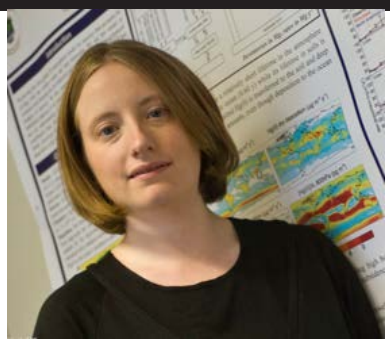
EPP and Center for Climate and Energy Decision Making

Sponsored Seminar

Noelle Eckley Selin
Assistant Professor of Engineering Systems and Atmospheric Chemistry
Massachusetts Institute of Technology



Presenting on:

"Tracking Toxic Air Pollutants from Emissions to Impacts"

December 2, 2013
12 noon
(Lunch served at 11:50am)
129 Baker Conference Room
Department of Engineering and Public Policy

Seminar Abstract: Air pollution is a major sustainability challenge: toxic substances that travel through the atmosphere can pose risks to humans and the environment at locations both near and far from their emission. Examples of pollutants with toxic health and environmental impacts include particulate matter (PM), ozone, mercury (Hg), and persistent organic pollutants (POPs). Effective regulation of these pollutants requires a systems approach, linking regulatory policies, better understanding of environmental transport, and accounting for impacts and feedbacks, and needs to identify the uncertainties that are most relevant to policy-making. Any analysis also needs to take into account the effects of global change, including climate change and socioeconomic changes. This talk summarizes research linking atmospheric modeling of the transport and fate of pollutants (at regional to global scales) with health and economic impacts analysis and policy. I focus on two broad scientific questions: 1) How can we better understand the pathways by which past, present and future emissions of toxics travel through the environment?, and 2) What methods can better evaluate the impacts of policies, including climate change policies, on air pollution and related health and economic damages? Examples will be given from recent research on PM, ozone, Hg, and POPs.

Speaker Bio: Dr. Selin is an Assistant Professor of Engineering Systems at the Massachusetts Institute of Technology, with a joint appointment as Assistant Professor of Atmospheric Chemistry in the Department of Earth, Atmospheric and Planetary Sciences. Her research focuses on using atmospheric chemistry modeling to inform decision-making strategies on air pollution, climate change and hazardous substances such as mercury and persistent organic pollutants (POPs).

She received her PhD from Harvard University in Earth and Planetary Sciences as part of the Atmospheric Chemistry Modeling Group, where she developed and evaluated a global, 3D model of mercury pollution. Prior to Dr. Selin's current appointment, she was a research scientist with the MIT Joint Program on the Science and Policy of Global Change. In addition to her scientific work, she has also published articles and book chapters on the interactions between science and policy in international environmental negotiations, in particular focusing on global efforts to regulate hazardous substances. Previously, Dr. Selin was a research associate with the Initiative on Science and Technology for Sustainability at Harvard's Kennedy School, a visiting researcher at the European Environment Agency in Copenhagen, Denmark, and worked on chemicals issues at the U.S. Environmental Protection Agency.

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