UNIVERSITY OF WASHINGTON TECH POLICY LAB 2013–2019

LOOKING BACK MOVING FORWARD

OUR RESEARCH PRODUCTS

20+
Academic Papers

2
White Papers

14
Video Resources

4
Toolkits, Methodologies, and Educational Resources

WHO WE ARE

55
Students

3
Faculty Co-Directors

7
Faculty Associates

dozen
Members and alumni from a dozen departments across UW

500
Bringing together a community of more than 500 tech policy enthusiasts for 5 years

OUR OUTREACH

325,000
Robotics and Law Primer Videos with over 325,000 combined views

500+
students trained with tech policy curriculum modules

100+
Over 100 people trained in the Lab's Diverse Voices method for creating more inclusive tech policy

9
thought leaders brought to University of Washington as Distinguished Lecturers

75
Lab Expertise and research features in more than 75 local, national, and international media outlets

Letter From the Directors

With this report, we celebrate the Tech Policy Lab's five-year anniversary. We are deeply grateful to the community for helping us mark this milestone.

We came together in the fall of 2013 to create a deeply interdisciplinary research collaboration with real-world impacts. We chose to model our new collaboration on a laboratory—a place to experiment with a distinct interdisciplinary model for research, to develop tangible and innovative new resources, and to train the next generation of tech policy experts. With co-equal faculty directors from three distinct disciplines, and students and faculty from many more, we set out to bridge the gap between policymakers and technologists in the service of wiser, more inclusive tech policy.

Our success to date is evident. In our first five years, Tech Policy Lab faculty and staff worked with more than fifty students from across a dozen or more disciplines to make progress on cutting-edge tech policy issues, producing interdisciplinary research that shaped emerging fields of inquiry and influenced legislation, policy, and best practices. We developed innovative toolkits and resources that provide technologists and policymakers with new approaches for tech policy. For example:

- **We conducted a comprehensive analysis** of the City of Seattle's open municipal data program and published a detailed report. The City adopted nearly all of our recommendations and went on to win an award for best practice in open data from a well-known national think tank.
- **We published an early whitepaper** on the legal and policy implications of augmented reality that served as the foundation for a U.S. Senate hearing, at which one of our co-directors testified.
- **We built and maintained** a diverse, international network of tech policy experts, repeatedly bringing together dozens of policymakers, technologists, and others from organizations across Africa, Asia, Europe, and North and South America to discuss global tech policy challenges.
- **We have contributed pivotal research** on the cutting-edge issues of security, including genetic security, police surveillance, and adversarial machine learning.
- **We have trained** more than 100 technologists and policymakers in our Diverse Voices method for more inclusive tech policy.

As we reflect on the milestone achievement of our five-year anniversary, five core contributions of the Lab have emerged. We are excited to share these five "big ideas" in this report:

- **A model for agile, interdisciplinary research**
- **Identifying cutting-edge technologies with societal import**
- **Diverse Voices: A last mile intervention with experiential experts for inclusive tech policy**
- **Storytelling as a tool for communicating across tech policy barriers**
- **Hands-on cross-disciplinary tech policy education**

These are areas where our unique focus on method, agility, and interdisciplinarity positioned us to make meaningful progress over the past five years. Through this cumulative annual report, we will share what we have accomplished working on these big ideas, what we have learned through our work, and what we envision coming next.

As we enter the second-half of our first decade together, we invite you to join us in what we envision going forward.

RYAN CALO / BATYA FRIEDMAN / TADAYOSHI KOHNO

Our First 5 Years

Since our founding in 2013, interdisciplinary teams of Tech Policy Lab faculty, staff, and students made progress on cutting-edge tech policy issues and developed resources for wiser, more inclusive tech policy. Here were share projects and milestones from this work.

PROJECTS

EDUCATION MODULES

AUGMENTED REALITY

TOYS THAT LISTEN

AI AND ROBOTICS

DIVERSE VOICES

SMART CITIES

TECH POLICY BREAKDOWNS

SEAGLASS

2014 2015 2016

MILESTONES

09/2013
LAUNCH

12/2014
DISTINGUISHED LECTURE SERIES:
First Lecture with Jeroen van den Hoven

04/2015
AI AND ROBOTICS:
Hosted We Robot 2015

07/2015
DIVERSE VOICES:
Facilitated first set of Diverse Voices panels

10/2015
AUGMENTED REALITY:
Augmented Reality Whitepaper

DNA SECURITY

IOT SECURITY & PRIVACY

ADVERSARIAL MACHAINE LEARNING

BOTS

MATERIALITY

DATA STATEMENTS

ADVERTISING PRIVACY

PUBLIC DISCOURSE

TECH POLICY FORECASTING

2017 2018 to the future →

05/2016
SMART CITIES:
Push, Pull, Spill Journal Article

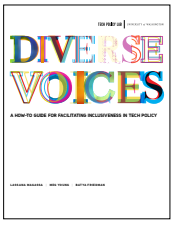
05/2016
AI AND ROBOTICS:
Hosted Obama White House Artificial Intelligence Workshop in Seattle

