Dear ISE Community,

As the year comes to an end we wanted to send a few reflections on our year together and to also let you know how much we appreciate your commitment and engagement. During the entire year the level of interest and importance that our campus community places on sustainability and resilience has been obvious. Launching the Institute was the culmination of several years of collaborative planning.

Although there have been many activities during the past year, a few highlights stand out:

- There were a number of internal community building initiatives launched: formation of an active ISE Advisory Council with membership from every college, development of this biweekly newsletter, six seed funding awards selected from fourteen excellent proposals, and development of a faculty directory.

- ISE supported and enhanced Mason’s strategic partnerships with Future Earth and the Smithsonian Institution. Dozens of faculty have participated in events involving these partnerships.

Announcements
partner organizations. In addition, Mason will host the first membership meeting of the Sustainable Development Solutions Network on January 23-24, 2020.

- Sponsoring and co-sponsoring nearly a dozen ISE-relevant events. This included events in partnership with departments and other units on campus as well as events with external partner.

We look forward to your continued engagement in 2020. This newsletter will not be issued during the holiday break. The next issue will be on January 27, 2020. Please continue to send us your events, announcements, and activities to share with the campus community.

Wishing you and yours a wonderful holiday break.

- The ISE Team

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**Upcoming Mason Events**

### America in 2020: Mobilizing for a Decade of Sustainable Development

During this two-day event, we will hear from SDSN USA co-chairs Jeffrey Sachs, Dan Esty, and Gordon McCord; dive deep into SDSN USA projects and activities; brainstorm on future projects; learn about SDG-related resources, research, and action from institutions across the US; and, most importantly, meet each other face-to-face!

The meeting will be co-hosted by SDSN USA, the Institute for a Sustainable Earth, and Business for a Better World Center at George Mason University.

- **Date:** January 23-24, 2020
- **Location:** Van Metre Hall, George Mason University, Arlington Campus
- **Registration**
Congratulations!

Funding Announcements, Awards, and Accomplishments
Virginia Consortium for Teacher Preparation in Visual Impairment
Primary Investigator (PI): Kimberly Avila, College of Education and Human Development
Funding source: Virginia Department of Education & U.S. Department of Education, $ 299,553

Virginia Consortium for Teacher Preparation in Special Education Adapted Curriculum: Supporting Students with Severe Disabilities and Autism
PI: Marci Jerome, College of Education and Human Development
Funding source: Virginia Department of Education & U.S. Department of Education, $454,955

Traineeship for Special Education Personnel: A Dynamic Coaching Outreach Program in Special Education: General Curriculum (DCOP)
PI: Kelley Regan, College of Education and Human Development
Co-PIs: Pamela Baker and Margaret Weiss, College of Education and Human Development
Funding source: Virginia Department of Education & U.S. Department of Education, $20, 600

Academic Fellowship Program for the US Naval Observatory - TO 811
PI: Shobita Satyapal, College of Science
Funding source: US Department of the Navy, $166,099

Strengthening of English Language Secondary Education in Uzbekistan
PI: Joan Shin, College of Education & Human Development
Funding source: American Councils for International Education and Department of State, $575,444

Transition to Adulthood and Factors Impacting Well-being in Women with Autism
PI: Allison Jack, College of Humanities and Social Sciences
Funding source: Autism Speaks, $64,200
Center for Peacemaking Practice
PI: Susan Allen, School for Conflict Analysis and Resolution
Funding source: George Mason University Foundation, $10,000

Russia-US Teachers (R-UST) for STEM Education: Building Teacher Knowledge and Leadership Through International Learning
PI: Rebecca Fox, College of Education & Human Development
Co-PIs: Anna Evmenova, College of Education & Human Development
Funding source: The U.S. Russia Foundation, $330,190

Funding Opportunities

Improving Undergraduate STEM Education: Pathways into the Earth, Ocean, Polar and Atmospheric & Geospace Sciences

The program expects to offer approximately 18 awards with ~ 6 awards being made in each of the three tracks: Informal Networks (IN), Undergraduate Preparation (UP), and Graduate Opportunities (GO).

Informal Networks (IN): Collaborative projects in this track will support geoscience learning and experiences in informal settings for teachers, pre-college or community college students.

Undergraduate Preparation (UP): Projects in this track will engage students in extracurricular research experiences and training in the geosciences with a focus on service learning and workplace skill building.

Graduate Opportunities (GO): Projects in this track will improve research and career-related pathways into the geosciences for undergraduate and graduate students through institutional and employer collaborations with a focus on workplace learning and workforce skill building.

- Funding source: Directorate for Geosciences, National Science Foundation
- Amount: The average total is expected to be $300,000-$350,000
- Sponsor due date: December 20, 2019 (LOI); February 14, 2020
- GMU internal deadline: First come
- Submission: grants.gov
- Contact: Sheila Davis

Solid Waste Management Grant Program

The U.S. Department of Agriculture (USDA) established the program to assist communities through free technical assistance and/or training provided by the grant recipients. Qualified
organizations will receive SWM grant funds to reduce or eliminate pollution of water resources in rural areas, and improve planning and management of solid waste sites in rural areas.

- Funding source: U.S. Department of Agriculture
- Amount: $1,000,000
- Deadline: December 31, 2019
- Submission: grants.gov
- Contact: Penny Douglas, 202-253-0504

**Smithsonian Institution Fellowship Program**

The James Smithson Fellowship Program was created to offer early career opportunities for post-doctoral researchers interested in gaining a better understanding about the interplay between scholarship and public policy through a Smithsonian lens.

The fellowship provides an immersion experience working with Smithsonian researchers and relevant collections, while also affording fellows a hands-on opportunity to explore relationships between research and public policy through direct interaction with Smithsonian leaders, and with policy leaders throughout the Washington, DC network.

