

New Perspectives *in* Spectrum Policy

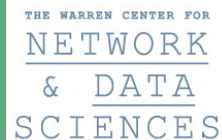


Monday, April 23, 2018

10:00 AM - 5:00 PM | Silverman 245A



Center for Technology, Innovation and Competition



AGENDA

10:00 – 10:05 am	Welcome	3:00 – 3:45 pm	Michael Honig “The Value of Shared Spectrum” (with Randall Berry, Thanh Nguyen, Vijay Subramanian, and Rakesh Vohra)
10:05 – 10:50 am	Gregory L. Rosston “Using 2-Sided Auctions and Overlay Auctions to Facilitate Reallocation”	3:45 – 4:00 pm	Break
10:50 – 11:05 am	Break	4:00 – 4:45 pm	Kevin Werbach “On the Application of Blockchain Technology to Spectrum Sharing” (with Douglas Sicker and Martin Weiss)
11:05 – 11:50 am	Lawrence M. Ausubel “Market Design and the FCC Incentive Auction” (with Christina Aperjis and Oleg Baranov)	4:45 – 5:00 pm	Closing Remarks
11:50 – 1:00 pm	Lunch		
1:00 – 1:45 pm	Christopher S. Yoo “Revisiting the Justifications for Unlicensed Spectrum”		
1:45 – 2:00 pm	Break		
2:00 – 2:45 pm	Thomas Hazlett “Transaction Costs in Wireless: Bringing Coasean Symmetry to 5G Spectrum Allocation Policy”		
2:45 – 3:00 pm	Break		

PARTICIPANT BIOS

Rakesh Vohra

Founding Director, The Warren Center for Network & Data Sciences

Through his forward-thinking research in mechanism design, game theory and auction theory, world-renowned scholar Rakesh Vohra has not only bridged the fields of engineering and economics, he's bridged the gap between theory and practice.

A lifelong academic, Vohra has been teaching Managerial Economics and Decision Sciences at Northwestern University since 1988. He earned his Ph.D. in Mathematics in 1985 from the University of Maryland, his M.Sc. in Operational Research from the London School of Economics, and a B.Sc. (Hon.) in Mathematics from University College London. Currently he is the George A. Weiss and Lydia Bravo Weiss Professor of Economics and Electrical & Systems Engineering, and Penn Integrates Knowledge (PIK) Professor.

To date, he's authored more than 70 articles and working papers on topics such as resource allocation and optimal pricing mechanisms while also authoring or co-authoring several books.

Christopher S. Yoo

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

Christopher S. Yoo is the John H. Chestnut Professor of Law, Communication, and Computer & Information Science and the Founding Director of the Center for Technology, Innovation and Competition. Recognized as one of the most cited scholars in administrative and regulatory law as well as intellectual property, his major research projects include studying innovative ways to connect more people to the Internet; comparing antitrust enforcement practices in China, Europe, and the U.S.; using technology to inform how the law can promote optimal interoperability; promoting privacy and security for autonomous vehicles, medical devices, and the Internet's routing architecture; and net neutrality. He is also building an innovative integrated interdisciplinary joint degree programs designed to produce a new generation of professionals with advanced training in both law and engineering.

Before entering the academy, Yoo clerked for Justice Anthony M. Kennedy of the U.S. Supreme Court and Judge A. Raymond Randolph of the U.S. Court of Appeals for the D.C. Circuit. He also practiced law at Hogan & Hartson (now Hogan Lovells) under the supervision of now-Chief Justice John G. Roberts, Jr. Prior to joining Penn, Yoo was on the faculty at Vanderbilt Law School, where he led the Technology and Entertainment Law Program.

The author of four books and more than ninety articles and book chapters, Yoo testifies frequently before Congress, the Federal Communications Commission, the Federal Trade Commission, and foreign governments. He is a current member of the Federal Communication Commission's Broadband Deployment Advisory Committee, on the Board of Advisers for the American Law Institute's Project on Principles of Law for Data Privacy, and a co-convener of the United Nation's Internet Governance Forum's Connecting and Enabling the Next Billions initiative.

Yoo received his J.D. from Northwestern University Pritzker School of Law, his M.B.A. from the Anderson School at UCLA, and his A.B. from Harvard University.

