DAVID THAW

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CURRENT ACADEMIC APPOINTMENTS

University of Pittsburgh, Associate Professor (2019 – Present)
- **Associate Research Professor of Law**
- **Assistant Research Professor of Computing & Information**

University of Pittsburgh, Assistant Professor (2014 – 2019)

Yale Law School, Affiliated Fellow, Information Society Project (2010 – Present)

University of Nebraska, Visiting Faculty Fellow, Nebraska Governance and Technology Center (2020-2021)

Education Summary:
Ph.D., UC Berkeley, Info. Mgm't & Systems (2011); **J.D.**, Berkeley Law (2008); **M.A.**, UC Berkeley, Political Science (2004); **B.S.**, University of Maryland, Computer Science (2003); **B.A.**, University of Maryland, Gov't & Politics (2003).

(previous full-time and visiting appointments, courses taught, and education detail appear on final page)

PUBLICATIONS

- *From Russia With Love*, 59 HOUS. L. REV. (forthcoming 2022), https://ssrn.com/abstract=3038308.

- *Enhancing Cyber Operations via Artificial Intelligence: Risks, Rewards, and Frameworks*, 2021 IEEE COMPUTER (forthcoming) (with Joshua A. Kroll and James Bret Michael).

- *Bot Contracts*, 62 ARIZ. L. REV. 877 (2020) (with Deborah R. Gerhardt), http://ssrn.com/abstract=3533517.

- *Rebooting Congressional Cybersecurity Oversight*, Center for a New American Security: Paper Series on Congressional Oversight (2020), https://www.cnas.org/publications/reports/rebooting-congressional-cybersecurity-oversight (with Carrie Cordero).

- *Administrative Truth: Comments on Cortez's* Information Mischief, 94 CHI.-KENT L. REV. 607 (2019), https://ssrn.com/abstract=3389560.

- *Using Camouflaged Cyber Simulations as a Model to Ensure Validity in Cybersecurity Experimentation*, HICCS 51 Symposia on Cybersecurity Big Data Analytics, Jan. 3-6, 2018 (Big Island, HI) (also accepted for publication in SECURITY INFORMATICS, *Special Issue on Cybersecurity* (forthcoming)) https://arxiv.org/abs/1905.07059 (with Carrie Gardner, Abby Waliga, and Sarah Churchman).

  - **Invited Briefings, United States Department of Defense:**
    - *June 2016* – Assistant Secretary of Defense for Homeland Defense and Global Security
    - *January 2016* – Principal Deputy Director, Cost Assessment and Program Evaluation
    - *September 2017* – Commanding General, U.S. Army NETCOM and Deputy Commander, U.S. Army Cyber

- *Chameleon: Effective Honeynet Operation*, Women in Cybersecurity, Mar. 31, 2017 (Tuscon, AZ) (with Carrie Gardner, Sarah Churchman, M. Shannon Bradley, and Adeline Giritharan).

- *Ancient Worries and Modern Fears: Different Roots and Common Effects of U.S. and EU Privacy Regulation*, 49 CONN. L. REV. 1621 (2017) (with Pierluigi Perri), http://ssrn.com/abstract=2596382.

- *Cybersecurity Stovepiping*, 96 NEB. L. REV. 339 (2017), http://ssrn.com/abstract=2572012.

  o **Invited Allied Governmental Briefings**: Republic of Korea – National Assembly Legislation Research Institute (July 2015); Republic of Poland – Office of Electronic Administration (Apr. 2015)

- *Data Breach (Regulatory) Effects*, 2015 CARDOZO L. REV. DE NOVO 151, http://ssrn.com/abstract=2595297.

- *Reasonable Expectations of Privacy Settings: Contemplating the Stored Communications Act Through the Prism of Social Media*, 13 DUKE L. & TECH. REV. 36 (2015) (with Christopher J. Borchert and Fernando Pinguelo) http://ssrn.com/abstract=2306839.

- *Surveillance at the Source*, 103 KY. L. J. 405 (2015), http://ssrn.com/abstract=2512121.

- *Enlightened Regulatory Capture,* 89 WASH. L. REV. 329 (2014), http://ssrn.com/abstract=2298205.

- *The Efficacy of Cybersecurity Regulation*, 30 GA. ST. U. L. REV. 287 (2014), http://ssrn.com/abstract=2241838.

  o **Invited U.S. Congressional Testimony**: *Reporting Data Breaches: Is Federal Legislation Needed to Protect Consumers?*, Hearing Before the House Energy & Commerce Comm., Subcomm. on Commerce, Mfg., & Trade, 113th Cong. (July 18, 2013)

- *Criminalizing Hacking, Not Dating: Reconstructing the CFAA Intent Requirement*, 103 J. OF CRIM. L. & CRIMINOLOGY 907 (2013), http://ssrn.com/abstract=2226176.

