

Carbonaceous Aerosol Symposium

Southern Ontario Centre for Atmospheric Aerosol Research
University of Toronto



Keynote Speaker **John Wenger**

*Director, Centre for Research into Atmospheric Chemistry
University College Cork, Ireland*

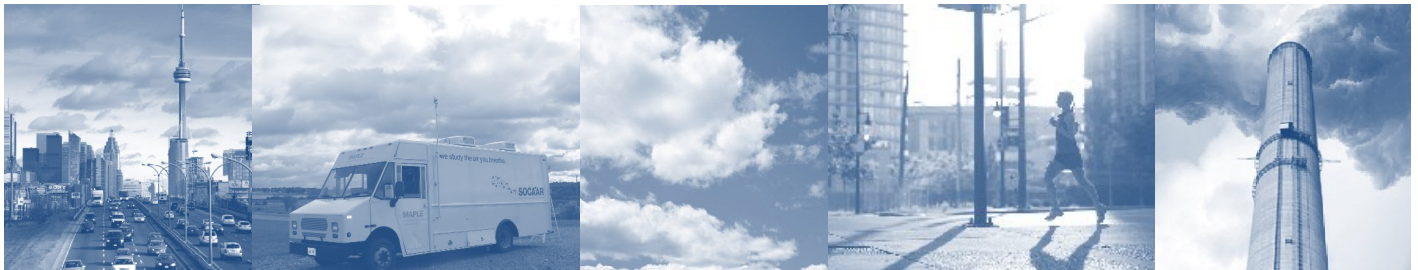
Contribution of solid fuel burning to PM_{2.5} in residential areas of Ireland


During winter months, the levels of fine particulate matter (PM_{2.5}) in many small rural towns across Ireland are often considerably higher than those in the cities. During the winter of 2014-2015, we performed two intensive field measurement campaigns to identify and quantify the sources of ambient PM_{2.5} in selected residential areas. An extensive range of instrumentation was deployed at the site, including a single particle mass spectrometer for chemical characterisation of PM_{2.5}.

A very strong diurnal variation in particle number and mass concentration was observed, characterised by a large increase during evening hours when local residents burn solid fuel for heating purposes. “Fingerprint” mass spectra have been used to assign the particles to different sources including the combustion of coal, peat and wood. The measurements indicate that solid fuel burning is by far the dominant source of PM_{2.5} in the studied locations, accounting for more than 75% of all particles detected. The results of this Irish EPA-funded study will help inform the development of national policy focussed on the reduction of particulate emissions from residential solid fuel burning.

May 20, 2015, 1 – 4 PM

Wallberg Building, 200 College Street, Room 407



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Symposium Speakers:

Cheol-Heon Jeong

“Influence of residential wood combustion on PM_{2.5} concentrations in Montreal”

Kelly Sabaliauskas

“Developing a wintertime land-use regression model for Toronto”

Robert Healy

“Mixing state of ambient black carbon and organic aerosol in Toronto”

Naomi Zimmerman

“From cylinder to city: linking controlled engine studies to real world measurements of exhaust pollutants”

Jon Wang

“Emission factors for traffic-related pollutant emissions: quantification and characterization”

Ezzat Jaroudi

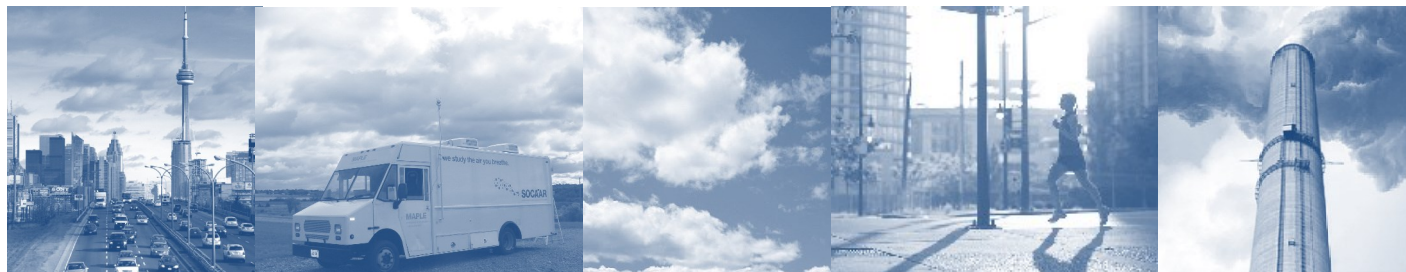
“Characterization of fly ash in biomass boilers using single particle mass spectrometry”

Jackie Ye

“Effect of preexisting aerosol on secondary organic aerosol formation from α -pinene ozonolysis”

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