Cornell Brooks Public Policy

Tech Policy Institute

Annual Report

2024-25

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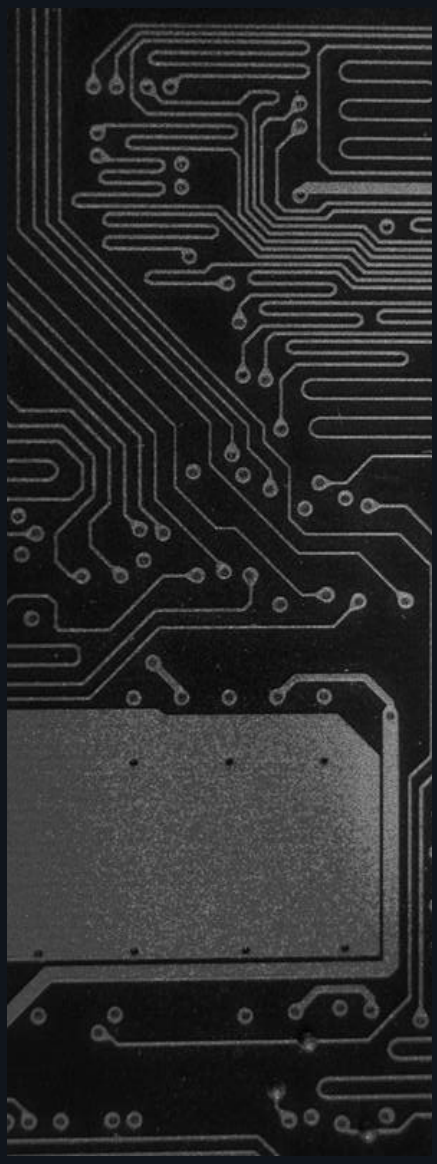


Executive Summary

Our Team

Based within the Jeb E. Brooks School of Public Policy, the Tech Policy Institute (TPI) is the home of technology policy and national security research at Cornell University. Our multidisciplinary research team is comprised of 42 fellows who work at the highest levels of decision-making; from the White House to the Pentagon, the United Nations to NATO. Combining policy insight with engineering expertise, we develop rigorous, evidence-based technological and policy solutions in close dialogue with policymakers, industry, defense, and civil society.

Our Mission

TPI advances applied social science and engineering research to shape evidence-based policy for AI and Fourth Industrial Revolution technologies. Our mission is to address the security and governance challenges of technological change while training the next generation of policy-minded scholars to lead in academia, industry, and public life.

Our Achievements

This annual report documents 12 months of consolidation and growth for TPI during the academic year 2024-25. It highlights our expanding portfolio of funded research projects on drones,, AI, semiconductors, cryptocurrencies, and cyber security; our growing team of experts; our collaborative work with industry, government, and defense; and our academic and professional education provisions that have enhanced our growing intellectual community.

Letter From Leadership

Dear Fellows, Colleagues, and Friends,

Over the past year, TPI has continued to mature as a research community focused on the intersection of technology, security, and public policy. Our work has remained guided by a commitment to rigor, relevance, and public service, with the aim of producing research that informs decision-makers while also strengthening the institutional foundations needed for long-term impact.

By taking these steps, we have become a more focused and capable intellectual community, with the depth and agility to translate research into direct engagement with policymakers and practitioners.

Translating these commitments into sustained impact required deliberate investments in people, infrastructure, and institutional capacity.

In addition to developing new laboratory and test-range space on the Cornell campus to support our cyber and security research, we welcomed new members of leadership, research, and administration to ensure we are better equipped to sustain complex, multi-year research programs and fulfill our long-term mission goals.

With this foundation in place, our research agenda engaged directly with a set of substantive security and policy challenges. As drones became a dominant feature of international politics and homeland security, our experts briefed NATO, the White House, and international partners on defense, resilience, and emerging threats. Intensifying great power competition over technology sharpened our focus on the Arctic as a site of growing strategic tension and a lens through which to understand the future of global technology and national security policy.

At the same time, we expanded our work on artificial intelligence and financial freedom, launching funded projects on AI governance, algorithmic decision-making in warfare, autonomous weapons, and the use of cryptocurrencies under authoritarian financial controls.

Across these areas, critical infrastructure emerged as a unifying concern, from secure supply chains to next-generation data centers, including Department of Defense-funded research on semiconductor supply chain security and the continued expansion of our Cyber Test Range, as well as cyber civil defense efforts supported by Craig Newmark Philanthropies.

Building on this work, we also invested in the next generation of policy leaders. Over the past year, we expanded teaching, research, and events for our undergraduate, graduate, and veteran communities, developing new courses and mentoring opportunities to prepare students for the policy challenges ahead.

None of this would be possible without the commitment of our fellows, the trust of our partners and funders, and the support of our Brooks School colleagues. Together, we have positioned the Institute to move forward into 2026 with confidence and purpose.

With sincere thanks,

Dr. Sarah Kreps
Director & Founder

Dr. James Patton Rogers
Executive Director

Research Hubs

- Critical Infrastructure
- AI Governance & Defense
- Drones & Robotics
- Geopolitics & Technology
- Cryptocurrency

Critical Infrastructure

This hub builds resilient policy frameworks for the essential digital and physical systems that underpin national security. Our work leverages the Cyber Test Range to identify hardware vulnerabilities, fortifies the Semiconductor Supply Chain through empirical network modeling, and ensures Data Centers are governed by policies that balance responsible development with economic and social impact.

Semiconductor Supply Chain Security

Funded by the Department of Defense this node fortifies the semiconductor ecosystem by analyzing both hardware and software vulnerabilities within the supply chain. It develops an empirical network model using financial data to map supplier webs and pinpoint critical bottlenecks.

