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A message from the Dean **FERNANDO R. MIRALLES-WILHELM**

Dear Friends and Alumni,

Looking back at the first blog I ever wrote as Mason Science dean, I had just finished multiple tours of our colleges, and research facilities and met the many faculty and staff responsible for our science [research enterprise](#). We were in pandemic mode, having just made the difficult decision to augment or suspend some of our efforts due to limited campus access. On the other hand, our biomedical research teams were gearing up for stretches of 18-hour days in the lab analyzing COVID-19 samples and creating the processes that would help our Mason community build our

resiliency and preserve our health throughout the pandemic.

We have come a long way. Our Mason Science research impact continues to expand, with research expenditures growing an accumulated 13% between July 2020 and July 2023. We've built on our [focused biomedical research](#) in proteomics and molecular medicine, genetics, and fighting infectious diseases. Our faculty are also leading collaborations and advising governments and organizations across diverse domains of space, data, energy, climate, agriculture, and quantum materials among many diverse disciplines. Our productivity is high; our Mason Science researchers have the most patents and the largest commercialization in Mason's history.

We continue to provide unique and impactful [research and educational experiences](#) at the R1 university level for our students, bringing forward a diverse STEM workforce equipped with scientific knowledge and collaboration skills necessary to address the current challenges of today while also providing solutions for the difficult situations we anticipate our society will face in the future.

We've expanded awareness and access to science programs with our [Quantum](#), [Mathematics](#), and [Valhen Hispanic STEM Academies](#), and our [STEM Accelerator](#) program and outreach continue, including our wildly popular [FOCUS](#) and [ASSIP](#) experiences to inspire the next generation of scientists.

The newness of my role hasn't worn off; I am just as excited now as I was then. If not more so, because I'm seeing how our efforts continue to make a difference. Research remains a primary focus of our college and I am quite confident our scientists and their collaborations will take us to new levels of success.

Thank you for your friendship and support of science

Sincerely,

FMW

Support Science at Mason!

**November 8:
Mason Science
Series
Featuring
Hakeem Oluseyi
and Peter Becker**



**MASON
SCIENCE SERIES**

Internet Apocalypse
Wednesday, November 8, 2023

3:30 p.m. to 6 p.m. ET
Country Club of Fairfax

Fernando Miralles-Wilhelm, Host
Hakeem Oluseyi, Featured Guest
Peter Becker, Featured Guest

For more information and to register:
alumni.gmu.edu/internet_apocalypse



Hakeem Oluseyi
Professor, Physics & Astronomy



Peter Becker
Professor, Physics & Astronomy

Join Fernando Miralles-Wilhelm, Dean for our kickoff Mason Science Series for the year for a conversation with **Hakeem Oluseyi** and **Peter Becker, Featured Guest**. Oluseyi and Beck, professors of Physics and Astronomy will discuss Dr. Becker's work to better understand the effects of increased solar activity that could potentially cause "an internet apocalypse" disrupting all electronic communications on Earth, including satellite communications.

Doors will open at 3:30 p.m. with a light reception and the program will run from 4 p.m. to 5:15 p.m., with continued conversation following.

[Reserve Your Seat Now!](#)



A message from Alumni Chapter President **MARK MONSON**

Dear Fellow COS Alumni:

As I write this, we are just about halfway through the Fall semester, though the weather seems to think that we are still in Summer.

These are exciting times at the College of Science. In addition to leading the dozens and dozens of classes offered in the College, COS faculty are conducting all sorts of intriguing research, from the use of nanobots to forensic research. In case you haven't seen these, here is a sampling of what's been happening at the College of Science.

- [Mason Student Unearths Rare Fossil](#)
- [Mason Scientists Explore an innovative approach to silence HIV](#)
- [Collaborative Research Awards Awarded to Twelve Promising Investigations](#)
- [Students Improve Substance Use Disorder App](#)
- [Mason Forensics Department Hosts 2023 National Center on Forensics Conference](#)
- [Check out a video about how Body Farms can solve Crimes!](#)
- [Mason Physicist receives NSF Eager Award](#)

[And don't forget to follow our Dean's Blog!](#)

There are some exciting events planned as well. On Wednesday, November 8 from 3:30 p.m. to 5:30 p.m. in the Fairfax Country Club Ballroom will be an intriguing Mason Science Series discussion event, joined by friends and alumni. Dr. Peter Becker of the Dept. of Physics & Astronomy will be discussing his work to determine how solar activity might interfere with satellite functions---with the potential to cause an "internet apocalypse". Follow this link above for more information and to reserve your seat.

I am also very happy to say that the COS Mentorship Program is underway. I hope you had a chance to read the recent email announcing the program. In case you missed it, [here's the link to the program](#) info where you'll also find a sign-up link.