08/2016
GLOBAL SUMMIT:
Global Summit on Grand Challenges for Tech Policy

11/2016
AUGMENTED REALITY:
Lab testifies on Augmented Reality before U.S. Senate

03/2017
SMART CITIES:
Driverless Seattle Whitepaper

08/2017
DIVERSE VOICES:
Diverse Voices How-To Guide



03/2018
TOYS THAT LISTEN:
Toys that Listen shared at FTC PrivacyCon

08/2018
GLOBAL SUMMIT:
Global Summit on Culturally Responsive Artificial Intelligence

11/2018
DIVERSE VOICES:
Inaugural Diverse Voices Training Workshop

10/2019
ADVERSARIAL MACHINE LEARNING:
Lab research featured in London Science Museum

Who We Are

MISSION

Situated within a globally renowned research university, the UW Tech Policy Lab is a unique, interdisciplinary unit committed to advancing technology policy through research, education, and thought leadership. Founded in 2013 by faculty from the University's Allen School of Computer Science & Engineering, Information School, and School of Law, the Lab aims to bridge the gap between technologists and policymakers and to help generate wiser, more inclusive tech policy.

GOVERNANCE STRUCTURE

The Lab is an intentionally and thoroughly interdisciplinary collaboration. Leadership is co-equal across three distinct disciplines, with faculty co-directors from the Lab's three home units at the University of Washington: Ryan Calo from the School of Law, Batya Friedman from the Information School, and Tadayoshi Kohno from the Paul G. Allen School of Computer Science & Engineering. Our faculty co-directors are joined by a small number of faculty associates who have training in computer science, design, electrical engineering, information science, law, linguistics, and urban studies, among other disciplines. They lead interdisciplinary teams of faculty, staff, and students well situated to address the specific questions we are exploring.

Our interdisciplinary, team-based model supports us in remaining true to our guiding principle of "small is beautiful." We maintain a small, agile footprint that enables us to pursue responsive, high impact research and initiatives. We concentrate our efforts where we are best positioned to contribute. Lab Faculty Co-Directors set our research and educational agenda in consultation with our faculty associates. Lab leadership remains closely involved in all our projects, which are conducted by interdisciplinary teams of faculty, student, and staff researchers. This model forms the foundation of our high quality, timely, impactful work.

Work at the Tech Policy Lab is funded through gifts and grants from our generous supporters. All private donors provide funds as unrestricted gifts; government and foundation grants also follow appropriate protocols to ensure autonomy in our research.

CURRENT PEOPLE

Each year the Tech Policy Lab brings together researchers from across campus to join interdisciplinary teams tackling important tech policy questions. This past year 10 faculty and 17 students joined us from departments across UW, including our home disciplines of information science, law, and computer science.

FACULTY CO-DIRECTORS

Ryan Calo
ASSOCIATE PROFESSOR
School of Law

FACULTY ASSOCIATES

Our faculty co-directors are joined by a small number of faculty associates who have training in computer science, electrical engineering, design, information science, law, linguistics, and urban studies, among other disciplines.

STUDENTS

Jennifer Aronson
School of Law

Stephanie Ballard
Information School

David O'Hair
School of Law

Elena Ponte
School of Law

Batya Friedman
PROFESSOR
Information School

Tadayoshi Kohno
PROFESSOR
Allen School of Computer Science & Engineering

Each year the Tech Policy Lab brings together researchers from across campus to join interdisciplinary teams tackling important tech policy questions.

Emily M. Bender
PROFESSOR
Linguistics

Alan Borning
PROFESSOR EMERITUS
Allen School of Computer Science & Engineering

Howard Chizeck
PROFESSOR
Electrical Engineering

William Covington
SENIOR LECTURER
School of Law

David Hendry
ASSOCIATE PROFESSOR
Information School

Franziska Roesner
ASSOCIATE PROFESSOR
Allen School of Computer Science & Engineering

Jan Whittington
ASSOCIATE PROFESSOR
Urban Design & Planning

Camille Cobb
Allen School of Computer Science & Engineering

Samy Danesh
School of Law

Ivan Evtimov
Allen School of Computer Science & Engineering

Nick Logler
Information School

Lassana Magassa
Information School

Hannah Martens
Law, Societies, and Justice

Peter Ney
Allen School of Computer Science & Engineering

Audrey Pope
Vanderbilt University

Lucy Simko
Allen School of Computer Science & Engineering

Rian Wanstreet
Department of Communication

Charlie White
English

Samuel Woolley
Department of Communication

Hayley Younghusband
Information School

STAFF

We concentrate our efforts where we are best positioned to contribute – focusing on doing a few things well.

Hannah Almeter
Program Manager

Earlence Fernandes
Postdoctoral Researcher
Allen School of Computer Science & Engineering

Karl Koscher
Research Scientist
Allen School of Computer Science & Engineering

Big IDEAS

Through our work we have identified a number of big ideas for tech policy. These areas are the building blocks for better, more inclusive tech policy.

