



## 6<sup>th</sup> Annual Governance of Emerging Technologies and Science Conference

Sandra Day O'Connor College of Law, 111 E. Taylor St., Phoenix, AZ

May 16-18, 2018

### Day 1: Wednesday, May 16

- 8:00-8:30 Breakfast
- 8:30-8:45 Welcome
- 8:45-9:30 **Keynote: Eight Simple Rules for Regulating My Disruptive Innovation**  
**Larry Downes**, Project Director at the Georgetown Center for Business and Public Policy and a Senior Fellow with Accenture Research
- 9:30-11:00 **Plenary Session 1: Success Stories in International Coordination**  
Moderator: **David Winickoff**, OECD and SciencesPo Law School (Neurotechnology)  
**Charlotte Stanton**, Carnegie Endowment for International Peace (Artificial Intelligence)  
**Chris Mondini**, ICANN (Internet Domain Names)  
**Megan Brown**, Wiley Rein (Internet of Things)
- 11:00-11:15 Break
- 11:15-12:45 **Concurrent Session 1.1: Neuro-technology**  
*Guiding Principles for Responsible Innovation in Neurotechnology for Health*  
**David Winickoff**, OECD and SciencesPo Law School  
*Brain-Computer Interfaces: Guidelines for Responsible Robotic-Humanism*  
**Jeff Ward**, Duke School of Law  
*Race on the Brain: Behavioral Realism and its Technical Fix for Racism*  
**Jonathan Kahn**, Mitchell Hamline School of Law  
*Exploring Some Legal Implications of Neuroscience Research Finding Sex Differences in the Brain*  
**Betsy Grey**, Arizona State University

### **Concurrent Session 1.2: AI & Values**

*Safe-By-Design: Principled Methods of Embedding Values in Transformative Technologies*

**Steven Umbrello**, Institute for Ethics and Emerging Technologies  
*Artificial Intelligence in Geriatric Medicine and Caregiving: Legal and Ethical Challenges of Advancing Technologies*

**Timothy S. Hall**, Louis D. Brandeis School of Law; University of Louisville  
*Artificial Intelligence and Public Policy: A Systematic Review*

**Carlos Ignacio Gutierrez**, Pardee RAND Graduate School  
*Immoral Software: How Artificial Intelligence Embeds Human Bias and Distorts Our Decision-Making*

**Antony Haynes**, Albany Law School

### **Concurrent Session 1.3: Privacy and Surveillance**

*What Does May 26 Look Like? The GDPR Impact*

**K Royal**, TrustArc

*The Civilian use of Drones at EU Borders: Legal Issues, the Impact on Privacy and a Privacy by Design Approach*

**Panagiotis Loukinas**, Queen's University Belfast, United Kingdom

*Transcending Cyber/Privacy/Compliance Silos with a Corporate Compliance Framework*

**Paul Flanagan**, Drexel University Law School

*Native Nations and Identity: an Exercise in Balancing Security and Privacy*

**Richard Monette**, University of Wisconsin School of Law

### **Concurrent Session 1.4: Gene Editing and Synthetic Biology**

*The Challenges of Synthetic Biology and Digital Sequence Information for the Principles and Structures of the International Treaty for Plant Genetic Resources for Food and Agriculture*

**Todd Kuiken**, North Carolina State University

*How Gene Editing Reveals Regulatory Loopholes in the New GMO Labeling Law*

**Paul Enriquez**, North Carolina State University

*Biosecurity in the Age of Genome Editing: Exploring the Risks, Benefits, and Governance Options*

**Sarah Welch Denton**, George Mason University

*Enhancing Biosafety and Biosecurity across International Borders*

**Irene Mendoza**, Arizona State University

*Synthetic Biology Regulation and the Assurance Timeline*

**Justin Firestone**, University of Nebraska

12:45 – 1:30 Lunch

### **Concurrent Session 2.1: Blockchain, IoT and Personal Data**

*Incorporating Blockchain into the Biosciences: What are we waiting for?*

**Dov Greenbaum**, IDC, Herzliya

*Privacy, Anonymity, and the Myth of Decentralization: Challenges of Blockchain Technology in Light of EU Data Protection Law*

