

LSGI Talk Series: Emerging Topic in Geospatial and Urban Science

Applying data science methods to measure and to evaluate the urban design of our cities

Date: 16 Dec 2021 (Thu)

Time: 16:30 - 17:30

Venue: Online @ zoom

Language: English

Bio:

Dr Stephen Law is a Lecturer in University College London UCL Geography and a Turing Fellow at the Alan Turing Institute. Prior to his appointment, he received a EPSRC Research Fellowship at the Turing and was a senior research fellow at the UCL Bartlett School of Architecture. He completed a PhD in UCL Space Syntax Lab, studying the economic value of spatial network accessibility in the housing market. He also has many years of consultancy experience on spatial data analysis and urban design.

Abstract:

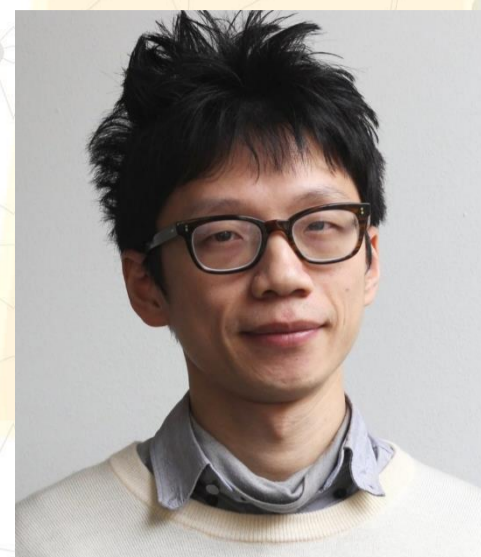
We are living in an age where data is ubiquitous and data science methods are pervasive. The question is how do we apply and adapt these methods in urban design with the hope to promote inclusivity, prosperity and well-being in cities. Stephen's talk aims to explore these methods to measure our cities and evaluate our urban design through three case studies; the use of machine learning methods to extract urban information such as street frontages [1], the prediction of house price [2] and the use of spatial network methods to classify whether a city is planned or less-planned [3]. He will also give a brief summary on his recent works on model explainability [4] and its potential urban applications in the future.

References

- [1] Law, S., Seresinhe, C., Shen, Y., Gutierrez-Roig, M., (2020). Street-Frontage-Net: Urban image classification using deep convolutional neural networks. *International Journal of Geographic Information Science (IJGIS)*
- [2] Law, S., Paige, B., Russell, C. (2019). Take a look around: Using Streetview and Satellite Images to Estimate House Prices., *ACM Transactions on Intelligent Systems and Technology. (ACM TIST)*
- [3] Elliott, A., Law, S. and Ospina-Forero, L. (2020). "Characterising road networks through subgraph graphlet analysis," *NetSciX 2020, 2020.*
- [4] Elliott, A.*, Law, S.*, Russell, C. (2021). Explaining Classifiers using Adversarial Perturbations on the Perceptual Ball. *CVPR2021.*

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

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