The 47th Research Conference on Communications, Information and Internet Policy
September 20-21, 2019

Hosted by American University Washington College of Law
Washington, DC

Thursday, September 19

Pre-Conference Session
10:30 am Graduate Student Consortium
(by invitation)
11:30 am Capitol Hill Briefing and Lunch

Friday, September 20

8:00 am   Registration and Continental Breakfast
9:00 am   Paper Sessions outlined in grid
10:40 am   Coffee Break
11:05 am   Paper Sessions outlined in grid
12:45 pm   Lunch and Keynote Speaker
               Congressman Jerry McNerney
2:15 pm   Panel Sessions outlined in grid
3:45 pm   Coffee Break
4:10 pm   Paper Sessions outlined in grid
5:50 pm   Reception and Poster Session
6:45 pm   Dinner and Keynote Speaker
               Grace Koh, U.S. State Department

Saturday, September 21

8:00 am   Registration and Continental Breakfast
9:00 am   Paper Sessions outlined in grid
10:40 am   Coffee Break
11:10 am   Paper Sessions outlined in grid
12:50 pm   Lunch and Student Paper Awards
               Presentation of the Charles Benton Early
               Career Scholar Award
2:00 pm   Panel Sessions outlined in grid
3:30 pm   Coffee Break
4:00 pm   Paper Sessions outlined in grid

Conference Information

The 47th Annual Telecommunications Policy Research Conference will be held at American University's Washington College of Law (WCL), 4300 Nebraska Ave NW, Washington DC 20016.

Located in Washington, DC's historic Tenleytown neighborhood, WCL's 8.5 acre campus offers state-of-the-art facilities to host this year's TPRC. TPRC is pleased with our continuing relationship with AUWCL and we look forward to utilizing the excellent facilities.

Hotel Information

Washington, DC offers numerous options for lodging accommodations for those visiting from out of the area.

TPRC has a block of rooms at the Courtyard by Marriott Chevy Chase for $129.00 USD per night. It is first come, first served basis with the block expiring **August 20**. Book your group rate for WCL TPRC47. Additional information is on our web site.
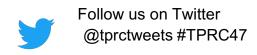
Conference Registration

Online registration is available at https://www.tprcweb.com/.

Conference Fees

	Before Aug. 31	After Aug. 31
Student	$125	$250
Authors/Co-Authors	$245	$395
Academic, Gov't, Nonprofit	$445	$595
Industry	$645	$795

Registration fees cover all conference sessions, conference materials, continental breakfasts, lunches, dinner and coffee breaks.

An additional $100 will be charged for on-site registration.

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Continuing Legal Education (CLE) Credits

Each year, TPRC applies for CLE accreditation from Pennsylvania. Registered legal professionals can earn up to 13 hours of credits. The CLE program is included in registration fees.

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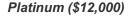
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Updated Conference Information