**Martinho Lucas Pires**, Nova Law School Lisbon, Portugal

*Who Owns the Health Data on the Blockchain?*

**Patricia Velarde Burnett**, Weiss Brown, Gary Marchant, Arizona State University

*Decentralized Governance and Reputation in Multi-Agent Systems: Hyper-Transparency, Social Impact Platforms, Tokenized Capitalism and Alternative Economic Models on the Blockchain*

**Tomas Vrba**, Arizona State University

### **Concurrent Session 2.2: Autonomous Weapons Systems**

*The Privatization of Expertise: Analyzing the Role of the Private Sector in the Governance of Autonomous Weapons Systems*

**Sophie-Charlotte Fischer**, ETH Zurich

*Autonomous Weapons Systems and the Search for New Forms of Public Accountability*

**Laura A. Dickinson**, George Washington University Law School

*Lethal Robotics and Autonomous Systems – Predicting Proliferation*

**Margaret E. Kosal**, Georgia Institute of Technology

*Perspective on the Public Engagement in Drone Technology in India: Challenges and Reflections on Public Policy*

**Kirti Sharma**, - emailed for affiliation

### **Concurrent Session 2.3: Medical Internet of Things**

*The Food and Drug Administration and the Regulation of the Internet of Therapeutic Things (IoTT)*

**David Feigal**, Arizona State University

*Securing the “Internet of Persons”: Critical Infrastructure Protection*

**Janine S. Hiller**, Virginia Tech

*The Internet of Bodies*

**Andrea M. Matwyshyn**, Northeastern University

*Regulating the Mining of Consumer Medical Data from Internet of Things (IoT) Devices*

**Mason Marks**, Yale Law School

### **Concurrent Session 2.4: Biotechnology and Public Engagement**

*Biotechnology: The Need for Acknowledging Disagreement*

**Ruth Mampuy**, The Netherlands Commission on Genetic Modification

*Engaging the Public: Understanding Consumer Perceptions of Risk in Various Areas of Biotechnology*

**Joanna K. Sax**, California Western School of Law

*Synthesizing Engagement for Synthetic Biology Governance*

**Adam Kokotovich**, North Carolina State University

*Public Outreach and Community Engagement for Genetically Engineered Mosquitoes: Lessons from Oxitec and Mosquito Mate*

**Cynthia E. Schairer**, University of California, San Diego

3:00-3:30

Break

3:30-5:00

### **Plenary Session 2: Success Stories in Public Engagement – A Frankenstein Case Study**

Moderator: **David Guston**, School for the Future of Innovation in Society, ASU

**Ed Finn**, Center for Science and the Imagination, ASU

**Ruth Wylie**, Center for Science and the Imagination, ASU

**Judith Guston**, Rosenbach Museum and Library

5:00-5:45

### **Keynote: How the EU is Dictating Online Speech Norms and What Silicon Valley Can Do About It**

**Danielle Keats Citron**, Morton & Sophia Macht Professor of Law, University of Maryland Carey School of Law

## Day 2: Thursday, May 17

8:00-8:30 Breakfast

8:30-10:00 **Plenary Session 3: Success Stories in “Soft Law”**

Moderator: **Craig Shank**, Microsoft

**Diana Bowman**, Center for Law Science & Innovation/School for the Future of  
Innovation in Society, ASU

**Ryan Hagemann**, Niskanen Center

**Gary Marchant**, Center for Law, Science & Innovation, ASU

10:00-10:15 Break

10:15-11:45 **Concurrent Session 3.1: Algorithmic Decision-Making**

*Regulatory Architectures for Disruptive Technologies: Algorithmic Citizenship, Datafication and the Tyranny of Scoring*

**David Levi-Faur**, Hebrew University

*Artificial Intelligence in the Court: Black Box, Due Process, and the Need for Greater Algorithmic Accountability*