Lawrence M. Ausubel

Professor, Department of Economics at University of Maryland

Professor Lawrence Ausubel, received his PhD in Economics from Stanford University in 1984, also earning a Master of Legal Studies from Stanford Law School and an MS in mathematics. He taught in the Department of Managerial Economics and Decision Sciences at Northwestern University for 8 years before joining the Maryland faculty in 1992. His main research field is microeconomic theory, particularly in game theory and the economics of asymmetric information. He has written extensively on the bilateral bargaining, multiple-object auctions, the credit card market, and other aspects of industrial organization and financial markets.

Thomas W. Hazlett

Hugh H. Macaulay Endowed Professor of Economics at Clemson University

Professor Thomas Hazlett has previously held faculty positions at George Mason University, the University of California, Davis, and the Wharton School, and served as Chief Economist of the Federal Communications Commission. A noted expert in regulatory economics and information markets, his research has appeared in academic forums such as the *Journal of Law & Economics*, *RAND Journal of Economics*, the *Journal of Financial Economics*, the *University of Pennsylvania Law Review* and the *Columbia Law Review*. He has also written for such popular periodicals as the *Wall Street Journal*, *The Economist*, *Slate*, the *N.Y. Times*, *N.Y. Daily News*, *Reuters.com*, *Business Week*, *The New Republic* and the *Financial Times*. His most recent book, *THE POLITICAL SPECTRUM: THE TUMULTUOUS LIBERATION OF WIRELESS TECHNOLOGY, FROM HERBERT HOOVER TO THE SMARTPHONE*, (Yale, 2017), was featured as one of the top tech books of the year at CES 2018.

Michael L. Honig

Professor of Electrical Engineering and Computer Science at Northwestern University

Prior to joining Northwestern in 1994 Professor Michael Honig worked in the Systems Principles Research Division at Bellcore in Morristown, NJ, and at Bell Laboratories in Holmdel, NJ. He received the B.S. degree in electrical engineering from Stanford University in 1977, and the Ph.D. degree in electrical engineering from the University of California, Berkeley, in 1981. He has served as editor and guest editor for several journals, and as a member of the Board of Governors for the IEEE Information Theory Society. He is a Fellow of IEEE, the recipient of a Humboldt Research Award for Senior U.S. Scientists, and a co-recipient of the 2002 IEEE Communications Society and Information Theory Society Joint Paper Award and the 2010 IEEE Marconi Prize Paper Award.

Gregory L. Rosston

Director of the Public Policy Program at Stanford University, the Gordon Cain Senior Fellow at the Stanford Institute for Economic Policy Research, and Professor of Economics (by courtesy)

Dr. Gregory Rosston teaches Economics and Public Policy courses on competition policy and strategy, intellectual property, and writing and rhetoric.

Dr. Rosston served as Deputy Chief Economist at the Federal Communications Commission working on the implementation of the Telecommunications Act of 1996 and helped to design and implement the first ever spectrum auctions in the United States. In 2011, he was Senior Economist for Transactions for the Federal Communications Commission for the proposed AT&T – T-Mobile transaction. He co-chaired the Economy, Globalization and Trade committee for the 2008 Obama campaign and was a member of the Obama transition team on economic agency review and energy policy. He served as a member and co-chair of the Department of Commerce Spectrum Management Advisory Committee from 2010 – 2014.

Dr. Rosston has written extensively on the application of economics to telecommunications issues. Dr. Rosston received his Ph.D. in Economics from Stanford University and his A.B. with Honors in Economics from University of California at Berkeley.

Kevin Werbach

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

In addition to his influential work on telecommunications and internet policy, Werbach is a pioneer in the emerging field of gamification: applying digital game-design techniques to business. His book, *For the Win: How Game Thinking Can Revolutionize Your Business* (with Dan Hunter) was published in 2012, and over 220,000 students worldwide have registered for his Massive Open Online Course (MOOC). He was named Wharton's first "Iron

Prof" in 2010. Outside of his academic role, Werbach is the founder of Supernova Group, a technology analysis and consulting firm. For nine years, he organized the Supernova conference. He co-led the review of the Federal Communications Commission (FCC) for the Obama Administration's Presidential Transition Team in 2008, and was employed as an expert advisor by both the FCC and the Department of Commerce in 2009.

Prior to joining the Wharton faculty, Werbach was the editor of *Release 1.0*, a renowned technology report for senior executives, and co-organizer of the annual PC Forum conference. Before that, he served as counsel for New Technology Policy at the FCC during the Clinton Administration. Called "one of the few policy wonks who really got it" by *Wired*, he helped develop the U.S. government's e-commerce policies, and authored Digital Tornado, the first comprehensive analysis of the implications of the internet on telecommunications. He earned his JD from Harvard Law School and BA from the University of California at Berkeley.