- *When Machines Are Watching: How Warrantless Use of GPS Surveillance Technology Violates the Fourth Amendment Right Against Unreasonable Searches*, 121 YALE L.J. ONLINE 177 (2011) (with Priscilla J. Smith, Nabiha Syed and Albert Wong), http://ssrn.com/abstract=1942559.

- *Characterizing, Classifying, and Understanding Information Security Laws and Regulations: Considerations for Policymakers and Organizations Protecting Sensitive Information Assets* (May 12, 2011) (Ph.D. dissertation, University of California, Berkeley (on file with the University of California)), http://www.davidthaw.com/papers/DavidThawDissertationFinal.pdf.

- *Proposal for a "Down-the-Chain" Notification Requirement in Online Behavioral Advertising Research and Development* (W3C Workshop on Web Tracking and User Privacy Working Paper, Apr. 28, 2011), http://www.w3.org/2011/track-privacy/papers/ThawGuptaAgrawala.pdf (with Neha Gupta and Ashok Agrawala).

- *CoPE: Democratic CSCW in Support of e-Learning*, *in* INTELLIGENT COLLABORATIVE E-LEARNING SYSTEMS AND APPLICATIONS (T. Daradoumis, S. Caballe, J. M. Marques and F. Xhafa eds., 2010) (with Jerome Feldman).

- David Thaw, Jerome Feldman and Joseph Li, *CoPE: Democratic CSCW in Support of e-Learning*, 2008 IEEE COMPUTER SOC'Y: PROCEEDINGS OF THE INT'L WORKSHOP ON COLLABORATIVE E-LEARNING SYS. & APPLICATIONS 481 (with Jerome Feldman and Joseph Li).

- *Supporting Communities of Learning Practice by the Effective Embedding of Information and Knowledge into Group Activity*, 2008 COMPUTER SOC'Y: PROCEEDINGS OF THE INT'L WORKSHOP ON COLLABORATIVE E-LEARNING SYS. & APPLICATIONS 493. (with Sante Caballé and Jerome Feldman).

- *Stopping Spyware at the Gate: A User Study of Privacy, Notice and Spyware*, *in* SPYWARE: AN INSIGHT (Ravi Kumar, ed. 2007) (reprint of earlier conference paper) (with Nathaniel Good, Rachna Dhamija, Jens Grossklags, Steven Aronowitz, Deirdre Mulligan, and Joseph Konstan).

- *Communities of Practice Environment*, *in* THE INTERNET AND SOCIETY (Morgan, Bebbia and Spector eds., 2006) (with Jerome Feldman and Daniel Lee).

- *Stopping Spyware at the Gate: A User Study of Privacy, Notice and Spyware* 2005 ASS'N OF COMPUTING MACHINERY: PROCEEDINGS OF THE SYMPOSIUM ON USABLE PRIVACY AND SECURITY 43 (with Nathan Good, Rachna Dhamija, Jens Grossklags, Steven Aronowitz, Deirdre Mulligan, and Joseph Konstan).

- *User Choices and Regret: Understanding Users' Decision Process About Consensually Acquired Spyware*, 2 I/S: J. L. & POL. INFO. SOC'Y 283 (2006) (with Nathaniel Good, Jens Grossklags, Aaron Perzanowski, Deirdre Mulligan and Joseph Konstan), http://ssrn.com/abstract=2262437.

BOOKS

- CYBERSECURITY: AN INTERDISCIPLINARY PROBLEM (interdisciplinary instructional and reference text covering topics in cybersecurity, cybercrime, cyber conflict, and associated regulatory topics for lawyers, scientists, engineers, policymakers, and business leaders) (with Gus Hurwitz, Charlotte Tschider, and Derek Bambauer) (WEST ACADEMIC PUBLISHING, 2021).

RESEARCH WORK-IN-PROGRESS

- *Disambiguating "Cyber"* (arguing for an organized understanding of the often-conflated terms "privacy," "data protection," "cybersecurity," "cybercrime," "cyber warfare," and related terms through the axes of (1) normative versus objective evaluation; and (2) the distinctions among private, public, criminal, and international law) (working paper).

- *Artificial Intelligence Security and Safety Terminology: Characterizing the AI Assurance Space* (defining the problem space of "Artificial Intelligence Security", disentangling this term which actually refers to three separate, discrete problems with different regulatory goals, characterizing the dangers of conflating those problems and presenting a framework for policy responses to address AI and security) (with Carrie Gardner) (working paper).

