



ANNUAL REPORT 2023-2024

Cornell Brooks Public Policy
Tech Policy Institute

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EXECUTIVE SUMMARY

OUR TEAM

Based within the Jeb E. Brooks School of Public Policy, the Brooks Tech Policy Institute (BTPI) is the home of technology policy and national security research at Cornell University. Our multidisciplinary research team is comprised of 33 fellows who work at the highest levels of decision-making – from the White House to the Pentagon, the United Nations to NATO – utilizing academic expertise to advise on critical issues of national and international importance.

OUR MISSION

Our mission is to build robust policies that help unlock the potential of AI & 4IR technologies, while mitigating emerging threats to security. By partnering with industry, government, and international policy leaders, we leverage our research to solve complex national security and tech policy challenges.

OUR ACHIEVEMENTS

This annual report documents 12 months of record growth for BTPI during the academic year 2023/24. It highlights our expanding portfolio of funded research projects on robotics, crypto, AI, 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.

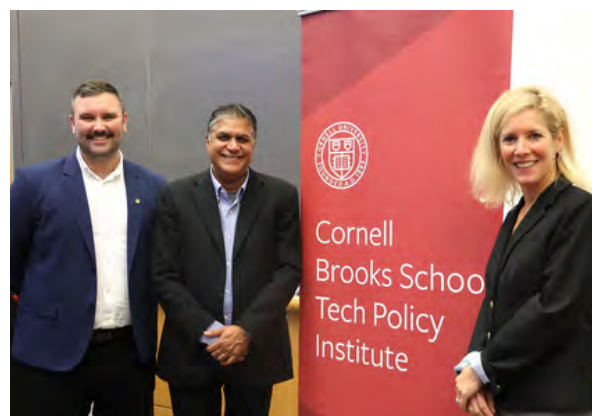
OUR VISION

Building on these firm foundations, 2024/2025 looks to be an even stronger year for BTPI. Generously funded by a \$3 million grant from the U.S Department of Defense, January 2025 will see the establishment of our new 'US Semiconductor Research Hub'. This is the first of our planned research hubs, with four more, focused on 'Drones and Robotics', 'AI Governance', 'Crypto Currencies', and 'Cyber Security', set to launch in 2025.

“

We cannot safely unlock the potential of AI and other emerging technologies without developing well-researched, responsible policies.

- SARAH KREPS



LETTER FROM THE LEADERSHIP

Dear Fellows and Friends of the Cornell Brooks Tech Policy Institute (BTPI),

As we look back on the past year, we are filled with pride for what has been a truly transformative period for BTPI. In 2023/24, we secured new funding that empowered us to expand our research, amplify our policy impact, and foster thought leadership in critical areas of technology policy and national security. We also welcomed an exceptional group of new team members – five new junior fellows, five new fellows, and seven new senior fellows – each of whom bring diverse expertise and a shared passion for shaping tech and security policy. Together, our growing multidisciplinary team is poised to address some of the most pressing challenges of our time, from cryptocurrency and financial freedom to drone technologies and the need for AI governance. It is off the back of this success that our team has delivered increased policy engagement and academic impact. Alongside our 17 events and four new academic modules, our fellows have advised international governmental organisations, NGOs, departments of state, and industry leaders, all while publishing in prestigious research journals, and commenting for leading media outlines (such as CNN, the New York Times, and the Washington Post).

Our success is a testament to the collaboration and commitment of our partners, funders, and dedicated staff. As we move forward, we are excited to build on this momentum, advancing BTPI's mission to unlock the potential of AI & 4IR technologies with robust and responsible policies. 2024/25 is already looking to be an exciting year with future projects on semiconductors, the geopolitics of weapons proliferation, cyber security, quantum technologies, and the civilian and military applications of AI in the pipeline.

As such, thank you all for being a part of our journey and we very much look forward to another impactful year with your continued partnership and support.