These ideas are also central to our work as a Lab. Some we anticipated exploring during our initial goal setting in 2013 and others we identified through our work. To each we brought our interdisciplinary focus and commitment to method. In the following pages, we will share a selection of big ideas that the Lab has made significant progress on, the insights we have learned in moving forward in these areas, and how these ideas will shape our work going forward.

A Model for Agile, Interdisciplinary Research

CHALLENGE

Very few important problems can be resolved from within a single discipline. But working across disciplines effectively requires new understandings, methods, and practices.

GOAL

We aim to explore what these understandings, methods, and practices might be and contribute these ways of working to the larger tech policy community. Along the way, we contribute the outcomes of specific projects in which we developed these new methods and approaches.

INSIGHT

To make meaningful progress, we need to bring together truly interdisciplinary teams in sustained, close dialogue with an ability to focus on emerging technology and foreground human values. We must take action in a timely, agile manner and go deep on a smaller number of projects, with our eye on high impact.

WHAT WE'VE DONE

- **Built Interdisciplinary Teams.** Brought together deeply interdisciplinary teams to focus on long-term research, e.g., information scientists and computer scientists examining the forces that push back against the materiality of IT; experts in computer security, law, and machine learning investigating the intersection of adversarial machine learning and anti-hacking laws.

- **Research Accessible to Diverse Audiences.** Carefully created research outputs that are accessible to diverse audiences such as policy whitepapers on augmented reality and driverless cars that summarize our deep dives across technical and policy issues; detailed how-to guides for methods we've developed; and videos that introduce key tech policy terms.

- **Human Values Methods and Tools.** Adopted and developed methodologies and toolsets throughout our work like envisioning (envisioningcards.com), security cards (securitycards.cs.washington.edu), our Diverse Voices method (see pg. 12), and value sensitive design that encourage our research teams to consider human values and think through value tensions.

- **Network of Tech Policy Experts.** Established a network of diverse expertise that enables us to quickly build teams with the expertise necessary to tackle the questions we are exploring – bringing to the Lab knowledge of the farming community when thinking through security and privacy of agricultural technology; sustainability when considering what pushes back from considerations of the materiality of IT; and computational linguistics when thinking through documentation for datasets used in natural language processing systems.

SINCE OUR LAUNCH IN 2013, WE HAVE FOSTERED A COMMUNITY OF TECH POLICY ENTHUSIASTS.

OUR WHITEPAPER ON AUGMENTED REALITY FORMED THE BASIS OF A SENATE HEARING.

IMPACT

- Our work is highly accessible and useful to policymakers and others – our whitepaper on augmented reality served as the basis of a senate hearing and was entered into the congressional record.

- Our teams are able to get out in front of emergent technologies and have made early contributions to national conversations around adversarial machine learning, augmented reality, and consumer genetic testing, among others.

- Other organizations have expressed interest in applying the methods and tools that we use to their work, such as Diverse Voices.

- We have fostered a collaborative network of more than 500 tech policy enthusiasts over our first five years. Our community includes policymakers, researchers, and technologists from the Seattle area, our region, the U.S., and around the world.

THE NEXT FIVE YEARS

- We are committed to maintaining our small, agile footprint, and to advantaging this footprint to best position ourselves to contribute to emerging, struggling, or overlooked discussions.

- We will continue to make available the tools and resources that support our model by publishing guides and toolkits on our website and by creating processes to access Lab expertise like our Tech to Policy initiative for legal insight on computer science work.

Identifying Cutting-Edge Technologies with Societal Import

CHALLENGE

As technologies affect more and more aspects of daily life, new, unanticipated vectors of risk and opportunity emerge. We need to choose which technologies to get out in front of.

GOAL

We aim to identify the cutting-edge technologies that will have widespread impact on society, that we are well-positioned to address, where we can bring important interdisciplinary perspective, and where we can have high impact.

INSIGHT

We focus on technologies that are emergent, on the edge of uptake; have the potential for large-scale societal impact; and/or are under researched or under resourced. We bring a forward-looking and cross-disciplinary lens to our work on emerging technologies.

WHAT WE'VE DONE

- **Augmented Reality.** Published a policy white paper examining augmented reality in the mid-2010s when major tech companies were announcing projects like Google Glass and Microsoft HoloLens.
- **Adversarial Machine Learning.** Participated in foundational research in adversarial machine learning and drafted one of the first examinations of the field from a legal standpoint.
- **Bot Disclosure.** Began an examination of how bot disclosure laws might interact with the First Amendment and free speech while state and federal policymakers were proposing bills requiring bots online to be identified as such.
- **DNA Security.** During widespread uptake of consumer genetic testing, in 2017 we found DNA sequencing systems failed to follow computer security best practices and demonstrated security vulnerabilities by gaining control of a computer through an attack on a DNA sequencer with malware encoded in synthetic DNA.
- **IoT Security and Privacy.** Developed new security and privacy-minded tools for IoT developers that include a consideration of diverse stakeholder values as internet-connected devices expanded into the home.
- **Cellular Privacy.** Built a measurement system to detect cell site simulators, devices purportedly used by governments and criminals to inject themselves into the cellular network and track the locations of cell phone users, among other things.

