School for Public Policy Talk, Washington, DC (May 19, 2017)

Big Data, Big Responsibilities, Big Data Discrimination: Understanding Algorithmic Power, Washington & Lee University Law School, Lexington, PA (March 30, 2017)

Communications Law Under the Trump Administration, Penn Law School, Philadelphia, PA (March 20, 2017)

Blockchain and Spectrum Nirvana, DySPAN 2017 Blockchain Workshop, Baltimore, MD (March 6, 2017)

A Capabilities Approach to Communications Equity, Silicon Flatirons Digital Broadband Migration Conference, Boulder, CO (February 2017)

Big Data, Big Responsibilities, McGowan Fund Symposium, Philadelphia, PA (November 11, 2016) Research Based Gamification, Gamification World Congress, Madrid, Spain (October 27, 2016)

Trustless Trust, TPRC Conference on Telecommunications, Information, and Communications Policy, Arlington, VA (September 2016)

Digital Society 2017-2021, Aspen Institute Communications and Society Conference, Aspen, CO (August 15, 2016)

MOOCs and the Modularization of Education, Columbia Institute for Tele-Information virtual seminar (June 6, 2016)

Privacy & Security Panel, NCTA INTX Academic Workshop, Boston, MA (May 16-17, 2016)

Market Regulation and Innovation Panel, Tenth Law & Information Society Symposium, Fordham CLIP, New York, NY (May 13, 2016)

Gameful Approaches to Motivation and Engagement, workshop for gamification researchers and practitioners, Philadelphia, PA (November 1, 2015)

Policy Implications of Unlicensed Wireless, University of Pennsylvania spectrum research update, Philadelphia, PA (October 28, 2015)

- The Song Remains the Same, TPRC Conference on Telecommunications & Information Policy, Arlington, VA (September 27, 2015)
- Competition: The Big Picture, Aspen Institute Communications Policy Conference, Aspen, CO (August 13, 2015)
- Creating a Flipped Classroom, Professional Development Workshop on MOOCs and Flipped Classes in Business Education, Academy of Management Conference, Vancouver, BC (August 8, 2015)
- The Song Remains the Same, Cyberlaw Colloquium, Philadelphia, PA (May 29, 2015)
- Workshop on Gamification, Microsoft CEO Summit, Redmond, WA (May 13, 2015)
- Is Uber a Common Carrier?, The Future of Internet Regulation Symposium, Ohio State University (March 27, 2015)
- Panel on pedagogical innovation, American Bar Association Deans Conference, Washington, DC (February 20, 2015)
- Panel on To Regulate or Not to Regulate: Should Net Neutrality Be Required by Law?, Penn Law Sharer Symposium (November 14, 2014)
- Panelist, First Amendment Law Review Annual Symposium, Chapel Hill, NC (October 24, 2014)
- The Internet of Things, Aspen Institute Conference on Communications Policy, Aspen, CO (August 14, 2014)
- If You Come to a Fork in the Road, Take It, Network Neutrality presentation to Google TGIF All-Hands Meeting, Mountain View, CA (July 24, 2014)
- The Power of Game Thinking, Socialize 2014, Tel Aviv, Israel (June 17, 2014)
- The Present and Future of Fixed Broadband, seminar organized by the University of Haifa Law School, Tel Aviv, Israel (June 15, 2014)
- Serious Gamification, IDC, Herzliya, Israel (June 15, 2014)
- The Power of Game Thinking, IDC Knowledge Happening, Herzliya, Israel (June 13, 2014)
- Panelist, Should the FCC Serve as Internet Traffic Cop?, Progressive Policy Institute, Washington, DC (May 27, 2014)
- Learning from Games for Gamified Learning, Gamification World Congress, Barcelona, Spain (May 23, 2014)
- (Re)Defining Gamification: A Process Approach, Persuasive 2014, Padua Italy (May 21, 2014)
- Gamification, Cheers Publishing Trip to the Future for Chinese businesspeople, Philadelphia, PA (May 19, 2014)
- What I Learned in the Digital Trenches, Beyond MOOCs: New Learning Technologies And Their Impact On Higher Education, Mack Institute Workshop (May 7, 2014)
- Panelist, Progressive Policy Institute, New Principles for a Progressive Broadband Policy, Washington DC (March 13, 2014)
- Fun as a Force for Good, World Bank Institute, Washington DC (March 13, 2014)
- Gamification for Learning, Indiana University – Purdue University of Indianapolis (IUPUI) Advancing Learning with Technology Symposium (via Skype) (February 28, 2014)

