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Research

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If it shapes our world,

WE'RE EXPLORING IT AT GW.

Research

The George Washington University is a global, comprehensive research institution and a member of the [Association of American Universities \(AAU\)](#). From our location in the heart of the nation's capital, GW faculty and their students carry out cutting-edge research and scholarship in diverse fields. We partner with community-based organizations, city leaders, industry and our academic peers in the U.S. and around the world to investigate some of the world's most complex challenges, including climate change, infectious diseases, education and health equity, trustworthy AI, gender-based violence, disinformation, cancer, financial literacy and more.

State-of-the-art research facilities, such as the [nanofabrication and imaging center](#) in our 500,000-sq-ft Science & Engineering Hall or our biosafety labs, help foster important discoveries and innovations.

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GW Research Year in Review

In 2023, the GW community reached new heights of research excellence and impact. In this GW Research Year in Review, we celebrate a number of highlights, from some of our top research stories to new initiatives tackling the STEM workforce,

R1

Carnegie Classification signifying “very high research activity” among Higher Education Institutions

35+

Chartered institutes spurring cross-disciplinary research, as well as dozens of school-based research centers

#1

Highest total federal R&D expenditures of colleges and universities in the nation’s capital

76%

Increase in total federal R&D expenditures since 2009

Research in the Nation’s Capital

Our location in the nation's capital means GW faculty and students have unparalleled access to experts, facilities and collections at some of the world’s pre-eminent research institutions. This includes federal research labs and world-class cultural institutions. With great proximity comes great possibility.



GW & NASA

GW's bilateral agreement with NASA Goddard Space Flight Center expands the university's reach into space exploration. With access to NASA labs, equipment and experts, GW faculty and students are helping advance space missions, including building astrophysics instrumentation for next generation telescopes.

GW & Smithsonian

GW and the Smithsonian Institution have long partnered to advance knowledge, education and cultural enrichment. Not only do GW students have access to a wide range of internships within the Smithsonian complex, we collaborate together on joint research projects such as the [Slave Wrecks Project](#) and an exhibit on the [natural history of the cell phone](#).

Building on Our Strengths

GW is building a strong STEM enterprise and integrating STEM competencies into areas of historic strengths such as public policy, law and international affairs to advance the public good. Our research enterprise is truly comprehensive.



Public Interest Technology:

Part of the Public Interest Technology University Network, GW combines historical strengths in fields like law, policy and international affairs with technology innovation to advance the field of public interest technology research.

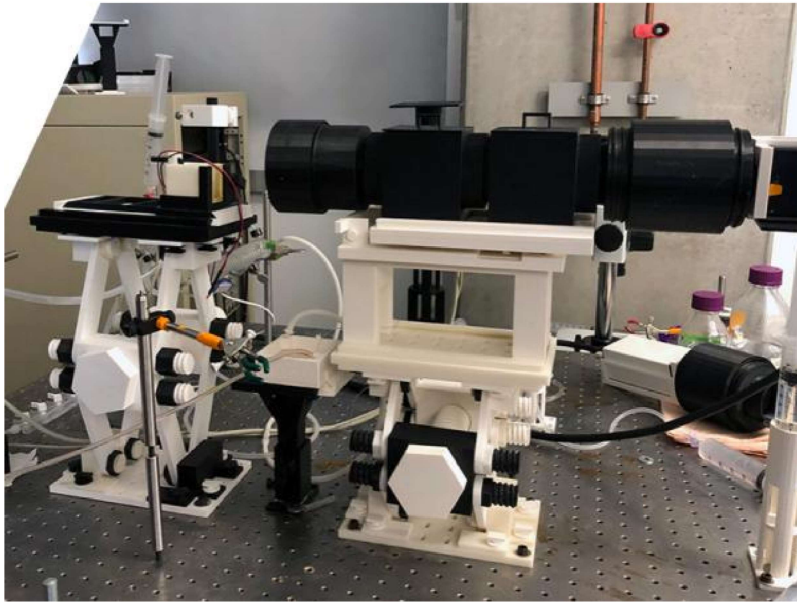
Cybersecurity Law Initiative:

GW's Cybersecurity Law Initiative brings together the law school's nationally recognized strengths with expertise from across the university to evolve the field of cybersecurity law.

Human-Technology Collaboration:

Drawing upon faculty and experts from education, data science, engineering, psychology, business, public health, and medical informatics, this doctoral program takes an interdisciplinary approach to education and research into how collaborations of people and machines shape the future.

GW is training the next generation of scientists and scholars to be leaders in their fields. Undergraduates, graduate students and postdocs conduct pioneering research, publish in prestigious journals, present at academic conferences and innovate around their research. Each year, students have the opportunity to showcase their research at the [GW Research Showcase](#), which highlights the breadth of innovation and creativity conducted at the university across all disciplines.



