Mathematics and Climate: A new partnership

By
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February 24, 2014, 11:10 – 12:10pm
Monroe 353

Climate is an emerging area of research in the mathematical sciences, part of a broader portfolio that addresses issues of complexity and sustainability. So far, the climate system has received relatively little attention in the mathematical sciences community, despite the fact that the stakes are high, decision makers have more questions than we can answer, and mathematical models and statistical arguments play a central role in assessment exercises. In this talk I will identify some problems of current interest in climate science and indicate how, as mathematicians, we can find inspiration for new applications.

Dr. Hans Kaper is an applied mathematician and co-director of the Mathematics and Climate Research Network http://www.mathclimate.org, an NSF-funded virtual organization to develop the mathematics needed to better understand the Earth's climate. He is the (co-) author of four books and more than 100 articles in refereed journals. His most recent book "Mathematics and Climate" (with Dr. Hans Engler) was published by the Society for Industrial and Applied Mathematics (SIAM). and was named “ASLI's Choice 2013” by the Atmospheric Science Librarians International (ASLI) as the best book of 2013 in the fields of meteorology/climatology/atmospheric sciences. Dr. Kaper is a Corresponding Member of the Royal Netherlands Academy of Sciences and a Fellow of the Society for Industrial and Applied Mathematics (SIAM), class of 2009. He is editor-in-chief of SIAM News and a member of the SIAM Committee on Science Policy, and served as Chair of the SIAM Activity Group on Dynamical Systems in 2012-13.

This event is co-sponsored by the Joint Undergraduate Mathematics and Physics (JUMP) Program and the GW Office of Sustainability.