

Séminaire du CETHIL

Vendredi 17 juillet 2015 à 13h30

Bâtiment Sadi Carnot, salle 230 (2^{ème} étage)

“The Role of Anthropogenic Heat and Moisture Emissions in the Urban Climate System”

David SAILOR

Professeur à Portland State University (USA)

Résumé du séminaire

The built environment interacts with the urban climate system, affecting the urban thermal environment, transport and dispersion of pollutants in cities, and local hydroclimatology. These interactions give rise to many of the key environmental challenges faced by cities--ranging from extreme urban heat and excessive air pollution to altered precipitation patterns and urban flooding. Atmospheric modeling is increasingly being used at fine scales in an attempt to resolve and understand processes relevant to these challenges. Despite ongoing modeling advances, however, our ability to accurately represent urban climates and proposed solutions to urban climate problems is limited.

This presentation deals with one of the ongoing challenges to modeling of urban climates—representation of anthropogenic emissions of heat and moisture. It will begin with an overview of the sources and characteristics of anthropogenic emissions, and methods of estimating these emissions across a range of temporal and spatial scales. It will then discuss efforts to incorporate such emissions in atmospheric models and assess the relative importance of these emissions. It will conclude by offering a critique of current approaches and a framework for future work in this area.

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