Please remember that we want to hear from you. What you're doing, where you're working, and, of course, awards and accomplishments. We would love to be able to share them with your former classmates and fellow alumni. We also want your ideas and suggestions for ways that we can help you and other College of Science alumni stay connected. Please drop us an email at cosalum@gmu.edu or connect with us on [LinkedIn](#). We want to hear from you.

Mark Monson
President, College of Science Alumni Chapter
George Mason University



Christine Fox, BS '76, MS '80 named College of Science Alumni of the Year

The College of Science is honored to recognize Christine Fox as our Alumna of the Year. On Friday, October 20 Christine was honored with almost twenty other alumni across the university for their contributions.

The Honorable Christine Fox served in President Obama's Administration as Acting Deputy Secretary of Defense and as Director of Cost Assessment and Program Evaluation (CAPE) in the Department of Defense. As Director, of CAPE, Ms. Fox served as the chief analyst to the Secretary of Defense. Most recently she served as Assistant Director, Policy and Analysis at Johns Hopkins Applied Physics Lab and is currently serving there as a Sr Fellow. Prior to her DoD positions, she served as president of the Center for Naval Analyses, working there as a research analyst and manager for a total of 27 years.

She is a member of the President's National Infrastructure Advisory Council, the Division of Engineering and Physical Sciences at the National Academies of Science, the Board of Directors of the U.S. Naval Institute, and is a life member of the Council on Foreign Relations. She also serves on several advisory and governance boards of commercial and financial companies including Brown Advisory and Palantir Technologies. She is a three-time recipient of the Department of Defense Distinguished Service Medal. She has also been



awarded the Naval Heritage (Lone Sailor) Award and the Department of the Army's Decoration for Distinguished Civilian Service.

In popular culture, Fox gained notability during her work at the Naval Air Station Miramar, and became the inspiration for the *Top Gun* character, Charlotte "Charlie" Blackwood, played by Kelly McGillis in the film.



Appreciating and Remembering Jennifer Mickelberg, Environmental Science and Policy, PhD 2011

Jennifer Mickelberg, PhD Environmental Science & Policy tragically passed away last week. The Mason Science community mourns the loss of one of our own. Jennifer brought brightness, cheer, and optimism and her loss

made the world a duller place. Faculty, staff, and alumni mourn the passing of a life that enriched us all.

While a doctoral candidate at Mason, Jennifer mentored graduate students through the Smithsonian Conservation Biology Institute and the National Zoo. She was the gold standard and her contributions to Mason included being an outstanding teaching assistant in our 100-level Human Anatomy and Physiology courses, teaching a 300-level Conservation Biology course, and even teaching a graduate Population Ecology course while Professor Rockwood was on leave. Her course on primates received excellent reviews from her students.

As a student, Jennifer was always eager to learn and as a teacher and promoter of conservation, she was one of the best. Her mentors and fellow alumni will always remember her contributions to our field trips to Costa Rica. After defending her dissertation, "Understanding and Managing Isolation in a Fragmented Population of Golden Lion Tamarins," in 2011, she accepted a position at Zoo Atlanta in 2012 as Curator of Primates. She was subsequently promoted to Senior Director of Collections and Conservation. Her advocacy for primates, and Golden Lion Tamarins, in particular, remained her life-long passion.

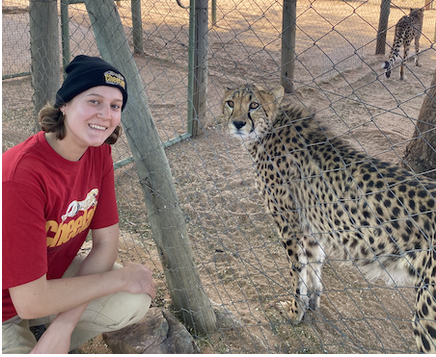
We know the Zoo Atlanta community will miss her bright smile and unparalleled enthusiasm as much as we at Mason Community will.

Wherever you are, shine on Jennifer.

"Graduate can't deny an animal attraction!"

Recent biology graduate, Gwendolyne Fields will have many career options once she graduates. Should she go for her master's degree and PhD? Should she go to veterinary school and work with endangered species?

Should she work with wildlife at a zoo?



[Read Fields Full Story Here](#)

Student Spotlight



Madison Mateo, Geology

Madison Mateo's family jokes that her passion for paleontology is a dinosaur phase she never outgrew. Now, Mateo is making headlines with the excavation of one of the largest theropod fossils in Eastern America at the M-NCPPC Dinosaur Park in Laurel, Maryland.

[Read more about Mateo's historic discovery.](#)



Molly Corder, Ph.D. Environmental Science and Public Policy

Mason PhD student, Molly Corder writes about her passion for the conservation of endangered species in the Smithsonian's National Zoo & Conservation Biology Institute new's article, Focus on the Future.