- Panelist, Internet Protocol Transition and The Social Contract for the Broadband World, Silicon Flatirons Annual Conference, Boulder, CO (February 9, 2014)
- Gamification, Philadelphia Ed Tech Meetup (January 27, 2014)
- No Dialtone: The End of the Public Switched Telephone Network, TPRC Conference on Information Policy, Arlington, VA (September 28, 2013)
- Panel on Massive Open Online Courses, organizer and speaker, TPRC Conference on Information Policy, Arlington, VA (September 27, 2013)
- Comcast Innovation Seminar, Philadelphia, PA (September 11, 2013)
- Gamification: The Serious Business of Game Thinking, ISB Digital Summit, video presentation to conference in Hyderabad, India (August 2013)
- Gamification for Mobile Learning, US Department of Defense Advanced Distributed Learning webinar series on Mobile Learning (July 17, 2013)
- Gamification, National Design Education Conference, Philadelphia, PA (June 28, 2013)
- Gamification: Getting Serious with Game Thinking, presentation to Penn Health System executive leadership (May 7, 2013)
- Massive Open Online Courses, American Academy for the Advancement of Science annual meeting, Washington, DC (May 3, 2013)
- For the Win: How Game Thinking Can Revolutionize Your Business, Human Resources Online Today conference, Philadelphia, PA (May 2, 2013)
- Teaching Gamification (keynote), Gamification Summit conference, San Francisco, CA (April 17, 2013)
- Applied Game Thinking, video presentation to KnowledgeStream event in Moscow, Russia (April 9, 2013)
- Building Communities, Coursera Partners Conference, Philadelphia, PA (April 6, 2013)
- Game Thinking in Business, Education, and Public Policy, USC Annenberg School, Los Angeles, CA (March 28, 2013)
- For the Win: How Game Thinking Can Revolutionize Your Business, Financial Services Learning & Development Conference, Philadelphia, PA (March 12, 2013)
- Gamification: The Future of Public Policy?, Neustar, Washington, DC (January 29, 2013)
- Beyond Nudges: Gamification as Motivational Architecture, Consumer Protection and Data Privacy conference, Brussels, Belgium (January 23, 2013)
- For the Win: How Game Thinking can Revolutionize Your Business, SEO Braintrust Webinar (November 13, 2012)
- Gamification and Online Education, Presentation to Coursera staff (July 2012)
- ABA Administrative Law Section Conference: The Administrative Agency in an Electronic Age, Princeton (April 2012)
- Gamification for Community Engagement, Grassroots Games Conference (April 2012)
- For the Win: Why Games are the Future of Media, and Much More, Havas Media, Shanghai, China, (March 2012)

The Development and Diffusion of Digital Content, presentation to Organization for Economic Cooperation and Development Committee on Information, Computers, and Communications Policy, Paris, France (December 2011)

The Five Stages of Telecom Transformation, invited presentation to Federal Communications Commission expert workshop on The Telephone Network in Transition, Washington, DC (December 2011)

For the Win: What Businesses are Learning from the World of Games, Penn Homecoming talk to alumni and parents (November 2011)

For the Win: Games as Business and Business as Games, Rochester Institute of Technology, invited lecture to faculty and students of School of Interactive Games and Media (October 2011)

Growth Lessons from Games, SEI Center for Advanced Management board meeting (October 2011)

For the Win: Games as Business and Business as Games, Penn Development and Alumni Relations conference (May 2011)

The Network Utility, invited presentation to the Cyberlaw Colloquium, Rutgers-Camden Law School (February 2011)

The Network Utility, invited presentation to Duke Law Journal 41st Annual Administrative Law Symposium, The FCC and the Future, Duke Law School, Durham, NC (February 2011)

Net Neutrality: The Real Story, Penn IMP Colloquium, Annenberg School (October 2010)

New America Foundation event, Wireless Visionaries: What's Next After TV White Space?, Washington, DC (September 24, 2010)

US House Judiciary Committee, Hearing on Cloud Computing and the Electronic Communications Privacy Act (September 23, 2010)

Layers for Lawyers, CTIC Conference on Engineering & Broadband Policy, Penn Law School (May 2010)

Japan Society event, Obama's Internet Initiative & Social Reform in the U.S. & Japan, New York, NY (March 19, 2010)

Technology Policy Institute Congressional Seminar on Increasing Spectrum for Wireless Broadband: What are the Options?, Washington, DC (February 26, 2010)