IMPACT

- Lab researchers have been called on as experts in adversarial machine learning to policymakers, scientists, and the military, working with organizations including IARPA, the JASONs, etc.
- Testified before the U.S. Senate Committee on Commerce, Science, and Transportation on augmented reality, drawing on recommendations laid out in the Lab's whitepaper written by a team of lawyers, computer scientists, and information scientists.
- Our work on bot disclosure and the First Amendment apparently resulted in changes to California's 2018 bot disclosure bill.

THE NEXT FIVE YEARS

- We will explore policy implications of technical work in areas such as DNA security and cell site simulators, leveraging our interdisciplinary context to examine potential recommendations.
- Forthcoming and future work will explore the materiality of technology and the intersection between agriculture and technology.

A STOP SIGN FROM LAB WORK ON ADVERSARIAL MACHINE LEARNING ON DISPLAY AT THE SCIENCE MUSEUM IN LONDON.

Diverse Voices: A Last Mile Intervention with Experiential Experts for Inclusive Tech Policy

CHALLENGE

All too often tech policy fails to consider the perspectives and experiences of under-represented communities. This failure leads to policy that creates inequities for those traditionally excluded from the policymaking process.

GOAL

The Diverse Voices method aims to help policymakers create better, more inclusive tech policy by soliciting feedback from under-represented communities on final draft tech policy documents.

INSIGHT

In tech policy, the rubber hits the road with the words on page; we developed a method for experiential experts from underrepresented populations to influence the wording in final draft tech policy documents.

WHAT WE'VE DONE

- Developed the Diverse Voices method to solicit feedback from under-represented communities on the wording of final draft tech policy documents, including documents on augmented reality (AR), autonomous vehicles, and the Washington State Access to Justice Technology Principles.
- Wrote a How-to-Guide on the Diverse Voices method providing a detailed, step-by-step walkthrough of the method for use by other organizations (available at https://techpolicylab.uw.edu/diverse-voices-guide/).
- Conducted trainings for over 100 people to enable others to appropriate the Diverse Voices method in their organizations and contexts, attended by technologists and policymakers from leading companies like Google, Microsoft, and Amazon, as well as the City of Seattle, Data & Society, and Partnership on AI.
- Published a journal article reporting on the Diverse Voices method and two case studies for an academic audience.

IMPACT

- **Augmented Reality.** Based on feedback from Diverse Voices panels with women, formerly incarcerated people, and accessibility communities, the definition of augmented reality was changed in the Lab's whitepaper to describe AR as also fully or partially replacing a sense, rather than only augmenting a sense. How we define technology shapes policy – technology augmenting a sense might be banned in the boardroom, but technology replacing a sense might not be. The revised whitepaper was entered into the congressional record as part of a senate hearing on augmented reality.
- **State of Washington Access to Justice Technology Principles.** Two new principles preserving human touch and language access were added to the revised Washington State Access to Justice Technology Principles based on feedback from Diverse Voices panels with immigrant, rural, and formerly incarcerated communities as well as legal professionals. The principles, which guide the use and procurement of technology in the state court system, are currently being reviewed by the Washington State Supreme Court.
- **Training and Uptake of the Diverse Voices Method.** Over 100 people from technology, policy, and advocacy organizations have been trained in the Diverse Voices method. We are seeing interest and uptake by technologists working in AI, by tech companies such as Microsoft, and by policy institutes such as the Google Policy Fellows.
- **Building Community.** Brought together a community of like-minded individuals committed to including under-represented voices in tech policy.

THE NEXT FIVE YEARS

- We plan to explore models to sustain the Lab's ability to run Diverse Voices panels as a third party for other organizations, including piloting options for financial support.
- We are exploring ways to support others in uptake of Diverse Voices, including providing support for others in conducting their own training and as they run panels for the first time.
- We will continue to apply the Diverse Voices method to future Lab outputs.
- We will focus on ensuring sustainability of our efforts to improve inclusivity in tech policy, considering how the Lab can best serve as a resource and facilitator.

Experiential Expert

People who have either lived experience as a member of a particular group or those closely associated with someone with this experience (such as family members or institutional advocates).

FROM
Diverse Voices: A How-To Guide for Facilitating Inclusiveness in Tech Policy

"I would have to say that that [being empowered as a panelist] would've been my biggest surprise, would be that it was actually real and that people were doing something with the feedback . . . you feel small and you don't know if your voice or anything you're saying is actually being heard or if it's going to be applied."

ZELDA TIEMANN, EXPERT PANELIST, FORMERLY INCARCERATED PANEL

Storytelling as a Tool for Communicating Across Tech Policy Barriers

CHALLENGE

A lack of narrative diversity challenges tech policymaking. Existing structures for how we view and experience technology struggle with conveying the effects—good and bad—of technological innovation across different ways of thinking.

GOAL

We provide resources that use storytelling as a way to bridge the gap between policymakers and technologists.

INSIGHT

Ways of communicating around technology can obscure environmental, policy, and societal impact. We use storytelling as a powerful means to bridge the gap between technology and its impact, between the thinking of technologists and the thinking of policymakers.