[Read Corder's full article: Focus on the Future.](#)

Mason News



Science and engineering meet to create a new surface water robot

In his research on freshwater systems in the DC/Virginia area, George Mason University College of Science professor R. Christian Jones was spending much of his time hauling boats...too much, he thought!

[Read More about Jones work.](#)

Advancing infectious disease capabilities through biomedical research laboratory core

George Mason University's Biomedical Laboratory (BRL) is one of 12 Regional Biocontainment Laboratories (RBLs) established through the National Institute of Allergy and Infectious Diseases. The BRL offers Biosafety Level 3 (BSL-3) facilities that conduct cutting-edge pathogen research and serve as resources to rapidly address emerging infectious disease outbreaks. Farhang Alem, Interim Director of the Biomedical Research Laboratory, Institute for Biohealth Innovation, and Aarthi Narayanan, Professor, Biology, will receive more than \$12 million from the National Institute for Health to support the development of Mason's Biomedical Research Laboratory, advancing the university's research capabilities for infectious diseases.

[Learn more about Aarthi Narayanan's work.](#)

Graduate Students Mentor High School Students

In [Atmospheric, Oceanic, and Earth Sciences \(AOES\)](#), even the students can have students. This summer, AOES hosted six high school students for internships in climate dynamics. AOES scientists Natalie Burls, Daniel Tong, and David Straus were the students' faculty advisors. Faculty members enlisted their advisees in the Climate Dynamics Doctoral Program to assist in guiding and mentoring the interns. The students presented their work this summer at the culminating event of [Mason's Aspiring Scientists Summer Internship Program \(ASSIP\)](#).

[Read more on ASSIP](#)



Mason Physicist Receives University's First DOE Career Award

George Mason University Assistant Professor for [Physics and Astronomy](#) [Fereshte Ghahari Kermani](#) recently received the highly competitive U.S. Department of Energy (DOE) Early Career Award. She is the first faculty member at George Mason University to receive this honor, one that highlights the significance of her contributions to the field of condensed matter physics. This

recognition supports scientists across the county whose work pushes the boundaries of scientific advancement and helps solidify the U.S. as a driver of science and innovation around the world.

[Read the full blog and learn more about Dr. Fereshte Ghahari Kermani](#)

'Our Future, Transformed" - Space Race for Cosmic Resources

Honors College launches new YouTube series addressing global challenges. The latest video features College of Science professor, [Hakeem Oluseyi](#) discussing how fusion energy might transform the way we live, and how the Artemis moon project is a stepping stone to technological advances that will help us on Earth.

[Read more about the series here.](#)

[Watch Our Future, Transformed: Space Race for Cosmic Resources](#)

Announcements & Events



Mason Space Day 2023 - Out of this world success!



Mason Space Day, hosted by the College of Science on Oct. 22, had more than 1,500 community members, Mason alumni, students, and faculty staff registered to attend the 2nd annual event. Roughly 1,500 came to the Fairfax Campus for the day to learn about the technology and science behind some of the leading aerospace projects in the area. The day offered lectures from those at the forefront of space exploration, hands-on activities, and more. Activities were available for all ages and included lectures from leading experts in aerospace, telescope viewings, tours of the Mason Observatory, pumpkin launches, and STEM activities.

Keynote speakers included Michelle Thaller, assistant director of NASA Science, NASA Goddard Space Flight Center; and Charles Bolden, retired astronaut and NASA administrator. Other highlights of the event included a panel on "Today's Challenges - Tomorrow's Opportunities" moderated by Hakeem Olusyi and featured faculty from the College of Science and College of Engineering and Computing.

A special thank you to all of our sponsors, speakers, and volunteers for making Mason Space Day 2023 a huge success. We hope to see you all next year!

Support Mason Space Day and see images from 2023's event!

Celebrate Science every day!

Join scientists around the globe, your fellow alum, and the college as we celebrate science days in November!

- November 8: [National STEM/STEAM Day](#)
- November 10: [World Science Day for Peace and Development](#)
- November 18: [Pride in STEM Day/International Day of LGBTQIA+ People in STEM](#)
- November 24: [Black Hole Friday](#)

Did we miss a day? Please [email](#) us and let us know!

Want to know more, Follow Mason Science

There are many ways to stay connected with the College of Science by following us on social media, reading our newsletters, or attending events. We want to keep you engaged and informed!



To stay up-to-date on our events, you can follow our College of Science [calendar here](#). Also, check out the [Mason Alumni calendar](#) for more events.

Have questions, comments, or updates. We want to know what you are doing!

[E-mail us!](#)

Questions you'd like us to answer in a future newsletter? Please write to us!

We want to hear from you, stay tuned for an alumni survey.

Follow Mason's Science Alumni on social media:



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