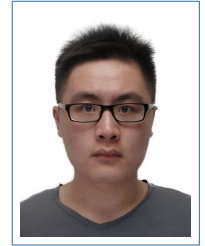


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Assistant Professor

CONCENTRATION

- Urban Data Science and Urban Analytics
- Geo-AI and Social Computation
- Human Mobility and Urban Informatics
- Human-Urban-Social Interaction

PROFESSIONAL APPOINTMENT

- 2022.04 -Now **Assistant Professor**, *School of Big Data and Internet*, Shenzhen Technology University.
- 2021.09 -2022.03 **Research Associate**, *School of Architecture and Urban Planning, Guangdong Key Laboratory of Urban Informatics*, Shenzhen University.
- 2019.09 -2021.08 **Postdoctoral Researcher**, *School of Architecture and Urban Planning, Guangdong Key Laboratory of Urban Informatics*, Shenzhen University.
- Cooperation advisor: Prof.Li Qingquan.

EDUCATION

- 2013.09 -2019.06 **Ph.D.**, *State Key Laboratory of Information Engineering in Surveying, Mapping and Remote Sensing (LIESMARS)*, Wuhan University.
- Supervisor: Prof.Li Qingquan.
 - Top Ten Academic Star for Postgraduates, National Scholarship for Graduate Students.
- 2017.09 -2018.09 **Joint Ph.D.**, *THINK LAB, School of Civil and Environmental Engineering*, University of Washington, U.S.A.
- 2009.09 -2013.06 **B.S.**, *School of Remote Sensing and Information Engineering*, Wuhan University.
- Outstanding Graduate, GPA: 3.7/4.0, Grades ranking (4/69).
 - University Scholarship, Excellent Student Award, Outstanding Graduates, etc.

RESEARCH PROJECTS

Projects in lead

- 2023.01 -2023.12 **School-level Teaching Reform Research Project**, *Exploration and Practice of Teaching Reform for Course of Introduction to Data Science and Big Data Based on Teaching Research Competition and Collaborative Education*, ¥20,000.
- 2021.05 -2023.07 **Young Teachers Education and Teaching Ability Development and Improvement Program**, ¥10,000.

- 2021.10 -2023.10 **Basic Research Program of Shenzhen Science and Technology Innovation Committee**, *Research on collaborative optimization of urban agglomeration functions from the perspective of fusion of deep learning and geographic-flow dual views*, No.JCYJ20220530152817039, ¥300,000.
- 2021.01 -2023.12 **National Natural Science Foundation of China**, *Study on the multi-scaled identification of urban dynamic functions based on mobile phone big data*, No.42001393, ¥300,000.
- 2020.06 -2021.12 **China Postdoctoral Science Foundation**, *Research on multi-scale prediction of urban functions based on big data*, 2020M672803, ¥80,000.
- 2020.01 -2022.12 **Open Fund of Key Laboratory of Urban Land Resources Monitoring and Simulation, Ministry of Natural Resources**, *Suitability assessment of urban travel patterns and spatial structures based on multi-sourced spatial-temporal trajectories*, No.KF-2019-04-073, ¥155,000.
- 2020.11 -2023.03 **Open Fund of Key Laboratory of National Geographic Census and Monitoring, Ministry of Natural Resources**, *Research on dynamic monitoring method of urban functions based on deep learning*, No.2020NGCMZD02, ¥100,000.

Participated projects

- 2021.01 -2022.12 **National Key R&D Program**, *Research and demonstration of comprehensive decision-making and collaborative services in mega-city region of the Greater Bay Area (Subtopic 4):Megalopolis cooperative management service and intelligent decision optimization technology*, ¥2740K, Core members.
- 2019.04 -2022.04 **China-EU Cooperation Project of National Natural Science Foundation of China**, *SIMETRI: Sustainable Mobility and Equality in Megacity Regions-Patterns, Mechanisms and Governance*, ¥2000K, Core members.
- 2016.01 -2018.12 **National Major Research Plan Cultivation Project**, *Collective spatiotemporal movement law mining and dynamic modeling based on multi-source spatio-temporal big data*, ¥430K, Core members.
- 2012.08 -2015.12 **Shenzhen Science and Technology Innovation Committee Strategic Emerging Industry Development Special Fund Project**, *Research on collective activity recognition and urban spatial structure evolution based on multi-source spatio-temporal data*, ¥4000K, Core members.

TEACHING EXPERIENCES

- Spring 2023 IB00129 (2023) Digital Image Processing
 Fall 2022 IB00095 (2022) Introduction to Data Science and Big Data
 Spring 2022 IB00078 (2022) Digital Image Processing
 Spring 2021 Spatial statistics and analysis
 Fall 2020 Professional English
 Spring 2014 Android development and practice

PUBLICATIONS

- 2023 **Jinzhou Cao**, Wei Tu, Rui Cao, Qili Gao, Guanzhou Chen, and Qingquan Li. Untangling the association between urban mobility and urban elements. *Geo-spatial Information Science*. 2023, 1 -19.