Cyber Test Range

Supported by a generous grant from Craig Newmark Philanthropies, the Cyber Test Range actively analyzes cybersecurity threats and vulnerabilities critical for cyber civil defense. Driven by a team of military and veteran researchers, alongside undergraduate research support, the Range pioneers security research and tool development in critical hardware.

Data Centers

This node analyzes the complex policy challenges surrounding data center deployment and operations. We focus on ensuring responsible development through effective regulation, evaluating their economic impact on local and regional economies, and fostering social engagement to benefit host communities and mitigate environmental concerns.

Right: Dr. Sarah Kreps, who co-leads our Semiconductor Supply Chain and Data Center research.

Drones & Robotics

This hub drives research into the future of military drone technologies across domains. Led by Executive Director Dr. James Patton Rogers, Director Dr. Sarah Kreps, Senior Fellow Lt. Col. Paul Lushenko, Project Researcher Elizabeth H. Redmond, and Director's Fellow Maj. John Miller, we investigate Full Spectrum Drone Warfare and its global implications. We provide strategic policy insights to NATO members and partner states. Our publications address the urgent need for new technologies and strategies for addressing emerging drone threats in a world of record drone proliferation.

This year, Director Sarah Kreps and Executive Director James Patton Rogers released 'Drones: What Everyone Needs to Know,' a new book with Oxford University Press. The book traces the evolution of drone technology and explains how unmanned systems across air, land and sea continue to transform modern warfare. Their work has led to briefings at the Department of State, the Pentagon's Joint Staff, the United Nations, Doctors Without Borders, and the World Economic Forum.

Additionally, Non-Resident Senior Fellow Dr. Paul Lushenko and Dr. Jennifer Spindel of the University of New Hampshire conducted a pioneering TPI study 'America's Skies: Public Support for Homeland Counter-Drone Operations,' offering the first experimental data on how Americans view domestic counter-drone activities. Their findings were presented to the National Security Council at the White House.

Full Spectrum Drone Warfare

The Full Spectrum Drone Warfare (FSDW) node analyzes the Third Drone Age, which is defined by the seamless, autonomous integration of drones across air, land, and sea. Developed from a 2024 NATO funded Advanced Research Project, FSDW is an operational concept requiring both a military-civil technology fusion and the doctrinal reform of allied forces to embrace cross-domain machine-teaming.

Right: Director's Fellow John Miller explains his Drone Risk Taxonomy during the TPI open house.

Geopolitics & Technology

Led by Senior Fellow Dr Gregory Falco, and Executive Director Dr James Patton Rogers, this hub provides strategic frameworks used to navigate the global technological competition which defines modern great power rivalry. We focus on identifying regions of future strategic importance, securing high-value infrastructure in contested domains. Our analysis informs specialized methodology—strategic foresight, simulations, and wargaming—which stress test emerging policy to ensure policymakers are equipped to address the escalating challenges of tech-driven geopolitical dominance.

Strategic Simulations

This node utilizes geostrategic simulations and advanced wargaming methodologies to test policy assumptions and reveal emerging risks. We engage directly with global security partners, including the U.S. Congress, NORAD/NORTHCOM, USAFA, NATO partners and the British Royal Navy, to model scenarios and deliver actionable, data-driven insights. Our objective is to move beyond theoretical analysis into practical, strategic decision support.

Arctic Security

The Arctic Security node focuses on strategic competition in the High North, examining the security of critical infrastructure like subsea cables, military basing and ports. We host high-level policy engagement to bridge academic research with global policy needs. Our work delivers tailored insights on navigating this rapidly evolving geopolitical domain.

Top Right: Dr. James Patton Rogers presents an inject during a wargame on arctic security co-hosted by TPI and Loughborough University, funded by the Royal Navy.

AI Governance & Defense

This hub, led by Senior Fellow Dr. Chris Earls and Director Dr. Sarah Kreps, and supported by Senior Fellow Judith Germano, investigates how algorithmic systems reshape the conduct and governance of modern defense and security. Leveraging the interdisciplinary Algorithmic Warfare Research Lab, led by Fellow Joshua Greenburg and Junior Fellows Varija Mehta and Aniket Martins, we examine how AI influences human judgment and institutional accountability in conflict. We also engage leading experts through the Tech Talk speaker series to foster new minds and accelerate the development of ethical, cutting-edge AI policy.

Algorithmic Warfare Research Lab

This interdisciplinary lab studies how algorithmic systems reshape the conduct and governance of war. By uniting expertise from public policy, law, computer science, engineering, philosophy, and sociology, the lab examines how these systems influence human judgment and institutional accountability. The work bridges scholarly research and practical policy needs, producing insights for academics, practitioners, and policymakers through applied research settings.

Tech Talk

TPI brings together AI andd cyber security experts from academia, industry, and government to discuss frontier issues with students and policymakers. The series is dedicated to fostering new minds, interdisciplinary collaboration, and ethical, cutting-edge AI policy development.

AI Governance

Expanding on previous work, Director Dr. Sarah Kreps, Senior Fellow Dr. Doug Kriner, and Fellow Adi Rao focus on frontier policy questions regarding AI regulation, the pace of innovation, and misinformation.

Right: Founder Sarah Kreps in conversation with Nand Mulchandani, the Chief Technology Officer of the CIA .

Cryptocurrencies

This hub, funded by the Human Rights Foundation and the Reynolds Foundation, studies how citizens of authoritarian regimes secure financial freedom. Our work investigates the global use of Bitcoin and stablecoins as tools to counter suppressive financial controls. We leverage this research to create a global adoption index, advising policymakers and industry leaders on effective strategies to secure financial freedom worldwide.

In 2025, Dr. Kreps debuted the Global Bitcoin Adoption Index at the Oslo Freedom Forum, based on 25,000 surveys and 250 interviews. Findings revealed that adoption is driven by financial surveillance, inflation, and need for banking alternatives in regions with unstable financial systems.

