PANEL: Improving Pathways, Access, and Opportunities: Science Literacy for the Human Good

Science Literacy is a broad term describing the knowledge of scientific concepts and methods and understanding of related skills such as numeracy, digital literacy, and the ability to find and assess credible information. As the science and technology (S&T) enterprise becomes increasingly globalized, science literacy training is a crucial step in the development process as a means of increasing access to both education and quality, competitive jobs.

This panel will explore the field and practice of science literacy as a means of improving educational and workforce pathways, and the implications for improved quality of life. Panelists will speak on issues such as science literacy and research collaborations, gender and the school-to-work pipeline, citizen science programs and tools for science literacy, and the role of informal learning projects in fostering science literacy.

Organizer: Katie Seely-Gant, Energetics Technology Center

Discussion Panelists:
- Erik Kuiler, George Mason University
- Lisa M. Frehill, National Science Foundation
- Ester Sztein, The National Academy of Sciences
- Rebecca Kruse, National Science Foundation

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PANEL BIOGRAPHIES

Erik Kuiler - George Mason University

Erik W. Kuiler has research interests that range from the humanities to the application of Information Technologies in the healthcare domain. With most of his career spent as an Information Engineer, he focuses on the development of lexicons, ontologies, and systems to support the management of data and information as enterprise assets. To date, he has developed various systems, ranging from a logistics-information exchange system for the United States Coast Guard to support the cutter fleet to an ontology-based prototype to classify tobacco products in an effort to support policy development and regulation enforcement. Dr. Kuiler’s formal education includes concentrations in software and information engineering, rhetoric and information theory, medieval studies and comparative literatures, and public policy. He has published studies in Classical Greek Drama, Big Data Analytics, Development Economics, and Policy Analysis and has made presentations on these topics at a number of national and international conferences.

Lisa M. Frehill - Energetics Technology Centre & National Science Foundation

Lisa M. Frehill is Senior Analyst and Acting Director of the Analytics Team at the Energetics Technology Center (Waldorf, Maryland, U.S.). She is currently on detail as Organizational Evaluation and Assessment Researcher at the National Science Foundation. Dr. Frehill is an internationally recognized expert on human resources in science and engineering, designing and executing program evaluations, strategic workforce planning, and change management.

Ester Sztein - The National Academy of Sciences

Ester Sztein is the Assistant Director of the Board on International Scientific Organizations of the U.S. National Academy of Sciences. Among other programs, she manages four U.S. National Committees for the geosciences and the U.S. National Committee for psychology. She participates actively in the geoscience community and works with U.S. and international professional societies and organizations in projects such as fellowships for early career scientists, teaching symposia, geoscience and climate change outreach, and medical geology. As a research scientist, she pioneered the study of hormone metabolism in land plants within an evolutionary context and has collaborated as an editor with the Biometeorology Institute (Bologna, Italy). She has taught plant biology at the University of Maryland and the University of Buenos Aires. As a nonprofit officer, she collaborated on conservation and educational projects in Latin America and Africa. Dr. Sztein is councilor for the International Medical Geology Association and is involved in International Council for Science programs. She earned her PhD in Plant Biology from the University of Maryland.

Rebecca Kruse, National Science Foundation

Rebecca Kruse is a Program Director in the National Science Foundation's Division of Research on Learning in Formal and Informal Settings. She is responsible for the Discovery Research PreK-12 and Innovative Technology Experiences for Students and Teachers programs.