

# Your Path to Tech

## Friday - August 18, 2023

# Agenda

08:00 AM – 08:30 AM	Arrivals/Sign-in/Pre-Survey
08:30 AM – 09:00 AM	Breakfast
09:00 AM – 09:30 AM	Ice Breaker – The Dancing Telephone Game
09:30 AM – 10:00 AM	Keynote Speaker – <b>Dr. Mary (Missy) Cummings</b> International expert and leader in the field of autonomous systems Professor @GMU Director @Mason Autonomy and Robotics Center (MARC)
10:00 AM – 11:00 AM	Curriculum Scavenger Hunt with CS/ACS/IST Advisors <b>Linda Lane Sheridan</b> , Undergraduate Academic Advisor @CS/ACS <b>Joshua Fletcher</b> , Undergraduate Academic Advisor @CS/ACS <b>Veronica Bonilla</b> , Undergraduate Academic Advisor @IST <b>Laura Rhodes</b> , Undergraduate Academic Advisor @IST
11:00 AM – 11:10 AM	Break
11:10 AM – 12:10 PM	Industry Panel Discussion <b>‘Her Path to Tech’</b> <b>Cassie Rothrauff</b> , Sr. Computer Engineer @Booz Allen Hamilton [Moderator] <b>Elizabeth Hall</b> , Senior Beta Program Manager @Appian <b>Dharitri Banerjee</b> , Sr. Director @Brilliant Corporation <b>Lauren Hempstead</b> , Insider Threat Analyst @Microsoft <b>Deeba Murugesan</b> , Agile Development Director @Freddie Mac <b>Vera Lyalko</b> , Senior Software Developer @Bixal
12:10 PM – 01:10 PM	Lunch
01:10 PM – 02:10 PM	Mason Alumni Panel Discussion <b>‘From GMU to Infinity and Beyond’</b> <b>Kylie M. Amison</b> , Application Security Analyst @NowSecure [Moderator] <b>Lakshmi Chetana GB</b> , Software Engineer and GTA @GMU <b>Elijah Bass</b> , Cybersecurity Engineer and PhD Student @GMU <b>Shreya Bhatia</b> , Software Development Engineer II @AWS
02:10 PM – 02:20 PM	Break
02:20 PM – 04:20 PM	Workshop Break-out Sessions: <b>CS Workshop: ‘A Hands-on Introduction to the AI Pipeline’</b> Led By: <b>Dr. Antonis Anastasopoulos</b> <hr/> <b>IT Workshop: ‘Cybersecurity and Digital Forensics Analytics’</b> Led By: <b>Elijah Bass and Humaira Akhtari</b>
04:20 PM – 04:30 PM	Break
04:30 PM – 05:00 PM	Mentor Assignment/Post-Event Survey



## Workshop Details and Presenters

### IT Workshop: 'Cybersecurity and Digital Forensics Analytics'

**Description:**

**Data Exfiltration:** Students will learn how Steganography, the concealment of information within computer files, is utilized and detected in network data exfiltration. Participants will use open-source tools to embed and detect hidden information in images.

**File Integrity and Malicious File Detection:** Students will learn file hashing to verify that a file has not been corrupted or tampered with. In addition, participants will learn how known malicious files are discovered by comparing file hashes.

**Deleted File Reconstruction:** Students will learn how nefarious actors attempt to cover their tracks by deleting malicious files after a network intrusion. Participants will learn the basics of filesystems structures and open-source tools to recover deleted files.

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### CS Workshop: 'A Hands-on Introduction to the AI Pipeline'

**Description:**

We will discuss the process that goes into building an AI-based solution to a problem using neural language models, from problem conception to data annotation and model training and deployment.

#### Dr. Antonis Anastasopoulos (He/Him)



Antonios Anastasopoulos is an Assistant Professor in Computer Science at George Mason University. He received his PhD in Computer Science from the University of Notre Dame with a dissertation

on "NLP for Endangered Languages Documentation" and then did a postdoc at Languages Technologies Institute at Carnegie Mellon University. His research is on natural language processing with a focus on low-resource settings, endangered languages, and cross-lingual learning, and is currently funded by the National Science Foundation, the National Endowment for the Humanities, the DoD, Google, Amazon, and Meta.