**Ching-Fu Lin**, National Tsing Hua University

*In Algorithms We Trust: the Death of the Second Opinion*

**Nizan Geslevich Packin**, Baruch College - CUNY

**Concurrent Session 3.2: Healthcare and Technology**

*Development of a Genomic Orientation Scale: Is a Healthy Amount of Skepticism Necessary for Good Biobank Governance?*

**Caroline Horrow**, Mayo Clinic

*Smartphone Applications as Adjuncts to Medical Devices: A Case Study in Health Regulation*

**Ibrahim Garba**, University of Arizona

*The Dark Side of Patient Advocacy? Does the Role Expansion of Disease Advocacy Organizations Warrant Greater Governance?*

**Christina Nyquist**, Mayo Clinic & **Caroline Horrow**, Mayo Clinic

*Recreational Genetic Testing – Legal and Ethical Issues*

**Carol D. Scott**, Law Offices of Carol D Scott

**Concurrent Session 3.3: Soft Law**

*Public Shaming in the Global Village*

**Jeremy Weissman**, University of South Carolina

*Law Cannot Be Soft, Only Vague*

**Joseph D’Agostino**, Savannah Law School

*Evolving Evidence Standards for Rare Diseases in Precision Medicine: The Role of Soft Law, Regulation and Governance*

**Amalia M. Issa**, USP

*Global Governance Artificial Intelligence: Soft Law Solutions for a Technology in Flux*

**Lucy Tournas**, Arizona State University

**Concurrent Session 3.4: Technology and New Divisions at National Security**

*2050 Strategic Security: Future Imperfect*

**Ina Wanca**, NYU

*Who Should Control Attempts to Message Alien Worlds?*

**Kelly C. Smith**, Clemson University

*Identity as Design Platform and Battlespace*

**Brad Allenby**, Arizona State University

*Emerging Technologies and the Weapons Review Process*

**Eric Talbot Jensen**, Brigham Young University Law School

11:45 – 12:45 Lunch

12:45-1:30 **Keynote: Machine Learning In a Global Context, Whose Rights Are At Risk?**

**Erica Kochi**, Co Founder, UNICEF Innovation

1:30-3:00 **Plenary Session 4: The Most Important Emerging Technology Is ....**

Moderator: **Brad Allenby**, Fulton School of Engineering, ASU

**Gillian K. Hadfield**, USC Gould School of Law (AI)

**Melanie Swan**, Institute for Blockchain Studies (blockchain)

**Genya Dana**, World Economic Forum (synthetic biology)

**Justin (Gus) Hurwitz**, University of Nebraska College of Law (IoT)

3:00-3:15 Break

3:15-4:45 **Concurrent Session 4.1: AI and Law**

*The Robot Koseki – Using Japanese Family Law as a Model for Regulating Robots*

**Colin P.A. Jones**, Doshisha University Law School (Kyoto, Japan)

*The impact of foreseeability factor when creating law of Artificial Intelligence*

**Tjasa Zapusek**, University of Copenhagen

*Incomplete Contracting and AI Alignment*

**Gillian K. Hadfield**, University of Southern California

*2018 A Legal Research Odyssey*

**Jamie Baker**, Texas Tech University School of Law

**Concurrent Session 4.2: Big Data & Privacy**

*Fog Computing in the Field: the Development of IoT Governance*

**Mark Perry**, University of New England

*Regulating Technological Resistance to Government Surveillance*

**Alan Z. Rozenshtein**, University of Minnesota Law School

*Internet of Things and Challenges to Insurance Sector*

**Rujitha Shenoy**, Cochin University, Luciprs, India

*Social Impact of Emerging Technologies; the Smart City Context*

**Luciano C. Oviedo**, Warwick Business School, Sarma Vrudhula, Arizona State University

**Concurrent Session 4.3: Human Gene Editing & Enhancement**

*Governance Challenges Raised by Germline Gene-Editing: A Canadian Case Study*

**Vardit Ravitsky**, University of Montreal

*The New Era of Gene Therapy and the Challenges of Equitable Access and Diversity*