- *Chameleon Cyber Threat Intelligence Gathering System*, *Cyber Research Environment Network (CyREN) Laboratory, University of Pittsburgh School of Computing and Information* – cybersecurity research project developing a method and system to collect current and prospective cyber threat intelligence data

  o *Simulation-Based Cyber Data Collection Efficacy* (empirical examination of the ability to attract representative attacks to cyber simulations and apply that data to evaluate cybersecurity recommendations) (under revision) https://arxiv.org/abs/1905.09336.

  o *Contextualizing Honeypot Technologies: Measuring Data Collection and Deception Capabilities* (systematic review of existing honeypot/honeynet technologies, evaluating those technologies along multiple axes pertaining their data collection, camouflage, interaction, and deception capabilities, to create a analytic framework for evaluating the empirical validity of data collected from cybersecurity simulations) (working paper).

      o *Election Hacking: Proof-of-Concept Model for Studying Adversary Behavior in Election Meddling* (reporting the results of a preliminary study of foreign-based election hacking and influence operations with a focus on capturing the tactics/techniques/procedures (TTPs) of foreign adversaries, utilizing simulations deployed by the CyREN laboratory during the 2018 U.S. federal election cycle) (working paper).

- *Mask or Respirator Examination* (tentative title) (empirical examination of the comparative efficacy at preventing exposure to the SARS-CoV-2 pathogen between FFP2/N95-density filtering facepiece respirators (FFRs) and surgical/procedure masks using a randomized controlled clinical trial among subjects in an urban setting based on serology surveillance) (pending IRB approval) (with Bernard Black, Jeffrey Whittle, John Meurer, Vladimir Atanasov, et al.).

SELECTED RESEARCH FUNDING AWARDS

- *General Purpose Blockchain*, Obnostic, LLC, 3KBICAS, Co., Ltd. and University of Pittsburgh (Principal Investigator) (multi-source faculty teaching buy-out/funded multi-year research leave) (Principal Investigator) (2019 – present)

- *Chameleon Project, CyREN Laboratory*, University of Pittsburgh School of Computing and Information (Principal Investigator)
  - School of Computer and Information, Dean's Startup Funding ($10,000) (2015 – 2016)
  - Office of the Senior Vice Chancellor for Research, Directed Research Funding ($150,000) (2016 – 2018)

- *Security-Assisted Data Science Workforce Development in Pennsylvania*, University of Pittsburgh School of Computing and Information (Senior Personnel), National Science Foundation ($476,903) (2017 – 2020)

- *Ancient Worries and Modern Fears: Different Roots and Common Effects of U.S. and EU Privacy Regulation*, (Principal Investigator) University of Pittsburgh European Studies Center, Jean Monet EU Center of Excellence Faculty Research Grant ($2,929.68) (2016)

SELECTED PEER REVIEW, PROFESSIONAL SERVICE, AND EDITORIAL ACTIVITIES

- Reporter, Uniform Law Commission, Study Committee on Cybercrime (2020-2021)
- Peer Referee, OXFORD UNIVERSITY PRESS
- Peer Referee, CAMBRIDGE UNIVERSITY PRESS
- Peer Referee, *IEEE Security & Privacy*
- Peer Referee, *Journal of Cybersecurity*
- Peer Referee, *Journal of Philosophy, Science, and Law*
- Peer Referee, *Journal of the Association for Information Science and Technology*
- Peer Referee, *Journal of Internet Services and Applications*
- Peer Referee, *Yale Law Journal*
- Peer Referee, Social Sciences and Humanities Research Council of Canada – Law Committee
- Advisory Board Member, *SSRN Cybersecurity, Data Privacy & eDiscovery Law & Policy eJournal*

OTHER PROFESSIONAL EXPERIENCE

Obnostic LLC, Dallas, TX and Seoul, KR
Co-founder and Chief Scientist, December 2019 – Present
Acting General Counsel, July 2020 – Present
Co-founder of a technology start-up developing a distributed computation, data analysis, and digital object management application ("app") platform based on extending the theory of blockchain to coordinating more complex computational problems. Also temporarily performing the duties of the General Counsel.

ELPIS, the Center for IoT Security, Washington, DC
Founding Advisor, January 2018 – Present
Founding Advisory Board Member of a cybersecurity coordination non-profit organization.

3KBICAS, Co., Ltd. and 3KSoft, Inc., Seoul, KR and Redwood City, CA
Advisor, April 2018 – December 2019
Member of corporate advisory board for an international blockchain and data integration company.

PAX Datatech (Color Platform), Seoul, KR and Singapore
Advisor, January 2018 – March 2019
Member of corporate advisory board for an international company developing a blockchain dApp platform.

AlphaTrek, Inc., College Park, MD
Special Counsel, October 2012 – October 2016
(Non-employee) role functionally providing the services of a general counsel to location-based security services startup.