#### Humaira Akhtari (She/Her)



Humaira Akhtari is a professor in the Department of Information Science and Technology at George Mason University. She has been a part of the faculty since 2016. Her major teaching interests include Discrete Structures, Problem-solving, and

Programming. Humaira Akhtari coordinates the Discrete Structures Course in the Department of Information Sciences and Technology. Prior to joining Mason, she was an adjunct professor at Northern Virginia Community Colleges for several years, where she gained valuable experience in the field of Computer Science. She holds a Master's degree in Computer Science from the Technical University of Berlin Germany, and a Bachelor's degree from Kabul University of Afghanistan. Currently, she serves as the assistant chair for UG and Graduate studies at Mason, where she is actively involved in shaping the academic experience for students.

Furthermore, she is leading the Break Through Tech efforts on behalf of the IST department. Teaching is her passion, and she is always thriving to contribute to the academic growth of students and to make a positive impact on their lives.

#### Elijah Bass (He/Him)



Elijah Bass has over 27 years of experience in developing secure telecommunications and information systems. In his current role as a Cyber Engineering Fellow, his duties involve assessing and generating

novel approaches to emerging cybersecurity threats. Elijah earned his Bachelor of Science in Electrical Engineering at the University of Kentucky; Master of Science in Electrical Engineering, Master of Science in Computer Science, and Master of Business Administration from Drexel University in Philadelphia; and Master of Science in Applied Information Technology/Cybersecurity and Master of Science in Digital Forensics from George Mason University (GMU). He is currently a second year Information Sciences and Technology PhD student at George Mason University. His current research interest is in the automation of information access control decisions and determining information classification by leveraging Natural Language Processing techniques. Elijah lives in Gainesville Virginia with his wife and two sons. He enjoys attending baseball games and traveling around the world in his spare time.



## Event Speaker and Panelists

### Dr. Mary (Missy) Cummings (She/Her)



Professor Mary (Missy) Cummings received her B.S. in Mathematics from the US Naval Academy in 1988, her

M.S. in Space Systems Engineering from the Naval Postgraduate School in 1994, and her Ph.D. in Systems Engineering from the University of Virginia in 2004. A naval officer and military pilot from 1988-1999, she was one of the U.S. Navy's first female fighter pilots. She is a Professor in the George Mason University College of Engineering and Computing and is the director of the Mason Autonomy and Robotics Center (MARC). She is an American Institute of Aeronautics and Astronautics (AIAA) Fellow, and recently served as the senior safety advisor to the National Highway Traffic Safety Administration. Her research interests include the application of artificial intelligence in safety-critical systems, assured autonomy, human-systems engineering, and the ethical and social impact of technology.

### Elizabeth Hall (She/Her)



Elizabeth received her B.S. in Psychology from the College of William &

Mary in 2013 and her M.S. in Educational Psychology from George Mason University in 2015. After working in educational research for a few years, she pivoted to the tech space and became an associate product manager at Gartner, where she helped roll out a proprietary survey platform to measure employee engagement. Next, she joined Miller Heiman Group (now Korn Ferry), where she helped digitize the business by bringing their world-class sales training into a Salesforce-integrated product. In June 2020, she became a senior product manager at Appian Corporation, and this past spring, she became the lead of Appian's beta programs.

### Cassie Rothrauff (She/Her)



Cassie Rothrauff is a Sr. Computer Engineer supporting law enforcement for Booz Allen's Civil

Sector. As a lifetime dancer and former cheerleader, Cassie leverages her spirited nature to her passions. She brings a sparkling light to her specialty; low-level programming on embedded operating systems developing one-of-a-kind forensic tools. And in her free time, you can see Cassie coaching on the robotics field for FIRST, mentoring in GMU's GUILD/Sprinternships programs, participate in ground-breaking outreach opportunities to spread the word of STEM and empower her students to be future game changers!! This year, she's honored her peers have nominated her for the *Society of Women Engineers (SWE) SPARK Award* and received the Booz Allen's *Volunteer of the Year Award 2023* from the nonprofit, Multiplying Good, receiving a Bronze Jefferson Award Medallion.