Dr. Kreps also presented data on global Bitcoin adoption patterns at the Bitcoin Policy Summit, examining how cryptocurrency usage varies across regions and political systems.

Financial Freedom

This project investigates the mechanisms of cryptocurrency uptake by individuals in authoritarian regimes. Led by Dr. Sarah Kreps, the research employs novel quantitative and qualitative methods across 12 countries to understand specific adoption, motivations, and usage patterns of Bitcoin and stablecoins. This deep, evidence-based research aims to create a global crypto adoption index for policymakers.

Top Right: In April 2025, Junior Fellow Ella Hough delivered a TEDx Cornell talk titled 'In Yourself You Trust,' exploring Bitcoin's potential to provide financial empowerment to Gen Z.

Bottom Right: Director Dr. Sarah Kreps presents the Bitcoin Adoption Index at the Oslo Freedom Forum.

Growth in Numbers

27%

Percent growth in fellows

33 → 42

$4.5M

Total competitive research funding

+246.15%

36

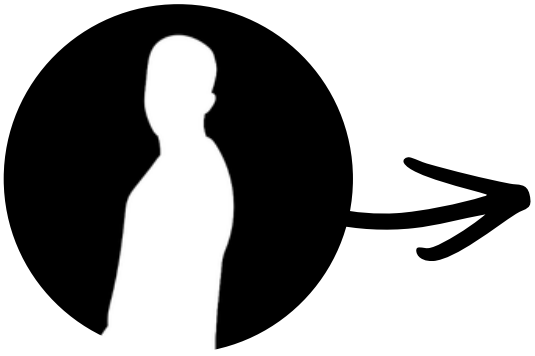
Average event attendance

95%

LinkedIn follower growth

369 → 720

Growth in Numbers



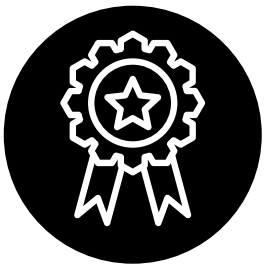
42 members

2: Leadership
17: Senior Fellows
15: Fellows
10: Junior Fellows

9 competitive research grants

10 distinguished speakers

21 events hosted



2 academic prizes

175 policy and press briefings

12 monthly research reports

Award Spotlight

Director Sarah Kreps wins VCNG Cornell Veterans Continuation of Service Award

Above: Sarah Kreps accepts the VCNG 2025 Continuation of Service Award.

The Veterans Colleague Network Group (VCNG) awarded its 2025 Continuation of Service Award to Sarah Kreps, John L. Wetherill Professor in Cornell's Department of Government and the Brooks School of Public Policy, recognizing her outstanding commitment to supporting student veterans. Established in 2022, the award honors veterans who exemplify continued leadership and service within the Cornell community beyond their military careers. An Air Force veteran, Kreps has played a key role in advancing veteran inclusion across campus through mentoring U.S. military officers in doctoral programs, advising the Cornell Law Veterans Association, and supporting undergraduate veterans navigating the transition to academic life under the GI Bill. Her efforts reflect a sustained dedication to advocacy, mentorship, and community-building, strengthening the academic and personal success of veterans at Cornell.

Funding & Grants

Grant and Gift Awarding Institutions 2024-25

U.S. Congress and the Department of Defense (2025-)

A total of $3,000,000 over three years for a project on *Semiconductor Supply Chain Security.*

Reynolds and Human Rights Foundation (2024-)

A collective $1M project to study financial freedom in countries with authoritarian governments.

Fedi Finacial Freedom (2025-)

A gift of $150,000 to support on going research into American Attitudes Regarding Privacy.

Craig Newmark Philanthropies (2024-)

An gift of $140,000 to support TPI's established Cyber Test Range and related cybersecurity research.

Jain Family Institute (2023-2024)

An award of $100,000 to advance research and policy recommendations on digital ethics.

NATO Science for Peace and Security Programme (2024-25)

An award of $65,000 to analyze the development and use of military drone technologies across air, land, and sea.

National Science Foundation (2024-)

A total of $50,000 over three years to create a 'microbe-mineral atlas.'