SEAS Students Design 3D-Printed Optical Mapping System



GW Professors, Students Present Findings on Race and Racism in the Marketplace at Paris Conference



GW Undergraduate Review: The premier, student-run publication of research from undergraduate students

66

“When I first started as an undergrad, I was truly amazed at how easy it was for me to get involved with research. I was able to work on a really cool project developing a new way to pace heart tissue using optogenetics in a way that is more non-invasive. For me to have the potential to have such an impact on the healthcare industry has been truly enlightening and motivating for me as a young research scientist.”

CHRISTIANNE CHUA

Biomedical Engineering

Solving Complex Challenges

At GW, our researchers are working across disciplines to solve complex challenges and address societal inequities and injustices, including through our more than 35+ cross-disciplinary institutes and dozens of school-based centers.



Institute for Data, Democracy & Politics

Systems engineers, physicists, political scientists, public health experts, law experts and more investigate digital media's influence on public dialogue and opinion from the spread of health misinformation and hate speech online to social media users' electoral behavior.



Global Women's Institute

The Global Women's Institute bridges research, education and action to advance gender equality, reduce violence and discrimination against women and girls, and identify effective solutions to improve the lives of women around the world.



Climate & Health Institute

The Climate & Health Institute is conducting policy-relevant and community-oriented research to advance an evidence-based global response by governments and stakeholders to mitigate the climate crisis and improve public health for all.

GW's Research Centers & Institutes

Innovation & Entrepreneurship

GW's innovation ecosystem helps interested faculty and students consider the practical applications of their research and supports them throughout the innovation pipeline, from lean startup training to filing for patents and licensing technologies.

#1 

Largest collegiate entrepreneurship competition in the U.S. (*Times of Entrepreneurship*)

\$21M 

Gross licensing income generated from GW inventions in FY20

250+ 

New ventures created between 2017-2019

79 

GW inventions disclosed in FY20. In addition, 25 patents were issued and 48 patents filed



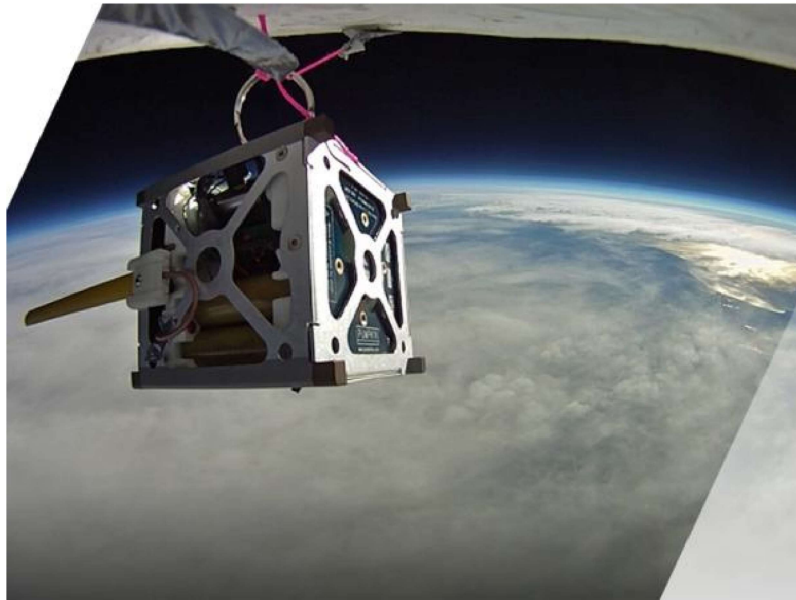
GW Innovation Hub

GW's Office of Innovation and Entrepreneurship leads the university's innovation and entrepreneurial training programs for faculty, students and entrepreneurs. As a partner institution in a \$15M NSF I-Corps Hub serving the mid-Atlantic region, GW trains researchers and technologists on entrepreneurial principles and practices and gives them hands-on experience to explore the



GW New Venture Competition

GW's New Venture Competition is the largest collegiate entrepreneurship competition in the U.S. NVC helps students, faculty, staff and alumni develop, test and launch their own startups, businesses and social ventures through a one-of-a-kind, real-world educational experience. Each year, teams vie for cash and non-cash prizes totaling more than \$500,000.



Technology Transfer at GW

Whether it's [licensing a life-saving drug](#) or [plasma thruster technology](#) to power the next generation of spacecraft, GW's Technology Commercialization Office helps bring new technologies and discoveries to the marketplace. The office serves as a bridge between lab research, companies, entrepreneurs and investors, overseeing all aspects of technology commercialization at GW.

Office of Innovation & Entrepreneurship

Technology Commercialization Office



GW Research Magazine and the quarterly GW Research Newsletter highlights the latest in GW research, discovery and innovation through feature stories, research briefs, interviews with faculty experts and more.

[GW Research Magazine](#)

[GW Research Newsletter](#)



GW's Office of the Vice Provost for Research works alongside our talented faculty to support cutting-edge research and scholarship across all stages of the research lifecycle. OVPR leads a number of initiatives and programs with the strategic aim of growing research capacity and boosting the impact of GW-led discovery and innovation.

Office of the Vice Provost for Research

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