**Bob Bohrer**, California Western School of Law

*Cyborgs -- Should we be better than we are?*

**Victoria Sutton**, Texas Tech University School of Law

*AI and Democratization of Genomics for the Regenerative Generation*

**Natasha Vita-More**, Humanity+, Inc.

#### **Concurrent Session 4.4: Risk Governance**

*Regulating IOT Nutrition Devices*

**Richard Williams**, Mercatus Center at George Mason University

*Emerging Risk Governance for Solar Radiation Management*

**Tyler Felgenhauer**, Duke University

*Using Humane Cost-Benefit Analysis to Pick Emerging-Technology "Winners"*

**Adam M. Finkel**, University of Michigan School of Public Health

*The Case for Robust Climate Policy*

**Leslie Paul Thiele**, University of Florida

4:45-6:30 *Poster Presentation Reception*

### **Day 3: Friday, May 18**

8:00-8:30 Breakfast

8:30-9:15 Keynote: [topic TBA]

**Beth Simone Noveck**, Governance Lab (GovLab) & Professor in Technology, Culture, and Society at New York University's Tandon School of Engineering

#### **Concurrent Session 5.1: Blockchain and Governance**

*Banking on Blockchain: Distribution, Democratization or Disruption*

**Kristin N. Johnson**, Tulane University Law School

*The Arc of the Moral Universe is Long, but it Bends Towards – the Block Chain or a Wilderness of Mirrors?*

**Greg Garvey**, Quinnipiac University

*Corporate Governance Guideposts for Distributed Ledger Technology*

**Carla L. Reyes**, Stetson University College of Law

*No Gods, No Masters, No Coders? The Future of Sovereignty in a Blockchain World*

**Sarah Manski**, University of California Santa Barbara

#### **Concurrent Session 5.2: The Pacing Problems**

*DELTA: The Law of Technological Change*

**Joshua A.T. Fairfield**, Washington and Lee University School of Law

*The Pacing Problem Revisited: Why do Regulations Lag Behind?*

**Marc Saner**, University of Ottawa

*Liberalism in the Digital Age—How to safeguard democracy in the age of big tech*

**Scott Nuzum**, Van Ness Feldman LLP

*The Responsible Research and Innovation Framework: Changing the Face of Emerging Technology Governance*

**George I. Ogoh**, De Montfort University, Leicester, UK

**Concurrent Session 5.3: Accountability of Autonomous Systems**

*How to Sue a Robot*

**Roger Michalski**, University of Oklahoma College of Law

*Self-Driving Cars and Responsible Innovation*

**Miklos Lukovics**, University of Szeged Hungary

*Compensation at the Crossroads: Autonomous Vehicles and Alternative Victim Compensation Schemes*

**Tracy Pearl**, Texas Tech University School of Law

*Navigating an Uncertain Legal and Regulatory Path Forward for Automated and Connected Vehicles*

**Gregory Rodriguez**, Best Best & Krieger

**Concurrent Session 5.4: International Governance and Data**

*The Openness of the Internet*

**Olli Honkkila**, University of Helsinki

*Cross-Border Growth of Data-Centric Technologies & Intellectual Property Law Responses*

**Tabrez Ebrahim**, California Western School of Law

*The Internet of Doing Things*

**Oyeniji Oluyinka**, FIRST CHRONICLES LP

10:45-11:00 Break

11:00-12:30 **Plenary Session 5: Innovations in Health Technology**

Moderator: **Jason Roberts**, Lincoln Center for Applied Ethics, ASU

**George Poste**, Center for Complex Adaptive Systems, ASU

**Katina Michael**, School of Computing and Information Technology, U. of Wollongong

**Jane Bambauer**, James E. Rogers College of Law, University of Arizona

**Geoff D. Moggridge**, Cambridge University

12:30 Conference Ends