With warm regards,



Sarah Kreps
Director and Founder



James Patton Rogers
Executive Director



MEET OUR FELLOWS

Our team is comprised of 33 fellows drawn from Cornell's world-leading research environment and external centres of academic, industry, and policy excellence.

“

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

- JAMES PATTON ROGERS

Our experts are drawn from academic disciplines integral to the in-depth analysis of defense and technology issues. These include public policy, computer science, mechanical and aerospace engineering, political science, history, civil and environmental engineering, law, electrical and computer engineering, information science, and chemical and biomolecular engineering. It is this unique grouping of expertise that provides us with the knowledge base required to react quickly and address rapidly developing technology and security issues in a dynamic and increasingly contested world.

Senior Fellows are nationally and internationally recognised leaders in their field. They are either tenured members of faculty at Cornell or are respected members of 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 BTPI.

SENIOR FELLOWS



Dr. Doug Kriner

Senior Fellow

American Political
Institutions



Dr. Gustavo Flores-Macías

Senior Fellow

Economic Reforms and Public
Safety



Dr. Jillian Goldfarb

Senior Fellow

Sustainable Energy and
Environmental Impact



Dr. Rebecca Slayton

Senior Fellow

Cybersecurity and
Governance



Dr. Ricky Clark

Senior Fellow

International Governance
and Environmental
Politics



Dr. Keith Carter

Non-Resident Fellow

Strategic Competition
and Civil-Military
Relations

SENIOR FELLOWS



Dr. Gregory Falco

Senior Fellow

Space Cybersecurity



Dr. David Silbey

Senior Fellow

20th-Century Warfare and
Insurgency



Dr. Paul Lushenko

**Non-Resident Senior
Fellow**

Drone Warfare and
Legitimacy



Judith Germano

Senior Fellow

Cybersecurity and
Regulatory Risk



Dr. Qian Yang

Senior Fellow

Human-AI Interaction
Design



Dr. Christopher Earls

Senior Fellows

Human-Machine
Intelligence Partnerships

RESEARCH SPOTLIGHT



DR. GREGORY FALCO

Dr. Falco's work focuses on protecting US space systems from hacking, cyberattacks, and directed energy weapons. An assistant professor at the Sibley School of Mechanical and Aerospace Engineering, Dr. Falco directs the Aerospace Adversary Lab which aims to enhance space security. The lab's research focuses on critical infrastructure, satellite systems, artificial intelligence, remote sensing and optical physics. Dr. Falco received his PhD from MIT, where NASA's Jet Propulsion Laboratory funded his doctoral research in Cybersecurity at MIT's Computer Science and Artificial Intelligence Laboratory (CSAIL). He currently serves as the founding chair of the working group creating the Institute of Electrical and Electronics Engineers' Standard for Space System Cybersecurity with over 25 countries involved. He is also NATO country director for HEIST, an SPS-backed program that works on rerouting data from subsea cables (the path for 95% of the world's internet traffic) to satcom networks in the event of underwater attacks.

FELLOWS



Maxwell Norteman

BTPI Directors Fellow

National Security and Human Rights



Brett Reichert

Fellow

Military Technology and Conflict Dynamics



Dr. Lilly Muller

Fellow

Politics, Security, and Technology



Basim Ali

Fellow

Fintech Policy, Risk Advisory and Strategy Consulting



Dr. Jean-François Bélanger

Non-Resident Fellow

Emerging Technologies, Coercive Diplomacy and Conflict Escalation

FELLOWS



Amelia Arsenault

Fellow

International Relations, AI
and Surveillance



Avishai Melamed

Fellow

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



Dr. Jon McCandless

Fellow

Defense, Industrial Policy,
Semiconductor Research



Dr. Julie George

Fellow

International Security,
Conflict and Cooperation



Adi Rao

Industry Fellow

National Security, Political
Economy, Emerging Technologies

RESEARCH SPOTLIGHT

IMPORTANCE OF GALLIUM IN THE SEMI-CONDUCTOR INDUSTRY

Dr. Jon McCandless, a BTPI Fellow, is the founder and CEO of Gallox Semiconductors, the only Gallium Oxide startup in the United States.