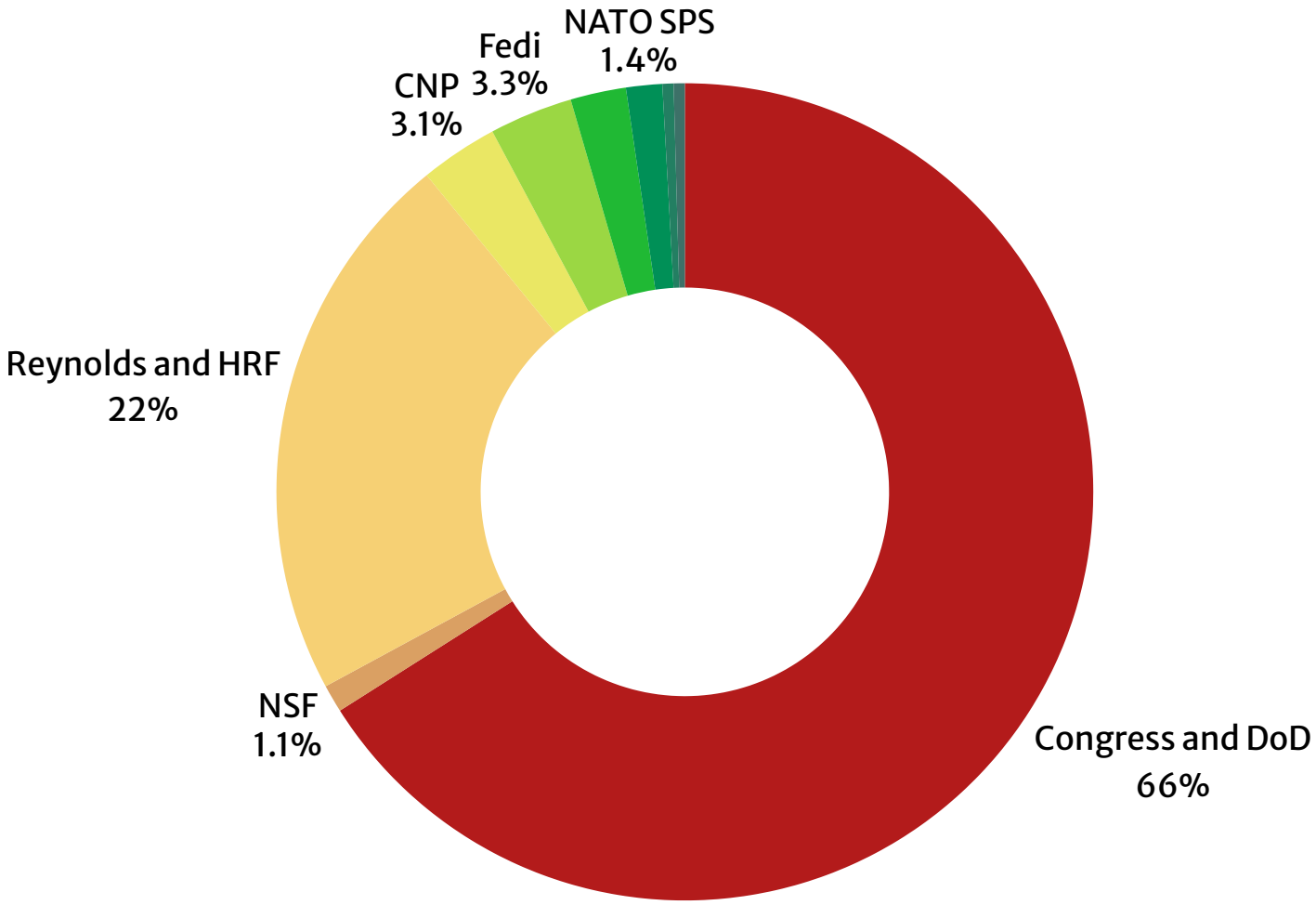
Microsoft AI (2024-25)

A gift of $20,000 towards collaborative research with Microsoft on devising a high-level framework for AI regulation and policy.

Varða (2024-25)

A gift of $20,000 to support TPI's ongoing counter drone research.

Funding & Grants



Research Impact

From the governance of AI, to the weaponization of duel use technologies, human machine-interaction to space policy, our fellows have engaged in cutting-edge research at the intersection of technology policy and national security.

Books & Chapters

Drones: What Everyone Needs to Know, S. Kreps and J. Patton Rogers (2025). Oxford University Press.

De Gruyter Handbook of Drone Warfare, J. Patton Rogers (2024). De Gruyter.

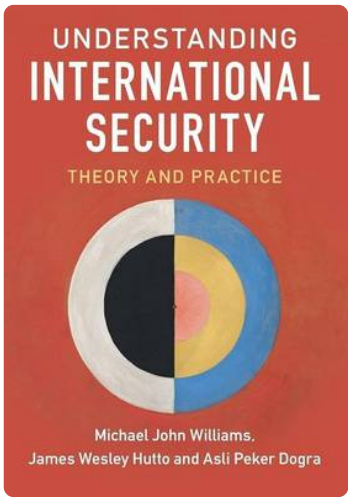
Afghanistan and International Relations, W. Maley, A.Y. Adili and P. Lushenko (2025). Routledge.

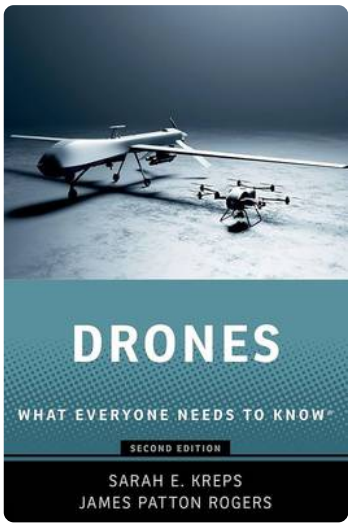
The Legitimacy of Drone Warfare: Evaluating Public Perceptions, P. Lushenko and S. Raman (2025). Routledge.

Understanding International Security: Theory and Practice, M.J. Williams, J. Wesley Hutto and A.P. Dogra (2025). Cambridge University Press.

Bridging the Digital Divide in the U.S.: Planning Innovative State and Local Approaches, Ch. 5 & 6, E.H. Redmond et al. (2025). Routledge.

Target-Oriented Policy: Place-Based Approaches in "Thematic Encyclopedia of Regional Science," E.H. Redmond and J.I. Carruthers. Edward Elgar Publishing.





Research Impact

Our Senior Fellows and Fellows continued to publish original research in journals spanning international security to space policy:

Journal Articles & Reports

The Drone Revolution, J. Wesley Hutto and J. Patton Rogers (2025). Euopean Journal of International Security.

Guarding the Galaxy: Satellite Ransomware and Countermeasures, R. Thummala et al. (2024). IEEE.

Embracing Drone Diversity: Five Challenges to Western Military Adaptation in Drone Warfare, D. Kunertova (2025). Freeman Air & Space Institute, King's College London.

A Piece of Theatre: Investigating How Teachers Design LLM Chatbots to Assist Adolescent Cyberbullying Education, Q. Yang et al. (2024). Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems.

Racial Bias and Public Support for U.S. Drone Strikes, P. Lushenko (2025). Security Studies.

Cyber Scares and Prophylactic Policies: Cross-National Evidence on the Effect of Cyber Attacks on Public Support for Surveillance, A. Arsenault et al. (2024). Journal of Peace Research.

