

Governance of Emerging Technologies: Law, Policy and Ethics

May 20-21

Monday, May 20

8:30-8:45 Welcome

8:45-9:15 Opening Keynote Speaker- Andrew Maynard (University of Michigan)
Title TBA

9:15-10:30 Plenary Session 1
Topic: The Challenges and Opportunities in Governance of Emerging Technologies
Session Chair: Gary Marchant
P.1.1: Sally Tinkle (NNI)
Title TBA
P.1.2: Dietram A. Scheufele (University of Wisconsin)
Title TBA
P.1.3: James Hughes (IEET)
Policy Opportunities in the Global Crisis Being Created by AI, Robots, Desktop Manufacturing and BioMedicine

10:30-10:45 Coffee Break

10:45-12:45 Concurrent Session A

A.1. Topic: Military Technologies
Session Chair: Brad Allenby
A.1.a: Brad Allenby (Arizona State University)
Emerging Military and Security Technologies and the Laws of War
A.1.b: Wendell Wallach (Yale University)
Title TBA
A.1.c: Maxwell Mehlman (Case Western University)
Ethical, Legal and Policy Issues in Military Genomics

- A.1.d: Brian Orend (University of Waterloo)
Clearing Up the Fog in the Fifth Dimension: Regulating Cyberwarfare
- A.1.e: Michael Burnham-Fink (Arizona State University)
Guerrilla Science and Blitzkrieg Technology: Military Theories for Governing Emerging Technologies

- A.2. Topic: Public Engagement and Risk Synthetic Biology
Session Co-Chairs: Diana Bowman/Andrew Maynard
- A.2.a: Phil Macnaghten (State University of Campinas, Brazil)
Living the Global Social Experiment: An analysis of Public Discourse on Solar Radiation Management and Its Implications for Governance
- A.2.b: Jennifer Kuzma and Aliya Kuzhabekova (University of Minnesota)
Exploring Genome Editing: Actors, Arenas, and Attitudes towards Governance
- A.2.c: Todd Kuiken and Eleonore Pauwels (Woodrow Wilson International Center for Scholars)
Beyond the Lab and Far Away: Immediate and Future Challenges in Governing the Bio-economy
- A.2.d: Gregory Kaebnick and Michael Gusmano (The Hastings Center)
Challenges for Public Engagement about the Ethics of Synthetic Biology
- A.2.e: Megan Palmer and Drew Endy (Stanford University)
Synthetic Biology Practices at SynBERC
- A.3. Topic: New Tools for Governing Emerging Technologies
Session Chair: TBA
- A.3.a.: Hans Somsen (Tilburg Law School)
In Pursuit of Third Generation Human Rights with Fourth Generation Technologies
- A.3.b: Gaia Bernstein (Seton Hall University)
Patent Law's Neglect of the Extraordinary Role of the Ordinary User in Disseminating Technologies
- A.3.c.: David Bjornstad, Amy Wolfe, Barry Shumpert, Mara Fernanda-Campa
(Oak Ridge National Laboratory)
The Invisible Handoff: Policy Issues along the Research to Deployment Continuum
- A.3.d.: Victoria Sutton (Texas Tech University)

*Methodologies in Regulating Emerging Technologies and a
Proposal for the Future*

A.3.e.: Alan Singer (Appalachian State University)

Convergent Governance Principles & Stakeholder Capitalism

12:45-1:30 Lunch (on own; lunch boxes provided)

1:30-3:10 Plenary Session 2: Responsible Innovation

Session Chair: David Guston

P.2.1: Jack Stilgoe (University College London)

*Governing Intent: Responsible Innovation and the Politics of
Geoengineering*

P.2.2: Keren Asante (University of Exeter Business School)

*Governance of Financial Innovation and Perceptions of Responsibility:
Insights from an Ethnographic Case Study*

P.2.3: Edward Woodhouse (Rensselaer Polytechnic Institute)

Democratic Theory and Epochal Technologies: The Case of 3D Printing

P.2.4: Clare Shelley-Egan (Universiteit Twente) & Douglas Robinson

(TEQNODE Limited, and Université Paris-Est, LATTIS-IFRIS)

*The Collision of Incentive Structures of Actors and Proposed Mechanisms
for Responsible Research and Innovation*

3:10-3:30 Coffee Break

3:30-5:30 Concurrent Session B

B.1. Topic: Smarter Medicine

Session Chair: Gary Marchant

B.1.a: Neil Woodbury (Arizona State University)

*Immunosignaturing: Towards Comprehensive, Consumer-based,
Health Monitoring*

B.1.b: Rebecca Boxhorn and Susan Wolf (University of Minnesota)

*International Governance Approaches to Whole Genome
Sequencing*

B.1.c: Rachel Lindor and Gary Marchant (Arizona State University)

Liability Drivers and Impediments to Individualized Medicine

B.1.d: Tsion Tesfaye (Young Invincibles)

*The Emerging Enterprise of Mobile Health Technology: Ethical
Considerations in the Age of the Smartphone*

B.1.e: Donna Hanrahan (Columbia University)

*The Role of Informal Data Aggregated from Social Media
Platforms in Disease Surveillance and Epidemiological Research*

