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教育经历

理学博士, 地理信息科学 伦敦大学学院 (UCL)	2014 – 2019 英国
理学硕士, 地图学与地理信息系统 北京大学	2011 – 2014 中国
理学学士, 化学 北京大学	2007 – 2011 中国

工作经历

讲师 (助理教授), 空间数据科学方向 高级空间分析中心, UCL <ul style="list-style-type: none">• 博士生导师; 讲授研究生课程• 副系教务主任(2020年起)	2020年10月– 英国
教员, 空间数据科学方向 高级空间分析中心, UCL <ul style="list-style-type: none">• 博士生导师; 讲授研究生课程• 副系教务主任(2020年起)	2019年2月– 英国
客座教授 建筑与城市学院, University of Westminster <ul style="list-style-type: none">• 讲授GIS和空间分析课程	2019年1月– 英国
助教 土木环境与测绘系, UCL <ul style="list-style-type: none">• 讲授“多智能体仿真”硕士生课程• 主持R/Python/NetLogo习题课	2014年10月– 2019年1月 英国
研究助理 土木环境与测绘系, UCL <ul style="list-style-type: none">• 参与“犯罪, 警务与市民信心”科研项目, 受英国物理与工程科学基金委 (EPSRC) 资助• 开发时空犯罪热点预测算法和可视化系统	2015年10月– 2019年1月 英国

研究兴趣

时空人工智能
应用领域包括犯罪热点预测, 公共卫生, 火灾应急, 交通出行行为建模等

空间优化
选址, 路径规划, 区域规划问题的算法开发和应用

空间多智能体仿真
应用领域包括犯罪预防和警察巡逻策略优化

期刊论文

1. Huanfa Chen, Alan T. Murray, and Rui Jiang, Open-source approaches for location cover models: capabilities and efficiency, *Journal of Geographical Systems* **23**, 361–380 (2021).
2. Huanfa Chen, Tao Cheng, and Xinyue Ye, Designing efficient and balanced police patrol districts on an urban street network, *International Journal of Geographical Information Science* **33**, 269–290 (2019).
3. Huanfa Chen, Tao Cheng, and John Shawe-Taylor, A Balanced Route Design for Min-Max Multiple-Depot Rural Postman Problem (MMMDRPP): a police patrolling case, *International Journal of Geographical Information Science* **32**, 169–190 (2018).
4. Huanfa Chen, Tao Cheng, and Sarah Wise, Developing an online cooperative police patrol routing strategy, *Computers, Environment and Urban Systems* **62**, 19–29 (2017).
5. Nilufer Sari Aslam, Mohamed R. Ibrahim, Tao Cheng, Huanfa Chen, and Yang Zhang, ActivityNET: Neural networks to predict public transport trip purposes from individual smart card data and POIs, *Geo-spatial Information Science*, 1–11 (2021).
6. Yibin Ren, Huanfa Chen, Yong Han, Tao Cheng, Yang Zhang, and Ge Chen, A hybrid integrated deep learning model for the prediction of citywide spatio-temporal flow volumes, *International Journal of Geographical Information Science* **34**, 802–823 (2020).
7. Yuerong Zhang, Stephen Marshall, Mengqiu Cao, Ed Manley, and Huanfa Chen, Discovering the evolution of urban structure using smart card data: The case of London, *Cities* **112**, 103157 (2021).
8. Yan Qiao, Huanfa Chen, Yiyang Lin, and Jianbin Huang, Controllable synthesis of water-soluble gold nanoparticles and their applications in electrocatalysis and surface-enhanced raman scattering, *Langmuir* **27**, 11090–11097 (2011).
9. Yan Qiao, Huanfa Chen, Yiyang Lin, Zhiyi Yang, Xinhao Cheng, and Jianbin Huang, Photoluminescent lanthanide-doped silica nanotubes: Sol-Gel transcription from functional template, *Journal of Physical Chemistry C* **115**, 7323–7330 (2011).
10. Yan Qiao, Yiyang Lin, Zhiyi Yang, Huanfa Chen, Shaofei Zhang, Yun Yan, and Jianbin Huang, Unique temperature-dependent supramolecular self-assembly: From hierarchical 1D nanostructures to super hydrogel, *Journal of Physical Chemistry B* **114**, 11725–11730 (2010).

书籍章节

1. Huanfa Chen and Alan T. Murray, Open-source approaches for location coverage modelling, in *Open Source Geospatial Science for Urban Studies. Lecture Notes in Intelligent Transportation and Infrastructure.*, edited by Amin Mobasher (Springer, Cham, 2021) pp. 117–129.

正在评审论文

1. Huanfa Chen, Thomas Keel, Mengdie Zhuang, and Nilufer Sari Aslam, Trip purpose prediction using non-sensitive data: a machine learning perspective, *Transportation* **Submitted** (2021).

