




# HYESOP SHIN

Research Associate in Geospatial Data Science, University of Glasgow



## EDUCATION

- Current • **University of Cambridge**  
Ph.D Candidate 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 Institute 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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🐦 [@hyesop](https://twitter.com/hyesop)  
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For more information, please contact me via email.

## SKILLS

Highly skilled in R, NetLogo, Geo-DA, 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 GISRUUK2019 for *the Best Reproducible Map Challenge*

Last updated on 2020-11-04.



## 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