YellowHat Laboratories, Inc., College Park, MD, Washington, DC and Honolulu, HI
Chief Scientist and Special Counsel, July 2012 – July 2014
Executive Vice-President and Chief Technology Officer, July 2011 – June 2012
Part of core management team for a cybersecurity startup. Responsible for overseeing all technical development.

Hogan Lovells US LLP (formerly Hogan & Hartson LLP), Washington, DC
Attorney, *Privacy and Information Management Practice*, January 2010 – December 2010
Advised clients on privacy and cybersecurity issues, including comprehensive assessments of organizations' privacy and data security practices, drafting privacy policies and security plans, and providing privacy/security regulatory compliance advice.

International Computer Science Institute, Berkeley, CA
Graduate Student Researcher, July 2003 – May 2008
Conducted research to develop a web-based content management and collaboration system for non-technical users.

Dewey & LeBoeuf LLP (formerly LeBoeuf, Lamb, Greene & MacRae LLP), New York, NY
Summer Associate, Summer 2007

United States District Court for the Southern District of New York, New York, NY
Law Intern to the Honorable Victor Marrero (U.S. District Judge), Summer 2006

Samuelson Law, Technology, and Public Policy Clinic, Berkeley, CA
Legal Intern/Technology Researcher, December 2004 – May 2008

Carvel Corporation, Farmington, CT
Webmaster, December 1998 – May 2004
Responsible for establishing, managing, and scaling up all aspects of the company's first public Internet presence.

Beacon Corporation, College Park, MD
Director, Beacon Project and Laboratory, December 1998 – June 2001
One of three founders of a research project to develop a marketable wireless emergency location device for college campuses. Developed one of the earliest prototypes of context-aware mobile computing (smartphone technology).

United Technologies Corporation, Farmington, CT/Hartford, CT
Information Technology Intern, Summer 2000, Summer 2001, Summer 2002

SELECTED LEGAL BRIEFS AND PROFESSIONAL SERVICE

- Reporter, Uniform Law Commission Study Committee on Cybercrime (2020-2021).

- Julie Cohen, Chris Hoofnagle, William McGeveran, Paul Ohm, Joel Reidenberg, Neil Richards, and David Thaw, *Information Privacy Scholars' Brief in* Spokeo, Inc. v. Robins, 136 S.Ct. 1540, Sept. 6, 2015 (Supreme Court of the United States), http://ssrn.com/abstract=2656482.

- Priscilla J. Smith, Nabiha Syed, David Thaw and Albert Wong, *Brief of Yale Law School Information Society Project Scholars and Other Experts in the Law of Privacy and Technology in* United States v. Jones, 565 U.S. 400 (2012) (Supreme Court of the United States).

- Priscilla J. Smith, Nabiha Syed, David Thaw and Albert Wong, *Information Society Project at Yale Law School Fellows' Brief in Support of Certiorari to the United States Supreme Court in* United States v. Pineda-Moreno, No. 08-30385, Dec. 17, 2010 (Supreme Court of the United States).

CONFERENCE, KEYNOTE, AND OTHER INVITED PRESENTATIONS

- *Data Privacy and Security in Healthcare*, Presentation to the Beazley Institute for Health Law and Policy and the National Security Law Association, Loyola University (Chicago) School of Law, Chicago, IL (remote), Feb. 5, 2021.

- *Security or Privacy: Can You Have Both?*, IEEE Virtual Roundtable (hosted by James Bret Michael, Richard Kuhn, and Jeffrey Voss), 53 IEEE COMPUTER 20-30, Sept. 2020.

- *Bot Contracts*, KCon XV, University of the Pacific McGeorge School of Law, Sacramento, CA, Feb. 22, 2020.

- *From Russia With Love*, Cyber Lecture Series Keynote Address, Faculty of Law and Canadian Institute for Cyber Security, University of New Brunswick, Jan. 23, 2020.

- *Law Enforcement and Privacy in Cyberspace* and *AI, Quantum Computing, and Global Cybersecurity*, Guest Lectures at the Air Force Judge Advocate General's School's Cyber Law Symposium, Maxwell AFB, AL (Nov. 7, 2019)

- *From Russia With Love*, Guest Lecture on Computer Security, University of Notre Dame Department of Computer Science, Apr. 18, 2019.

- *From Russia With Love*, Lecture Series on Cyber Conflict and Geopolitics (Keynote Address), University of North Carolina School of Media and Journalism, Apr. 2, 2019.

- *From Russia With Love*, Workshop on the Regulation of Artificial Intelligence, University of Surrey, Guildford, United Kingdom, Mar. 21-22, 2019.

- *Balancing Innovation and Consumer Protection*, Michigan Technology Law Review Symposium on Data Privacy and Portability in Financial Technology, Ann Arbor, MI, Feb. 23, 2019.

