

MARC CANELLAS, J.D., Ph.D.

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PROFESSIONAL EXPERIENCE	Office of the Public Defender for Arlington County, Virginia <i>Assistant Public Defender</i>	2021–2023
	U.S. Representative Derek Kilmer (D, WA-6) <i>IEEE-USA/AAAS Congressional Science and Technology Fellow</i>	2017–2018
	Georgia Institute of Technology, School of Aerospace Engineering <i>Postdoctoral Research Fellow, Cognitive Engineering Center</i> <i>Graduate Research Assistant, Cognitive Engineering Center</i>	2017 2012–2017
EDUCATION	J.D., New York University, 2021 Jacobson Leadership Program in Business and Law Scholar Cybersecurity Service Scholar Co-Founder, Rights over Tech Research Assistant, Profs. Tony Thompson, Ryan Bubb, and Erin Murphy Teaching Assistant, Critical Infrastructure, Prof. Rob Silvers Article Selection Editor, N.Y.U. Review of Law and Social Change Intern, Neighborhood Defender Service of Harlem, Federal Defenders of New York – Southern District, Bronx Defenders, and Brooklyn Defender Services	
	Ph.D., Aerospace Engineering, Georgia Institute of Technology, 2017 President, Graduate Student Government, 2015-2016 Sam Nunn Security Program Fellow	
	B.S. Mechanical Engineering, University of Missouri, <i>magna cum laude</i>, 2012 Research Assistant, Prof. Sergei Kopeikin Lead Mechanical Engineer, “Tigergen II” Hydrogen Car Team	
AWARDS & HONORS	2021 Best Paper Award, WeRobot 2021 for “Anti-Discrimination Law’s Cybernetic Black Hole” 2021 NYU Law Vanderbilt Medal 2018 NYU Jacobson Leadership Program in Business and Law Scholar 2018 NYU Cybersecurity Service Scholar 2017 IEEE-USA/AAAS Congressional Science and Technology Fellowship 2016 Best Poster Award, Max Planck Institute for Human Development, Summer Institute on Bounded Rationality 2016 Georgia Tech Graduate Student Government Mitch Keller Lifetime Achievement Award 2016 Georgia Tech Campus Life and Community at Tech Scholarship 2015 Georgia Tech Colonel Leslie Callahan Memorial Fellowship 2014 Georgia Tech Sam Nunn Security Program Fellow 2013 National Science Foundation Graduate Research Fellowship	

2012 Georgia Tech Goizueta Foundation Fellowship
 2012 University of Missouri Unsung Hero Award
 2011 Ronald E. McNair Post-Baccalaureate Achievement Program Scholar

PROFESSIONAL
 ACTIVITIES

Institute for Electrical and Electronics Engineers (IEEE) USA

Artificial Intelligence Policy Committee
Chair 2020–2021
Vice-Chair 2018–2020
Member 2016–present

Government Relations Committee
Member 2020–2021

International Workers of the World (IWW) 2022–2023
 Fredericksburg, Virginia, Branch
 Public Workers for Indigent Defense (PWID)
Delegate, Arlington County

Arlington County Bar Association (ACBA)
 Secretary 2022–2023
 Member 2022–2023

AAAS Science & Technology Policy Fellows Rapid Response Cohort in Artificial Intelligence 2023
 Selection Committee

Fairware '22: International Workshop on Equitable Data & Technology 2022
Co-Located with the International Conference on Software Engineering
 Program Committee

American Bar Association, AI Legal Ethics Working Group
Chair, Controls and Oversight Committee 2020

Open Source Elections Technology (OSET) Institute
Contributing Election Technology and Policy Analyst 2018

BAR ADMISSION Virginia 2021–present

MEMBERSHIP IEEE 2011–present
 Virginia Bar Association 2021–present

REVIEWER Behavior Research Methods
 Frontiers in Big Data
 IEEE Access
 IEEE Computer
 IEEE Transactions on Automation Science and Engineering

IEEE Transactions on Human-Machine Systems
Nature Human Behavior

SCHOLARSHIP

Law Journals

2. [Abolish and Reimagine: The Pseudoscience and Mythology of Substance Use in the Family Regulation System.](#)
Georgetown Journal on Poverty Law & Policy
2023.
1. [Autonomous Systems & Domestic Security.](#)
Penn State Journal of Law & International Affairs.
(readout from conference panel, with David Atkinson, Douglas Burig, and Alan Wagner)
2020.