- Deadline: January 15, 2020
- Submission
- Contact: 202-633-7070

**Marine Debris Prevention Program**

The National Oceanic & Atmospheric Administration (NOAA) Marine Debris Program (MDP) leads national efforts to address marine debris. The mission of the NOAA MDP is to investigate and prevent the adverse impacts of marine debris. This mission is achieved through research, prevention, and reduction activities that aim to conserve and protect our nation’s marine environment, and coastal economy, as well as ensure navigation safety.

- Funding source: NOAA/Department of Commerce
- Amount: $150,000
- Deadline: February 7, 2020
- Submission: grants.gov
- Contact: Tom Barry

**Environmental Convergence Opportunities in Chemical, Bioengineering, Environmental, and Transport Systems (ECO-CBET)**

The (ECO-CBET) solicitation will support activities that confront vexing environmental engineering and sustainability problems by uncovering and incorporating fundamental knowledge to design new processes, materials, and devices from a systems-level perspective. Projects should be compelling and reflect sustained, coordinated efforts from interdisciplinary research teams.

A key objective of the solicitation is to encourage conversations and robust collaborations
amongst the chemical process, transport phenomena, bioengineering, and environmental and sustainability research communities such that unanticipated solutions may arise.

- Funding source: National Science Foundation
- Amount: $8,500,000
- Deadline: February 12, 2020
- Submission: grants.gov
- Contact: Christina Payne

Dear Colleague Letter: Supporting Transition of Research into Cities Through the U.S. ASEAN (Association of Southeast Asian Nations Cities) Smart Cities Partnership

Through a Dear Colleague Letter (DCL), the National Science Foundation’s (NSF) Directorate for Computer and Information Science and Engineering (CISE) together with the Department of State’s Bureau of East Asia and Pacific Affairs wishes to notify the U.S. community of its intention to support the high-impact research-transition funding requests aligned with the U.S.-ASEAN Smart Cities Partnership.

- Funding source: National Science Foundation
- Amount: $300,000
- Deadline: March 1, 2020
- Submission: grants.gov
- Contact: David Corman

FY 2020 Solicitation for the Office of Science Financial Assistance Program

The Office of Science of the US Department of Energy is providing funding for research in the following program areas: Advanced Scientific Computing Research, Basic Energy Sciences, Biological and Environmental Research, Fusion Energy Sciences, High Energy Physics, and Nuclear Physics.

- Funding source: Office of Science, Department of Energy
- Amount: Up to $5,000,000
- Deadline: September 30, 2020
- Submission: grants.gov
- Contact: Kimberlie Laing, 301-903-3026

Environmental Biology

The Division of Environmental Biology (DEB) Core Track supports research and training on evolutionary and ecological processes acting at the level of populations, species, communities, and ecosystems.

Proposals should be submitted to the core clusters (Ecosystem Sciences, Evolutionary Processes, Population and Community Ecology, and Systematics and Biodiversity Sciences).
DEB also encourages interdisciplinary proposals that cross conceptual boundaries and integrate over levels of biological organization or across multiple spatial and temporal scales.

- Funding source: National Science Foundation
- Awards: 120 awards each year
- Funding amount: $100,000,000 for new awards each year pending availability of funds
- Deadline: Proposals accepted anytime
- Submission: grants.gov
- Contact: Division of Environmental Biology

Environmental Engineering Program

The Environmental Engineering Program supports potentially transformative fundamental research that applies scientific and engineering principles.

Integral to achieving these goals is a fundamental understanding of the transport and biogeochemical reactivity of pollutants in the environment. Research on environmental micro/biology, environmental chemistry, and environmental geophysics may be relevant providing the research has a clear objective of protecting human and ecological health.

- Funding source: National Science Foundation
- Amount: $10,000,000
- Deadline: Applications accepted at anytime
- Submission: grants.gov
- Contact: Karl Rockne

Other Upcoming Events

Global Symposium on Soil Biodiversity

The Global Symposium on Soil Biodiversity is being organized by the United Nations Food and Agriculture Organization (FAO) at Its Headquarters in Rome, Italy on March 10-12 2020.

The main objective of the Symposium is to address critical knowledge gaps and promote discussion among policy makers, food producers, scientists, practitioners and other
stakeholders on solutions to protect soil biodiversity and increase its sustainable use and management by addressing the underlying causes of soil biodiversity loss and enhancing implementation of sustainable practices.

- Date: March 10-12 2020.
- Location: Rome, Italy
- Contact: Global Soil Biodiversity Initiative

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6th International Symposium on Knowledge and Capacity for the Water Sector

The African Development Bank, the IHE Delft Institute for Water Education, the Asian Development Bank, UN Habitat and other development partners are preparing the 6th International Symposium on Knowledge and Capacity for the Water Sector, themed: From Capacity Development to Implementation Science.

The Symposium will convene key stakeholders to explore the skills, knowledge and attitudes needed by water professionals and institutions. The meeting will also study how new developments in implementation science can strengthen institutional capacity to enhance water security.

- Date: May 27-29, 2020
- Location: Delft, Netherlands
- Deadline for fill papers: February, 29 2020
The Institute for a Sustainable Earth (ISE) aims to connect members of the Mason community with others across the Mason community—and with other communities, policy-makers, businesses and organizations—so that, together, we can more effectively address the world’s pressing sustainability and resilience challenges.

The ISE Newsletter provides up-to-date information on conferences, funding opportunities, and research pertaining to environmental science and sustainability. The biweekly newsletter aims to facilitate information sharing among researchers, practitioners, and relevant local, national, and international organization.
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