Gallium is a crucial element for the semiconductor industry, particularly in the context of the ongoing trade tensions between the US and China. Its importance stems from its use in creating advanced semiconductors like Gallium Nitride (GaN) and Gallium Oxide, which offer significant advantages over traditional silicon-based semiconductors in terms of power efficiency, speed, and thermal management. These materials are vital for emerging technologies such as 5G telecommunications, electric vehicles, and high-efficiency power systems.



INSIGHTS ON ARTIFICIAL INTELLIGENCE, GEOPOLITICS, AND INTERNATIONAL POLITICAL ECONOMY



Amelia Arsenault is a BTPI Fellow and Doctoral candidate within the Department of Government, specializing in AI, surveillance, and ‘smart city’ technologies.

Artificial Intelligence is increasingly shaping global power dynamics and economic competitiveness, becoming a pivotal factor in international political economy. As nations compete for technological supremacy, the integration of AI raises significant governance challenges, particularly regarding the balance between innovation and the protection of civil liberties. The rise of AI-powered surveillance tools has prompted urgent discussions about privacy and human rights, leading to calls for robust international oversight and regulatory frameworks. Initiatives like AI Safety Institutes reflect a growing recognition of the need for global cooperation in AI governance. It is to these challenges that Amelia dedicates her research.

Amelia’s work has been published in the Oxford Handbook of AI Governance, Journal of Peace Research, Canadian Foreign Policy Journal, and Harvard Business Review. She received a Doctoral grant from the Department of National Defense Mobilizing Insights in Defence and Security (MINDS) Scholarship Initiative and the Social Sciences and Humanities Research Council of Canada to support her research.

JUNIOR FELLOWS



Esteban Lau
Arts & Sciences '25



Anika Kolanu
CALS '25



Ella Hough
Arts & Sciences '26



Cynthia Tan
Brooks '26

JUNIOR FELLOWS



Abigail F. Srulevich
Arts & Sciences '26



Lucas Galioğlu
Arts & Sciences '26



Eshaan Chaudhuri
Brooks '27



Kayla Schechter
Brooks '27



Danyal Hyland Hassan
Brooks '27

JUNIOR FELLOW SPOTLIGHT



Pictured: Cynthia Tan at the FBI Headquarters in New York City

BTPI Junior Fellows, Cynthia Tan and Danyal Hyland Hassan have secured funding for their research from the prestigious Laidlaw Leadership and Research Program. Supervised by BTPI Executive Director, James Patton Rogers, and aided by BTPI fellows Jon McCandless, Judith Germano, Doug Kriner, and Amelia Arsenault, Cynthia and Dan were able to engage in policy-focused research over the summer months. Cynthia worked closely with the FBI's Cyber Division in New York and Dan worked on a NATO SPS-funded project alongside conducting cutting-edge research into semiconductors. In 2025, Laidlaw will fund both scholars to conduct international research.

EVENTS

Bringing together experts from across industry, policy and academia



Pictured: Jonathan Stringfield, Vice-President at Activision Blizzard, discussing the political and policy implications of VR & the growing immersive gaming experience.

BTPI Distinguished Speaker Series

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



Pictured: Senior Fellow Judith Germano briefing the BTPI community on her research into deepfakes, deception and AI-enabled cybercrime.

BTPI Talk Series

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



Co-founder of CrowdStrike,
Dmitri Alperovitch.



Senior Director for Technology
Policy at CISCO, Eric Wenger.



Lt Gen (Ret) Ben Hodges, Former
commanding general U.S. Army
Europe.



Professor Ronald Deibert,
Director of Citizen Lab.



Brig Gen Dabas (Indian Army), Col
Perkowski (US Army), & Lt Col
Taylor (USAF).



Dr Rebecca Slayton, Director of
Reppy Peace and Conflict
Institute.



Former Special Assistant to
President Obama on
Cybersecurity Michael Daniel.



NATO funded workshop with
delegates from DIU, Anduril, US
Army & keynote by Prof Tony King.