Law Conference Publications

2. [Anti-Discrimination Law's Cybernetic Black Hole](#)
WeRobot.
2021.
 - [Best Paper Award, WeRobot 2021](#)
1. [Framing Human-Automation Governance: A New Modus Operandi from Cognitive Engineering.](#)
Marc Canellas, Matthew Miller, Yosef Razin, Rachel Haga, Dev Minotra, and Raunak Bhattacharyya.
WeRobot.
2017.

Scientific Publications in Peer-Reviewed Journals

7. [Decoding Human Behavior with Big Data? Critical, Constructive Input from the Decision Sciences.](#) [YouTube]
AI Magazine
Konstantinos Katsikopoulos and Marc Canellas
Spring 2022.
6. [Defending IEEE Software Standards in Federal Criminal Court.](#)
IEEE Computer
June 2021.
5. [Unsafe at Any Level: U.S. NHTSA's levels of automation are a liability for autonomous vehicle design and regulation.](#)
Marc Canellas and Rachel Haga.
Communications of the ACM.

March 2020.

4. [Heuristic Information Acquisition and Restriction for Decision Support.](#)
Marc Canellas and Karen Feigh.
IEEE Transactions on Human-Machine Systems.
2017.
3. [Toward Simple Representative Mathematical Models of Naturalistic Decision Making through Fast-and-Frugal Heuristics.](#)
Marc Canellas and Karen Feigh.
Journal of Cognitive Engineering and Decision Making.
2016.
2. [Lost in Translation: Building a Common Language for Regulating Autonomous Weapons.](#)
Marc Canellas and Rachel Haga.
IEEE Technology and Society Magazine.
2016.
1. [Accuracy and Effort of Decision-Making Strategies with Incomplete Information: Implications for Decision Support System Design.](#)
Marc Canellas, Karen Feigh, and Zarrin Chua.
IEEE Transactions on Human-Machine Systems.
2015.

Scientific Publications in Peer-Reviewed Conferences

3. [Toward Meaningful Human Control of Autonomous Weapons Systems through Function Allocation.](#)
Marc Canellas and Rachel Haga.
IEEE International Symposium on Technology and Society (ISTAS).
2015.
2. [Heuristic decision making with incomplete information: Conditions for ecological rationality.](#)
Marc Canellas and Karen Feigh.
IEEE International Conference on Systems, Man and Cybernetics (SMC).
2014.
1. [Accuracy and effort of decision making strategies with incomplete information.](#)
Marc Canellas, Karen Feigh, and Zarrin Chua.
IEEE International Inter-Disciplinary Conference on Cognitive Methods in Situation Awareness and Decision Support (CogSIMA).
2014.

ESSAYS &
OP-EDS

5. [Trustworthy Evidence for Trustworthy Technology: An Overview of Evidence for Assessing the Trustworthiness of Autonomous and Intelligent Systems.](#)
Jeanna Matthews, Bruce Hedin, and [Marc Canellas](#).
IEEE-USA AI Policy Committee and IEEE Global Initiative's Law Committee
Sept. 29, 2022.
4. [A Post-Election Trump Firing Makes the Case for an Independent, Regulatory CISA Just Security.](#)
Just Security.
December 1, 2020.
3. [A Once-in-a-Lifetime Opportunity: IEEE-USA Government Fellowships](#)
IEEE-USA Insights.
July 15, 2020.
2. [Voting Machines Must Become More Usable: Lots of Voting Machines Are Really Confusing, and on Election Day, It Showed.](#)
Slate.
November 20, 2018.
1. [Was Your Voting Machine Hacked? Without More User-Friendly Devices, We May Not Know.](#)
Just Security.
November 16, 2018.

AMICUS
BRIEFS

1. *State of New Jersey v. Pickett*, N.J. Super. Ct. App. Div.
Decision: Docket No. A-4207-19T4, February 3, 2021 (Supporting expert for brief filed on behalf of defendant Pickett arguing for full access to the DNA software source code. Pickett was successful and court cited the brief in its decision.)

TESTIMONY,
STATEMENTS, &
REPORTS

9. [Letter to NIST providing comments on NIST Internal Report 8354-DRAFT Digital Investigative Techniques: A NIST Scientific Foundation Review](#)
IEEE-USA, IEEE Standards Association (IEEE SA), and the IEEE Computer Society.
July 2022.
8. [Letter to NIST providing comments on NIST Internal Report 8351-DRAFT DNA Mixture Interpretation: A NIST Scientific Foundation Review](#)
IEEE-USA.
November 2021.
8. [Privacy, Equity, and Justice in Artificial Intelligence](#)
IEEE-USA Position Statement.
(with IEEE-USA Artificial Intelligence Policy Committee).
November 2021.
7. [Democratic Use of Artificial Intelligence](#)

IEEE-USA Position Statement.
(with IEEE-USA Artificial Intelligence Policy Committee).
November 2021.