**Dharitri Banerjee**  
(She/Her)



Dharitri Banerjee is a Seasoned IT Executive with over 25 years of experience

and a successful track record managing and developing digital platforms and IT initiatives across the Federal Government. As a Sr Director at Brilliant, she is responsible for providing Technology Solutions and Program Delivery towards enabling a 'friction free' Government through Digital Transformations. With a deep meaning and commitment to our Government's missions, she applies her love of technology, people, and processes each day, to successfully execute IT modernization and Digitalization projects. In her spare time, Dharitri enjoys communing with nature and thus goes on bike rides and nature hikes, while keeping up her Yoga practice. Dharitri received her Master of Science Degree in Management Information Systems from the University of Houston, Texas, a Bachelor's of Science (Honors) in Chemistry and a Masters of Science in Chemistry from Delhi University, New Delhi. Dharitri is Six Sigma certified (yellow belt), a PMP certified professional and a SaFe Agile Practitioner.

**Shreya Bhatia**  
(She/Her)



I started my BS CS at George Mason University in 2016 and graduated Fall of 2019. Since I have been graduated, I have been working full time as a

Software Engineer at Amazon Web Services while working part time on my MS CS at GMU. I specialize in growing large scale distributed systems while improving their durability and availability for customers.

**Kylie M Amison**  
(She/Her)



Born and raised in Hamilton, New Jersey, I am now residing in the DC metropolitan area after recently becoming a George Mason University

alum. While at GMU, I obtained my Bachelor of Science degree in Cybersecurity Engineering with a minor in intelligence analysis. I recently had the honor of winning Cyber Defense Magazine's Young Women in Cyber Award, and with that, am now a published technical journalist. In addition, I currently work full time at a leading mobile security company, NowSecure, as an Application Security Analyst. In addition, I also work part time with startup company, Auspex Labs, as a Cybersecurity Software Developer, where I am the main developer on DiplomacyTM, a geopolitical threat intelligence engine that combines a broad assortment of metrics and NLP sentiment analysis to calculate nuanced and real-time threat scores per nation state. Working at Auspex has been pivotal in my knowledge in creating secure software and has given me the opportunity to not only develop my first product, but to also start my own startup company. Which brings me to my final endeavor, I am presently co-founder and CTO of Xenophon Analytics, a company that grew from shared interests in international political affairs and my project of building the geopolitical risk engine. When I'm not researching or coding, you can find me watching anime, reading Sci Fi, painting, or playing with my dogs! My ultimate goal in life is to learn every single day, and I'm proud to be doing just that.

**Lakshmi Chetana Gomaram  
Bikshapathireddy**  
(She/Her)



Lakshmi Chetana Gomaram Bikshapathireddy is a Computer Science professional with a Master's degree in Computer Science from George Mason

University, she has a strong background in application engineering, web design, and software quality control. As a Graduate Teaching Assistant at George Mason University, she taught Python programming and supported students in their coursework. She also contributed as a Graduate Research Assistant on NASA's Geoweaver Project, where she worked on the development of a web-based system. With prior experience as a Software Engineer and proficiency in full-stack development, Lakshmi has a track record of delivering successful projects, including the development of business intelligence tools and data visualization applications. In addition to her technical expertise, she has experience teaching German as a foreign language.



## Lauren Hempstead (She/Her)



Lauren graduated from George Mason University with a Psychology degree in 2003 and immediately joined the

Central Intelligence Agency (CIA) as an Intelligence Analyst working on Counterterrorism missions. Lauren was selected to be a member of the Usama Bin Laden Task Force within the CIA's Counterterrorism Center, where she conducted forensic analysis of digital media seized from Bin Laden's compound. Later, she pivoted to a role focused on Counterintelligence and Counter-Espionage, where she developed her love for the Insider Threat mission. Today, Lauren supports the Insider Threat Program at Microsoft where she identifies and mitigates intentional/unintentional threats to the company from employees, by leveraging both Machine Learning and threshold-based detections. Lauren was the first (and only) in her family to graduate from college, and is eager to take her three pre-teens on a GMU campus tour one day!

