

*****Please note the special date and time*****

ATS/CIRA Colloquium

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**Surface-atmosphere exchanges of energy and
carbon in urban environments**

Thursday, February 25, 2016

**ATS room 101; Discussion will begin at 4:00 pm
Refreshments will be served at 3:30 pm in the weather lab**

Cities account for less than 5% of total land surface, yet are home to over half the world's population and the majority of anthropogenic greenhouse gas emissions. Relative to more natural environments, urban areas are characterized by extremely heterogeneous landscapes and the presence of intense anthropogenic activity. This results in drastically altered surface-atmosphere exchanges of energy, water, trace gases, and momentum across a range of scales. Understanding these exchanges is important for a variety of applications including air quality, thermal comfort, weather forecasting, urban planning, energy consumption, and sustainable growth.

This seminar describes an approach to study surface-atmosphere interactions in urban environments at multiple scales based on measurements, models, and theoretical concepts from atmospheric science, geography, biology, and ecology. Measurements of carbon dioxide fluxes and concentrations from Baltimore, USA and Vancouver, Canada along with surface energy balance observations in Andacollo, Chile and London, UK are discussed in this context. Complexities and opportunities associated with urban climate research, as well as pathways towards future research, will also be introduced.

Link to colloquium videos and announcement page: <http://www.atmos.colostate.edu/dept/colloquia.php>