

Models and Lasers in 2023: Frontiers in Urban Meteorology



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**Conference Room, 3/F,
Mong Man Wai Building**



[Zoom Link](#) (Mixed-mode)

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Cities housed more than 55% of all living humans in 2022 and concentrate more than 70% primary energy consumption, while only covering less than 1% of the globe. Compared to rural areas, urban areas pose unique challenges to meteorologists by challenging theoretical assumptions about homogeneity scales in space and time, which are required for most model-simulation and observation approaches. In this talk, I will discuss my perspective about applying doppler lidar systems in urban areas by showcasing examples and discussing their limitations. The aim of this talk is to stimulate a critical discourse around measurement principles: What is it, exactly, that we try to assess, when trying to measure urban boundary layer dynamics with currently available technology? What new technology would be required to actually measure this complex environment accurately? More generally, how much information is sufficient to facilitate decision-making in city planning and governance?



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