

Huanfa Chen

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EDUCATION

2014 - present	Ph.D. Geographical Information Science – University College London Advisor: Prof. Tao Cheng Research Topic: Designing Effective Police Patrolling Strategy on Street Network	London, UK
2011 - 2014	Master of Science – Peking University Thesis: Spatio-temporal Modelling of Urban Air Quality in Beijing	Beijing, China
2007 - 2011	Bachelor of Science in Chemistry - Peking University	Beijing, China

RESEARCH EXPERIENCE

2014 - present	Designing Effective Police Patrolling Strategy on Street Network Work with Prof. Tao Cheng Part of EPSRC-funded CPC project (http://www.ucl.ac.uk/cpc/) Design effective routing strategy for police patrolling in order to monitor the crime hotspots and respond to calls for service. Used methods include linear optimisation, heuristics, agent-based simulation.	London, UK
01 - 09 / 2014	Spatio-temporal Modelling of Urban Air Quality in Beijing Work with: Prof. Qi Li Statistical analysis of the PM2.5 concentration time series data in Beijing. Building a spatio-temporal ARIMR model to predict the future air pollution level. The model has high predicting accuracy.	Beijing, China
09/2011 - 06/2012	Testing of an online Remote Sensing Product Distributing System Work with: Prof. Qi Li Use software testing techniques to test the functions of the remote sensing product distributing system. Produce a report on the system functionality.	Beijing, China
01/2012 – 09/2014	A 3D Simulation System for Hazardous Chemical Leakage Accidents Work with: Prof. Qi Li Design and implement a 3D GIS system for simulating chemical leakage accident based on atmospheric dispersion models, to support emergency response.	Beijing, China

WORK EXPERIENCE

2014 – present	University College London – Postgraduate Teaching Assistant Teaching skills: Lecture in “Agent Based Simulation” as part of the Msc Course <i>Spatio-Temporal Data Mining</i> in 2016 and 2017. Communication skills: guide the tutorial session of Spatio-Temporal Data Mining (CEGE076, 2015/2017) and GIS Principles and Technology (CEGE082, 2017). Tutorials involve programming in R/Python/Netlogo.	London, UK
06 – 08 / 2011	China Branch of Micro-Vu Inc. – Software Testing Engineer Internship Team working skills: work with 3 software developers to ensure the functionality of the software.	Beijing, China
06 – 08 / 2008	Chunmiao Education Group – Volunteering Tutor Teaching skills: teach geography, chemistry and English to a class of 20 primary school students.	Jieyang, China

PUBLICATIONS

Peer-Reviewed Journal Articles

- **Huanfa Chen**, Tao Cheng, Sarah Wise. Developing an online cooperative police patrol routing strategy. *Computers, Environments and Urban Systems*. 62, 19–29 (2017). (Indexed by SSCI, impact factor 2.092)
- Hamed Karimian, Qi Li, **Huanfa Chen**. Accessing Urban Sustainable Development in Isfahan, *Applied Mechanics and Materials*. 2013, 253-255, 244-248
- Yan Qiao, **Huanfa Chen**, Yiyang Lin, Zhiyi Yang, Xinhao Cheng, Jianbin Huang. Photoluminescent Lanthanide-Doped Silica Nanotubes: Sol-Gel Transcription from Functional Template, *Journal of Physical Chemistry C*, 2011, 115, 7323–7330
- Yan Qiao, **Huanfa Chen**, Yiyang Lin, Jianbin Huang. Controllable Synthesis of Water-Soluble Gold Nanoparticles and Their Applications in Electrocatalysis and Surface-Enhanced Raman Scattering, *Langmuir* 2011, 27, 11090-11097

Peer-reviewed Conference/Workshop Proceedings

- **Huanfa Chen**, Tao Cheng*, Sarah Wise, 2015. Designing Daily Patrol Routes for Policing Based on Ant Colony Algorithm. *ISPRS Annals of Photogrammetry, Remote Sensing and Spatial Information Sciences*, II-4/W2, pp.103–109.
- **Huanfa Chen**, Qi Li, Yajie Zhu, Hamed Karimian, Research of 3D simulation system for chemical accidents based on atmospheric dispersion model, in *Proceedings of International Conference on Earth Science and Environmental Protection 2013* (ICESEP 2013), 2013.
- Hamed Karimian, Qi Li, **Huanfa Chen**. Correlation between AOD and Pm2.5 over Tehran Iran, in *Proceedings of International Conference on Earth Science and Environmental Protection 2013* (ICESEP 2013), 2013, Kunming, China.
- Yajie Zhu, Qi Li, **Huanfa Chen**. System Design of a Simulation System for Hazardous Chemicals Leakage, in *Proceedings of the 12th International Conference of GeoComputation*, 2013, Wuhan, China

Presentations

- Oral presentation, Spatio-temporal Optimisation of Cooperative Police Patrol Routes. In *Association of American Geographers (AAG) Annual Meeting*, March 29-Apr. 2, 2016, San Francisco, CA, USA.
- Oral presentation, Designing Daily Patrol Routes for Policing Based on Ant Colony Algorithm. In *the 1st International Symposium on Spatiotemporal Computing (ISSC 2015)*, Fairfax, VA, US.

RESEARCH INTERESTS

My primary area of research concerns route design, district design and spatial optimisation for distributed service, such as police patrol. My current work involves designing routes for a group of police patrollers to effectively cover the area and respond to calls for service. I am also very interested in spatio-temporal data mining, including clustering approaches, text mining and knowledge discovery of social media data.

LEADERSHIP EXPERIENCE

2016 - present	Peking University Alumni Association in the UK. General Secretary • Coordinate a 20-person committee to guarantee the development of the association. Oversaw a 10% membership boost compared to the previous year. • Organise monthly seminars and 150-person annual meeting.	UK
2011 - 2012	Coordinator of Badminton Club of Peking University • Organise weekly training of the 20-person club and 8 games against other teams.	Beijing, China

AWARDS

2014-2018	UCL-CSC Joint Research Scholarship. From University College London & China Scholarship Council. (Full Ph.D. scholarship. Covering tuition fees and expenses.)
2015	Excellent Prize , in the 2015 ISPRS-Scientific Initiative Open Data Challenge. By Shenzhen Key Laboratory of Spatial Smart Sensing and Services, Shenzhen University.
2015	Honorable Mention for Best Young Researcher Paper. In the 1st International Symposium on Spatiotemporal Computing (ISSC 2015), Fairfax, VA, US. (\$500)
2010	China National Petroleum Corporation Scholarship. Peking University. For undergraduate students with excellent academic performance.
2008	Merit Student Awards. Peking University.

ADDITIONAL INFORMATION

Languages	English (fluent), Madarin (native), Cantonese (fluent) and Teochew (native)
Programming language	R, Java, Python, C++.
Applications	MS Office Suite, WordPress, Esri ArcGIS
Interests	Travel, sports (practicing badminton in competition), history and science
Academic membership	Member of ICA Commission on Location Based Services; member of The International Association of Chinese Professionals in Geographical Information Sciences