- B.2. Topic: Nanotechnology
Session Chair:
B.2.a: Rider Foley, Youngjae Kim, Michael Bernstein (Arizona State University)
Ground Control: Linking Top-Down and Bottom-Up Approaches for International Nanotechnology Governance
B.2.b: Youngjae Kim (Arizona State University), Elizabeth A. Corley & Dietram
A. Scheufele
The Role of Social Responsibility in Leading Nano-scientists' Perceptions about Nanotech Research and Regulation
B.2.c: Kiril H Hristovski (Arizona State University)
Towards Regulating Engineered Nanomaterials: A Framework as a Tool for Overcoming the Existing Limitations
B.2.d.: Robin Fretwell Wilson (Washington & Lee University)
Beefing Up FDA Oversight of Nano-Sunscreens and Nano-Cosmetics
B.2.e: Diana Bowman (University of Michigan)
Evidence-based Regulation of Food Nanotechnologies: A Perspective from the European Union and United States
- B.3. Topic: The Digital World
Session Chair: Joshua Abbott
B.3.a: Lauren Solberg (University of Florida)
Complying with Facebook's Terms of Use in Academic Research: A Contractual, Regulatory, and Ethical Perspective on Data Mining
B.3.b: Mailyn Fidler (Stanford University)
Ubiquity, Interrupted? A Comparison of European, Chinese and U.S. Governance of the Internet of Things as an Emerging Technology
B.3.c: Jesse Shedd
Anticipatory Gaming: Governing Emerging Technologies through Digital Media
B.3.d: Joseph Carvalko
Implications of the Proliferation of in-the-body Technologies
B.3.e: Joshua Abbott (Arizona State University)

5:30-6:30 Break

6:30-7:15 Dinner

7:15-8:00 Dinner Speaker: George Church (Harvard University)
Novel Governance & Technology Strategies for BioSafety & Sharing Genomic/Brain Data

8:00-9:00 Plenary Panel 3: Synthetic Biology
P.3.1: Peter Jutro (U.S. Environmental Protection Agency)
Potential EPA Implications for Environmental Release of Synthetic Organisms
P.3.2: Ting Wu (Harvard University)
Engaging the Public Through Personal Genetics
P.3.3. Adam Finkel (University of Pennsylvania)
Designing a “Solution-Focused” Governance Paradigm for Synthetic Biology

Tuesday, May 21

8:30-10:00 Plenary Panel 4: Neuroscience – The Next Big Emerging Technology?
Session Chair: Jennifer Kuzma
P.4.1: Philip Rubin, (White House Office of Science and Technology Policy)
The White House Neuroscience Initiative: Policy as Embodied Action
P.4.2: Adam Kolber (Brooklyn Law School)
The Neurolaw Revolution
P.4.3: Laura Cabrera & Peter Reiner (University of British Columbia)
Public (mis)understanding of Transcranial Direct Current Stimulation as a Cognitive Enhancer
P.4.3: Francis Shen (University of Minnesota)
The Future of Brain-Based Lie and Memory Detection: Beyond the Courtroom

10:00-10:15 Coffee Break

10:15-12:15 Concurrent Session C:

C.1. Topic: New Approaches for Governing Emerging Technologies
C.1.a: Marc Saner (University of Ottawa)
The Case for Adaptation in the Governance of Emerging Technologies
C.1.b.: Yaniv Heled (Georgia State University)
Regulatory Competitive Shelters—An Emerging Mechanism for Encouraging Technological Innovation
C.1.c.: Molly Land (New York Law School)
Coding International Law

- C.1.d: Gary Marchant (Arizona State University) and Wendell Wallach (Yale University)
Governing the Governance of Emerging Technologies
- C.1.e.: Timothy Takahashi (Arizona State University)
Federal Regulation of Robotic Aircraft
- C.2. Topic: Smart Machines
Session Chair: TBA
- C.2.a: David J. Gunkel (Northern Illinois University)
The Machine Question: Can Machines Have Rights?
- C.2.b: Dorothy Glancy (Santa Clara University)
Assuring Privacy and Security in Vehicle-to-Vehicle Safety Communications
- C.2.c.: Kevin LaGrandeur (NYIT & IEET)
The Ethical and Social Ramifications of Rossler's Blueprint for Making Benevolent Robots
- C.2.d: Mark Gubrud (Princeton University)
Compliance Measures for an Autonomous Weapons Convention
- C.2.e: Mark Waser (Digital Wisdom Institute)
The "Bright Green Line" of Responsibility
- C.3. Topic: Life Sciences Innovation
Session Chair: TBA
- C.3.a.: Aaron Levine (Georgia Inst. Of Technology)
Policy Uncertainty, Ethical Controversy and Emerging Technologies: Lessons from the Funding of Stem Cell Science
- C.3.b: Maria Fernanda-Campa, David Bjornstad, Amy Wolfe, Barry Shumpert
(Oak Ridge National Laboratory)
From Lab Bench to Fuel Pump: Policy Implications in the Development of Lignocellulosic Biofuels
- C.3.c: Jordan Paradise (Seton Hall University)
Different Risk, Different Name?: The Debate over Assignment of Nonproprietary Names for Biosimilar Biologics
- C.3.d: Jonathan Kahn (Hamline University)
Privatizing Biomedical Citizenship
- C.3.e: Elizabeth Beryt and Tim Malloy (UCLA)
Leveraging the New Predictive Toxicology Paradigm in Evaluating Emerging Technology

12:15-12:45 Lunch

12:45-1:30 Luncheon Speaker – George Poste (Arizona State University)

1:30-2:00 Informal discussion on conference follow-up