Going to Outer Space with New Space: The Rise and Consequences of Evolving Public-Private Partnerships, A. Melamed, A. Rao, O. de Rohan Willner and S. Kreps (2024). Space Policy.

Secure-by-component: A System-of-systems Design Paradigm for Securing Space Missions, G. Falco et al. (2024). IEEE.

The Political Economy of Reshoring: Evidence from the Semiconductor Industry, R. Clark, S. Kreps and A. Rao (2025). PLOS ONE.

...and more

TPI Publications

Biomining: An Opportunity for U.S. Critical Mineral Independence

Emma Williamson and Abby Reinhold

The Militarization of Outer Space: Legal, Ethical and Strategic Implications of Commercial Interests

Harrison Mellor
Practitioner Series

Dark Skies: Criminal Drone Operations Targeting Prisons

Jack Venables
Practitioner Series

Defending America's Skies: Public Support for Homeland Counter-Drone Operations

Lt. Col. Paul Lushenko, Ph.D and Dr. Jennifer Spindel

Policy & Media Impact

Policy Impact

White House & Congressional Engagement

In March 2025, Dr. Paul Lushenko and Dr. Jennifer Spindel presented counter-drone operations research directly to White House officials, informing federal policy on domestic drone threats.

A TPI team facilitated a geostrategic simulation on *Great Power Competition in the Arctic Ocean* for bipartisan members of Congress: Executive Director Dr. James Patton Rogers, Senior Fellows Lt. Col. Paul Lushenko and Dr. Keith Carter, Project Researcher Elizabeth H. Redmond, and Junior Fellow Kayla Schechter

Arctic Policy Insights

Earlier this summer, Senior Fellows Dr. Falco and Dr. Kennedy-Pipe briefed the Pentagon Joint Staff on the history, security landscape and geopolitics of the Arctic as well as ways to build technological resilience.

World Economic Forum Cyber & Tech Retreat

Executive Director Dr. James Patton Rogers provided the keynote address for this year's retreat on 'Full Spectrum Autonomy: Drones in All Domains' providing policy makers with a vision of future war and emerging threats.

Below: Executive Director Dr. James Patton Rogers participates at the WEF Cyber & Tech Retreat

Policy Impact

AI and Global Bitcoin Policy

Founder and Director Sarah Kreps addressed multiple audiences from the 2025 Bitcoin Policy Summit and the 2025 Oslo Freedom Forum, where she discussed her findings on global Bitcoin adoption, as well as SXSW London, where she provided key insights on the geopolitics of AI and how the world order hangs in the balance.

International Governance

Dr. James Patton Rogers serves as the NATO-Country Director of the Full Spectrum Drone Warfare project, advising NATO on policy responses to drone proliferation across all military domains.

Dr. Gregory Falco serves as NATO Country Director of the Hybrid Space-Submarine Architecture Ensuring INFOSEC of Telecommunications (HEIST) project, aiming to make the internet less vulnerable to attack.

Dr. Jean-François Bélanger attended NATO CA2X2 Forum in Kuwait to advise on wargaming methodologies for Multi Domain Operations implementation.

Student Impact

Junior Fellow Cynthia Tan joined INTERPOL's Academic Cyber Offender Prevention Network and attended the Fifth InterCOP Conference at INTERPOL Headquarters in Lyon.

Top: Director Dr. Sarah Kreps speaks at the SXSW Conference in London.

Bottom: Senior Fellow Dr. Gregory Falco participates in a System Conversation for the Cornell Duffield College of Engineering.

Media Impact

TPI's deep bench of experts is regularly interviewed, cited, and quoted by leading international and national media outlets.

Drawing on rigorous research and policy-relevant expertise, TPI leadership and fellows contribute analysis on emerging security, technology, and governance challenges, helping inform public debate and decision-making across global audiences:

- Executive Director Dr. James Patton Rogers was quoted by the BBC on North Korea's development of more advanced drones.
- Founder & Director Dr. Sarah Kreps was quoted in the New York Times speaking about Elon Musk's use of X to further his goals at the Department of Government Efficiency.
- Senior Fellow David Silbey was quoted in an AP News article about the proposed Russia-Ukraine peace plan.
- Senior Fellow Lauryn Williams wrote an op-ed for The Washington Post on U.S. vulnerabilities to cyberattacks.
- Dr. James Patton Rogers was quoted by the New York Times discussing India and Pakistan's drone arsenals.
- Dr. Gregory Falco and Dr. James Patton Rogers were featured by Business Insider discussing the challenges of Arctic security and drones.
- Dr. James Patton Rogers and Caroline Kennedy-Pipe authored a piece in TIME on Trump's interest in Greenland.
- Dr. Sarah Kreps was quoted by The Hill discussing Anthropic.

Top: Director Dr. Sarah Kreps gives an expert webinar on AI and Geopolitics for the Council on Foreign Relations.

Bottom: Executive Director Dr. James Patton Rogers is interviewed for a DW News (Germany) video segment discussing Ukraine's drone production capability.

Reuters CNN WALL STREET JOURNAL The New York Times Forbes BBC
Bloomberg abc NEWS AP PBS NEWS Los Angeles Times npr

Events

Bringing together experts from across industry, policy, defense, and academia.

TPI Distinguished Speaker Series

The TPI Distinguished Speaker Series brings leading academic researchers and thought leaders from policy, defense, and industry to the Jeb E. Brooks School of Public Policy.