TPRC47 September 20-21, 2019
September 6, 2019 – Program Subject to Change

Paper and Panel Sessions Friday, September 20

	Room NT01	Room NT08	Room YT17	Room Y115	Room Y403
Friday	**5G** Roslyn Layton *American Enterprise Institute*	**Antitrust** Kristian Stout *International Center for Law and Economics*	**Digital Divide** Michael Calabrese *New America Foundation*	**International** Marcela Gomez *University of Pittsburgh*	**Broadband** John Horrigan *Technology Policy Institute*
9:00-10:40	**IMT Spectrum Identification: An Obstacle for 5G Deployments?,** Mohamed El-Moghazi, *NTRA of Egypt*; Jason Whalley, *University of Northumbria at Newcastle*	**Multisided Markets and Platform Dominance,** James Alleman, *University of Colorado Boulder*; Edmond Baranes, *University of Montpellier*; and Paul Rappoport, *Temple University*	**Tribal Technology Assessment: The State of Internet Service on Tribal Lands,** Traci Morris, *Arizona State University*; and Brian Howard, *Arizona State University*	**Expanding Telecommunications Services in a New Age: How Legal Traditions and Licensing Procedures Impact Telecommunications Industries Around the World** Frederick Steimling, *University of Colorado Law School* **STUDENT PAPER AWARD**	**Scoping New Policy Frameworks for Local Broadband Networks,** Sharon Strover, *University of Texas at Austin*; and Martin Johannes Riedl, *University of Texas at Austin,* Selena Dickey, *University of Texas at Austin*
	Beyond 5G: the Role of THz Spectrum, Rohit Singh, *Carnegie Mellon University*; William Lehr, *Massachusetts Institute of Technology*; Douglas Sicker, *Carnegie Mellon University*; Kazi Mohammed Saidul Huq, *Instituto de Telecomunicacoes*	**Applying Antitrust in Digital Markets,** Mark Jamison, *University of Florida*	**Cell Phones, Security and Social Capital: Examining How Perceptions of Data Privacy Violations Among Cell-Mostly Internet Users Impact Attitudes and Behavior,** Gwen Shaffer, *California State University Long Beach*; and Jan Fernback, *Temple University*	**Cloud Control: China's 2017 Cybersecurity Law and its Role in US Data Standardization,** Aynne Kokas, *University of Virginia*	**Does the multilevel governance of state aid encourage broadband diffusion? Evidence from three European countries,** Paolo Gerli, *Northumbria University*; Julio Navio Marco, *Universidad Nacional de Educación a Distancia* Jason Whalley, *Northumbria University*
	WRC-19 and 5G Spectrum Planning, Rob Frieden, *Pennsylvania State University*	**Can Antitrust Enforcement Improve Privacy Protection? Privacy as a Parameter of Competition in Merger Reviews,** Mark MacCarthy, *Georgetown University*	**Digital Reentry: Uses of and Barriers to ICTs in the Prisoner Reentry Process,** Bianca Reisdorf, *UNC Charlotte*; Julia DeCook, *Michigan State University*; Megan Foster, *UNC Charlotte*; Jennifer Cobbina, *Michigan State University*; and Ashleigh LaCourse, *Michigan State University*	**Internet governance in Russia - sovereign basics for independent RUnet,** Ilona Stadnik, *Saint-Petersburg State University*	**How Telecommunication Regulations Can Contribute to the Alleviation of Traffic Explosion in the Japanese NGN,** Masatsugu Tsuji, *Kobe International University*; and Sobee Shinohara, *KDDI Research*
	The Role of Regulation in 5G Market Design, Johannes Bauer, *Michigan State University*; and Erik Bohlin, *Chalmers University of Technology*				**Quality Competition at the Competitive Margin in US Residential Broadband Markets,** Kenneth Flamm, *University of Texas at Austin* and Pablo Varas, *University of Texas at Austin*

	Room NT01	Room NT08	Room YT17	Room Y115	Room Y403
Friday	**5G** **Jason Whalley** *Northumbria University*	**Platforms** **Bronwyn Howell** *Victoria University Wellington*	**Digital Divide** **Nicol Turner-Lee** *Brookings Institution*	**International** **Hernan Galperin** *Annenburg/USC*	**Broadband** **Mark Walker** *CableLabs*
11:05-12:45 pm	**5G Mobile Broadband: Spectrum Challenges for Rural Regions,** Heather Hudson, *University of Alaska Anchorage*	**Old School Goes Online: Exploring Fiduciary Obligations of Care and Loyalty in the Platforms Era,** Richard Whitt, *GLIA Foundation*	**Quantified global broadband strategies for connecting unconnected communities,** Edward Oughton, *University of Oxford*	**Critical communication infrastructures and Huawei,** Olav Lysne, *Simula Metropolitan CDE*; Ahmed Elmokashfi, *Simula Metropolitan CDE*; Niels Nagelhus Schia, *Norwegian Institute of International Affairs (NUPI)*; Lars Gjesvik, *NUPI*; and Karsten Friis, *NUPI*	**The Rewards of Municipal Broadband: An Econometric Analysis of the Labor Market,** George Ford, *Phoenix Center*; and Alan Seals, *Auburn University*
	Not Over My Backyard: The Regulatory Conflict between 5G Rollout and Environmental and Historic Preservation, Benjamin W. Cramer, *The Pennsylvania State University*	**Regulation when platforms are layered,** William Lehr, *Massachusetts Institute of Technology*; David Clark, *Massachusetts Institute of Technology*; and Steven Bauer, *Massachusetts Institute of Technology,* kc Claffy, *USCD*	**Building Our Own Bridges; How a Distressed Urban Neighborhood Bridges the Digital Divide,** Bibi Reisdorf, *UNC Charlotte*; Laleah Fernandez, *Michigan State University*; and Ruth Shillair, *Michigan State University*	**Impact of Free Trade Agreements on Internet Domain Name Arbitration Cases: A Cross-National Comparison of the Uniform Dispute Resolution Policy,** Bumgi Min, *The Pennsylvania State University*; Ryan Yang Wang, *The Pennsylvania State University*; Yang Bai, *The Pennsylvania State University*; Jenna Grzeslo, *State University of New York New Platz* and Krishna Jayakar, *The Pennsylvania State University*	**What Are the Economic Effects of Municipal Broadband?,** Sarah Oh, *Technology Policy Institute*
	Imagining Future Cities: Design Guidelines for Wireless Small Cells in Urban Landscapes, Irena Stevens, *University of Colorado Boulder*; and David Reed, *University of Colorado Boulder*	**What are the Pro- and Anti-Competitive Claims Driving the European Commission's Platform Policies? A Case Study Based Analysis of the European Commission's Take on Platform Cases**, Adelaida Afilipoaie, *imec-SMIT-VUB*; Karen Donders, *Vrije Universiteit Brussel*; and Pieter Ballon, *Vrije Universiteit Brussel*	**Digital skill sets for diverse users: A comparison framework for curriculum and competencies,** Stacey Wedlake, *University of Washington*; David Keyes, *City of Seattle*; and Karah Lothian, *University of Washington*	**A Tale of Two Countries: Mobile Communications, the Internet and the Digital Economy in China and India,** Rekha Jain, *IIM Ahmedabad*; Prabir Neogi, *Carleton University*; and Krishna Jayakar, *The Pennsylvania State University*	**Predicting Broadband Expansion: An Analysis of Geographic and Demographic Influences,** E.K. Itoku, *Columbia University*; Aman Varma Mantena, *Columbia University*; Aaron Sadholz, *Columbia University*; Anna Zhou, *Columbia University*; and Henning Schulzrinne, *Columbia University*
	5G and Net Neutrality, Christopher Yoo, *University of Pennsylvania,* Jesse Lambert, *University of Pennsylvania*				**How Data Gaps (re)Make Rural Broadband Gaps**, Helen Hambly, *University of Guelph*; and Reza Rajabiun, *Ryerson University*

