



Institute for
Digital InnovAtion



THE WEEKLY

Dear Colleagues,

We are so excited for the new faculty who have joined Mason. We are holding a meet and greet on September 21 to welcome new faculty members. Come join us to learn about what [Institute for Digital InnovAtion \(IDIA\)](#) offers and how you can connect to its research infrastructure.

RSVP [here](#).

Deadline: **September 15, 2023 at 5:00 PM EST**



Welcome
NEW FACULTY
September 21 | 12-1PM
Johnson Center, G337, Fairfax Campus

Join Us

Come meet the Institute of Digital InnovAtion (IDIA).
Learn about what IDIA offers and how you can connect to its research infrastructure.
Light refreshments will be provided.

M Institute for
Digital InnovAtion

UPCOMING EVENTS

Is Generative AI a Threat to Cybersecurity? - Tech Duels

Technology moves fast! If you're a developer, engineer, architect or technical leader, you're constantly confronting a number of decisions and choices. Or, maybe you're just really passionate about a particular technology. What do you do? Tech Duels will put this to debate. Skilled and opinionated developers will debate on technical topics in a variety of formats, from individuals facing off one one-on-one to teams battling it out. All this while competing for prizes and recognition as the winning debaters.

Event date: **September 14 at 6:00 PM EST.**

Register [here](#).



TECHDUELS IS BACK WITH ONE OF THE HOTTEST TOPICS

Is Generative Ai a Threat to Cybersecurity?

SEPTEMBER 14, 2023 | 6PM-9PM

AT GEORGE MASON UNIVERSITY

Team Con

Team Pro

REGISTER NOW AT
WWW.TECHDUELS.COM



Brian Drake

Federal Chief Technology Officer
at Accrete AI Government



Jared Shepard

Chief Executive Officer at Hypori



Raz Choudhury

Co-Founder at Sam.ai



Ebrima Ceesay

Sr Cybersecurity Director and
Distinguished Engineer at
Capital One

RECEIVE YOUR CPE TRAINING CREDITS FOR ATTENDING

[AWS Skilled Talent Job Fair](#)



Looking for **internships and full-time** cloud roles? Join us at the AWS Skilled Talent Job Fair where you can network with **companies** in the DC-metro area who are looking for you, too!



These employers will be actively recruiting for entry-level tech roles:

- Cloud Support Associate
- Software Developer Engineer
- Data Integration Specialist
- Data Analyst
- IT Support Specialist
- ...and others!

When: Tuesday, 9/19, 1-4p EDT

Where: AWS Arlington Skills Center -
1550 Crystal Drive, Suite G, Arlington,
VA 22202

Register: Below by September 15th



bit.ly/GMU-AWS-919

[NSF-CNSF AI Institute Showcase](#)

National Artificial Intelligence Research Institutes Congressional Showcase



Please join the U.S. National Science Foundation and our federal agency and industry partners as we celebrate and share the work of our 25 National Artificial Intelligence Research Institutes, or AI Institutes, on Capitol Hill.



FEATURED SPEAKER

Senator Martin Heinrich
(D-NM) Co-chair, Senate AI Caucus



WELCOMING REMARKS

Dr. Sethuraman Panchanathan
Director, U.S. National Science Foundation

Tuesday, September 19, 2023

10:00 a.m. – 1:00 p.m. EDT

OPENING REMARKS: 10:30 A.M. - 11:00 A.M.

INTERACTIVE SHOWCASE: 11:00 A.M. - 1:00 P.M.

Hart Senate Office Building, Room 216

[CLICK HERE TO RSVP](#)

FEDERAL AGENCY PARTNERS



NIST



Launched in 2020, the AI Institutes represent a \$500 million investment connecting over 500 funded and collaborative institutions across the U.S. and around the world. Attendees will have the opportunity to learn about real-world applications of AI and see firsthand the technologies that are transforming the AI field and the many ways in which federal investments are being used in AI research, innovation, community partnerships and workforce development.

To learn more about the AI Institutes program, please visit [National AI Research Institutes \(nsf.gov\)](https://www.nsf.gov/nai). Credit: U.S. National Science Foundation.

CONTACT: For questions, please contact D'Elia Wernecke (dwerneck@nsf.gov).



This NSF-sponsored event is made possible, in part, with generous support from the [Coalition for National Science Funding](#).