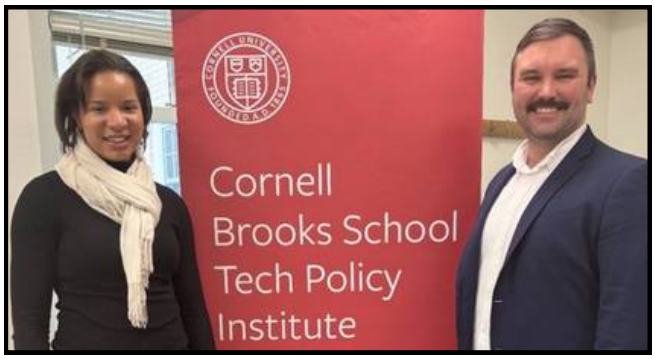
Right: Mike Brenes, Co-Director of the Brady-Johnson Program in Grand Strategy at Yale, presents on 'How Great-Power Competition Threatens Peace and Weakens Democracy.' This event was held in partnership with the Reppy Peace and Conflict Institute.

TPI Talk Series

The TPI Talk Series offers a dynamic and energetic forum for scholars to share their research with the TPI community and collaborate on work-in-progress. We also utilize this format to host career talks with prominent and inspiring individuals.

Right: Senior Fellow Lauryn Williams engaging with the TPI community in a discussion on the future of space system cybersecurity.

Event Highlights



Top: TPI welcomes Col. Chris Ellis, Ph.D, a U.S. army officer and a leading expert on national resilience.
Bottom left: Professor Michael Brenes leading a talk on the democratic and industrial trade-offs of defense policy.
Bottom right: Non-Resident Senior Fellow, Lauryn Williams, leads space policy event.

Event Highlights

Top left: TPI puts on an open house to showcase the year's work.
Top right: U.S. Army War College officers engage with TPI as part of the Eisenhower series.
Bottom left: General Ben Hodges and Dr. Rogers discuss NATO's future.
Bottom right: Anatoly Levshin, postdoctoral researcher at Harvard, discussing how artificial intelligence systems influence great power competition.

Event Highlights

Top left: Dr. Kate Epstein lecturing on her latest book, 'Analog Superpowers.'
Top right: Dr. Jean-François Bélanger discussing European defensive capabilities with Fellows.
Bottom: End of semester celebration with the TPI team.

Course Offerings

In 2024–25, TPI expanded its teaching portfolio to meet fast-moving educational needs at the intersection of technology and security. FWS: Politics of Outer Space introduced first-year students to the political economy and security dynamics of space. TPI also delivered an eCornell professional course, Country Risk Analysis, for working practitioners, translating core tech policy frameworks into concise, skills-first modules available globally.

FWS: Politics of Outer Space
Level: Undergraduate

Global Policy Challenges
Level: Undergraduate & Graduate

Artificial Intelligence: Law, Ethics, and Policy
Level: Undergraduate & Graduate

Contemporary Security Policy
Level: Undergraduate & Graduate

Disruptive and Emerging Technologies
Level: Undergraduate & Graduate

International Security
Level: Graduate

Field Seminar in International Relations
Level: Graduate

International Law and the Use of Force
Level: Juris Doctor & Graduate

AI Law and Policy: A Risk Assessment
Level: Juris Doctor & Graduate

Country Risk Analysis
Level: Certificate (eCornell)

Course Spotlights

Basim Ali

'The course [Global Policy Challenges] was exceptionally valuable in furthering my understanding of geopolitics and strategic decision-making. The combination of practical scenarios and detailed case studies allowed me to engage with real-world challenges rather than just theoretical concepts. By analyzing how different actors respond to complex international issues, I was able to deepen my critical-thinking skills and gain a clearer sense of how international systems operate.'

Cynthia Tan

'I took Disruptive and Emerging Technologies and subsequently this started my interest in tech policy. Through real-world conflict simulations, I had the opportunity to dive deeper into policy issues and substantively with students in distinct backgrounds. Learning from Dr. Rogers, who has a rich background in global affairs, provided a valuable lens to look at these contemporary security issues from.'

Meet Our Fellows

We pride ourselves on our shared ethos of cross-disciplinary and applied research.

James Patton Rogers
Executive Director

Our team comprises 42 fellows drawn from Cornell's renowned research environment and a network of external centers across academia, industry, defense, and policy.

Our experts span disciplines integral to the in-depth analysis of geopolitical, defense, and technology issues: public policy, computer science, mechanical and aerospace engineering, political science, regional science, history, civil and environmental engineering, law, electrical and computer engineering, information science, and chemical and biomolecular engineering. This unique combination of expertise provides the knowledge base required to respond quickly to rapidly evolving technology and security challenges in a dynamic, increasingly contested world.

Senior Fellows are nationally and internationally recognized leaders in their field. They are either tenured members of faculty at Cornell or are respected members our policy, military and industry community.

Fellows are the rising stars of their respective fields. They are either graduate or postgraduate researchers who have a proven track record of producing top-tier research.

Junior Fellows are recruited from Cornell's highly motivated, academically strong, and talented community of undergraduate scholars. They have shown great initiative, achieved excellence in their academic studies, and apply their skills through research and administrative support within TPI.

Senior Fellows

Dr. Doug Kriner

Clinton Rossiter Professor in American Institutions, Cornell University.

Dr. Gustavo Flores-Macías

Dean of the School of Public Policy, University of Maryland.

Dr. Jillian Goldfarb

Cornell Engineering Dean's Fellow and Director of Undergraduate Studies for Archeology.

Dr. Rebecca Slayton

Associate Professor, Department of Science & Technology Studies.

Lauryn Williams

Deputy Director in the Strategic Technologies Program, CSIS.
Non-resident

Dr. Keith Carter

Associate Dean, U.S. Naval War College.
Non-resident

Senior Fellows

Dr. Gregory Falco

Assistant Professor, Cornell University and Director of the Aerospace ADVERSARY Lab.

Dr. David Silbey

Adj. Associate Professor, Director of Teaching and Learning Cornell in Washington.

Dr. Paul Lushenko

Chief Strategist for the Joint Interagency Task Force 401.
Non-resident

Judith Germano

Adjunct Professor of Law, Cornell University Law School.

