Mason SCIENCE

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Thursday March 3, 2022 **science.gmu.edu**

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A message from the Dean

FERNANDO R. MIRALLES-WILHELM

The history, art, and science of water scarcity

by Fernando Miralles-Wilhelm

Throughout the academic year, I have the opportunity to share our science with the community through our Mason Science Series research discussions.

Over the course of the last year alone, our audiences have learned about how Mason rose to the COVID-19 challenge; our efforts to understand and protect ecosystems of the Potomac and the coral reefs across Florida and the Caribbean; and even some of our research discovering super massive black holes in space. As the Q&A facilitator, I consistently come away from these sessions with a deep respect for our scientists at Mason, amazed at the impact of their work and encouraged by our audience's engagement.

Last week, we took on the topic central to my own personal research, WATER. Yet we did so in what some might describe as a most unexpected way. Mason Environmental Science and Policy professor, Changwoo Ahn and I partnered with Mason College of Visual and Performing Arts Dean, Rick Davis to offer both a historical recount and discuss the current state of water as a critical resource.

Learn about the 100th Meridian Project

Read the dean's full message

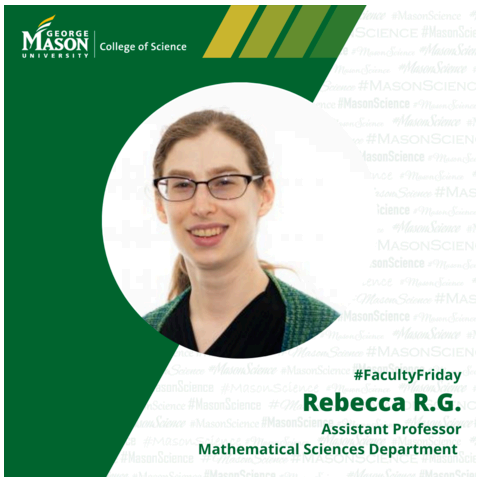
MASON SCIENCE COMMUNITY

Physics professor highlighted as Mason Trailblazer

by Colleen Kearney Rich

Robinson Professor of Physics James Trefil is a huge proponent of science literacy. With his colleague, Robinson Professor of Earth Science Robert Hazen, Trefil created and taught the popular PROV 301 Great Ideas in Science, a class for nonscience majors that introduces ideas that have shaped the field, from the building of Stonehenge to the Big Bang. The textbook they created for this course, "The Sciences: An Integrated Approach," is in its ninth edition and is used at hundreds of universities around the country.

Watch Trefil's video highlight



#FacultyFriday highlights mathematical sciences assistant professor

Our first #FacultyFriday feature of the month kicks off with Rebecca R.G., Assistant Professor, Mathematical Sciences. R.G.'s research is in commutative algebra, a field of math that involves studying the behavior of algebraic objects like rings and modules. R.G. is passionate about supporting students and creating a space for everyone to do math. As a result, she worked with colleagues to organize several multiple programs including the New PhD Mentoring Program, the Graduate Learning Assistants (GLA) Program, and the PhD Launchpad Program. R.G. is a big advocate for active learning, reflected in her newly designed course, History of Math (joint with Jessica Otis). Be sure to stop by her office to see crocheted models of hyperbolic planes and a Sierpinski triangle shawl.

Read R.G.'s bio

RESEARCH & DISCOVERY

Climate change poses danger to U.S. national security and VA economy

by John Hollis

Jim Kinter, Professor, Atmospheric Oceanic and Earth Sciences, says an additional foot of rising sea levels by 2050 will adversely affect U.S. national security while simultaneously inflicting potentially "devastating" consequences to a Virginia economy dependent on a robust military presence.

More on threats posed by climate change

IN THE NEWS

Honey bees could help solve police cases

The collaboration between George Mason University's Honey Bee Initiative and the new outdoor Forensic Science Research and Training Laboratory is gaining attention. The partnership, that could yield critical advances in forensic science, recently appeared in The Free Lance-Star and Phys.org. *Photo: Shelby Burgess/Strategic Communications*

Watch The Free Lance-Star's video

Astronomers discover widely separated brown dwarf pair

by Amit Malewar

Adam Schneider, Research Scientist, Physics and Astronomy, is among the authors of the paper.