George Mason University - Blast Off Week



BELONG

START BLAST OFF WEEK WITH ICE CREAM



September 11, 2023 • 2:00 p.m.-4:00 p.m.

NGUYEN ENGINEERING BUILDING ATRIUM AND GRIFFITH'S PLAZA

Mason I-Corps Quantum Cohort at QWC

Mason and the [2023 Quantum World Congress](#) have partnered to bring you the Mason I-Corps Quantum Cohort. Costs for this event, along with registration fees to the Quantum World Congress, will be covered by Mason. The U.S. National Science Foundation's Innovation Corps (I-Corps™) program is an immersive, entrepreneurial training program that facilitates the transformation of invention (or research) into impact.

During this experience, you will learn an evidence-based approach to idea evaluation with regards to market viability. Is the idea desirable? Who is the ideal audience? Where do you even start? This cohort is here to help answer those questions. Centered around customer discovery and Lean Launch methodology, you will determine if your idea solves a need and for whom.



MASON I-CORPS QUANTUM COHORT

THIS PROGRAM TEACHES AN EVIDENCE-BASED APPROACH TO IDEA EVALUATION. IS THE IDEA DESIRABLE? WHO IS THE IDEAL AUDIENCE? WHERE DO YOU EVEN START? THIS COHORT IS HERE TO HELP ANSWER THOSE QUESTIONS.

LOGISTICS

Intro Session (Virtual) - Week of Sept. 18 (TBC)
Session 1 (in-person) - Monday, September 25 (5PM - 7PM ET)
Session 2 (in-person) - Tuesday, September 26 (5PM - 7PM ET)
Session 3 (in-person) - Wednesday, September 27 (5PM - 7PM ET)
Session 4 (Virtual) - (TBC)

Session 1-3 (In-Person) Location:
Capital One Hall
7750 Capital One Tower Rd., Tysons, VA 22102

AGENDA

Mason I-Corps Quantum Cohort offers this Immersive NSF Regional Cohort at the Quantum World Congress 2023 to assist George Mason University innovators that want to take the ideas that have been percolating in their minds and bring them to market.

This program teaches an evidence-based approach to idea evaluation. Is the idea desirable? Who is the ideal audience? Where do you even start? This cohort is here to help answer those questions. Centered around customer discovery and Lean Launch methodology, you will determine if your idea solves a need and for whom.

The program provides a hands-on learning experience on how to begin to successfully nurture a fledgling idea into a more viable and implementable potential solution that benefits society.

This program is not just about the content; it focuses on talking to customers and testing hypotheses about the value behind your idea and the potential venture you could launch in the future to provide your solution to the market.

INSTRUCTORS

Charleson Bell, I-Corps Hub Director, Mid-South Innovation Hub at Vanderbilt University and National I-Corps Instructor

Shannon Ware, Lead I-Corps Instructor, Mid-South Innovation Hub at Vanderbilt University

WHO CAN ATTEND?

George Mason University's Faculty, Researchers, Postdocs, Students and Staff in Quantum research.

COST/SESSION

This program is free of charge for Mason's affiliated team(s). Registration fee for QWC is covered.

QWC REGISTRATION

First, register for the Quantum cohort and then contact **Sampson Addo (Mason I-Corps Program Manager)** at saddo2@gmu.edu to register for the QWC 2023.

ABOUT QUANTUM WORLD CONGRESS

Quantum World Congress is the premier global quantum conference - connecting the world's quantum ecosystem, including the brightest researchers, innovators, technology developers, legislators, and industry experts - to accelerate the value of the growing quantum industry. Register now for Quantum World Congress at Capital One Hall in Tysons, Virginia, from September 26th through 28th. Learn more at quantumworldcongress.com.

Click the following link or scan the QR code to register for Mason I-Corps Quantum Cohort:
<https://airtable.com/appFeNGaD0hWQIWEj/shrlgplc7WR3GkjYg>



**Register
now.**

PRESENTED BY



Artificial Intelligence for Scientific Discovery Workshop

This workshop explores the future of AI in terms of its role as an autonomous researcher performing scientific discovery. This includes where AI stands, where it needs to go, and which disciplines should have increased investment for the utilization of AI scientists. Sessions for the workshop will include what it means to be an AI scientist, societal aspects of AI, hurdles to achieve AI-independent scientific discovery, and steps in the

direction of AI grand challenges. The workshop will also explore the ethical aspects and potential pitfalls that loom for AI scientists throughout.