Dr. Qian Yang

Assistant Professor in Information Science, Cornell University.

Dr. Christopher Earls

J. Preston Levis Professor of Engineering, Cornell University.

Senior Fellows

Dr. Jean-François Bélanger

Assistant Professor, Institute for Military Operations at the Royal Danish Defence College.
Non-resident

Srinjay Bose

Associate Professor of Politics and International Relations, UNSW Sydney.
Non-resident

Dr. J. Wesley Hutto

Professor of Strategy and Security Studies, School of Advanced Air and Space Studies.
Non-resident

Dr. Caroline Kennedy Pipe

Professor of War Studies, Loughborough University.
Non-resident

Jamie Shea CMG

Former Deputy Assistant Secretary General for Emerging Security Challenges, NATO.
Non-resident

Senior Fellow Spotlight

Judith Germano

Adjunct Professor of Law
Cornell Law School

Professor Judith H. Germano is a leading expert in cybersecurity, AI governance, and technology-risk management whose work bridges law, national security, and emerging technologies. She serves as an Adjunct Professor of Law at Cornell Law School and NYU School of Law.

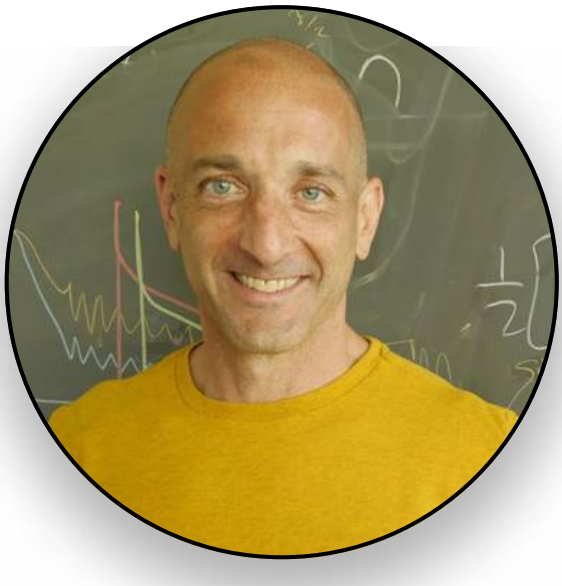
A former federal prosecutor and Chief of Economic Crimes for the U.S. Attorney's Office in New Jersey, Germano has worked extensively with the DOJ, FBI, SEC, DoD, and other federal agencies on cybercrime, financial fraud, and national security matters. Widely regarded as a cybersecurity pioneer, she has created influential programs including one of the first cyber-law conferences, the Cybersecurity Leaders Roundtable, and the Women Leaders in Cybersecurity series.

Germano's scholarship bridges technology policy and law, emphasizing that cybersecurity now centers on protecting people, data, and critical infrastructure as AI becomes embedded in public services and national defense.

She calls for interdisciplinary governance and stronger guardrails, security-by-design, transparency, human oversight, and continuous testing, to manage emerging AI risks. Her work expands the idea of reasonable cybersecurity to include biometrics, encryption, layered defenses, and protections against deepfakes, while arguing that foreseeability must now account for opaque or emergent AI behaviors.

Through her research on cybersecurity, leadership of AI-governance roundtables, and teaching at Cornell and NYU, she advances a framework for navigating rapidly evolving digital and national-security threats.

Senior Fellow Spotlight



Christopher J. Earls

J. Preston Levis Professor
Cornell Engineering

Dr. Earls teaches at the Cornell School of Civil and Environmental Engineering and leads the AI Governance & Defense hub at TPI. He is a faculty member in the Complex Systems and Engineering concentration, interested in Scientific Artificial Intelligence (SciAI) and Inverse Problems.

Under his lead, the AI Governance & Defense hub examines the potential of human-AI partnership to create solutions for complex technological and societal problems. In collaboration with Dr. Sarah Kreps, Earls has authored proposals and white papers on human-AI teaming for policymaking. He also conducts research on the engagement of U.S. adversaries with language models and complex AI systems.

Currently, his research focuses on mechanistic interpretability, which examines how state-of-the-art language models demonstrate behavior they are undesigned for and parallel actions of the biological brain.

Earls' objective is to construct a scientific theory which explains how such models function, using mathematics and physics.

Dr. Earls believes that TPI represents a unique place where people from different disciplines can cooperate to comprehensively analyze critical technological developments affecting politics and society at large.

Fellows

John Miller

Systems Engineering and National Defense
Director's Fellow

Brett Reichert

Military Technology and Conflict Dynamics

Elizabeth H. Redmond

Critical Infrastructure and Hybrid Warfare
Project Researcher

Basim Ali

Fintech Policy, Risk Advisory and Strategy Consulting
Non-resident

Joshua Greenberg

Military Ethics and Information Science

Amelia Arsenault

International Relations, AI and Surveillance

Fellows

Avishai Melamed

Politics of Technology, Science and Diplomacy, International Cooperation and Competition

Kadhim Owayez

Cultural Mediation and Public Policy
Non-resident

Rajiv Thummala

Aerospace Engineering and National Security

Dr. Martin Thorp

War Studies and Organizational Psychology
Non-resident

Dr. Dominika Kunertova

Transatlantic Defense Cooperation, Emerging Tech
Non-resident

Patrick Whitty

National Intelligence, Space Operations and Advanced Technologies
Industry Fellow

Fellows

Dr. Jon McCandless

Defense, Industrial Policy, Semiconductor Research

Adi Rao

National Security, Political Economy, Emerging Technologies
Industry Fellow

Dr. Julie George

International Security, Conflict and Cooperation

Research Spotlight

Brett Reichert

Securing the Semiconductor Supply Chain

Brett Reichert is a TPI Fellow, a U.S. Army Goodpaster Scholar, and PhD student in Public Policy at Cornell University. His research examines how emerging military technology affects conflict dynamics and the use of force.