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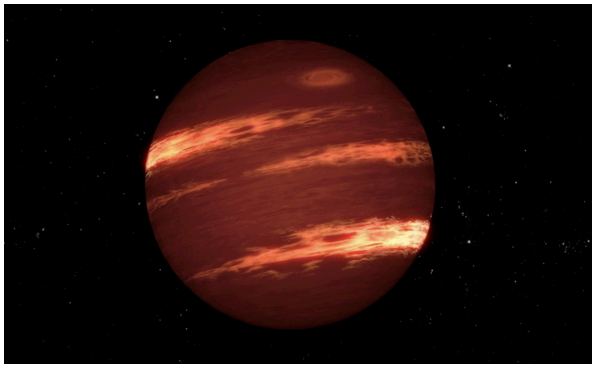

recently by Tech Explorist. According to Schneider, "wide, low-mass systems like CWISE J014611.20-050850.0AB are usually disrupted early on in their lifetimes, so the fact that this one has survived until now is pretty remarkable." *Photo: NASA/JPL-Caltech*

Read the Tech Explorist feature

Happening at Mason

Review Mason's safety procedures

Safety, Emergency, and Enterprise Risk Management

For your safety, here are some best practices recently shared from the 3/1/22 email:

Be Prepared: Register one or more cell phone numbers with Mason Alert, the university's emergency notification system, to receive timely notification of events that affect your safety. Find out how to prepare and respond to potential emergencies. Visit the university's Active Threat Response web page for information about how to respond to violence on campus and to register for Active Threat Training.

Do you use the Public Safety App? The Rave Guardian public safety app, integrated with Mason Alert, offers a virtual safety escort feature, allows you to submit tips to university policy anonymously, and functions as a virtual blue light phone that can relay your profile information and location if you activate a panic call from the app. Free application available through the iTunes store and the Google Play store.

It is important to remember that everyone can play a role in sustaining a safe and secure campus. If you suspect a person is capable of causing harm to themselves or others, or observe a suspicious incident or person, report your observation to University Police immediately by dialing 911 or 703-993-2810. Remember, if you see something, say something; take the challenge.

If you have any questions or concerns about Mason's readiness for potential emergencies on campus, please contact EHS at safety@gmu.edu or 703-993-8448.

Review EHS website

Events

GCSE Virtual Conference - The Road to 2030: Tipping Points for a Climate Positive Future

Examine the role of tipping points in natural and social systems, and in government and policy, to explore a collective goal of achieving a climate positive future.

Office of Community Engagement and Civic Learning (CECiL) Information Session
March 8, 2022 | 3 p.m. | Virtual
Find out how you can get involved with CECiL by attending the upcoming information session.

Climate Dynamics Seminar
March 9, 2022 | 1:30 to 2:30 p.m. | Johnson Center Meeting Room G and Virtual
Join Kathy Breen, NASA Goddard Space Flight Center, for a discussion on her recent work at NASA in physics-based and AI hybrid modeling applications wrt cloud microphysics and aerosol-cloud interactions.

Galileo's Science Café
March 10, 2022 | 7 p.m. | Verizon Auditorium, Sci Tech and Virtual
Professors Taylor Anderson, Andreas Züfle, Hamdi Kavak, and Tim Leslie from the Departments of Geography and Geoinformation Science and Computational and Data Sciences will discuss the key role of spatial-temporal data in better understanding the relationship between human behavior, mobility, and disease spread and how we can use this knowledge to improve predictive models. Registration required.

Women of Color Circle
March 22, 2022 | 4 to 5 p.m. | Virtual
This collaborative program between The Counseling and Psychological Services and the Women and Gender Studies Program explores the college student experiences of women of color here at Mason. The Women of Color Circle will provide students with supportive discussion, self-care and well-being tips, and resources for continued growth.

See Full Calendar

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