	Room NT08	Room YT17	Room NT01
	Panel Sessions		
Friday 2:15-3:45	**Mobile Consolidation at an Antitrust Crossroads**	**Policy Incentives to Encourage Spectrum Efficiency**	**Mapping the digital Divide: Spatial Analysis approaches to broadband competition and digital inequality**

	Room NT01	Room NT08	Room YT17	Room Y115	Room Y403
Friday	**Privacy** Jamie Hine *FTC*	**Content** Silvia Elaluf Calderwood *Syracuse University*	**Policy** Giullia McHenry *FCC*	**Spectrum** Kelly O'Keefe *U.S. State Department*	**Internet** William Lehr *MIT*
4:10-5:40	**Disaster Privacy/Privacy Disaster,** Madelyn Sanfilippo, *Princeton University*; Yan Shvartzshnaider, *New York University*; Irwin Reyes, *University of California Berkeley*; Helen Nissenbaum, *Cornell Tech* and Serge Egelman, *University of California Berkeley*	**Content and Access Bundling: simulating complex scenarios,** Petrus H. Potgieter, *University of South Africa* and Bronwyn E. Howell, *Victoria University of Wellington*	**Increasing Low-Income Broadband Adoption through Private Incentives,** Gregory Rosston, *Stanford University*; Scott Wallsten, *Technology Policy Institute*	**The Impact of Spectrum prices on consumers,** Pau Castells, *GSMA*; and Kalvin Bahia, *GSMA*	**The Hidden Standards War: Economic Factors Affecting IPv6 Deployment,** Brenden Kuerbis, *Georgia Institute of Technology*; and Milton Mueller, *Georgia Institute of Technology*
	Life, law, and new privacy in a world of illusions and manipulations, Andrew Odlyzko, *University of Minnesota*	**Online Video: Content Models, Emerging Market Structure, and Regulatory Policy Solutions,** Eli Noam, *Columbia University*	**Any Sirious Concerns Yet? - An empirical analysis of voice assistants' impact on consumer behavior and assessment of emerging policy challenges,** René Arnold, *WIK and Bruegel*; Serpil Tas, *WIK*; Christian Hildebrandt, *WIK*; and Anna Schneider, *Fresenius University of Applied Sciences*	**Market Disputes	Legal, Social, and Long-Term Implications for an Evolving Spectrum Market**, J. Stephanie Rose, *University of Pittsburgh*; Martin B.H. Weiss, *University of Pittsburgh*; Taieb Znati, *University of Pittsburgh*; Marcela Gomez, *University of Pittsburgh*; Debarun Das, *University of Pittsburgh*; and Pedro Bustamante, *University of Pittsburgh*	**How DNS over HTTPS is Reshaping Privacy, Performance, and Policy in the Internet Ecosystem,** Tithi Chattopadhyay, *Princeton University*; Paul Schmitt, *Princeton University*; Kevin Borgolte, *Princeton University*; Jordan Holland, *Princeton University*; Austin Hounsel, *Princeton University*; and Nick Feamster, *Princeton University;* Mihir Kshirsagar, *Princeton University*
	Have Your Privacy Cake and Eat It Too: How New Technologies May Help Resolve the Inherent Tension in the Privacy Policy Debate, Mark Walker, *CableLabs*; Kelton Shockey, *CableLabs*; and Brian Scriber, *CableLabs*	**What Unregulated Algorithm Industry Wants from New Digital Audience Measurement: Institutional Perspective on Personal Data Surveillance** Yong Jin Park, *Howard University*	**Public vs. Private Mobile Services: An Analysis of a Tortured History,** Scott Jordan, *University of California, Irvine*	**Spectrum sharing analysis for unlicensed use in 6 GHz using Risk-Informed Interference Assessment,** Nadia Yoza Mitsuishi, *University of Colorado Boulder*; Peter Mathys, *University of Colorado Boulder* and David Reed, *University of Colorado Boulder*	**Navigating the Landscape of Programmable Networks: Looking beyond the Regulatory Status Quo,** Apoorv Shukla, *TU Berlin* and Volker Stocker, *MPI-Informatics, Saarbrücken/TU Berlin*