- *Bot Contracts*, North Carolina Journal of Law and Technology Symposium on Blockchain and the Law, Chapel Hill, NC, Feb. 22, 2019.

- *From Russia With Love*, Faculty Workshop Series, University of North Carolina School of Law, Chapel Hill, NC, Feb. 7, 2019.

- *The U.S. Approach to Consumer Data Security*, Hearings on Competition and Consumer Protection in the 21st Century, invited commentary before the United States Federal Trade Commission, Washington, DC, Dec. 11-12, 2018.

- *Information Mischief Under the Trump Administration*, Symposium on The Trump Administration and Administrative Law, Chicago-Kent School of Law, Chicago, IL, Nov. 29-30, 2018.

- *Transforming a Digital Generation: How the Economic and Legal Implications of Blockchain Will Reshape Society* (Keynote Address), Symposium of Blockchain and Trusted Repositories, University of North Carolina, Chapel Hill, NC, Nov. 5, 2018.

- *Transforming a Digital Generation: How the Economic and Legal Implications of Blockchain Will Reshape Society* (Keynote Address), AI & Blockchain: International Symposium on the 4th Industrial Revolution, Seoul National University, Pangyo, KR, Nov. 1, 2018.

- *Hacking Democracy*, Second Annual Northwestern-Penn-Stanford Junior Faculty Forum for Law and STEM, Northwestern University's Pritzker School of Law, Chicago, IL, Sept. 28-29, 2018.

- *Developments in Cyber Law and Regulations*, Seton Hall University Law School Computer Crime Symposium, Princeton, NJ, June 18, 2018.

- *Managing Electoral Cyber Risk*, Privacy Law Scholars Conference, George Washington University Law School, May 30 – 31, 2018.

- *Defining AI Security: An Exposé of the Ambiguous Terminology and the Problem Space*, The Regulation of AI, University of Surrey, United Kingdom, Mar. 7-8, 2018.

- *Blockchain 3.0 and the Future of Ownership*, Blockchain 3.0 Conference, Seoul, KR, Feb. 8, 2018.

- *The CFAA at 30: Problems and Policies*, Journal of Science & Technology Symposium on Cyberlaw, Boston University School of Law, Feb. 2, 2018.

- *Managing Electoral Cyber Risk*, Penn State Law Junior Faculty Exchange, State College, PA, Nov. 9, 2017.

- *Managing Electoral Cyber Risk*, Faculty Workshop Series, Drexel Kline School of Law, Philadelphia, PA, Nov. 7, 2017.

- *The Internet of Things and Cybersecurity*, Cybersecurity and the Law Conference, Albany Law School, Albany, NY, Oct. 19-20, 2017.

- *Fake Identity, Fake News: The Changing Nature of the Cyber Security Threat*, Blouin Creative Leadership Summit, New York, NY, Sept. 18, 2017.

- *Limitations on Cyber Operations and Issues of Sovereignty in Cyberspace*, Advanced Operational Law Conference, United States Strategic Command, Offutt AFB, NE, Sept. 7-8, 2017.

- *Data Privacy Speaker Series*, University of Arizona School of Law, Apr. 20, 2017.

- *State, Local, and Regional Issues in Cybersecurity*, University of Nebraska College of Law, Mar. 17, 2017.

- *AI and Machine Learning for Cybersecurity and Fraud Detection*, Center on Law and Information Policy Conference on Artificial Intelligence, Machine Learning, and Law, Fordham Law School, Feb. 28, 2017.

- *Notre Dame Conference on Data Security*, Notre Dame University Law School, Feb. 24, 2017.

- *Disambiguating Cyber*, Nebro(hi)oklyn 2016/2017 Workshop for Junior Faculty in Law and Technology, The Ohio State University Moritz College of Law, Feb. 3, 2017.

- *Privacy, Security, and Power: The State of Digital Surveillance*, University of Connecticut School of Law, Hartford, CT, Jan. 27, 2017.

- *Redefining Cybersecurity Policy: An Interdisciplinary Approach to Addressing Systemic Failures*, Graduate School of Public Administration, Seoul National University, Dec. 19, 2016.

- *Redefining Cybersecurity Policy: An Interdisciplinary Approach to Addressing Systemic Failures*, School of Information and Library Sciences, University of North Carolina, Nov. 4, 2016.

- *Roundtable on the Application of International Law to Cyber Conflict* and discussion of Scott Shackelford's *iGovernance: the Future of Multi-Stakeholder Governance in the Wake of the Apple Encryption Saga*, *N.C. J. of Int'l Law* Symposium on Cyberwarfare and International Law, School of Law, University of North Carolina, Nov. 4, 2016.