WHAT WE'VE DONE

- **Culturally Responsive Artificial Intelligence.** Developed a forthcoming book of short stories that uses storytelling as a uniquely positioned tool to explore culturally responsive artificial intelligence with 19 ethicists, political scientists, policymakers, and technologists from Africa, Asia, Europe, and North and South America as an outcome of our 2018 Global Summit.
- **Public Conversations about Technology Used Wisely.** Began a collaboration to broaden public engagement with discussions around technology, working with a local radio station in rural eastern Washington to engage the listening public in questions around developing and using technology wisely.
- **Visual Primers on Robots Law and Policy.** Worked with interdisciplinary teams of students to use visual storytelling to explain introductory robotics and law topics in our primer videos.

IMPACT

- Initial feedback on our book of short stories shows good interest in the use of storytelling as a tool for policymaking.
- Our robotics and law primer videos have a total of 325,000+ views; viewers have commented on the engaging format.

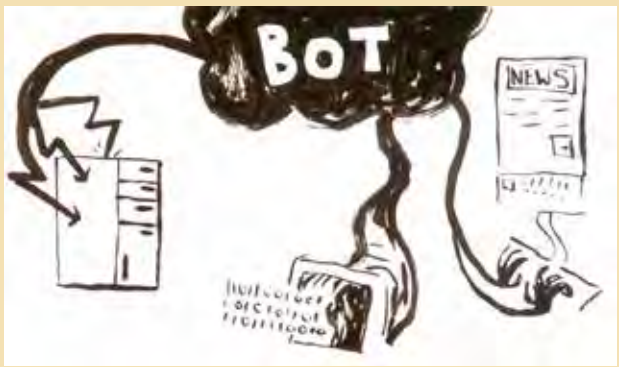
THE NEXT FIVE YEARS

- Develop and continue work on initiatives that involve diverse communities in conversations around tech policy.
- Share our book of short stories on culturally responsive artificial intelligence broadly with policymakers, technologists, educators, and others.
- Reflect on our experience initiating conversations with communities around technology and share insights from our work.
- Bring a consideration of the value and role of storytelling to future Lab initiatives and outcomes.

PARTICIPANTS AT OUR 2018 GLOBAL SUMMIT DISCUSSED STORYTELLING.

"How do we begin to introduce the astonishing range of cultural contexts to technologists, policymakers, educators, and others? How do we build a bridge between communities and their advocates and the individuals and institutions developing and regulating AI?"

EXCERPT FROM THE FORTHCOMING
Telling Stories: On Culturally Responsive Artificial Intelligence (draft)



LAW AND COMPUTER SCIENCE STUDENTS CREATED VIDEOS EXPLORING ROBOTICS LAW AND POLICY.

Hands-On, Cross-Disciplinary Tech Policy Education

CHALLENGE

Technology and policy education has a tendency to be siloed, such that students emerge with one training and not another. Increasingly we recognize that students must be better prepared to bridge the thinking of policymakers with the thinking of technologists.

GOAL

We create tech policy educational interventions that empower the next (and current) generations of technology-aware policymakers and policy-aware technologists to look at tech policymaking in new and fruitful ways.

INSIGHT

To prepare students to become policy-aware technologists and tech-aware policymakers, we develop models, tools, and resources that introduce learners to diverse perspectives on tech policy through hands-on consideration of practical case studies.

WHAT WE'VE DONE

- Created a research model that grounds student researchers' exposure to tech policy in diverse perspectives. Students join teams of faculty and peers from across the University, each bringing their own perspective, background, and training, to tackle challenging tech policy questions through a cross-disciplinary lens.
- Developed and piloted four tech policy education modules that use case studies to blend technology design and policy design, asking students to consider social elements such as codes of conduct, norms, incentive systems, IT governance, and laws during technical design.
- Organized a weekly seminar designed to build translational skills to communicate across disciplines while engaging in debates around pressing tech policy concerns. The seminar brings together small groups from 7+ disciplines each week to explore issues raised by journalists, policymakers, and researchers.
- Developed resources like our robotics law and policy primer videos that enable sophisticated tech policy discussion by demystifying the technical and legal concepts involved in the issue, incorporating visual explanations to make concepts approachable and digestible.
- Established a process for ongoing access to cross-disciplinary perspectives through our Tech to Policy initiative, by which tech students and faculty working on cutting-edge privacy and security issues can get answers on their law and policy questions from law students.

IMPACT

- **Alumni Contributions to Tech Policy.** Over 55 students have joined interdisciplinary research teams with the Lab. They have gone on to make important contributions to tech policy, working with, for example, the ACLU, Federal Trade Commission, industry leaders including Amazon, Google, and Microsoft, and as tech policy-savvy faculty at major research universities.
- **Tech Policy Communication.** Through our interdisciplinary tech policy seminar students are able to explore their tech policy interests with peers from computer science, information science, law, and other disciplines. They have gone on to, for example, work on these issues with the ACLU and state legislature and develop ethics curricula for computer scientists.
- **Training in Policy, Norms, and Values.** Trained 500+ students at the University of Washington through our tech policy education modules on artificial intelligence, drones, peer-to-peer sharing technology, and IoT in the home. Tech policy education modules have also been taken up in industry by major tech companies to train their employees.
- **Visually Introducing Tech Policy.** Our primer videos on robotics law and policy have been widely successful in providing learners with the foundation needed to enter tech policy discussions. The videos have over 325,000 views and have been used by others in education and training, including other universities and the FBI.

