Seminar Series 2014 - 2015

Southern Ontario Centre for Atmospheric Aerosol Research University of Toronto

From modelling to policy: refining the science of decision-making

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Air Quality Models have a firmly established niche in the scientific decision-making process for improving air quality. However, despite being widely used to estimate the impact of various policies, models have often struggled to provide adequate answers to some of the most immediate and germane policy questions. What is the most effective investment for improving air quality? Is the proposed regulation a near-optimal path towards attaining air quality standards? What is the societal burden of each individual emission source?

In this talk, I will discuss newer approaches that use models to address such questions in a more policyrelevant manner. I will explain how a recent approach in mathematical sensitivity analysis can be used to estimate contributions of individual sources to air pollution health outcomes, and how inclusion of these estimates provides for a more comprehensive analysis framework in air pollution economics. We will examine how the economics of air pollution control is likely to change as we move to a warmer climate and a cleaner atmosphere, and how our conventional perception of long-term societal benefits of pollution control may be flawed. Finally, we will revisit some of the challenges that remain before air quality models can be more effectively used in the scientific decision-making process.

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