

# RESEARCH SEMINAR

DEPARTMENT OF GEOGRAPHY AND RESOURCE MANAGEMENT  
THE CHINESE UNIVERSITY OF HONG KONG

## Exploring Source Contribution and Wet Deposition of Ambient Pollutants Over the Greater Bay Area

25 Nov 2021 (Thu)  
4:30–6:00 pm (UTC+8)

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Air pollution has become one of the most notorious environmental issues in China, on account not only of its impact on climate change but also its impact on public health due to increased morbidity and mortality. Although the current air quality in the Greater Bay Area (GBA), one of the major economic engines in China, has been ameliorated compared to that 10 years ago, a long way is still ahead of this region to reach the level required by the World Health Organization's Air Quality Guidelines. Considering the emission, transport, reactions, and deposition of the ambient pollutants, the 3D chemical transport model can provide pictures of the pollutant's concentration, formation, and depletion processes in space and time, which is of great help for policymakers and scientists to design effective control strategy. Mainly based on this tool, this seminar will first discuss the origin (source category, source region, and source period) of the air pollutants over GBA. Then the process and spatial distribution of the wet deposition, one of the major terminal pathways of the air pollutants, will be presented. My research projects and future research plans will be introduced at the end of this presentation.

### Dr Xingcheng Lu

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Dr Xingcheng Lu is an Associate Research Fellow at Fok Ying Tung Graduate School, The Hong Kong University of Science and Technology (HKUST). His research interests are in applying and improving 3D chemical transport models and machine-learning techniques to investigate air pollution problems, including but not limited to the assessment of policy control efficacy, source apportionment, and physical and chemical processes affecting atmospheric pollutants. He has published more than 30 peer-reviewed papers. Dr Lu previously worked as a Research Assistant Professor at HKUST. He received a PhD degree in Environmental Science, Policy, and Management from HKUST and a BS degree in Environmental Science from Sun Yat-sen University.



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