THE NEXT FIVE YEARS

- Develop channels to encourage appropriation of education resources and methods developed and used by the Lab by other organizations and educators, including finalizing and distributing for public use our education modules.
- Publish and disseminate resources for tech policymakers, including a toolkit and taxonomy that provides a framework for discussing when tech policy breaks down.
- Build cross-disciplinary channels of communication within UW as a model for elsewhere, streamlining a process by which computer scientists can work with law students to ask law and policy questions.

"The Tech Policy Lab helped me find students from all over the university with the same cross-section of interests as me and pushed me to stay on top of developments in my field *and* the way they reverberated across other fields. Learning how to have productive conversations across disciplines in the Tech Policy Lab was incredible preparation for my current job where I work with colleagues from all sorts of disciplines—activists and organizers, engineers, lawyers, designers—on tech policy issues every day."

GENNIE GEBHART, ASSOCIATE DIRECTOR OF RESEARCH,
ELECTRONIC FRONTIER FOUNDATION,
MASTER OF LIBRARY AND INFORMATION SCIENCE, UNIVERSITY OF WASHINGTON '16

Drone Playground

In November 2019, TPL student Stephanie Ballard adapted the drone tech policy education module for the 2019 iTech Inclusion Symposium hosted by the Information School. At the Symposium Stephanie and fellow PhD students Mina Tari and Katherine Cross facilitated the education module for 30 local high school students from diverse backgrounds. The students were introduced to the design thinking process through a hands-on exploration of drones and drone playgrounds.

On-Going Activities

We are committed to interdisciplinary education and collaboration exploring the intersections between technology, rulemaking, and society. Our events and convenings build an interdisciplinary community among current and future technologists and policymakers, the greater Seattle tech community, and tech policy thought leaders from around the world. Through our work we have connected a network of 500+ technologists, policymakers, and others across the globe. We come together to consider emerging tech policy issues.

DISTINGUISHED LECTURE

Our Distinguished Lecture series brings to the University of Washington and greater Seattle area a diverse group of thought leaders that our community may not otherwise have a chance to hear from. These lectures focus on emerging technology issues, with speakers coming from diverse perspectives including anthropology, security, and ethics. Lectures bring together the tech policy community in Seattle for conversation and collaboration; each lecture is vibrant and well-attended. Lectures are recorded to serve as educational resources and are available at https://techpolicylab.uw.edu/education/#distinguished-lectures.

MATT TAIT DISCUSSES ELECTION SECURITY IN THE 2018 DISTINGUISHED LECTURE.

"I think it's also important fundamentally to realize that we can't fix everything with technology, and we can't fix everything with government. And that some of these problems we need to have a much bigger conversation within society, because there's no knights in shining armor out there who are coming to save us on things like media coverage, on things like social media. We're not going to fix this with regulation. We're not going to fix this with technology. And fundamentally, those problems are the things that we need to spend more time looking at ourselves, looking at our influence on each other, and the financial incentives that are driving this. Because if we're going to get stuck in echo chambers, then that's on us."

MATT TAIT, FALL 2018 DISTINGUISHED LECTURE ON HACKING ELECTIONS

PAST DISTINGUISHED LECTURES

FALL 2018. **MATT TAIT.**
Hacking Elections: A Conversation.
Cybersecurity expert and former British intelligence officer Matt Tait discusses foreign interference in elections and how to improve election security.

SPRING 2018. **KATE CRAWFORD.**
AI Now: Social and Political Questions for Artificial Intelligence.
Kate Crawford, co-founder of AI Now, discusses the social implications of artificial intelligence technologies.

FALL 2017. **JAMES SUZMAN.**
Poison Arrows and Other 'Killer Apps': A Hunter-Gatherer Perspective on Tech and Our Future.
Leading anthropologist James Suzman discusses what we might learn from a better understanding of hunter-gatherers about technology and our future.

FALL 2016. **TERRY WINOGRAD AND ALAN BORNING.**
My Politics as a Technologist.
In our first conversation, Terry Winograd and Alan Borning discuss how to navigate the relationship between research and personal responsibility with Lab Co-Director Batya Friedman.

GLOBAL SUMMIT

We increasingly face a number of global, cross-border tech policy challenges. To frame and begin addressing these challenges, in 2016 the Lab began our Global Summit initiative, which brings together designers, ethicists, lawyers, policymakers, technologists, and others from around the world to collaborate on global and local issues. During these biennial Summits, we not only bring together a global community of tech policy-focused individuals, but also work to build shared language and develop resources for policymakers and others.

