Guowen Huang

Department of Mathematics Shantou University

Shantou, Guangdong, China hgw0610209@gmail.com

EDUCATION University of Glasgow, Scotland, UK Sep 2013 – Dec 2016

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PhD in Environmental Statistics in School of Mathematics and Statistics

Supervisors: Duncan Lee: Marian Scott.

Thesis: Quantification of Air Quality in Space and Time and its Effects on Health.

Tianjin University, Tianjin, China

Sep 2010 – Mar 2013

Master in Industrial Engineering in College of Management and Economics

Graduated with College Honors.

Nankai University, Tianjin, China

Sep 2006 – Jul 2010

Bachelor in Physics in School of Physics Graduated with College Honors.

Work Associate Professor, Shantou University, China Jan 2021 - present

EXPERIENCE [1]Bayesian hierarchical modelling, air pollution health effects.

Postdoc, St. Michael's Hospital, & University of Toronto, Canada

Aug 2018 – Aug 2020

[1] Extended Study on Air Pollution Risk Model for Three Pollutants.

Postdoc, National Tsing Hua University, Taiwan

Dec 2016 - Jul 2018

[1] Spatio-temporal modelling of PM_{2.5} in Taiwan.

[2] Spatial Signal Detection Based on Small Area Aggregated Data.

Shantou University TEACHING

Jan 2021 – present

Bayesian Statistics; Sampling Techniques; Multivariate Analysis; **EXPERIENCE**

Mathematical Statistics; Spatial Statistics

University of Glasgow Mar 2014 - Jul 2016

Graduate Teaching Assistant in Student Learning Service

University of Toronto May 2019 - Jul 2019

Course instructor of STA302 (Linear regression)

JOURNAL

The Lancet Planetary Health; Biostatistics; Environmetrics; Biometrical Journal; Journal of the Royal REVIEWER

Statistical Society: Series A (Statistics in Society); Journal of the Royal Statistical Society: Series C (Applied Statistics); Spatial Science; International journal of epidemiology; Atmospheric Environment; Environmental pollution; Spatial and Spatio-temporal Epidemiology; Journal of Environmental Infor-

matics; Epidemiologic Methods.

LANGUAGES **English, Chinese**

SKILLS Proficient with: **R** (daily used); Familiar with: **C++**, **SPSS**, **AWS**.

HOBBIES Badminton, Skiing, Billiards, Table tennis, Driving **PAPERS**

- [1] Huang G., Lee D. and Scott M. An integrated Bayesian model for estimating the long-term health effects of air pollution by fusing modelled and measured pollution data: A case study of nitrogen dioxide concentrations in Scotland. *Spatial and Spatio-temporal Epidemiology*. 2015;14-15: 63-74.
- [2] Huang G., Lee D. and Scott M. Multivariate space-time modelling of multiple air pollutants and their health effects accounting for exposure uncertainty. *Statistics in Medicine*. 2017; 37: 1134-1148.
- [3] Guowen Huang; Ling-Jyh Chen; Wen-Han Hwang; ShengLi Tzeng; Hsin-Cheng Huang. Real-time PM2.5 mapping and anomaly detection from AirBoxes in Taiwan. *Environmetrics*. 2018;1-15.
- [4] Hsin-Cheng Huang and Noel Cressie and Andrew Zammit-Mangion and Guowen Huang. False Discovery Rates to Detect Signals from Incomplete Spatially Aggregated Data. *Journal of Computational and Graphical Statistics*. 2021, 30(4):1081-1094.
- [5] Guowen Huang, Patrick Brown. Population-weighted exposure to air pollution and COVID- 19 incidence in Germany *Spatial Statistics*. 2021, 41(100480): 1-12.
- [6] Guowen Huang; Patrick E. Brown; Sze Hang Fu; Hwashin Hyun Shin. Daily mortality/morbidity and air quality: Using multivariate time series with seasonally varying covariances. *Journal of the Royal Statistical Society Series C: Applied Statistics*. 2022, 71(1): 148-174.
- [7] Guowen Huang, Marta Blangiardo, Patrick E. Brown and Monica Pirani. Long-term exposure to air pollution and COVID-19 incidence: A multi-country study. *Spatial and Spatio-temporal Epidemiology*. 2021, 39(100443):1-11.
- [8] Xuyang Tang, ..., Guowen Huang and et al. Assessment of SARS-CoV-2 Seropositivity During the First and Second Viral Waves in 2020 and 2021 Among Canadian Adults. *JAMA Netw Open*. 2022;5(2):e2146798.
- [9] Patrick E. Brown, Yurie Izawa, Kalpana Balakrishnan, Sze Hang Fu, Joy Chakma, Geetha Menon, Rajesh Dikshit, R.S. Dhaliwal, Peter S. Rodriguez, Guowen Huang, Rehana Begum, Howard Hu, George D'Souza, Randeep Guleria, and Prabhat Jha. Mortality from Particulate Matter 2-5 in India: National Prospective Proportional Mortality Study. *Environmental Health Perspectives*. 2022; 130:9 CID: 097004
- [10] Guowen Huang; Feng Liu. Urban/rural differences in air pollution impacts on deaths in Scotland: A comparison study on different pollution data sources. *Spatial Statistics*. 2022; 52: 100712
- [11] Guowen Huang; Patrick Brown; Hwashin Hyun Shin. Multi-pollutant case-crossover models of all-cause and cause-specific mortality and hospital admissions by age group in 47 Canadian cities. *Environmental research*. 2023; 225: 115598.
- [12] Guowen Huang; Feng Liu. A comparison of exposure uncertainty propagation models used in epidemiological studies. *Journal of the Royal Statistical Society Series A: Statistics in Society*. 2023; 00: 1-16.