Poster Session Friday, September 20, 5:50 – 6:45 pm

A Study from failure in Japan, "Why Japanese Mobile Handset Manufacturers left Market in Smartphones Era?": From the Theory of Diffusion of Innovation. Sobee Shinohara, *KDDI Research, Inc*.

Balancing the Spectrum: Achieving Economic and Public Mission Objectives. Carolyn Kahn, *The MITRE Corporation*

E-Governance as Good Governance: ICT Policy and Adoption in the Developing World Patience Akpan-Obong, *Arizona State University*; Charles Ayo, *Covenant University Nigeria*; and Aderonke Oni, *Covenant University Nigeria*

Satellite and Wireless Broadband Service Complementarity and Substitutability for Wired Rural Internet Service. Peter Stenberg, *USDA-ERS*

Gender Disparities in ICT Access & Usage: Ghana as a Case Study, George Asante, *Ghana Technology University*; Fati Tahiru, *Ho Tech University*; and Samuel Agbesi, *Aalborg University*

Fallow Fields or Unyielding Potential? An Examination of EBS Proposed Rulemaking Comments and the Public Interest. Richelle Crotty, *University of Texas at Austin;* and Alexis Schrubbe, *University of Texas at Austin*

Spectrum Value in a 5G World. Coleman Bazelon, *The Brattle Group*; Paroma Sanyal, *The Brattle Group*; and Ezra Frankel, *The Brattle Group*

Telehealth Usage in Rural Michigan. Chris McGovern, *ConnectedNation, Inc*.; and Eric Frederick, *ConnectedNation, Inc.*

Beyond Fake News: Toward a Theory of Socially Constructed Political Information Seeking Nicole Alemanne*, Valdosta State University*

Digital Security, Privacy and Trust: the three underpinnings of a Sustainable and Commercially Viable Internet Prabir Neogi, *Carleton University*; Arthur Cordell, *Carleton University*; and Don Maclean

A new approach? Evidence accumulation and the evolving conceptualization of competition in Canadian telecom policy Catherine Middleton, *Ryerson University;* and Reza Rajabiun, *Ryerson University*

Examining Mobile Broadband Transparency using the FCC's Measuring Mobile Broadband Data, James Miller and Scott Jordan, *University of California, Irvine*