Grand Challenges for Tech Policy. In 2016, we brought together 22 individuals from diverse organizations across 11 countries in Asia, Africa, Europe, and North and South America. Over 3 days we identified 11 pressing, yet tractable grand challenges for technology policy globally, including cybersecurity, diversity, and the environment. These challenges serve as starting points for future research and collaboration.

Culturally Responsive Artificial Intelligence. Through our second Summit in 2018, 20 tech policy leaders came together to surface implications of culturally responsive AI through storytelling. These 20 ethicists, political scientists, artists, policymakers, and technologists from Africa, Asia, Europe, and North and South America developed original stories around AI technology situated within their own culture and perspective. Stories will be made available in 2020.

LAB STUDENTS IN DISCUSSION WITH 2016 DISTINGUISHED LECTURER GENERAL KEVIN CHILTON.

WEEKLY DISCUSSION

Students come to the Lab eager to discuss issues and challenges in tech policymaking. Our popular tech policy discussion group explores current issues with students from communications, computer science, electrical engineering, human-centered design and engineering, information science, law, and public policy, among other units on campus. Discussions focus on tech policy current events, and over the past three years have included the Google v. Oracle case, consumer genetic testing, Cambridge Analytica, and community cellular networks. Students discuss topics from multiple angles – with, for example, computer science students explaining the technical details behind security vulnerabilities, and law students covering legal implications – building a shared vocabulary and proficiency in discussing issues across disciplines.

CONVENING DISCUSSIONS

We organize convenings and events that provide diverse, cross-disciplinary expertise on cutting-edge technology. We co-organized a public workshop on artificial intelligence with the Obama White House Office of Science and Technology Policy at the intersection of law and computer science. We convene discussions with policymakers, bringing experts from computer science, electrical engineering, information science, law, and others in conversation with visiting policymakers from the U.S. Senate, 9th Circuit Court of Appeals, Federal Trade Commission, and, internationally, from Britain and Denmark. Drawing on our research involving 13+ disciplines at UW, the Lab has provided expertise to the Federal Trade Commission, Office of the Director of National Intelligence (IARPA), Army Research Office, Office of the Secretary of Defense, Government Accountability Office, and Congressional Research Office, among others.

SPRING 2016. **GENERAL KEVIN CHILTON.**
Deterrence in the 21st Century: From Nuclear, To Space, To Cyberspace.
General Chilton, former Commander of U.S. Strategic Command, describes deterrence theory and how it can be applied in the future and to cyberspace.

FALL 2015. **LATANYA SWEENEY.**
How Technology Impacts Humans.
Latanya Sweeney, renowned technologist and former Chief Technologist for the Federal Trade Commission, discusses the new role of technology designers as policymakers.

SPRING 2015. **TONY DYSON.**
The Man Who Built R2-D2.
In concert with the conference We Robot 2015, Tony Dyson, the late noted roboticist and special effects model-maker, discusses the future of robotics.

FALL 2014. **JEROEN VAN DEN HOVEN.**
Responsible Innovation in the Age of Robots and Smart Machines.
Our first Distinguished Lecturer, Jeroen van den Hoven, a leading ethicist of technology, discusses how to overcome problems of moral overload and conflicting values by design.

Tech Policy Lab Alumni Out in the World

Every year, students who have worked with the Lab graduate to continue working in tech policy. They join a network of lab alumni who, over the past five years, have gone on to make important contributions in government, academia, activism, and industry. They have been the inaugural TechCongress Congressional Innovation Scholar, received a Fulbright fellowship to study privacy in Japan, and participated in IEEE's Ethically Aligned Design initiative.

Our alumni have worked and interned with:

ACADEMIA AND RESEARCH

Allen Institute for Artificial Intelligence
Data Foundation
Georgia Institute of Technology
Kyoto University Graduate School of Law
MILA – Quebec Artificial Intelligence Institute
Northeastern University
OpenAI
Tilberg Institute for Law, Technology, and Society
University of Kentucky
University of Oregon
University of Texas at Austin
University of Utah
University of Washington
University of Wisconsin-Madison
Wellesley College

INDUSTRY

Aleada Consulting
Amazon
Avalara
Blizzard Entertainment
Bombardier
Booz Allen Hamilton
Bungie
Cashvue
CMBIgroup
Deloitte
GE Healthcare
Google
Lyft
Microsoft
NextCapital
Rover.com
Square
Warner Bros. Entertainment
Workday

POLICY AND ADVOCACY

Alaska Court of Appeals
Alaska Department of Law
American Civil Liberties Union of Washington
Brennan Center for Justice
Electronic Frontier Foundation
Federal Trade Commission
Foster Pepper PLLC
Government of Canada, Patent Policy Directory
Herbert Smith Freehills
Internal Revenue Service
King County Superior Court
Knobbe Martens
Office of Senator Mike Johnston
Pierce County Department of Assigned Counsel
Savitt Bruce & Willey LLP
TechCongress
United States Court of Federal Claims
United States Tax Court
World Intellectual Property Organization