- *Transatlantic Perspectives of Privacy and Cybersecurity: A Proposal*, Information Society Project Speaker Series, Yale Law School, Oct. 25, 2016 (with Pierluigi Perri).

- *Interdisciplinary Issues in Information Security*, Guest Lecture in CMSC417 (Computer Networks), Dep't of Computer Science, University of Maryland, College Park, MD, Oct. 14, 2016.

- *Cyber Hygiene: The Importance of Recognizing Social Engineering Attacks*, NATO Allied Command Transformation Cybersecurity Awareness Month, NATO ACT Norfolk, VA, Oct. 12, 2016.

- *Cyber Deterrence, Denying Benefit: Whole of Nation Responses*, USCYBERCOM Legal 2016: Cyber National Security – the Law of Cyberspace Confrontation, United States Cyber Command, U.S. Dep't of Defense, Oct. 3-4, 2016.

- *Leveraged Whack-a-Mole: the Need for Interdisciplinary and Cross-Departmental Approaches to Cyber Defense*, TPRC: 44th Research Conference on Communications, Information, and Internet Policy, George Mason University, Sept. 30-Oct. 1, 2016.

- *Does Cybersecurity Need More Law?*, IEEE Intelligence and Security Informatics 2016, University of Arizona, Sept. 28-30, 2016 (with Derek Bambauer).

- *Cyber Capabilities and the Rules of War*, Blouin Creative Leadership Summit, New York, NY, Sept. 19-20, 2016.

- *Chameleon Cyber Threat Intelligence Gathering System*, Briefing to the Commanding General, U.S. Army Network and Enterprise Technology Command, U.S. Dep't of Defense (hosted on campus in Pittsburgh, PA), Sept. 15, 2016.

- *Redefining Cybersecurity*, CyberWeek 2016, Tel Aviv University/Prime Minister's Office National Cyber Bureau, Tel Aviv, Israel, June 19, 2016.

- *Cyber Threat Intelligence Gathering and the Role of the Department of Defense in Modern Cyber Defense*, Briefing to the Commanding General, U.S. Army 7th Signal Command (Theater), U.S. Dep't of Defense, Norfolk, VA, June 8, 2016.

- *Redefining Cybersecurity*, Privacy Law Scholars Conference, George Washington University Law School, June 3, 2016.

- *Chameleon Cyber Threat Intelligence Gathering System*, Briefing to the Assistant Secretary of Defense for Homeland Defense and Global Security, U.S. Dep't of Defense, Arlington, VA, May 23, 2016.

- *Redefining Cybersecurity*, Midwestern Privacy Law Scholars Conference, Ohio State University Moritz College of Law, May 16, 2016.

- *Virtual Briefing on the US-EU Privacy Shield*, University of Pittsburgh European Studies Center, Apr. 12, 2016.

- *Data Breach (Regulatory) Effects*, The States of Security: Data Security Regulation at the State Level – Standards Setting, Benjamin J. Cardozo School of Law, Yeshiva University, Apr. 1, 2016.

- *Redefining Cybersecurity*, "NeBrooklyn" 2016 Workshop for Junior Faculty in Law and Technology, University of Nebraska College of Law, Mar. 25, 2016.

- *Redefining Cybersecurity*, Lastowka Cyberlaw Colloquim, University of Pittsburgh, Pittsburgh, PA, Feb. 5-6, 2016.

- *Cyburgh: Process/Evolution of Security Program Capability Improvement*, CERT/SEI/Carnegie Mellon University, Pittsburgh, PA, Feb. 1, 2016.

- *Chameleon Cyber Threat Intelligence Gathering System*, Briefing to the Principal Deputy Director, Cost Assessment and Program Evaluation, U.S. Dep't of Defense (hosted on campus in Pittsburgh, PA), Jan. 19, 2016.

- *Internet and Computer Law – Once More Unto the Breach: The Law & Policy of Data Breaches*, Annual Meeting of the American Association of Law Schools, New York, NY, Jan. 9, 2016.

- *Catalyzing Privacy By Design: Lessons from Other Areas – Security and Environmental*, Georgetown University Law Center, Washington, DC, Jan. 7, 2016.

- *Redefining Cybersecurity: Risk Management for Global Issues in Cybersecurity*, Hallym University of Graduate Studies, Seoul, Korea, Dec. 22, 2015.

- *Security, Psychology, and the Smart City*, Exposed: Privacy, Security, and the Smart City, Illinois Institute of Technology Chicago-Kent College of Law, Chicago, IL, Nov. 6, 2015.

- *Ancient Worries and Modern Fears*, Yale Law School Conference on Federalism(s) and Fundamental Rights – Europe and the United States Compared, New Haven, CT, Oct. 29-31, 2015.