Paper Sessions Saturday, September 21

	Room NT01	Room NT07	Room Y116	Room Y402	Room Y403
Saturday	**Spectrum** **Reza Arefi** *Intel*	**Digital Divide** **Shiv Bashki** *Ericsson*	**Data** **Aleecia McDonald** **Carnegie Mellon University**	**Net Neutrality** **Randolph May** *Free State Foundation*	**Social Networks** **Derrick Cogburn** *American University*
9:00-10:40	**Technology Adoption in Spectrum Sharing: Estimating the Impact on Incumbents in the 3.5GHz Band,** Marcela Gomez, *University of Pittsburgh*; Martin Weiss, *University of Pittsburgh*; Seongmin Park, *University of Pittsburgh*; and Prashant Krishnamurthy, *University of Pittsburgh*	**Tolls on the Bridge Over the Digital Divide? An Economic and Regulatory Analysis of Over-the-Top Services in a Developing Market,** Martin Saint, *Carnegie Mellon University*; and Obed Shema, *Rwanda Utilities Regulatory Authority*	**Open Data and the Core Competences of Government: Lessons from Flanders, Belgium,** Nils Walravens, *Vrije Universiteit Brussel*; Pieter Ballon, *Vrije Universiteit Brussel*; Mathias Van Compernolle, *UGent*; and Pieter Colpaert, *UGent,* Lieven De Marez*, UGent*	**The Regulation of Archives and Society's Memory,** Noam Tirosh, *Ben-Gurion University of the Negev*; and Amit Schejter, *Ben-Gurion University of the Negev and Penn State*	**Connective Ambition and Creative Caution: Facebook Use among Unstably Housed Adults in Chicago** Will Marler, *Northwestern University* **STUDENT PAPER AWARD**
	Design of Institutions for Spectrum Governance: Lessons from Spectrum Trading in India, Rekha Jain, *IIM Ahmedabad*	**Internet usage subnational disparity measure in Mexico: a gender-digital-divide approach,** Francisco García García, *Data Lab Mx*; and Adán Morales Pedroza, *Data Lab Mx*	**Big data, machine learning, consumer protection and privacy,** Rory Macmillan, *Macmillan Keck Attorneys & Solicitors*	**Net Neutrality and it's Repeal; Small Firms' Shareholders Shrug While Large Firms' Shareholders Turn** David Gabel, *Queens College*; Joan Nix, *Queens College*; and Bruce McNevin, *New York University*	**The Political Outcomes of Unfriending: Social Network Curation, Network Agreeability, and Political Participation,** Craig Robertson, *Michigan State University*; Laleah Fernandez, *Michigan State University*; and Ruth Shillair, *Michigan State University*
	Assessing the Sharing Potential in the 3.5 GHz band: An Analytical Approach, Marcela Gomez, *University of Pittsburgh*; Jacek Kibilda, *Trinity College, The University of Dublin*; Martin Weiss, *University of Pittsburgh*; and Luiz DaSilva, *Trinity College, The University of Dublin*	**Developing a Digital Inclusion Index at the State Level: the case of Mexico,** Manuel Ochoa, *University of California Berkeley*; and Brandie Nonnecke, *University of California Berkeley*	**Data-driven Market Power: An Overview of Economic Benefits and Competitive Advantages from Big Data Use,** Victoria Fast, *University of Passau*; Daniel Schnurr, *University of Passau*; and Michael Wohlfarth, *University of Passau*	**Zero-rating and sponsored data strategies of Internet service providers: A systematic review of the literature,** Christian Hildebrandt, *Goethe University Frankfurt*; and Lukas Wiewiorra, *Goethe University Frankfurt*	**Five Free Expression Safeguards from a Facebook User's Perspective,** Zak Rogoff, *Georgetown University*