## Deeba Murugesan (She/Her)



As an Agile Development Director, Deeba is committed to discovering creative and effective solutions for

delivering results. She has an established track record of leading large-scale programs utilizing the scaled agile framework. Her expertise in cross-organizational team and project leadership drives success, and her passion for hiring the right talent and mentoring individuals in their professional growth fosters a supportive and high-achieving team. She started her career as a Java Developer and later pivoted to management and leadership roles. In her free time she enjoys plant-based cooking, volunteering, reading, and watching tv shows.

## Vera Lyalko (She/Her)



Vera Lyalko is an award-winning programmer and senior software developer at Bixal. She is recognized for

her outstanding contributions in the industry, receiving the prestigious "2016 DCFemTech Power Women Programmers & Designers" award. At Bixal, Vera spearheads the development and maintenance of multiple Drupal projects, expertly handling complex migrations and enhancing functionality and user experience. With over 20 years of experience, her versatile skill set includes .NET, PHP, Drupal, MySQL, Moodle LMS customization, and custom SQL reports. Vera has led web projects for renowned Federal agencies, showcasing her attention to detail and commitment to excellence. She holds a master's degree in Control Systems Engineering and is fluent in English, Ukrainian, and Russian. Beyond her professional pursuits, Vera manages the "Help Citizens of Ukraine" fund, providing humanitarian aid to Ukraine. She also actively participates in theater groups, enjoys an active lifestyle, and cherishes time with her children. Vera Lyalko embodies technical brilliance, philanthropy, and a zest for life, leaving a lasting impact in the world of programming and beyond.



## Computer Science/Applied Computer Science/Information Sciences & Technology Student Advisors

### Joshua Fletcher (He/Him)



Josh Fletcher advises undergraduate students on all matters dealing

with the *BS Applied Computer Science* (BS ACS), the *BS Computer Science* (BS CS), the *Computer Science Minor*, the *Software Engineering Minor* and the *Undergraduate Certificate in Computer Science*

### Linda Sheridan (She/Her)



Linda Sheridan advises undergraduate students on all matters dealing

with the *BS Applied Computer Science* (BS ACS), the *BS Computer Science* (BS CS), the *Computer Science Minor*, the *Software Engineering Minor* and the *Undergraduate Certificate in Computer Science*.

### Laura Rhodes (She/Her)

Laura Rhodes joined the IST Department in March 2020. Prior to joining the Mason community, Rhodes worked in various roles in higher education, including counseling and psychological services, academic success and advising, and disability services. Rhodes earned her MSW in clinical social work from Rutgers University in May 2016 and her BS in Psychology with a Minor in Photography in 2014 from Susquehanna University.

### Veronica Bonilla (She/Her)

Veronica Bonilla comes from an International Advising background having worked at OIPS at George Mason University and Marymount University. She joined the IST Academic Advising team in May 2023. Veronica is also a George Mason alumni who enjoys getting involved with the Mason Community. During her free time, she enjoys going for a walk with her partner and Boston Terrier dog, yoga, dancing, crocheting, reading, and watching TV.



## Event Organizers

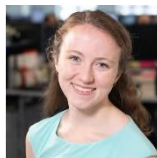
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She/Her  
Associate Professor of CS  
Break Through Tech DC PI



Dr. Shvetha Soundararajan  
She/Her  
Associate Professor of CS



Teresa M. Donnellan  
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Break Through Tech DC  
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Elizabeth Delgado  
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Break Through Tech DC  
Data Lead



## Special Thanks

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Debra Marcus  
Donna White  
Dr. Mark Snyder  
Michele Pieper  
Kristi Morrow  
Kelly Cardew  
Francis P. Money