Event date: **October 12-13, 2023**

More information [here](#).

Mason Libraries - Artificial Intelligence Salon Series

Join Mason Libraries for a series of scholarly discussions regarding artificial intelligence (AI) technologies such as ChatGPT and their effects on higher education and society. They will facilitate open dialog for learning more about this rapidly expanding topic and what it means for Mason and the global community.

AI Salon Series 2023

- *AI in Business and Government*
 - September 21st, 4pm-5pm
- *AI, Ethics, and Academic Integrity*
 - October 9th, 4pm-5pm
- *AI in the Arts and Humanities*
 - November 15th, 4pm-5pm
- *AI in the Social Sciences and STEM*
 - December 6th, 4pm-5pm

All salons will be moderated by
Mason librarians and held in the
Fenwick Library Main Reading Room (Level 2).



For more information, contact Dr. Heidi Blackburn, hblackbu@gmu.edu

How Attention in 2017 Got Us ChatGPT Talk

The 2017 “Attention is All You Need” paper introduced the transformer architecture. In the past six years, interest in the transformer architecture has only grown, and now the capabilities of GPT4 are the subject of frenzied media attention in the popular press as well as research groups at OpenAI, Microsoft, HuggingFace, Argilla, Google, Facebook, and others. The emergence of the transformer architecture heralded the current era of large language models (LLMs). But how do they work? Should you be intimidated by their inner workings? Are they magic? Are they really artificial general intelligence (AGI)? What does each component do?

This talk will briefly walk through each component visually and make them understandable in historical perspective no matter the level of expertise in machine learning (ML). Dr. Kaufhold will make complex Transformer concepts accessible to a broad audience while also incorporating the more relevant themes of deep learning of interest to more advanced ML engineers — the themes that led to its dominance.

Find **Dr. John Kaufhold's** bio [here](#).

Venue: **Mason Square (Van Metre Hall)**

Event date: **September 20, 2023 at 6:00 PM EST**

Register [here](#).

2023 DataTribe Challenge

The DataTribe Challenge is a unique annual competition where startups have a chance at receiving up to \$2 million in seed capital. The Challenge brings together the best entrepreneurs in the world looking to disrupt cybersecurity and data science. DataTribe selects three finalists that split \$20,000 in prize money and one winner that could receive up to \$2 million in seed capital.

Applications deadline: **September 23, 2023**

More information available [here](#).

A promotional banner for the DataTribe Challenge 2023. The background is dark blue with a glowing network pattern. On the left, the text 'DATATRIBE CHALLENGE 2023' is displayed in white and blue. In the center, the text 'WHAT COULD YOUR COMPANY DO WITH \$2 MILLION?' is written in white and large blue font. Below this, it says 'FIND OUT NOW:' followed by a white box containing the URL 'www.datatribe.com/challenge'. On the right, the DataTribe logo (a stylized 'D' with a triangle) and the word 'DATATRIBE' are shown in white.

DATATRIBE CHALLENGE 2023

WHAT COULD YOUR COMPANY DO WITH
\$2 MILLION?

FIND OUT NOW: www.datatribe.com/challenge

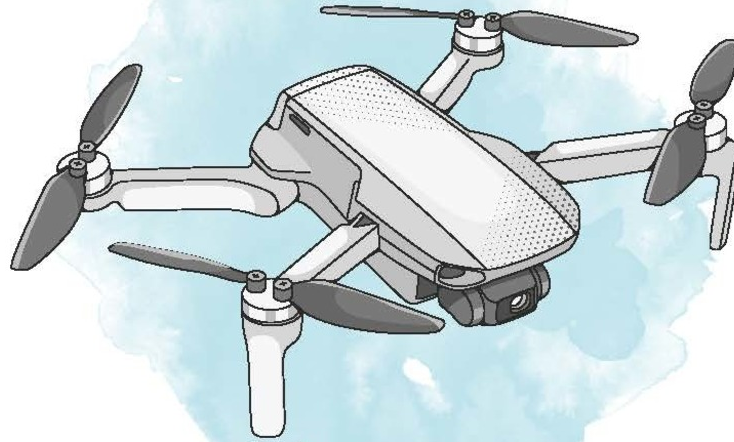
DATATRIBE

Drone Prototyping Short Course Fall 2023



MASON INNOVATION EXCHANGE

Drone Prototyping Short Course Fall 2023



Do you like problem solving, learning new technology, and making things? Join our Drone Prototyping Workshop series! You will be working in small teams to design, prototype, and pitch a solution to a real-world challenge given by industry partners.