6. [Artificial Intelligence: Jobs, Education, Workforce, and Diversity](#)
IEEE-USA Position Statement.
(with IEEE-USA Artificial Intelligence Policy Committee).
November 2021.
5. [Effective Governance of Artificial Intelligence](#)
IEEE-USA Position Statement.
(with IEEE-USA Artificial Intelligence Policy Committee).
November 2021.
4. [Artificial Intelligence: Accelerating Inclusive Innovation by Building Trust](#)
IEEE-USA Position Statement.
(with IEEE-USA Artificial Intelligence Policy Committee).
July 2020.
3. [Testimony re: “Oversight - Follow up on Local Law 49 of 2018 in Relation to Automated Decision Systems Used by Agencies” \[Video\]](#)
Written Testimony.
New York City Council, Committee on Technology
New York, NY, 2020.
2. [Recommendations to the New York City Automated Decision Systems Task Force](#)
Open Letter.
(with coalition of technical and civil rights experts, advocates, and community members).
August 17, 2018.
1. [Artificial Intelligence Research, Development and Regulation](#)
IEEE-USA Position Statement.
(with IEEE-USA Ad-Hoc Artificial Intelligence Policy Committee).
February 10, 2017.

PRESENTATIONS

31. Engineering the War Against Carceral Technology (CLE credit event)
Annual Public Defender Conference
Virginia Indigent Defense Commission.
October 20, 2022.
30. Engineers v. PGS: A Strategy for the War Against Carceral Technology (CLE credit event)
Questioning Forensics.
Legal Aid Society of New York.
April 1, 2022.

29. Strengthening Forensic Science Through Independent Verification and Validation: The Path Forward.
[*74th AAFS Annual Scientific Conference.*](#)
American Academy of Forensic Science.
February 24, 2022.
28. [Regulation, Audits, and Setting Standards/Kitemarks in AI \[Video\]](#)
Panelist.
Validate AI Conference.
Validate AI and Southampton University (UK).
Dec. 3, 2021.
27. “AI in Space” (CLE credit event)
Panelist.
AI in Space and Telecom.
Federal Communications Bar Association – Artificial Intelligence, Machine Learning & Robotics, International Telecommunications, and Wireless Telecommunications Committees.
June 15, 2021.
26. “AI: Triage in a Pandemic” (CLE credit event)
Panelist.
Artificial Intelligence Law 2021.
Practising Law Institute.
January 25, 2021.
25. “Capturing Societal Benefits while Addressing Ethical Concerns of Autonomous Last Mile Delivery”
Panelist.
Science and Technology Forum and Exposition 2021 (SciTech 2021)
American Institute for Aeronautics and Astronautics (AIAA)
January 15, 2021.
24. [“The search for the Unicorn: Is there such a thing as a unified, values-driven, evidence-based AI governance framework?” \[Video\] \[Report\]](#)
Moderator
The Athens Roundtable on Artificial Intelligence and the Rule of Law
IEEE Standards Association, The Future Society, and ELONtech
November 17, 2020.
23. [“COVID-19 Contact Tracing Apps: Privacy and Public Health in the Coronavirus Age”](#)
Moderator.
NYU Rights over Tech.
May 1, 2020.

22. [“AI Law: The Basics”](#) (CLE credit event)
Panelist.
Artificial Intelligence Law 2020.
Practising Law Institute.
New York, NY, January 27, 2020.
21. [Testimony re: “Oversight - Follow up on Local Law 49 of 2018 in Relation to Automated Decision Systems Used by Agencies”](#) [Video]
New York City Council, Committee on Technology
New York, NY, January 22, 2020.
20. “Pre-Trial Detention/Risk Assessment”
Session Leader.
Automating Bias: How Computers Are Making Decisions About Your Life.
NAACP LDF and Co-Partners.
New York, NY, 2019.
19. [“Seven Questions to Ask When Faced with an Algorithm”](#) (CLE credit event)
Presenter.
Primer on AI.
Rights over Tech with the NYU Center on Civil Justice.
New York, NY, November 22, 2019.
18. [“Law & Tech”](#)
Panelist.
All Tech is Human NYC.
All Tech is Human.
New York, NY, November 9, 2019.
17. “Lessons from the Hill”
Panelist.
NYU Journal of Legislation and Public Policy.
New York, NY, October 16, 2019.
16. “Impact of Innovation” (CLE Credit Event)
Moderator.
NYU Law & Tech.
New York, NY, October 15, 2019.
15. “Automation, Robotics, Artificial Intelligence and the Future of Work”
Panelist.
60th Constitutional Convention.
Texas AFL-CIO.
San Antonio, TX, July 27, 2019.
14. “A Golden Age of Legal Innovation: Navigational Advice for Law Students, Young Lawyers, and Other Explorers” (CLE Credit Event)

