

# Curriculum Vitae

**Jing YAO**, BSc, MSc, Msc(Eng.), PhD

Lecturer in Urban Big Data and Quantitative Methods  
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Web page: <http://www.gla.ac.uk/schools/socialpolitical/staff/jingyao/>

ESRC Urban Big Data Centre: <http://www.ubdc.ac.uk/>

## 【EDUCATION】

**PhD (Geography)**, 2009.08-2012.12, Arizona State University, USA.

*Dissertation: Spatial Optimization Approaches for Solving the Continuous Weber and multi-Weber Problems (Advisor: Prof. Alan Murray)*

**MSc (Industrial Engineering)**, 2010.08-2012.5, Arizona State University, USA.

**MSc (Cartography and Geographical Information System)**, 2002.09-2005.05,  
Nanjing University, China.

**BSc (Geographical Information System)** (Honors, First Class), 1998.09-2002.05,  
Nanjing University, China.

## 【EMPLOYMENT】

**2014.10-now**, Lecturer in Urban Big Data and Quantitative Methods, Urban Big  
Data Centre, University of Glasgow, Scotland, UK.

**2013.06-2014.09**, Research Fellow, Centre for GeoInformation, University of St  
Andrews, Scotland, UK.

**2013.01- 2013.05**, Postdoctoral Associate, GeoDa Center for Geospatial Analysis  
and Computation, Arizona State University, USA.

**2012.08-2012.12**, Teaching Assistant, GeoDa Center for Geospatial Analysis and  
Computation, Arizona State University, USA.

**2009.08-2012.08**, Research Assistant, GeoDa Center for Geospatial Analysis and  
Computation, Arizona State University, USA.

**2008.05-2009.08**, Lecturer, Hohai University, Nanjing, China.

**2005.09-2008.05**, Teaching Assistant (faculty), Hohai University, Nanjing, China.

## 【RESEARCH AND TEACHING INTERESTS】

Geographic Information Science; Spatial Statistics; Quantitative Methods; Spatial Optimization; Health Geography; Urban and Regional Planning and Development; Location Modeling.

## 【AWARDS AND FELLOWSHIPS】

**2017.** Fellow of the Higher Education Academy (FHEA), UK.

**2012.** Chinese Government Award for Outstanding Self-financed Students Abroad (\$6,000), Ministry of Education, China.

**2009.** University Graduate Fellowship, Arizona State University, USA.

## 【GRANTS】

**2019-2024** *Urban Big Data Centre*. Co-I (PI: Prof. Nick Bailey). Economic and Social Research Council.

**2017-2021** *GCRF Centre for Sustainable, Healthy, and Learning Cities and Neighbourhoods (SHLC)*. Co-I (PI: Prof. Ya Ping Wang). Global Challenges Research Fund (GCRF) Research Councils UK Collective Fund, £7,105,262.

**2017-2019** EuroGEOSS-Hub: the European approach to Data Hub for GEOSS. Co-I. (PI: François ROBIDA, Geological and Mining Research Bureau Joint Research Center, European). Horizon 2020 Research and Innovation Framework Programme. European Commission.

**2016** *Postdoctoral and Early Career Researcher Exchanges Funds*. Scottish Alliance for Geoscience, Environment and Society, £2,500.

**2015-2018** *The Re-Making of Chinese Urban Neighborhoods: Socio-Spatial Transformation and Access to Public Services*. Co-I (PI: Prof. Ya Ping Wang). Economic and Social Research Council and National Natural Science Foundation of China: UK-China Research and Innovation Partnership Fund (Newton Fund), £606,945.

**2015** *Glasgow-Nankai Research Exchange Grant*. University of Glasgow, £1,500.

**2013-2015** *Spatial Optimization Approaches for Solving the Continuous multi-Weber Problem*. PI. National Natural Science Foundation of China, ¥230,000.

**2013-2015** *Continuous Geographic Physical Process Model and its Integration with*

GIS. Co-I (PI: Dr. Xiaoxiang Zhang). National Natural Science Foundation of China, ¥250,000.

## 【PUBLICATIONS】

### *Book Chapter*

**Yao J.** 2009. Chapter 9 *Application of GIS in the Management of Flood*. In L. Kang and X. Zhang (ed.), *Principles and Applications of Geographical Information Systems (in Chinese)*. China Water & Power Press, pp. 143-156.