Teri Erickson Smith, Director,
Microsoft.

HIGHLIGHTS FROM THIS YEAR'S EVENTS

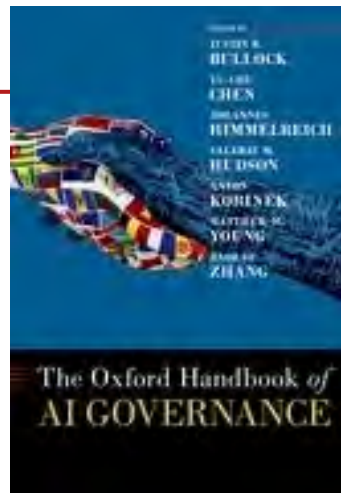
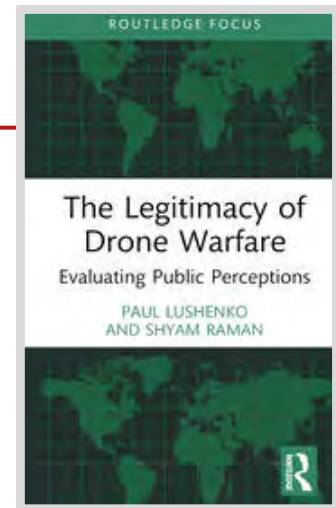
RESEARCH

From the governance of AI, to the weaponization of dual 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.

Below is a selection of publications by the BTPI Team, with a focus on the outlets they published in, and the policy organisations they worked with.

Books

- Precision: A History of American Warfare (2023).
- DeGruyter Handbook on Drone Warfare (2024).
- The Legitimacy of Drone Warfare, (2024).



Journal/Chapter Outlets

- International Journal of
- Human-Computer Interaction
- The Oxford Handbook of AI Governance.
- Security Studies
- Foreign Affairs
- Neural Networks
- Space Policy

Policy Outlets

- United Nations Office of Counter Terrorism
- NATO SPS
- Brookings Institution
- RAND Corporation
- UK Parliament
- Congressional Select Committee on CCP



TEACHING

In 2023/4 BTPI introduced two new academic courses within the Jeb E. Brooks School of Public Policy.

The 3 credit full semester courses can be taken by students from across the university, creating a multidisciplinary, diverse, and vibrant learning environment. All courses are built around an active and problem based pedagogical approach and include applied research, class debates, and regular geo-strategic simulations.

Building off consistent positive student feedback, BTPI will launch two new courses in 2025. These will include Contemporary Security Policy, taught at a UG & PG level, and an online e-Cornell certificate in Country Risk Analysis.



Disruptive and Emerging Technologies

Level: Undergraduate

Convenor: James Patton Rogers



Global Policy Challenges

Level: Postgraduate

Convenor: James Patton Rogers



Contemporary Security Policy & Country Risk Analysis

Forthcoming 2025

ONGOING PROJECTS

INNOVATIONS IN BITCOIN RESEARCH

The Brooks School Tech Policy Institute (BTPI) undertook a \$1M project to study how those living under authoritarian governments secure financial freedom. Led by BTPI Founder and Director Dr. Sarah E. Kreps, the research will use quantitative and qualitative approaches to understand how Bitcoin and stablecoins are used around the world.

Funded by the Human Rights Foundation and Reynolds Foundation, the initiative will create a global adoption index mapping cryptocurrency use across 12 countries—including India, Nigeria, El Salvador, Indonesia, and Turkey. Through surveys and interviews, the research will investigate adoption behaviors on the basis of demographics within each country as well as the perceptions and attitudes towards digital currencies. The project, set to run from 2024 to 2026, aims to guide policymakers, industry leaders, and communities in crafting effective regulatory, educational, and product strategies to enhance financial freedom and inclusion.



“

If you live in a place where the government silences its critics by threatening their assets or where you cannot trust the local banking system, you understand the importance of financial freedom to democracy. We want to study how people in these countries are using Bitcoin and stablecoins in the pursuit of their financial security.

