

Seminar Series 2016 - 2017

Southern Ontario Centre for Atmospheric Aerosol Research
University of Toronto

In Search of Fresh Air: Characterizing the Sources and Impacts of Air Pollution in Urban Areas

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Urban air pollution comprises a complex mixture of both regionally transported pollutants and pollutants emitted from local sources. Understanding the sources and behaviour of urban air pollutants is crucial for protecting the health of those living in densely populated urban areas and for minimizing the release of climate-forcing agents into the atmosphere. Urban air pollution measurements have typically relied on a small number of widely separated regulatory monitoring sites to assess population-scale exposure. However, air pollutant concentrations may exhibit significant spatial variability depending on local sources and features of the built environment, which may be poorly captured by the existing monitoring regime.

In this seminar, I will discuss my work on characterizing urban spatial and temporal pollution gradients on the sub-km scale in Pittsburgh, PA. As part of this work, a network of 12 air quality monitoring stations has been deployed for one year of monitoring beginning July 2016 at sites along an urban-rural transect and in downtown urban locations with a range of traffic, restaurant and tall building densities. These measurements have been supplemented with rigorous mobile monitoring to increase spatial resolution. Additionally, the validity and reliability of increasingly popular low-cost sensors will be discussed within the context of Pittsburgh air quality monitoring programs.

Monday, May 29, 2017 3:00 – 4:00 PM

Wallberg Building, 200 College Street, Room 407



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