	Room NT01	Room NT07	Room Y116	Room Y402	Room Y403
Saturday	**Blockchain** John Leibovitz *Columbia Capital*	**Internet** Jennifer Manner *EchoStar*	**Measurement** Jeff Prince *Indiana University*	**Privacy** BC Kim *University of Alabama*	**Social Networks** Martha Garcia Murillo *Syracuse University*
11:10-12:50	**A Collaborative Enforcement Mechanism for Spectrum Sharing Using Blockchain and Smart Contracts: An application for the 1695-1710MHz band,** Pedro Bustamante, *University of Pittsburgh*; Marcela Gomez, *University of Pittsburgh*; Martin Weiss, *University of Pittsburgh*; Taieb Znati, *University of Pittsburgh*; J. Stephanie Rose, *University of Pittsburgh*; and Debarun Das, *University of Pittsburgh*	**Toward a Theory of Harms in the Internet Ecosystem,** David Clark, *Massachusetts Institute of Technology* and kc Claffy, *University of California San Diego*	**Disparities in Purposeful Internet Use in U.S. States: Spatiotemporal Patterns and Socioeconomic Influences,** Avijit Sarkar, *University of Redlands*; and James Pick, *University of Redlands*	**Online dis-trust? Relationships between cybersecurity and online transactions,** Roxana Barrantes Cáceres, *Pontificia Universidad Católica del Perú*; Aileen Agüero García, *Instituto de Estudios Peruanos*; Paulo Matos Trifu, *Innovations for Poverty Action*; and Diego Aguilar, *Instituto de Estudios Peruanos*	**Ontology of Digital Asset After Death: Policy Complexities, Suggestions, and Critique of Digital Platforms,** Yong Jin Park, *Howard University*; Yoonmo Sang, *University of Canberra*; Hoon Lee, *Kyunghee University*; and S Mo Jang-Jones, *University of South Carolina*
	Open-source or open-slather? Governing blockchain applications as common-pool resources, Bronwyn Howell, *Victoria University Wellington*; Petrus Potgieter, *University of South Africa*; and Bert Sadowski, *Eindhoven University of Technology*	**Does Accessible Design Benefit General Users of e-Government? Examining the Relationship between Website Usability and Accessibility,** Yang Bai, *The Pennsylvania State University*; Jenna Grzeslo, *State University of New York New Platz*; Bumgi Min, *The Pennsylvania State University*; Yang Wang, *The Pennsylvania State University*; and Krishna Jayakar, *The Pennsylvania State University*	**The Balance of Market Power and Efficiency in the U.S. Mobile Services Industry: A Panel Data Analysis,** Glenn Woroch, *University of California Berkeley*	**Not a Zero Sum Game: How to Simultaneously Maximize Efficiency and Privacy in Data-driven Urban Governance,** Chintan Vaishnav, *Massachusetts Institute of Technology*; Karen Sollins, *Massachusetts Institute of Technology*; and Nikita Kodali, *Massachusetts Institute of Technology*	**Are Deep Fakes a Shallow Concern? A Critical Analysis of the Likely Societal Reaction to Deep Fakes,** Jeffrey Westling, *R Street Institute*
	Is Blockchain the next step in the Evolution Chain of [market] intermediaries?, Marcela Gomez, *University of Pittsburgh*; Pedro Bustamante, *University of Pittsburgh*; Martin Weiss, *University of Pittsburgh*; Herminio Bodon, *University of Pittsburgh*; Prashant Krishnamurthy, *University of Pittsburgh*; Michael Madison, *University of Pittsburgh*; Tymofiy Mylovanov, *University of Pittsburgh,* Wilson Law*, Baylor University;* Ilia Murtazashvili, *University of Pittsburgh*	**Characteristics of At-Scale mHealth Projects in the Global South: A Case Study Approach** Muge Haseki, *University of Pennsylvania*; Sharada Srinivasan, *University of Pennsylvania*; and Christopher Yoo, *University of Pennsylvania*	**The Nuanced Effects of Internet Use on International Trade: An Empirical Analysis of U.S. Trade Data** Yang Bai, *The Pennsylvania State University* **STUDENT PAPER AWARD**	**Apps, Code, Culture, and Market Reform: Examining influences on Android Permissions in the US, South Korea and Germany,** Jonathan Schubauer, *Indiana University Bloomington*; David Argast, *Indiana University Bloomington*; Jean Camp, *Indiana University Bloomington*; and Sameer Patil, *Indiana University Bloomington*	**Touched by the Trolls,** Patrick Warren, *Clemson University*; and Darren Linvill, *Clemson University*

	Room Y116	Room NT01	Room NT07		

Saturday	Panel Sessions				
2:00 - 3:30	**World Radiocommunication Conference (WRC-19): Implications for US Spectrum Policy**	**To 5G or not to 5G? That is the Question: Mobile Broadband Network Developments in Europe, China, India and Mexico**	**Impacts of digitization and AI on the future of work: Contrasting European and American Views**		