We are looking for enthusiastic participants from every major!

Spots are limited- apply today!

9 week course

Thursdays starting September 21

4:30-6:30pm

Horizon Hall 1408

Applications close September 15th

Apply Now at www.mix.gmu.edu/drone

VARIOUS OPPORTUNITIES

Postdoctoral Research Fellowships in Biology

Join the Division of Molecular and Cellular Biosciences (MCB) at the National Science Foundation for our next virtual office hour. The topic will be Postdoctoral Research Fellowships in Biology (PRFB; NSF 22-

623). Program Directors will be present to address your questions.

Event date: **September 13 at 2:00PM EST.**

Register [here](#).

National Science Foundation STEM Education

The Research Experiences for Undergraduates (REU) program supports active research participation by undergraduate students in any of the areas of research funded by the National Science Foundation. REU projects involve students in meaningful ways in ongoing research programs or in research projects specifically designed for the REU program.



National Science Foundation

Proposal deadline: **September 27, 2023**

More information available [here](#).

CCI OPPORTUNITIES

CCI Hub Call for Proposals - Supply Chain Cybersecurity

CCI seeks proposals for seed research grants that advance the state of the art of Supply Chain Cybersecurity by building capacity and increasing competitiveness.

Proposal deadline: **September 25, 2023 by 5:00 PM EST**

More information available [here](#).

CCI Paid cybersecurity Internship opportunity

The objective of this experiential learning opportunity is to encourage students to gain work experience in a tech startup and to familiarize themselves with the world of cyber entrepreneurship, with the hope that one day perhaps, the students can launch their own tech company.

Proposal deadline: **September 8, 2023**

More information and registration available [here](#).

CCI Meet Up to Startup at GMU

CCI faculty and student founders are invited to connect and network with leading Virginia venture capitalists at George Mason University's Horizon Hall. This networking opportunity provides students and faculty to share their research, receive feedback, meet, and discover what is top of mind from investors.

Venue: **MIX Room# 2107**

Event Date: **October 18, 2023, from 4:00 PM to 7:00 PM EST**

Register [here](#).



AWARDS

Congratulations to:

Pfoser, Dieter from the [College of Science](#) and Co-PIs **Kavak, Hamdi** and **Anderson, Taylor M** for receiving the US Department of the Interior grant on *HAYSTAC – METROPOL*.

Shishika, Daigo from the [College of Engineering and Computing](#) for receiving the Air Force Research Laboratory grant on *Rethinking Assignment-based Methods in Multi-agent Differential Games*.

Odstreil, Dusan from the [College of Science](#) for receiving the National Aeronautics and Space Administration grant on *A Holistic Heliospheric Solar Cycle Approach to Heliospheric Evolution from UCSD 3-D Reconstructions Using Thomson Scattering Data from the STEREO HI, and SMEI Imagery, and Interplanetary Scintillation Observations*.

Snyder, Mark Huntington from the [College of Engineering and Computing](#) for receiving the Northeastern University grant on *NU/Inclusive Computing - Revision – 1*.

FUNDING OPPORTUNITIES

[National Science Foundation - Advanced Technological Education \(ATE\)](#)

Deadline: **October 5, 2023**

[National Science Foundation - EDU Core Research \(ECR:Core\)](#)

Deadline: **October 5, 2023**

[National Science Foundation - Major Research Instrumentation](#)

Deadline: **November 15, 2023**

IDIA AFFILIATION

Did you know that, as an IDIA faculty affiliate, you are eligible to:

Compete for [internally funded IDIA projects](#)

Receive support for [IDIA-relevant events](#)

Become part of the [dynamic multidisciplinary faculty network](#) focused on digital techniques and technologies to advance fields as diverse as finance, education, built infrastructure, science, economics, agriculture, health, transportation, entertainment, national security, and social justice.

There is no financial burden to you or your departments for affiliation with the institute. Participation in IDIA does not prevent its members from being associated with other university centers. If you are not already affiliated, we encourage you to submit your profile [here](#).

SHARE WITH US

We are eager to hear from you! As we work with your colleges to compile updates on digital innovation-related research activities at Mason, we would love to hear about your research activities, awards, and recent publications. Please share any successes, concerns, or ideas with us at idia2@gmu.edu



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