Semiconductors underpin modern economic competitiveness and military capability, making their supply chains a central arena of global strategic rivalry. As production remains geographically concentrated and technologically complex, disruptions from geopolitical shocks, natural disasters, or targeted cyber intrusions carry outsized risks for critical industries and national security.

Reichert's research examines the contemporary semiconductor supply chain in granular detail, clarifying how it is structured, why that structure matters for U.S. resilience, and where its most acute cybersecurity and systemic vulnerabilities lie. By tracing chokepoints across design, fabrication, packaging, and support digital infrastructure, his work shows how seemingly technical bottlenecks can translate into broad economic and security exposure.

Reichert dedicates his research to the high stakes challenges of supply chain fragility and strategic dependence.

Reichert holds a Master of Policy Management from Georgetown University and a Master of Organizational Leadership from Columbus State. Prior to joining Cornell, Reichert was a Bradley Fellow assigned to the 19th Chairman of the Joint Chiefs of Staff and the 40th Army Chief of Staff.

Research Spotlight

Elizabeth H. Redmond

The Entropic Age and National Security

Elizabeth H. Redmond is a Project Researcher at TPI specializing in hybrid warfare, critical infrastructure security, and the geopolitics of modern conflict. She also serves as a Project Manager and Research Associate at the Portulans Institute, leading work on talent resilience.

Elizabeth H. Redmond is a regional scientist whose research applies the field's interdisciplinary, sociospatial framework to contemporary national security challenges. Drawing on regional science's original emphasis on socio-spatial systems, her work examines how modern conflict and coercion operate through hybrid warfare mechanisms such as disinformation, economic pressure, weaponized migration, and the targeting of critical infrastructure. This perspective allows her to analyze security threats that are spatially diffuse, jurisdictionally fragmented, and often obscured within civilian and economic systems.

Her scholarship, including *The Entropic Age and 21st-Century Regional Science* and *The 17th Sector: The Deathscape as Critical Infrastructure*, explores the hidden and indirect dimensions of national security, with particular attention to infrastructure and spaces that sit outside traditional military domains yet shape resilience, escalation, and governance in crisis and conflict.

Across peer-reviewed chapters, policy reports, and applied case studies, her work bridges regional science, security studies, and technology policy.

During a geostrategic simulation for the 119th Congress at the U.S. Capitol, she served as an expert panelist on hybrid threat scenarios targeting subsea communications cables and undersea critical infrastructure in the High North, with emphasis on escalation dynamics and maritime capabilities.

As TPI's Project Researcher, she supports NATO-relevant research on Full Spectrum Drone Warfare (FSDW) with Dr. James Patton Rogers and leads the development of TPI's Space Hub. Her current research portfolio centers on critical infrastructure resilience—particularly subsea systems—and the implications of hybrid warfare, unmanned systems, and emerging technologies for 21st-century conflict and alliance coordination.

Junior Fellows

Fiona Neibart

Policy Analysis and Management ‘26

Sophia Dasser

Computer Science & Philosophy ‘28

Eeshaan Chaudhuri

Public Policy ‘27

Kayla Schechter

Public Policy ‘27

Danyal Herlaar-Hassan

Public Policy ‘27

Sofiia Kozak

Government ‘25

Junior Fellows

Aniket Martins

Mechanical Engineering ‘27

Varija Mehta

Computer Science ‘27

Sumajja Denysiuk

Government ‘27

Cynthia Tan

Public Policy ‘26

Junior Fellow Spotlight

Kayla Schechter

Brooks School '27

> There is no other place on campus which fuses policy expertise and technological innovation like TPI. It's so exciting to be part of an organization conducting cutting-edge research with a global impact.

Experience Highlight:
Taking Dr. James Patton Rogers' Contemporary Security Policy course and diving deeper into security studies and geopolitics while learning from experts spanning international security, defense and foreign policy.

Kayla Schechter is a junior studying public policy at the Brooks School. On campus, she is a student organizer for Cornell's TEDx conference team, a Democracy Fellow through the Center on Global Democracy and an undergraduate scholar with the Institute of Politics and Global Affairs. At TPI, Kayla leads the publication team, where she edits policy briefs and oversees the interview portfolio. Additionally, she worked with Fellow Avishai Melamed on mapping comparative government investments in research and development between the U.S. and the E.U. and recently participated in the Bipartisan National Security Threat Simulation this summer.

Junior Fellow Spotlight

Aniket Martins

College of Engineering '27

> It is difficult sometimes as an engineering student to understand the role technologies play in the bigger picture of humanity. Being involved in TPI has allowed me to combine my interests in grand strategy and policy with my technical interests as an engineer.

Experience Highlight:
Getting to learn from Nand Mulchandi, the CTO of the CIA, as someone whose career spans both technology and national security.

Aniket Martins is a junior student in the College of Engineering. As a Space Force ROTC student, Aniket is interested in the novelty of how space is evolving as a domain of warfare. He works with Senior Fellow Dr. Gregory Falco and Director's Fellow Maj. John Miller in the Aersopace Adversary Lab where researchers are applying systems engineering techniques to create a taxonomy of drone fault cases in order to mitigate drone failures. Additionally, Aniket works with Fellow Joshua Greenberg on algorithmic war-fighting, specifically looking into the temporality of decision-making.

Alumni

Esteban Lau

Government '25

Anika Kolanu

Information Science '25

Ella Hough

Bitcoin & Cognitive Science '25

Ojasvi Rana

Biomedical Engineering '25

Maxwell Norteman

MPA '25
Director's Fellow

*A note of thanks and acknowledgement to Elizabeth Redmond, Kayla Schechter, and their team for the time and effort that went into this report.


Patton Rogers,
Director, Broo
versity.