Our Alumni

STUDENTS

Aaron Alva, School of Law
Matthew Bellinger, Department of Communication
Shaila Bolger, Law Societies, and Justice
Tamara Bonaci, Electrical Engineering
Andrew Boydston, Information School
Siana Danch, School of Law
Tamara Denning, Allen School of Computer Science & Engineering
Jabu Diagana, School of Law
Gennie Gebhart, Information School
Sarah Hubbard, Information School
Mike Katell, Information School
Anna Kornfeld Simpson, Allen School of Computer Science & Engineering
Madeline Lamo, School of Law
Timothy Lau, Information School
Kiron Lebeck, Allen School of Computer Science & Engineering
Ada Lerner, Allen School of Computer Science & Engineering
Kathaleeya Liamdee, Anthropology
Brooks Lindsay, School of Law
Charlotte Lunday, School of Law
Harrison McDonough, Information School
Patrick Moore, School of Law
Bryce C. Newell, Information School
Mackenzie Olson, School of Law
Katherine Pratt, Electrical Engineering
Emily Rosenfield, Human Centered Design and Engineering
Aditya Saraf, Allen School of Computer Science & Engineering
Espen Scheuer, Human Centered Design and Engineering
David Stieber, School of Law
Gaites Swanson, School of Law
Leron Vandsburger, School of Law
Jesse Woo, School of Law
Jasper Yao, Mathematics
Daisy Yoo, Information School
Meg Young, Information School

VISITING STUDENTS

Noemi Chanda, University of Toronto School of Law
Elena Ponte, University of Ottawa Faculty of Law
Jasmine Wang, McGill University

STAFF

Emily McReynolds, Program Director
Ian Smith, Research Scientist
Vivek Srinivasan, Research Scientist

"My favorite part of the Tech Policy Lab was the people. The Lab gave me opportunities to network, chat, befriend, and collaborate with people from across the university who I would otherwise never have met. After graduating, as a professor, I've kept up those friendships and those collaborations, and so the Lab has had not only a lasting effect on my ability to think interdisciplinarily, but also to do collaborative work which brings people with diverse expertise together to respond to interdisciplinary challenges."

ADA LERNER, ASSISTANT PROFESSOR OF COMPUTER SCIENCE, WELLESLEY COLLEGE

PH.D. COMPUTER SCIENCE AND ENGINEERING, UNIVERSITY OF WASHINGTON '17

"My time at the Tech Policy Lab as a doctoral student served as a strong foundation for my continuing work at the intersections of law and technology. In particular, the multidisciplinary collaboration promoted within the lab, between technologists, lawyers, and others interested in technology policy, was particularly beneficial to me in my development as a junior scholar. In today's world, and especially in the tech policy world, we need to think beyond disciplinary academic silos, and the Lab's focus on taking insights from computer science, information science, value sensitive design, goes a long way toward doing that important work."

BRYCE NEWELL, ASSISTANT PROFESSOR OF MEDIA LAW AND POLICY, SCHOOL OF JOURNALISM AND COMMUNICATION, UNIVERSITY OF OREGON

PH.D. INFORMATION SCIENCE, UNIVERSITY OF WASHINGTON '15

"Working with the Lab was critical to my later experience conducting impactful, interdisciplinary research in tech policy. Ryan Calo was the best mentor anyone could ask for. At the Lab, I learned to work with diverse stakeholders and to quickly hone in on the most important aspects of a policy problem. I have carried these lessons with me as a Fulbright fellow in Japan and as the policy lead at a boutique privacy consulting firm."

JESSE WOO, 2018-19 FULBRIGHT FELLOW AND VISITING RESEARCHER AT THE UNIVERSITY OF KYOTO, GRADUATE SCHOOL OF LAW

J.D., UNIVERSITY OF WASHINGTON '13

Selected Publications and Resources

2014

Tamara Bonaci, Ryan Calo, and Howard Jay Chizeck. 2014. App Stores for the Brain: Privacy and Security in Brain-Computer Interfaces. In *2014 IEEE International Symposium on Ethics in Engineering, Science and Technology (ETHICS 2014)*, 7 pages. DOI: https://doi.org/10.1109/ETHICS.2014.6893415

Ryan Calo. 2014. *The Case for a Federal Robotics Commission.* Report. Brookings Institution Center for Technology Innovation (Sept. 2014). Retrieved from https://techpolicylab.uw.edu/resource/federal-robotics-commission

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2015

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2016

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2017

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Peter Ney, Ian Smith, Gabriel Cadamuro, and Tadayoshi Kohno. 2017. SeaGlass: A City-wide Cell-site Simulator Detection Network. In *Proceedings on Privacy Enhancing Technologies (PETS 2017)*, 2017, 3, 39-56. DOI: https://doi.org/10.1515/popets-2017-0027

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2018

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2019

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Five Big Ideas

A Model for Agile, Interdisciplinary Research

Identifying Cutting-Edge Technologies with Societal Import

Diverse Voices: A Last Mile Intervention with Experiential Experts for Inclusive Tech Policy

Storytelling as a Tool for Communicating Across Tech Policy Barriers

Hands-on Cross-Disciplinary Tech Policy Education

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TECH POLICY LAB

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