Michael Zeiler, *Modeling Our World: The ESRI® Guide To Geodatabase Design*, translated by X. Zhang, F. Zhang, & **J. YAO** et al., Posts & Telecom press, 2004, 200pp.(in Chinese) (English Version: Michael Zeiler, *Modeling Our World: The ESRI® Guide To Geodatabase Design*, ESRI Press, 1999, 200pp).

### *Peer-reviewed Journal Articles*

**Yao, J.**, Zhang, X., & Murray, A. T. (2018). Location Optimization of Urban Fire Stations: Access and Service Coverage. *Computers, Environment and Urban Systems*, <https://doi.org/10.1016/j.compenvurbsys.2018.10.006> (in press).

**Yao, J.**, Wong, D. W.S., Bailey, N. and Minton, J. (2018). Spatial segregation measures: a methodological review. *Tijdschrift voor Economische en Sociale Geografie*, Doi:10.1111/tesg.12305.

**Yao, J.**, Zhang, X., & Murray, A. T. (2018). Spatial Optimization for Land-use Allocation: Accounting for Sustainability Concerns. *International Regional Science Review*, 41(6), 579-600.

Zhang, X., **Yao, J.** and Sila-Nowicka, K. (2018). Exploring spatiotemporal dynamics of urban fires: A case of Nanjing, China. *ISPRS International Journal of Geo-Information*, 7(1), 7. (doi:10.3390/ijgi7010007).

**Yao, J.**, & Fotheringham, A. S. (2016). Local spatiotemporal modeling of house prices: a mixed model approach. *The Professional Geographer*, 68(2), 189-201.

Agadjanian, V., **Yao, J.**, & Hayford, S. R. (2016). Place, Time and Experience: Barriers to Universalization of Institutional Child Delivery in Rural Mozambique. *International Perspectives on Sexual and Reproductive Health*, 42(1), 21-31.

- Agadjanian, V., Hayford, S. R., Luz, L., & **Yao, J.** (2015). Bridging user and provider perspectives: Family planning access and utilization in rural Mozambique. *International Journal of Gynecology & Obstetrics*, 130, E47-E51.
- Fotheringham, A. S., Crespo, R., & **Yao, J.** (2015). Exploring, modelling and predicting spatiotemporal variations in house prices. *The Annals of Regional Science*, 54(2), 417-436.
- Fotheringham, A. S., Crespo, R., & **Yao, J.** (2015). Geographical and temporal weighted regression (GTWR). *Geographical Analysis*, 47(4), 431-452.
- Yao, J.**, Agadjanian, V., & Murray, A. T. (2014). Spatial and social inequities in HIV testing utilization in the context of rapid scale-up of HIV/AIDS services in rural Mozambique. *Health & Place*, 28, 133-141.
- Yao, J.**, & Murray, A. T. (2014). Locational effectiveness of clinics providing sexual and reproductive health services to women in rural Mozambique. *International Regional Science Review*, 37(2), 172-193.
- Yao, J.**, & Murray, A. T. (2014). Serving regional demand in facility location. *Papers in Regional Science*, 93(3), 643-662.
- Yao, J.**, Murray, A. T., & Agadjanian, V. (2013). A geographical perspective on access to sexual and reproductive health care for women in rural Africa. *Social Science & Medicine*, 96, 60-68.
- Yao, J.**, & Murray, A. T. (2013). Continuous surface representation and approximation: spatial analytical implications. *International Journal of Geographical Information Science*, 27(5), 883-897.
- Yao, J.**, Murray, A. T., Agadjanian, V., & Hayford, S. R. (2012). Geographic influences on sexual and reproductive health service utilization in rural Mozambique. *Applied Geography*, 32(2), 601-607.
- Cudnik, M. T., **Yao, J.**, Zive, D., Newgard, C., & Murray, A. T. (2012). Surrogate markers of transport distance for out-of-hospital cardiac arrest patients. *Prehospital Emergency Care*, 16(2), 266-272.