- *Redefining Cybersecurity*, Invited Presentation at the University of Nebraska 8th Annual Space, Cyber, and Telecommunications Conference, Washington, DC, Oct. 29-30, 2015.

- *Cybersecurity Stovepiping*, Amsterdam Privacy Conference, Amsterdam, Netherlands, Oct. 23-26, 2015.

- *Cybersecurity Stovepiping*, Carnegie Mellon University School of Computer Science, CyLab Usable Privacy and Security Laboratory Seminar Series, Pittsburgh, PA, Oct. 8, 2015.

- *Cyber Security: Public/Private Cooperation, Legal Reforms, Social Norms, and Critical Infrastructure*, Blouin Creative Leadership Summit, New York, NY, Sept. 21-22, 2015.

- *Cybersecurity and Privacy in the US and the EU*, Global Legal Developments on the 20th Anniversary of the University of Pittsburgh Center for International Legal Education, Pittsburgh, PA, Sept. 11, 2015.

- *Cybersecurity Stovepiping,* Invited Presentation to the Korea Legislation Research Institute, Sejong City, Korea, July 3, 2015.

- *Cybersecurity Stovepiping*, Privacy Law Scholars Conference, University of California, Berkeley, School of Law, June 4-5, 2015.

- *Cybersecurity Stovepiping*, Third Annual Works-in-Progress Roundtable on Law and Computer Science, University of Pennsylvania School of Law, May 12-13, 2015.

- *Cybersecurity Stovepiping*, European Union Workshop on e-Administration, Torun, Poland, Apr. 29, 2015.

- *What if Everything Reveals Everything?*, (discussing Prof. Scott Peppet's upcoming book chapter) Information Law Faculty Workshop, Fordham Law School, Apr. 17, 2015.

- *Cybersecurity Workshop*, NSF/Berkeley Center for Law and Technology Working Group on Cybersecurity Law Reform, University of California, Berkeley, School of Law, Apr. 9-10, 2015.

- *Cyber Security*, Canada-U.S. Law Institute Conference on "The Digital Border," Case Western Reserve University School of Law, Mar. 19-20, 2015.

- *Cybersecurity Stovepiping*, Technology, Innovation, and Intellectual Property Workshop, University of Connecticut School of Law, Mar. 4, 2015.

- *Ancient Worries and Modern Fears*, Computers, Privacy, and Data Protection Conference 2015 (Sponsored by the Information Society Project at Yale Law School), Brussels, Belguim, Jan. 21-23, 2015.

- *Cybersecurity Stovepiping*, "NeBrooklyn" 2014 Workshop for Junior Faculty in Law and Technology, Brooklyn Law School, Dec. 4-5, 2014.

- *Cybersecurity Laws and Regulations in the Standard-Setting Context*, NIST Workshop on Standards Challenges and Cybersecurity: Implications for Distributed Systems and User Privacy, University of Pittsburgh School of Information Sciences, Nov. 20 – 21, 2014.

- *Cybersecurity Laws and Regulations: From Best Practices to Actual Requirements*, University of Pittsburgh School of Law "Lunch & Learn" Speaker Series, University of Pittsburgh, Nov. 13, 2014.

- *Surveillance at the Source*, Midwestern Privacy Law Scholars Conference, Notre Dame Law School, Oct. 23-24, 2014.

- *Surveillance at the Source*, Kentucky Law Journal Symposium on Data Privacy, University of Kentucky College of Law, Oct. 9-10, 2014.

- *Cyber security*, Blouin Creative Leadership Summit, New York, NY, Sept. 24, 2014.

- *Ancient Worries and Modern Fears*, Privacy Law Scholars Conference, George Washington University Law School, June 6, 2014.

- *Military Cyberspace Operations*, Next Generation of NATO Cyber Defense: Second Workshop for Academic Experts, Roundtable Briefing to the NATO Allied Command Transformation Cyber Defence Capability Group, Spain, Mar. 30-Apr. 4, 2014.

- *Regulating Big Data in Urban Governance*, Smart Law for Smarter Cities: Regulation, Technology, and the Future of Cities, Fordham University School of Law, Feb. 27-28, 2014.

- *Engaging Private Expertise in Regulating Information Security*, 30th Annual Information Technology Conference, Jon. M. Huntsman School of Business, Utah State University, Feb. 25, 2014.

- *Military Cyberspace Operations*, Next Generation of NATO Cyber Defense: Workshop for Academic Experts, Roundtable Briefing to the NATO Allied Command Transformation Cyber Defence Capability Group, National Defense University, Washington, DC, Nov. 20, 2013.

- *Military Cyberspace Operations*, Briefing to the Office of the Deputy Assistant Secretary of Defense for Cyberspace Policy Operations, U.S. Dep't of Defense, Arlington, VA, Nov. 7, 2013.