	Room NT01	Room NT07	Room Y116	Room Y402	Room Y403
Saturday	**Innovation** Rob Frieden *Pennsylvania State University*	**International** Heather Hudson *University of Alaska*	**Measurement**	**Privacy** Carolyn Gideon *Tufts University*	**New Technology** Petrus Potgeiter *University of South Africa*
4:00-5:40	**Can Piracy Increase Innovation? The Software Industry's Response to Online File Sharing,** Wendy Bradley, *Southern Methodist University* and Julian Kolev, *Southern Methodist University*	**Zero-Rating and Other Initiatives by Over-The-Top Players in Africa: Do They Contribute to Universal Access and Service?** Emmanuel Arakpogun, *Northumbria University*; Jason Whalley, *Northumbria University*; and Roseline Wanjiru, *Northumbria University*	**Competition, technological change and productivity gains: the contribution of information technologies** François Jeanjean, *Orange* and Stephane Ciriani, *Orange*	**Privacy Preserving Policy Framework: User-Aware and User-Driven,** Sanchari Das, *Indiana University Bloomington* and Jayati Dev, *Indiana University Bloomington,* Jean Camp*, Indiana University Bloomington*	**Can machines learn whether machines are learning to collude?,** Jonathan Cave, *University of Warwick*
	Addressing Privacy and Security Concerns with Distributed Tech without Impeding Innovation, Krisztina Pusok, *American Consumer Institute*	**An analysis of consumer preferences for mobile telephony and Over-the-top (OTT) commun-ications services: A Case of Thailand,** Monarat Jirakasem, *Waseda University*	**Urban Competitiveness and the Smart City: An empirical analysis in a Developing Country Context** Xiaoyue Peng,	**Internalizing the Harm of Privacy Breaches: How Effective are Disclosure Policies in Providing Incentives to Improve Data Protection? An Event Study,** Sam Lee, *Tilburg University*	**Making the IoT Worthy of Human Trust,** Hilda Hadan, *Indiana University Bloomington*; and Jean Camp, *Indiana University Bloomington,* Sanchari Das, *Indiana University Bloomington,* Nicholas Serrano, *Indiana University Bloomington*
	Technical, economic, and social coordination requirements of internet-based innovation, Johannes Bauer, *Michigan State University*	**Diversity without disagreeability: A multi-national examination of social networks and participation in political dialog,** Ruth Shillair, *Michigan State University*; and Laleah Fernandez, *Michigan State University*	**Assessing Cost Effectiveness of Digital Development Projects** Muge Haseki, *University of Pennsylvania*; Sharada Srinivasan, *University of Pennsylvania*; and Christopher Yoo, *University of Pennsylvania*	**Privacy Policies Caught between the Legal and the Ethical: European Media and Third Party Trackers before and after GDPR,** Jannick Kirk Sorensen, *Aalborg University*; Hilde Van den Bulk, *Drexel University*; and Sokol Kosta, *Aalborg University*	**A Complete Study of P.K.I. (PKI's Known Incidents),** Nicolas Serrano, *Indiana University Bloomington*; Hilda Hadan, *Indiana University Bloomington* and Jean Camp, *Indiana University Bloomington*

Friday Panels

Mobile Consolidation at an Antitrust Crossroads (Room NT08)

This panel will consider proper antitrust enforcement of mobile mergers as consolidation in the industry reaches new heights. What is the proper balance of weakened price competition against the potential for scale efficiencies and disruptive innovation, especially as carriers embark on next-generation wireless technology? The discussion will draw lessons from several 4-to-3 mobile mergers that have been approved (with conditions) or denied in Europe and other developed countries. We will explore the efficacy of spectrum divestitures and the sharing of wireless infrastructure to rectify competitive injury.

Moderator: Glenn Woroch, *University of California Berkeley*
Panelists:
- Thomas Hazlett, *Clemson University*
- Michelle Connolly, *Duke University*
- Gigi Sohn, *Georgetown University*

Policy Incentives to Encourage Spectrum Efficiency (Room YT17)

This panel will question whether traditional policy tools provide the correct incentives to develop efficient systems and explore whether other approaches may drive to more effective results. Specifically, the panel will ask the following questions: Do current spectrum policies reward the use of advanced wireless technology that improves spectrum efficiency and enables sharing both within and across platforms? Going forward, could policy be better used to encourage spectrum users to develop more spectrally efficient technologies? Are there carrots or sticks that the government could employ to change the economic incentives to share spectrum? Could innovative policy tools better align stated objectives with actual practice?

Moderator: Peter Tenhula, *NTIA*
Panelists:
- David Goldman, *SpaceX*
- Brian Regan, *Starry*
- Charlyn Stanberry, *Chief of Staff for Rep. Yvette Clarke*
- Charla Rath, *formerly of Verizon*

Mapping the Digital Divide: Spatial Analysis Approaches to Broadband Competition and Digital Inequality (Room NT01)

This panel brings together researchers that are pushing the boundaries of digital inequality research by examining differences in access to infrastructure, adoption, and socioeconomic outcomes through spatial lenses. A core common thread is the use of geocoded data to theorize how spatial factors and spillover effects interact with the traditional determinants of digital inequality at the individual and household levels. Panelists will also discuss the limitations of existing datasets as well as much needed improvements to data collection instruments at the local, state and federal levels, including FCC Form 477 and the Internet use questions from the American Community Survey and the Current Population Survey.