## 【SOFTWARE DEVELOPMENT】

### 2013-2014: PyGWR — A New Version GWR and Extension.

- A project led by Professor Stewart Fotheringham at Centre for Geoinformatics, University of St Andrews, UK.

- The only developer of PyGWR.
- A prototype was used in a short course for PhD students given by Professor Stewart Fotheringham and Dr Jing Yao (Lab Instructor) at Arizona State University, USA in March, 2014

#### **2013-2014: Development of GWR4.0.8 and GWR 4.0.9**

- An international collaboration project organized by Tomoki Nakaya (Department of Geography, Ritsumeikan University, Japan), Martin Charlton, Paul Lewis, Chris Brunson (National Centre for Geocomputation, National University of Ireland, Ireland), Jing Yao (School of Social and Political Sciences, University of Glasgow) and Stewart Fotheringham (School of Geographical Sciences & Urban Planning, Arizona State University) (<http://gwr.maynoothuniversity.ie/gwr4-software/>)
- Developer and group member.

#### **2010-2011: Development of GeoDaSpace and PySAL**

- Projects led by Professors Luc Anselin and Serge Rey at the GeoDa Center for Geospatial Analysis and Computation, Arizona State University, USA (<https://spatial.uchicago.edu/software>)
- Developer and group member.

### **【 PRESENTATIONS 】**

- Yao J.**, A.T. Murray. Location Modeling to Support Sustainable Urban Land Use Planning. *International Symposium on Locational Decisions (ISOLDE) XIV*, Toronto, Ontario, Canada, July 9 – 14, 2017.
- Yao J.**, X. Zhang. Location Optimization of Fire Stations: Trade-off between Accessibility and Service Coverage. *The Ninth International Conference on Geographic Information Science*, Montreal, Canada, September 27-30, 2016.
- Yao J.**, X. Zhang. Spatial-Temporal Dynamics of Urban Fire Incidents: A Case Study of Nanjing, China. *The XXIII International Society for Photogrammetry and Remote Sensing (ISPRS) Congress*, Prague, Czech Republic, July 12-19, 2016.
- Yao J.**, A.S. Fotheringham. A Framework for Geographically Weighted Analysis and a Supporting Python Library – PyGWA. *Annual Meeting of the Association of American Geographers*, Chicago, IL, USA, April 21-25, 2015.

- Yao J.**, A.S. Fotheringham. Local Spatiotemporal Modelling of House Prices: A Mixed Model Method. *The 61<sup>st</sup> North American Meetings of the Regional Science Association International*, Bethesda, Washington, D.C., USA, November 12-15, 2014.
- Yao J.**, A.T. Murray, and V. Agadjanjan. Geographical Access to Sexual and Reproductive Health Care for Women in Rural Mozambique. *Annual Meeting of the Association of American Geographers*, Los Angeles, CA, USA, April 9-13, 2013.
- Yao J.**, A.T. Murray. Evaluation of Health Care Facility Locations: a Case Study in Rural Mozambique. *Western Regional Science Conference*, Santa Barbara, CA, USA, Feb 25 - 27, 2013.
- Yao J.**, A.T. Murray. Assessment of Sexual and Reproductive Health Service Location in Rural Mozambique. *International Symposium on locational decisions (ISOLDE) XII*, Nagoya and Kyoto, Japan, July 19 - 24, 2012.
- Yao J.**, A.T. Murray. Continuous Surface Representation and Approximation: Spatial Analytical Implications. *Annual Meeting of the Association of American Geographers*, New York, NY, USA, February 24-28, 2012.
- Yao J.**, A.T. Murray. Heuristics for Solving Multi-Weber Problem Extensions. *North American Regional Science Conference*, Miami, FL, USA, November 9-12, 2011.
- Yao J.**, A.T. Murray, V. Agadjanjan, S. Hayford. Exploratory Spatial Analysis of Sexual and Reproductive Health Services Utilization in Rural Mozambique. *Annual Meeting of the Association of American Geographers*, Seattle, WA, USA, April 12-16, 2011.
- Yao J.**, A.T. Murray. Siting A Single Facility to Best Serve an Area. 2010 North American Regional Science Conference, Denver, CO, USA, November 10-13, 2010.
- Yao J.**, A.T. Murray, S. Hayford, V. Agadjanjan, B. Cau. Regional Variability of Women's HIV/AIDS Risks: A Case Study of Gaza, Mozambique. *Annual Meeting of the Association of American Geographers*, Washington, D.C., USA, April 14-18, 2010.