- *The Efficacy of Cybersecurity Regulation: Examining the Impact of Law on Security Practices*, LISA '13: 27th Large Installation System Administration Conference, USENIX: The Advanced Computing Association, Washington, DC, Nov. 7, 2013.

- *Military Cyberspace Operations*, International Roundtable on Internet Governance & Cyber Conflicts: Models, Regulations, & Confidence Building Measures, SUNY Albany/Moscow State University, New York, NY, Oct. 31-Nov. 1, 2013.

- *Domestic Law, Policy, and Regulation: Intellectual Property and Torts – Cybercrime Reform Proposals*, Cyber Threats & Cyber Realities Conference, Roger Williams University Law School, June 17, 2013.

- *Criminalizing Hacking, Not Dating: Reconstructing the CFAA Intent Requirement*, Privacy Law Scholars Conference, University of California, Berkeley, School of Law, June 6, 2013.

- *The Computer Fraud and Abuse Act: The Statute That Took Over the Internet, And Why You Should Care*, Yale Law School, Apr. 8, 2013.

- *Criminalizing Hacking, Not Dating: Reconstructing the CFAA Intent Requirement*, Symposium on Cybercrime, Northwestern University Law School, Feb. 1, 2013.

- *The Efficacy of Cybersecurity Regulation*, Cyberscholars Workshop: Remixing Research, Harvard Law School, Dec. 6, 2012.

- *The Efficacy of Cybersecurity Regulation*, Dep't of Computer Science Faculty Colloquium, Worcester Polytechnic Institute, Nov. 30, 2012.

- *Comparing Management-Based Regulation and Prescriptive Legislation: How to Improve Information Security Through Regulation*, Privacy Law Scholars Conference, George Washington University Law School, June 7, 2012.

- *Overview of Cybersecurity Laws, Regulations, and Policies: From "Best Practices" to Actual Requirements*, University of Maryland Cybersecurity Center Annual Symposium, University of Maryland, College Park, May 16, 2012.

- *Comparing Management-Based Regulation and Prescriptive Legislation: How to Improve Information Security Through Regulation*, Cyberscholars Workshop, Columbia University, Mar. 27, 2012.

- *The Relationship Between Regulatory Models and Information Security Practices*, Privacy Law Scholars Conference, George Washington University Law School, June 3, 2010.

EDUCATION

Ph.D. Information Management and Systems, May 2011 – **University of California, Berkeley**
Dissertation: *Characterizing, Classifying, and Understanding Information Security Laws and Regulations: Considerations for Policymakers and Organizations Protecting Sensitive Information Assets*
Advisors: Deirdre K. Mulligan, Pamela Samuelson, Todd LaPorte

J.D. Berkeley Law, May 2008 – **University of California, Berkeley**

M.A. Political Science, May 2004 – **University of California, Berkeley**

B.A. Government and Politics with High Honors, May 2003 – **University of Maryland, College Park**

B.S. Computer Science with Honors, May 2003 – **University of Maryland, College Park**

COURSES TAUGHT
(by sponsoring College; cross-listed/interdisciplinary courses marked with *)

Computing & Information Science
- Cybersecurity*
- Cybercrime*
- Cybersecurity Research Laboratory (CyREN)
- Exploring Cybersecurity Law*

Law/Public Policy
- Administrative Law
- Cybersecurity Law*
- Cybersecurity and Privacy Regulation*
- Cybercrime*
- Cybersecurity and the Law (undergraduate/college-in-high school)
- Seminar Series in Cyberlaw*
- Criminal Law
- Criminal Procedure
- Business Organizations
- Constitutional Law
- Civil Procedure

VISITING AND PREVIOUS FULL-TIME ACADEMIC APPOINTMENTS

Visiting Professor/Visiting Lecturer, Department of American Law – **Hallym University of Graduate Studies**/University of Connecticut Joint Program in American Law (Seoul, Korea) (Summer 2014, Winter 2014-2015, Summer 2015, Winter 2015-2016, Winter 2016-2017, Winter 2017-2018, Winter 2018-2019, Winter 2020-2021)

Adjunct Associate Professor, School of Law – **University of North Carolina** (Spring 2020)

Visiting Professor, Department of Law "Cesare Beccaria," **Università degli Studi di Milano** (Summer 2016)

Visiting Assistant Professor, School of Law – **University of Connecticut** (2012 – 2014)

Research Associate, Department of Computer Science – **University of Maryland** (2011 – 2012)

Visiting Postdoctoral Fellow, Information Society Project – **Yale Law School** (2008 – 2010)

BAR ADMISSIONS

Connecticut, District of Columbia, Texas, New York, United States Supreme Court

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