Science Challenges Explained: ENERGY - the currency of the universe

by Fernando Miralles-Wilhelm

About a year ago, the Biden-Harris Administration shared a fact sheet titled “Developing a Bold Vision for Commercial Fusion Energy” that outlined a decade-long “vision to accelerate fusion – a clean energy technology that uses the same reaction that powers the Sun and stars.” This declaration included a summit sponsored by the White House Office of Science and Technology Policy (OSTP) and the U.S. Department of Energy (DOE) to convene stakeholders to accelerate the vision.

Last December, the White House announced that scientists at Lawrence Livermore National Laboratory were able to do something that hadn’t been done before anywhere in the world. The group created a net energy output gain through fusion (more energy was created by fusing atoms together than was used to generate the reaction).

Simply put, these fusion reaction experiments bring atoms together to generate energy. The key is to produce more energy after the reaction than what it took to create it. In the past, the group had created
70 percent of the energy so the recent breakthrough is a significant step forward.

That's where we come in…

Recently George Mason University launched "Our Future, Transformed", a video series in which university president Gregory Washington discusses the grand challenges we face today with Mason’s leading experts in a multidisciplinary classroom of Honors College students. The new publicly available online video series will explain global challenges and possible technologies to solve them.

Volunteers still needed for College of Science Degree Celebration 2023

by Melissa Hayes

This year's Degree Celebration is scheduled for Friday, May 19, 2023, at 10 a.m. in the EagleBank Arena. The college has more than 600 graduates this year; your participation is important to them and their families as they commemorate this achievement in their academic career. We need your help. A volunteer meeting will be held via Zoom on Wednesday, May 10, 2023 at 2 p.m. Your participation will be greatly appreciated. Volunteer by emailing cosevent@gmu.edu. Photo by Ron Aira/Creative Services.

#FacultyFriday highlights ESP Assistant Professor

The first #FacultyFriday of #EarthMonth featured Dr. Jennifer Sklarew, Assistant Professor, ESP. Sklarew, also known as Dr. Jen, coordinates the department's MS Concentration in Energy and Sustainability Policy and Science, which she developed. Her research examines how institutional relationships and catastrophic events combine to drive energy and environmental
Mason researchers connect with community members to develop an app for individuals recovering from opioid use disorder

by Shayla Brown

Dylan Scarton, a third-year neuroscience PhD student, is part of a team finding ways to use smart technology in order to help those who are struggling with or recovering from substance use disorder. The team calls themselves the Good Troublers. "We're designing the app with accessible user interface considerations, to minimize the number of clicks and present the information very clearly, for anyone not familiar with this domain like a caregiver, family member, concerned friend," Scarton said. Screenshots of the app iCONNECT by Rebecca Leung, Dylan Scarton, Jonathan Mbuya, and Srinath Silla. Photo provided.

Mason study shows conservation of large areas will help protect the Amazon’s birds

by Laura Powers

As the most biodiverse place on Earth, the Amazon Rainforest attracts scientists from around the world seeking to understand its diversity and also ways to protect it from outside forces like deforestation. A recent study led by George Mason University postdoc and conservation ecologist, Cameron Rutt, says that conserving large areas of upland rainforest support the richness and survival of the region’s birds. Mason researchers Dr. David Luther and W. Justin Cooper from the Department of Biology also worked on this study.
IN THE NEWS

New Mars research review tells story of the red planet's atmosphere evolution

For the first time, Mason's Dr. Erdal Yiğit, associate professor in the Department of Physics and Astronomy pulled studies of Mars together in a single review to reveal Martian whole atmosphere couplings and interactions. "If we understand the physics, the chemistry, and dynamics of the weather on Mars, this can help us understand the history of Earth and of atmosphere solar system planets," Yiğit said in a recent article shared by Phys.org. Photo by NASA.

Read full article

Happening at Mason

Take your junior Patriot to work day

Mark your calendars: Take Your Junior Patriot to Work Day is Thursday, April 27. Faculty and staff are invited to bring the children in their lives to campus to learn what it's like to work at Mason. A calendar of events is in the works. If you or your department are interested in leading an activity during the day, reach out to the Faculty and Staff Engagement team. Photo by Sierra Guard/Creative Services

More on Junior Patriot Day
MyHub import of workspaces this spring

by Mason ITS

ITS recently introduced MyHub, a tool within the Office 365 environment, as the standard way to create new workspaces. At the end of April, workspaces (i.e., Microsoft Teams or Groups) that were previously created without MyHub will be imported. This effort will enhance collaboration in a secure environment, promote productivity, and enforce retention policies.

What to Expect:

- Once imported, your workspace will be prompted for renewal based on its original creation date. Notifications will be sent 30 days before the expiration. This renewal will recur depending on your workspace type. To learn more, see MyHub Renewal Policies.
- MyHub requires workspaces to have two owners. If your workspace was created with only one owner, you will be prompted to add a second. Once a second owner has been assigned, both owners will receive notifications to renew the workspace. MyHub will ask you to confirm permissions for the workspace and its files. When doing so, please review members included in the workspace to ensure the list is still accurate.
- If a renewal is not completed, the workspace will be archived in MyHub and eventually deleted. Deleted workspaces can be recovered for up to 30 days by an Office 365 administrator. To inquire about a deleted space, contact the ITS Support Center.

If you have any questions or need assistance, contact the ITS Support Center at 703-993-8870 or support@gmu.edu.

Learn about MyHub

Events

Quantum Week 2023
April 13, 2023 | Johnson Center 327 - April 14, 2023 | Horizon Hall 3008
Encourage students to attend Quantum Week 2023 and learn about quantum technology while also gaining insights into what you can do with a career in quantum technology, who is hiring, and what skills you need to be successful. Registration required.

East Coast Optimization Meeting: Optimization and Game Theory
April 13, 2023, 9:30 a.m. to April 14, 2023, 5:30 p.m. | Virtual
The annual East Coast Optimization Meeting (ECOM) is an initiative to introduce students and early-career researchers to the current trends in optimization as well as to create a strong networking environment among academia, industry, and the national laboratories. Registration required.

2023 Celebration of Teaching Excellence Awards Ceremony
April 17, 2023 | 1 to 3 p.m. | Johnson Center Dewberry Hall
Join the 2023 Celebration of Teaching Excellence awards ceremony, with opening remarks and award announcements by Provost Mark Ginsberg. There will be food and drinks at a reception following the ceremony. If you have any questions, email steams@gmu.edu.
Spring 2023 UndocuAlly Trainings
April 18, 2023 | 10:30 a.m. to 1:30 p.m. | Johnson Center Bistro
Learn the history of our undocumented communities, past and present legislation, and the lived realities and barriers our undocumented communities are fighting through with strength and resilience. Registration required.

Earth System Observations and Modeling (ESOM) Graduate Symposium
April 21, 2023 | 7:30 a.m. to 6:30 p.m.
Returning for its fourth year, the ESOM Graduate Symposium encourages earth science graduate students from George Mason and other institutions to share their research focused on observational and modeling topics related to our climate. Register to attend.

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Read the College of Science’s latest annual report

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