- SARAH KREPS

ONGOING PROJECTS

COLLABORATION WITH NATO



“

We want BTPI to continue to be the home of cutting-edge interdisciplinary discussions like this—collaborations that break down traditional barriers across industry, policy, and academia to support NATO and its allies as drone warfare becomes a central threat. And we want to make sure the best minds available are taking up these issues that have far-reaching implications for all of us.

- JAMES PATTON ROGERS

In April, the Brooks Tech Policy Institute (BTPI) received a \$65,000 grant from the NATO Science for Peace and Security Programme to study the development and use of military drone technologies. This project, a transatlantic partnership between BTPI and CSS led by Patton Rogers and Kunertova, includes a series of advanced research workshops bringing together leading practitioners and experts to analyze factors contributing to the growing use of land, air, and sea drones in the “Third Drone Age.” The ultimate goal is to provide NATO members and partners with strategic insights on developing drone and counter-drone capabilities. The project will run from 2023 to 2025 and will conclude with the publication of the ‘Full Spectrum Drone Warfare’ report, a strategic foresight analysis of emerging drone threats across all domains out to 2040.

GLOBAL IMPACT



BTPI organized policy panels at the 2023 and 2024 **Arctic Circle Assemblies** titled “Opportunities and Challenges in Increasingly an Ice-Free Arctic” and “Science and (In)Security: Dual-Use Technologies in an Opening Arctic.” Chaired by BTPI Executive Director, Dr. James Patton Rogers, these panels brought together leading experts to discuss the complex security environment and evolving issue of dual-use technologies in the Arctic region. Senior Fellow Dr. Gregory Falco & Non Resident Fellow Dr. Jean-François Bélanger were featured on the panel.

This August, Dr. James Patton Rogers and Dominika Kunertova, Senior Researcher for the Center for Security Studies (CSS) at ETH Zurich, brought leading defense experts together for a workshop entitled “Full Spectrum Drone Warfare 2050: Developments in Drone Deployment Across All Domains.” This workshop was part of a larger 'Full Spectrum Drone Warfare' project, sponsored by **NATO Science for Peace and Security Programme** which researches how autonomous, automated, and/or remote-controlled drones will be utilized across air, land, and sea out to 2050.

GLOBAL IMPACT



In September of 2023, the Brooks Technology Policy Institute co-hosted a panel discussion with the **Bitcoin Policy Institute** at the National Press Club in Washington, D.C. entitled “Digital Competition & Strategic Currencies.” The panelists, featuring Dr. Sarah Kreps, discussed the geopolitical role of digital currencies in the context of Western sanctions, US-China competition, and digital authoritarianism. Other panelists included Matthew Pines, the Director of Intelligence at Krebs Stamos Group, and Chris Meserole, the Director of the the Brookings Institution Artificial Intelligence and Emerging Technologies Initiative.

GROWTH IN NUMBERS

65%

PERCENT GROWTH IN FELLOWS
(FROM 20 TO 33)

\$1.3M

TOTAL COMPETITIVE RESEARCH
FUNDING

52

AVERAGE EVENT ATTENDANCE

369

LINKEDIN FOLLOWER GROWTH IN
FIRST SIX MONTHS (NEW SITE)

