

HYESOP SHIN

Research Associate in Geospatial Data Science, University of Glasgow



EDUCATION

- 2021 • **University of Cambridge**
Ph.D in Geography 📍 Cambridge, UK

Thesis: Assessing Health Vulnerability to Air Pollution in Seoul: an Agent-based Modelling approach
- 2014 • **Seoul National University**
M.A. in Geography 📍 Seoul, S.Korea

Thesis: An Agent-based Approach for Modelling Spatial Transmission Processes of Foot-and-mouth Disease in Korea 2010-11
- 2012 • **Kyungpook National University**
B.A. in Geography 📍 Daegu, S.Korea

Thesis: Development of an Airport Choice Model - Determining Location for a New Airport in the South-eastern Region of South Korea



SELECTED PUBLICATIONS

- April. 2020 • **Get Bristol moving: tackling air pollution in Bristol city centre**
Turing Insitute Data Study Group: Final Report 📍 Bristol, UK
<http://doi.org/10.5281/zenodo.3775497>

C.Mougan, Q.Fu, J.Kolath, H.Tong, S.Dixit, L.Geffert, **H.Shin**, A.A.Rabuh, C.Robinson, E.Gale
- Jan. 2019 • **An Agent-based Assessment of Health Vulnerability to Long-term particulate exposure in Seoul Districts**
Journal of Artificial Society and Social Simulation (JASSS)
<http://doi.org/10.18564/jasss.3940>

H.Shin, M.Bithell
- Sep. 2014 • **Ordinary kriging approach to predicting long-term particulate matter concentrations in seven major Korean cities**
Environmental health and toxicology
<https://doi.org/10.5620/eht.e2014012>

S.Kim, S.Yi, Y.Eum, H.Choi, **H.Shin**, H.Ryou, H.Kim

CONTACT INFO

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For more information, please contact me via email.

SKILLS

Highly skilled in R, NetLogo, GeoDA, ArcGIS, and QGIS

Full Experience in Agent-based modelling, Geospatial analysis, Geostatistics

Experienced in LaTeX, HackMD

Governmental Certificate: Junior Statistical Survey Analyst

Experienced in interdisciplinary projects - Computer Science, Public Health, Forestry, Urban Science

Won prize at GISRUK2019 for *the Best Reproducible Map Challenge*

Last updated on 2021-01-22.



CONFERENCE CONTRIBUTIONS

- Sep. 2019

● **Estimating Pedestrian's Exposure to Long-term Ambient Air Pollution in Seoul Districts: Development and Application using an Agent-based Simulation**
 Poster in Social Simulation Conference 2019
 H.Shin, M.Bithell

📍 Mainz, Germany
- Jul. 2019

● **Bridging agent-based modelling and R with nlrx: simulating pedestrian's long-term exposure to air pollution**
 Oral presentation in UseR!2019
 H.Shin

📍 Toulouse, France
- Aug. 2018

● **Integrating OD matrices of travel patterns and pollution exposure by socioeconomic characters using an agent-based model**
 Poster in Social Simulation Conference 2018
 H.Shin, M.Bithell

📍 Stockholm, Sweden
- Nov. 2017

● **Individual Moving Dynamics and Exposure to Air pollution: an agent-based approach**
 Presented in Fitzwilliam graduate conference 2017
 H.Shin

📍 Cambridge, UK
- Sep. 2017

● **An Agent-based Assessment of Health Vulnerability to Long-term particulate exposure in Seoul Districts**
 Presented in Social Simulation Conference 2017
 H.Shin, M.Bithell

📍 Dublin, Ireland
- Jul. 2017

● **Calibrating Agent-based Exposure Simulation to Clinical Records**
 Poster in Big Data in Medicine: Tools, Transformation and Translation
 H.Shin, M.Bithell

📍 Cambridge, UK
- Apr. 2016

● **Discovering the determinants and transmission path of MERS-CoV: an agent-based approach**
 Presented in Americans Association of Geographers
 H.Shin, S.J.Park

📍 San Francisco, USA



RESEARCH EXPERIENCE

- 2019

● **Data Scientist**
 Exploring the spatial and temporal patterns of Turkish Migration (1980-2010)
 • Investigating Turkish Migration from 1995-

📍 Cambridge, UK
- 2015
|
2016

● **Graduate Research Assistant**
 The Institute for Korean Regional Studies, Seoul National University
 • Cooperation and Integration of Economic and Social Community in East Asia. *Funded by National Research Foundation of Korea*
 • GIS and Netlogo modeller on Efficient Forest Ecosystem Management using a Multi Agent System. *Funded by Korea Forest Service*

📍 Seoul, S.Korea

2014 ● **GIS Analyst**
School of Public Health, Seoul National University 📍 Seoul, S.Korea
• GIS analyst of modelling PM exposure in Public Health School, Seoul National University.
• Association between predicted particulate matter air pollution and health.
• *Funded by National Research Foundation of Korea*

2013 ● **Research Assistant**
Asia Center, Seoul National University 📍 Seoul, S.Korea
• Creating Geospatial Warehouse on Land Use and Population Change in (East) Asian Countries (University Funded)

PROFESSIONAL EXPERIENCE

2014-2015 ● **Research Engineer**
Geo C&I, Geospatial analyst 📍 Daegu, S.Korea

TEACHING EXPERIENCE

2018, 2019 ● **Introduction to R Language for Beginners.**
Demonstrator of R at the University IT Lecture Course (SSRMC) 📍 Cambridge, UK

2017 | 2019 ● **Demonstrator in Undergraduate GIS course**
Teaching assistant of GIS at Geography 📍 Cambridge, UK
• Interpolating point data, classifying and plotting gridded data
• Assembling & Mapping Data in a GIS
• Quantifying and Analysing Spatial Structure
• Exploratory Spatial Data Analysis
• Cluster Analysis
• Spatial Regression

2018, 2019 ● **Demonstrator in MPhil GIS course**
Teaching assistant of GIS at The Institute of Public Health 📍 Cambridge, UK
• Discovering Area-level deprivation associated with air pollution

PUBLIC ENGAGEMENT

Aug, 2019 ● **Data Hackathon, Member**
Turing Institute Data Study Group - in collaboration with Bristol City Council 📍 Bristol, UK
• Project in Tacking Air Pollution in Bristol City Centre
• Modelled traffic and pollution in Bristol with `tidyverse` and `openair`
• Suggested policy implications of clean air zones near school zones

Apr, 2019 ● **One-day Instructor**
Teach First - Outreach workshop in the department 📍 Cambridge, UK
• High school students seeking for Geography as for their selection in future studies
• Understanding vegetation modelling by building a terrarium