## 【SUPERVISION】

### *PhD Students*

2018.10-now, **Mr Weicong Luo**, “Measuring and Optimizing Healthcare Access in a Rapid Urbanization Context”. University of Glasgow.

2018.09-2019.09, **Mr Yuhao Jin** (visiting student from Sun Yat-sen University from China), “Big-data Driven Spatial Analytics for Land-use Dynamics Analysis and Modeling”.

### *Master Students*

I’ve supervised 13 Master dissertations at University of Glasgow on a variety of topics including urban planning, real estate market and urban transport, among others.

### *Visiting Scholars*

2016.12-2017.12, **Dr Xuemei Bi**, the Center of Earthquake Emergency Technical Support, Earthquake Administration of Jiangsu, China

2016.1, **Prof. Jing Wang**, Wuhan University, China

## 【TEACHING EXPERIENCE】

**2014-2018, University of Glasgow, Scotland, UK.**

### Postgraduate

- Social Science Statistics I (*course convener*)
- Social Science Statistics II (*course convener*)
- Principles of Applications of GIS (*course convener*)
- Fundamental of Transport Studies (*co-taught*)
- International Real Estate Analysis (*co-taught*)

### Undergraduate

- Researching the City: A Spatial Perspective (*course convener*)

### UBDC training course

- Introduction to R
- Using R: Mapping Spatial Data
- Introduction to R for Spatial Analysis
- Introduction to R for Statistical Analysis

**2014, University of St Andrews, Scotland, UK.**

- Quantitative Methods in Geography (co-taught)

**2012, Arizona State University, Arizona, USA.**

- Geographic Information Science I (teaching assistant)

**2005-2009, Hohai University, Nanjing, China.**

- Undergraduate thesis advisor (number students: 6)
- Principles of Spatial Databases (course convener)
- Principles of Geographic Information Systems (course convener)
- Web-based Geographic Information Systems (course convener)

**【INVITED TALKS】**

**2018.01** "Design and Development of Open-source Software for Spatial Analysis".

Institute of Geographic Sciences and Natural Resources Research, Chinese Science Academy, China.

**2017.06** "Optimisation Problems in Geographically Weighted Regression." School of Government, Peking University, China.

**2017.06** "Using PySAL for Spatial Analysis (half day workshop)." Hohai University, China.

**2017.06** "Geographically Weighted Regression (half day workshop)." Hohai University, China

**2016.05** "Spatiotemporal Analyses of Urban Fires and Optimizing Fire Station Locations: An Initial Study on Smart Fire Fighting." Department of Geography & Planning, University of Liverpool, UK.

**2015.12** "Spatial Analysis and Urban Big Data in Agricultural Land Use Research." Beijing Agriculture and Forestry Academy of Sciences, Beijing, China.

**2015.08** "Spatial Analysis and Urban Big Data Research in UK." the Institution of Remote Sensing and Digital Earth, Chinese Academy of Sciences, Beijing, China.

**2015.07** "Spatial Statistics in Social Sciences and the Challenges of Big Data." Nankai University, Tianjing, China.

**2014.12** "Applications of Spatial Analytics in National Geographic Conditions





### *Systems*

- *Environment and Planning B: Urban Analytics and City Science*
- *Health and Place*
- *Annals of the American Association of Geographers*
  - *Journal of the Operational Research Society*
  - *Socio-Economic Planning Sciences*
  - *Spatial Economic Analysis*
  - *Social Science & Medicine*
  - *Tropical Medicine &*

### *International Health*

- *Applied Geography*
- *BMJ Open*
- *PLOS ONE*
- *Journal of Urban Planning and Development*
- *Geocarto International*
- *Journal of Official Statistics*
- *Sustainability*
- *Transportation Letters: The International Journal of Transportation research*

### ***Professional Society Membership***

- Association of American Geographers (2009 - now)
- Regional Science Association International (2010 - now)
- Western Regional Science Association (2011 - now)
- Scottish Alliance for Geoscience, Environment and Society (2013 - now)

Updated on October 2018