会议论文

1. Huanfa Chen and Yang Zhou, Forecasting high-street footfall in real time, in *Proceedings of Geographical Information Science Research - UK 2020* (Online, 2020).
2. Huanfa Chen, Yang Zhang, and Tao Cheng, Locating stations in bike-sharing service: a special maximal covering location problem, in *Proceedings of Geographical Information Science Research - UK 2019* (Newcastle, UK, 2019).
3. Huanfa Chen and Tao Cheng, Modelling Police Patrol Routing as Min-Max Postmen Problems, in *Proceedings of Geographical Information Science Research - UK 2017* (Manchester, UK, 2017).
4. Huanfa Chen and Tao Cheng, Designing police patrol districts on street network, in *Proceedings of the 14th International Conference of GeoComputation* (Leeds, UK, 2017).
5. Yajie Zhu, Qi Li, and Huanfa Chen, System Design of a Simulation System for Hazardous Chemicals Leakage, in *Proceedings of the 12th International Conference of GeoComputation* (Wuhan, China, 2013).

6. Huanfa Chen, Qi Li, Yajie Zhu, and 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* (Kunming, China, 2013).
7. Hamed Karimian, Qi Li, and Huanfa Chen, Correlation between AOD and Pm2.5 over Tehran Iran, in *Proceedings of International Conference on Earth Science and Environmental Protection 2013* (Kunming, China, 2013).

项目报告

1. Tao Cheng, Kate Bowers, Paul Longley, John Shawe-Taylor, Toby Davies, Gabriel Rosser, Sarah Wise, Chris Gale, Monsuru Adepeju, Jianan Shen, Huanfa Chen, Dawn Williams, Kira Kempnińska, and Artemis Skarlatidou, *CPC: Crime, Policing and Citizenship – Intelligent policing and big data*, Tech. Rep. (UCL SpaceTimeLab, London, 2016).

软件项目

其他研究成果

指导学生

1. 伦敦大学学院, 英国, 2019 –

(a) 博士生(作为第二导师)

- i. Xiaowei Gao (PhD Geographical Information Science, 2020 –)
 - Research area: Spatio-temporal analytics of cycling mobility
- ii. Meihui Wang (PhD Geographical Information Science, 2020 –)
 - Research area: Urban analytics based on street-view imagery

(b) 硕士生(共指导30名硕士生, 以下是部分学生的论文题目)

- i. Lingru Feng (MSc Spatial Data Science and Visualisation, 2020 – 2021)
 - Thesis: Comparing Floating Catchment Area Methods for Measuring Spatial Accessibility to COVID-19 Vaccination Service in England
- ii. Chenxi Zhao (MSc Spatial Data Science and Visualisation, 2020 – 2021)
 - Thesis: The relationship between covid-19 and socio-demographic in London: the three lockdowns in 2020
- iii. Huaming Yan (MSc Spatial Data Science and Visualisation, 2020 – 2021)
 - Thesis: Using spatial analysis to measure the fire incidents response time in Greater London
- iv. Yutong Xia (MSc Smart Cities and Urban Analytics, 2020 – 2021)
 - Thesis: A Random Effect Bayesian Neural Network (RE-BNN) for Choice Analysis: Predicting Travel Mode Choice Across Multiple Regions
- v. Yixin Huang (MSc Smart Cities and Urban Analytics, 2020 – 2021)
 - Thesis: Research on spatial accessibility and spatial inequality of vaccination sites in England
- vi. Xiaohan Feng (MSc Spatial Data Science and Visualisation, 2020 – 2021)
 - Thesis: Decomposition Analysis of Index of Multiple Deprivation (IMD) Based on Shapley Value
- vii. Xiaomei Ge (MSc Smart Cities and Urban Analytics, 2019 – 2020)
 - Thesis: Looking into home sharing platforms and their influence on local inequality and insecurity: a case study of London
- viii. Chuyin Deng (MSc Spatial Data Science and Visualisation, 2019 – 2020)

- Thesis: Exploring the influential factors of cases growth of COVID-19 with machine learning techniques
- ix. Zhenzhi Zhang (MSc Spatial Data Science and Visualisation, 2019 – 2020)
 - Thesis: Understanding public confidence towards NHS by ordered logistics regression based on survey results
- x. Xiang Zhou (MSc Spatial Data Science and Visualisation, 2019 – 2020)
 - Thesis: Solving vehicle routing problems in supply chain using genetic algorithms: a case study in Shanghai
- xi. Yu Fu (MSc Spatial Data Science and Visualisation, 2019 – 2020)
 - Thesis: A real-time forecast of electricity consumption in residential buildings using machine learning approaches
- xii. Thomas Keel (MSc Spatial Data Science and Visualisation, 2018 – 2019)
 - Thesis: Can we predict why people travel within a city? A case study in Montreal, Canada
- xiii. Yang Zhou (MSc Smart Cities and Urban Analytics, 2018 – 2019)
 - Thesis: Retail centre footfall: planning and forecasting using time series modelling
- xiv. Yafei Ye (MRes Spatial Data Science and Visualisation, 2018 – 2019)
 - Thesis: Understanding residents' attitudes towards services and safety issues by geodemographics based on city survey results
- xv. Yunong Wang (MSc Spatial Data Science and Visualisation, 2018 – 2019)
 - Thesis: Optimal siting and sizing of electric vehicle charging points: a case study in London
- xvi. Maria del pilar Mayora (MSc Smart Cities and Urban Analytics, 2018 – 2019)
 - Thesis: An environmental bicycle level of service index for the Buenos Aires cycle network
- xvii. Ziyi Cheng (MSc Smart Cities and Urban Analytics, 2018 – 2019)
 - Thesis: Exploring the spatial accessibility to green space in the Greater London area