104%

X/TWITTER FOLLOWER GROWTH
2023/24

THE YEAR IN REVIEW



33 Members



2: Leadership

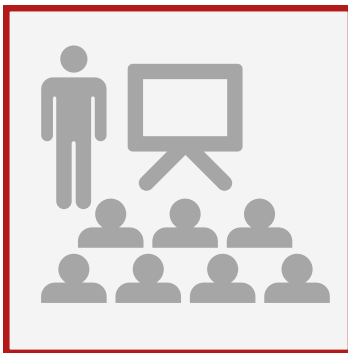
12: Senior Fellows

10: Fellows

9: Junior Fellows



**6 Competitive
Research Grants**



**15 Distinguished
Speakers**



**17 Events
Hosted**



**3 Academic
Prizes**



**73 Policy
and Press
Briefings**

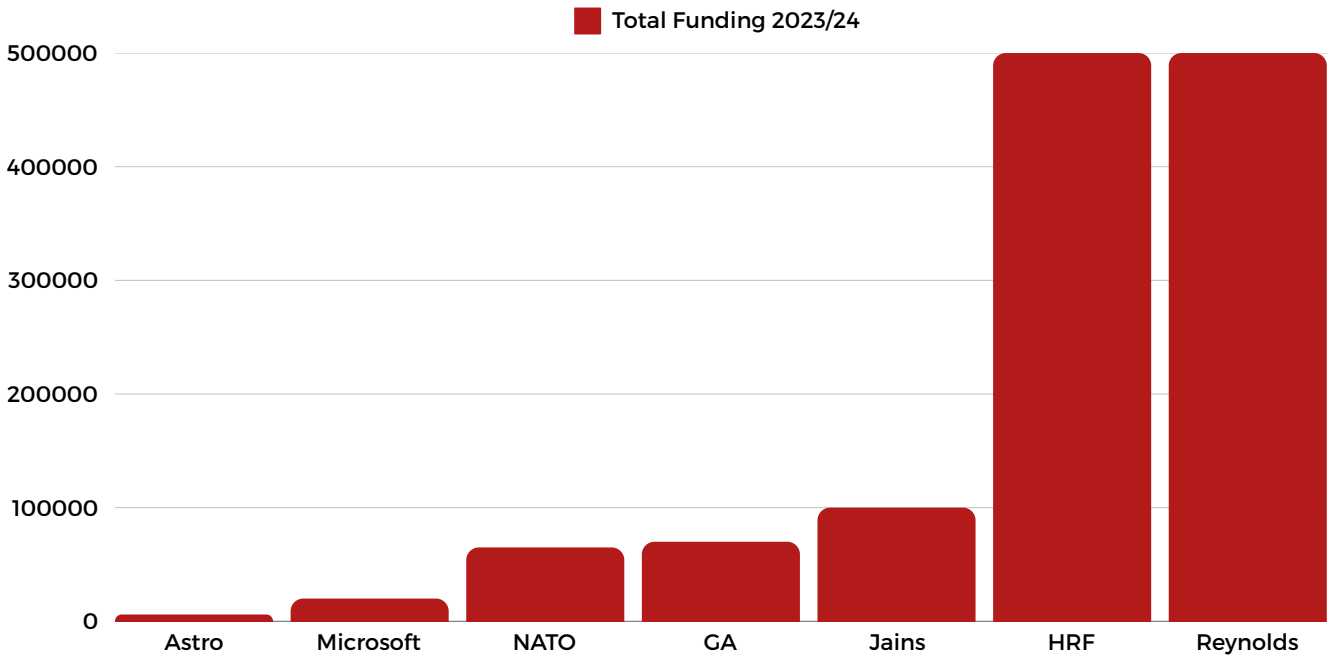


**12 Monthly
Research
Reports**

FUNDING AND GRANTS

GRANT AWARDING INSTITUTIONS 2023-2024

Reynolds and Human Rights Foundation A collective \$1M project to study financial freedom in countries with authoritarian governments, led by BTPI Director Sarah Kreps	Jain Family Institute (2023-2024) \$100,000 to advance research and policy recommendations on digital ethics, including funding for a post-doc researcher.	General Atomics Aeronautical Systems, Incorporated (2023) \$70,000 from GA-ASI to study public opinion for the global trade of drones
NATO Science for Peace and Security Programme \$65,000 to analyze the development and use of military drone technologies across air, land, and sea	Microsoft AI \$20,000 towards collaborative research with Microsoft on devising a high-level framework for AI regulation and policy.	Planetary Defense Scholarship (2023) \$6,000 from the International Academy of Astronautics to study public opinion on planetary defense.





CONTACT US



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[@CornellTPI](https://twitter.com/CornellTPI)