Panelist.
NYU Law & Tech.
New York, NY, April 8, 2019.

13. [“Autonomous Systems and Domestic Security”](#)

Panelist.
Security and the Autonomous Future.
Pennsylvania State University Center for Security Research and Education and
Pennsylvania State Journal of Law and International Affairs.
University Park, PA, April 5, 2019.

12. [Framing Human-Automation Governance: A New Modus Operandi from Cognitive Engineering](#)

Panelist.
(with Matthew Miller, Yosef Razin, Rachel Haga, Dev Minotra, and Raunak Bhattacharyya).
WeRobot 2017.
Yale Law School.
New Haven, CT, April 1, 2017.

11. [Mathematical Representations of Human Judgment and Decision Making in Military Contexts](#)

(with Karen Feigh and Rachel Haga).
Emerging Techniques Special Meeting.
Military Operations Research Society.
Washington, D.C., December 2016.

10. [A General Linear Model of Fast-and-Frugal Judgment and Decision Making](#)
Poster Presentation.

Summer Institute on Bounded Rationality.
Max Planck Institute for Human Development.
Berlin, Germany, July 2016.

9. “The Necessary and Sufficient Conditions for Graduate School Success.”

Invited speaker.
2016 FOCUS Program Dinner.
Georgia Institute of Technology.
Atlanta, GA, January 2016.

8. [Toward Meaningful Human Control of Autonomous Weapons Systems through Function Allocation](#).

Presenter.
(with Rachel A. Haga).
IEEE International Symposium on Technology and Society (ISTAS).
Dublin, Ireland, November 2015.

7. Heuristic Decision Making with Incomplete Information: Conditions for Ecological Rationality.
IEEE Systems, Man, and Cybernetics International Conference (SMC).
(with Karen Feigh).
San Diego, CA, November 2015.
6. Accuracy and Effort of Decision Making with Incomplete Information.
IEEE International Inter-Disciplinary Conference on Cognitive Methods in Situation Awareness and Decision Support (CogSIMA).
(with Karen Feigh and Zarrin K. Chua).
San Antonio, TX, March 2014.
5. “Building Your Morals.”
Keynote Speaker.
Show-Me Scholars Luncheon.
University of Missouri, Columbia, MO, 2014.
4. Accuracy and Effort of Dynamic Decision Making with Incomplete Information.
Brown Bag Lunch Lecture Series.
Georgia Institute of Technology, School of Aerospace Engineering, Atlanta, GA,
October 2013.
3. Review and Development of Planetocentric Reference Frames to Model the Flyby Anomaly.
McNair Scholars Conference.
(with Sergei Kopeikin).
University of Missouri, Columbia, MO, April 2012.
2. “Mastering the Fellowships Game.”
MU Excels 2012.
University of Missouri, Columbia, MO, 2012.
1. At Wheel Stop: A Review of the U.S. Human Space Exploration Policy.
Review of the 2011 Washington Internships for Students of Engineering (WISE) Program.
Washington, D.C., August 2011.

FEATURED

7. “[Leading Edge](#),” in *NYU Law School’s Annual Magazine* (September 2019).
6. “[Security center explores the ‘Autonomous Future’ through interdisciplinary lens](#)” in *Penn State News* (August 2019).
5. “[2017-2018 Government Fellowships: A Formative Experience](#),” in *IEEE-USA InSight Magazine* (October 2018).

4. [“US House White Paper Calls for AI Development, Restraint in Federal Regulations,”](#) in *LegalTech News* (October 2018).
3. [“Encouraging Transparency and Accountability, Advocates Push Governments to Confront Machine Bias,”](#) in *LegalTech News* (August 2018).
2. [“Tech in DC: Intersecting Science and Policy,”](#) in *Georgia Tech News Center* (August 2017).
1. [“When Cognitive Engineering Meets Public Policy,”](#) in *Georgia Tech News Center* (July 2017).