会议报告

受邀报告

Geospatial machine learning: motivations and implications 2020年5月
天津大学建筑学院

Machine learning for urban analytics and transport studies 2021年3月
中国测绘科学研究院

荣誉和奖励

UCL Q-Step 学生实习项目 2021
£3,000 资助, 指导本科生科研项目 UCL, 英国

- 科研项目: 评估全球多国家的Covid-19疫苗服务的可达性

2019 AAG Applied Geography Specialty Group Project Development Award 2019
\$500 资助, 支持“预测城市地区共享单车需求”的研究项目 美国

2019 AAG Applied Geography Specialty Group Travel Award 2019
\$250 参会补贴 US

Roger Tomlinson 论文奖 2018
由ESRI公司资助, 授予UCL指导的地理信息科学方向最佳博士论文 UCL, 英国

EPSRC 互联社会先行者比赛决赛选手 2018
由英国物理与工程科学基金会发起的比赛, 全英国共500名多领域的博士生参赛, 决赛名单共16人 英国

上海开放数据应用大赛“明日之星”奖励 领队，负责项目管理和算法开发	2017 上海，中国
• 项目内容：共享单车的站点选址和运营优化	
年轻研究者的旅行补贴 获得€300 资助，以参加研讨会	2017 Leiden University, 荷兰
• 研讨会主题：“移动模式：新传感器，新数据，新挑战”	
UCL-CSC 联合博士奖学金 博士全额奖学金，资助期限四年	2014 – 2018 UCL, 英国
2015年ISPRS开发数据全球挑战赛优秀奖 作为队长，带队在初赛排名前十（共100个队伍参赛）	2015 深圳大学, 中国
最佳青年学者论文提名奖 在首届时空计算国际会议获得\$500 奖励	2015 乔治梅森大学, 美国
北京大学-中石油奖学金 学业成绩在全年级排名前10/150；奖金¥5,000	2010 北京大学, 中国
北京大学三好学生 学业成绩在全年级排名前20/150	2008 北京大学, China

教学经历

CASA0007: 定量方法 教授城市研究和空间分析的数学方法基础	2019 – UCL
CASA0013: 空间数据科学基础 基于Python的空间数据科学, 涵盖pandas/geopandas/matplotlib/sklearn	2019 – UCL
CASA0006: 空间数据科学 基于统计学习和机器学习的空间分析方法	2019 – UCL
CASA0009: 空间数据获取，存储与分析 涵盖MySQL数据库, Javascript, 网站建设	2019 – UCL
CASA0011: 空间多智能体模型 基于NetLogo编程的空间显式多智能体模型	2021 – UCL
CEGE0076: 时空数据挖掘 基于R语言，介绍时空数据挖掘常用模型和方法	2015 – 2021 UCL
CEGE0082: GIS思想与方法 讲授基于ArcGIS的GIS习题课	2016 – 2017 UCL

协会活动

协会会员

会员, 美国地理学家协会	2015 –
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协会任职

理事会成员, 国际华人地理信息科学协会	2021 –
秘书长, 北京大学全英校友会 协调20人的理事会，组织150名参会人员的年会	2016 – 2018 英国
主席, 伦敦博士联盟 组织多学科领域的学术研讨会；协会共有800名成员	2016 – 英国

期刊编辑

编委会成员, Humanities and Social Sciences Communications	2022 –
客座编辑, 负责 Covid-19 Impact on Human Mobility 特刊 Geo-spatial Information Science	2021 – 2022

评审经历

期刊审稿

International Journal of Geographic Information Science	2015 –
Computers, Environments, and Urban Systems	2018 –
Transportation Research Part C: Emerging Technologies	2019 –
Journal of Homeland Security and Emergency Management	2022 –

技能

语言: 普通话, 英语, 粤语, 潮汕话
编程: Python, R, Java, C++, Linux Bash
软件系统: Esri ArcGIS, Microsoft Office Suite, LaTeX, Markdown
业余兴趣: 羽毛球, 旅行, 阅读, 博客写作