

# LSGI Research Seminar

## **A new method for identifying built-up areas using night-time light data – A case study of 600+ Chinese cities**

**Date:** 28 Jan 2022 (Fri)

**Time:** 16:30 - 17:30

**Venue:** online @ Zoom

**Language:** English

### **Bio:**

*Dr Li Wan, Assistant Professor at the Department of Land Economy, University of Cambridge. He is interested in spatial economic modelling of urban land use and transport. Dr Li Wan is the Director for the MPhil in Planning, Growth and Regeneration. He is a co-investigator of the Centre for Smart Infrastructure and Construction. His recent research projects include exploring a social-technical approach for developing novel digital tools for city planning through a series of case studies in Cambridge, and examining the role of micromobility and governance in facilitating the transition towards low-carbon transport. The paper will be co-presented by Mr Zengquan Li.*

### **Abstract:**

*Night-time light (NTL) data provide a novel and accessible source for monitoring the spatio-temporal dynamics of urban expansion. Existing methods tend to use national/regional and temporally static thresholds for separating urban built-up areas (UBA) and non-UBA. The static thresholds ignore the path-dependent nature of urban development. To address the research gap, this dissertation proposes a new method using dynamic threshold (DT) for extracting UBA using NTL data for 600+ Chinese cities. The dynamic thresholds explicitly address the temporal continuity of urban physical development and further consider intra-city heterogeneity in terms of NTL brightness change pattern. The efficacy of the new method is verified through a comparison with official statistics in China and UN-Habitat Sentinel-2 Human Settlement data.*

**All are welcome. To register, please click [here](#) for the details.**

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