Moderator: Steve Rosenberg, *FCC*
Panelists:
- Hernan Galperin, *University of Southern California*
- Kenneth Flamm, *University of Texas Austin*
- Karen Mossberger, *Arizona State University*
- William Dutton, *Oxford Internet Institute*

Saturday Panels

World Radiocommunication Conference (WRC-19): Implications for the US Spectrum Policy (Room Y116)

In a time where the literature usually focuses on US national spectrum policy while overlooking the implications of decisions at the international level, this panel addresses the potential implications of the forthcoming WRC-19 to be held in November 2019 with a focus on specific agenda items of critical importance. This includes WRC-19 Agenda Items (AI) 1.13, which will decide on the potential spectrum bands for 5G, AI 1.16 to consider issues related to Radio Local Area Networks (RLAN) in the 5 GHz, and future agenda items for WRC-23 (e.g. Mobile allocation in the UHF).

The panel tends also to examine whether the ITU-R has become less relevant for the US considering that the latter is planning 5G in the 28 GHz (among others), which is not one of the potential 5G bands in WRC-19. Another issue to be addressed is the criticism of the US to the ITU (the US is the largest contributor to the organization) and whether the US has become less powerful within WRCs. The panel will accommodate high profile professionals from the US WRC-19 Advisory Committee, terrestrial and satellite services in addition to the academia as follows:

Moderator: Mohamed El-Moghazi, *NTRA of Egypt*
Panelists:
- Dante Ibarra, *FCC*
- Jayne Stancavage, *Intel*
- Jennifer Manner, *EchoStar*
- Rob Frieden, *Pennsylvania State University*

To 5G or Not to 5G? That is the Question: Mobile Broadband Network Developments in Europe, China, India and Mexico (Room NT01)

This panel will focus on the impact of the widespread deployment, penetration and use of intelligent mobile devices, particularly smartphones, married to broadband mobile networks, in Europe, China, Mexico and India.

The intelligent mobile phone has become the most widely used communications device globally and the access device of choice in the developing world. In countries like India it is often the only available device for accessing the Internet and its large variety of associated services.

The panel will discuss issues such as:
• What role does mobile broadband play in different national broadband strategies?
• How will the transition from 4G/LTE networks to 5G networks be managed in different countries and regions, such as Europe, China, India and Mexico?
• How has China positioned itself to take a global leadership role in 5G, including standards development, commercial deployment and the development of a 5G ecosystem?
• What strategies have Mexico and India adopted in facilitating the national deployment of broadband mobile communications infrastructure and/or wholesale networks? Do Public Private Partnerships have a role to play in such deployments?
• What role can mobile broadband play in the delivery and use of a wide variety of digital information and transactional services, including electronic payments? How may mobile broadband services compensate for deficiencies in the physical infrastructure for banking services, rural healthcare and public information?

Moderator: Prabir Neogi, *Carleton University*
Panelists:
- Erik Bohlin, *Chalmers University of Technology*
- Rekha Jain, *Indian Institute of Management*
- Krishna Jayakar, *University of Electronics and Technical Science, China, and Pennsylvania State University*
- Judith Mariscal Aviles, *Centro de Investigación y Docencia Economica*
- Jason Whalley, *Northumbria University*

Impacts of Digitisation and AI on the Future of Work: Contrasting European and American Views (Room NT07)

The panel will focus on:

• the degree to which transformative technologies and related business models including AI, machine learning, big data, the Internet of Things and the emerging collaborative economy are likely to change the volume of work, the character of work, and compensation for work; and

• the implications of the changing character of work, and the shift away from traditional full-time employment, are likely to have on social protection systems in the US and the EU, together with potential public policy responses.

This transformation poses significant challenges for policymakers who seek to ensure that their national populations are reasonably well protected against catastrophic events as well as expensive but predictable events.

Moderator: J. Scott Marcus, *Bruegel*
Panelists:

- Rob Atkinson, *ITIF*
- Darrell West, *Brookings*
- Arun Sundararajan, *Stern School, NYU*
- Georgios Petropoulos, *Bruegel and MIT*