- 2022 Qili Gao, Yang Yue, Chen Zhong, **Jinzhou Cao**, Wei Tu, Qingquan Li. Revealing Transport Inequality from an Activity Space Perspective: A Study Based on Human Mobility Data. *Cities*. 2022, 104036. (SSCI, Q1 TOP)
- Bichen Fang, Wei Tu, Mingxiao Li, **Jinzhou Cao**, Wei Gao, Yang Yue, Qingquan Li. Uncovering Spatial Synergy of the Megacity Region: A Flow Perspective. *The International Archives of Photogrammetry, Remote Sensing and Spatial Information Sciences*. 2022, XLIII-B4-2022: 521-528.
- Rui Cao, Wei Tu, Jixuan Cai, Tianhong Zhao, Jie Xiao, **Jinzhou Cao**, Qili Gao, Hanjing Su. Machine Learning-Based Economic Development Mapping from Multi-Source Open Geospatial Data. *ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences*. 2022, V-4-2022: 259-266.
- 2021 **Jinzhou Cao**, Qingquan Li, Wei Tu, Chen Zhong. Resolving urban mobility networks from individual travel graphs using massive mobile phone tracking data. *Cities*. 2021, 110: 103077. (SSCI, Q1 TOP)
- Jinzhou Cao**. Big data-driven research on the interaction of human mobility pattern and urban spatial structure. *Acta Geodaetica et Cartographica Sinica*. 2021, 50(6):849 - 849. (EI, in Chinese)
- 2020 Wei Tu, **Jinzhou Cao**, Qili Gao, Rui Cao, Zhixiang Fang, Yang Yue, Qingquan Li. Sensing Urban Dynamics by Fusing Multi-sourced Spatiotemporal Big Data. *Geomatics and Information Science of Wuhan University*. 2020, 45(12): 1875 -1883. (EI)
- Wei Tu, Yatao Zhang, Qingquan Li, Ke Mai, **Jinzhou Cao**. Scale Effect on Fusing Remote Sensing and Human Sensing to Portray Urban Functions. *IEEE GEOSCIENCE AND REMOTE SENSING LETTERS*. 2020, 49(3):365 -374. (SCI)
- 2019 **Jinzhou Cao**, Qingquan Li, Wei Tu, Feilong Wang. Characterizing preferred motif choices and distance impacts. *Plos ONE*. 2019, 14(4): e0215242. (SCI)
- Feilong Wang, Jingxing Wang, **Jinzhou Cao**, Cynthia Chen, Xuegang Ban. Extracting Trips from Multi-Sourced Data for Mobility Pattern Analysis: An App-Based Data Example. *Transportation Research Part C*. 2019, 105. 183 -202. (SCI)
- 2018 **Jinzhou Cao**, Wei Tu, Qingquan Li. Uncovering motif patterns from mobile phone positioning data. *Association of American Geographers Annual Meeting*. 2018. New Orleans, USA.
- Wei Tu, Zhongwen Hu, Lefei Li, **Jinzhou Cao**, Jincheng Jiang, Qiuping Li, Qingquan Li. Portraying Urban Functional Zones by Coupling Remote Sensing Imagery and Human Sensing Data. *Remote sensing*. 2018, 10(1), 141. (SCI)
- Rui Cao, Jiasong Zhu, Wei Tu, Qingquan Li, **Jinzhou Cao**, Bozhi Liu, Qian Zhang, Guoping Qiu. Integrating Aerial and Street View Images for Urban Land Use Classification. *Remote Sensing*. 2018, 10.10: 1553. (SCI)
- 2017 Wei Tu, **Jinzhou Cao**, Yang Yue, Shih-Lung Shaw, Meng Zhou, Zhensheng Wang, Xiaomeng Chang, Yang Xu, Qingquan Li. Coupling mobile phone and social media data: a new approach to understanding urban functions and diurnal patterns. *International Journal of Geographical Information Science*. 2017, 31(12), 2331 -2358. (SCI, Highly Cited Papers)
- CAO Jinzhou**, TU Wei, LI Qingquan, CAO Rui. Spatio-temporal analysis of aggregated human activities based on massive mobile phone tracking data. *Journal of Geoinformation Science*. 2017, 19(4): 467 -474. (in Chinese)

- 2016 Rui Cao, Wei Tu, **Jinzhou Cao**, Qingquan Li. Comparison of Urban Human Movements inferring from multi-sources spatio-temporal data. *International Society for Photogrammetry and Remote Sensing Congress*. 2016. Prague. (A&HCI)
- Wei Tu, Rui Cao, **Jinzhou Cao**, Qingquan Li. Spatial-temporal variation of public transit ridership using smart card data and mobile phone data. *Association of American Geographers Annual Meeting*. 2016. San Francisco, USA.
- 2015 **Jinzhou Cao**, Wei Tu, Qingquan Li, Meng Zhou, Rui Cao. Exploring the distribution and dynamics of functional regions using mobile phone data and social media data. *14th International Conference on Computers in Urban Planning and Urban Management*. 2015. Boston, USA.
- 2014 **Jinzhou Cao**, Qingwu Hu, Qingquan Li. A study of users' movements based on check-in data in location-based social networks. In *Web and Wireless Geographical Information Systems, W2GIS 2014*, volume 8470 of *Lecture Notes in Computer Science*. 2014. (EI)
- 2013 **Jinzhou Cao**, Hongyu Wu. Update approach of pois based on weibo position check-in data. *Geospatial Information*. 2013, 11(2). (in Chinese)

PATENTS AND SOFTWARES

- Patents Wei Tu, **Jinzhou Cao**. Megalopolis space simulation method, system and equipment based on cellular automata (ZL202010858272.0)
- Wei Tu, Tianhong Zhao, Zhengdong Huang, **Jinzhou Cao**. A measuring method, equipment and storage medium based on the interaction of megalopolis elements (ZL202010939772.7)
- Wei Tu, **Jinzhou Cao**. Collective activity data collection method and system based on multi-source spatio-temporal trajectory data (CN106211071A)
- Wei Tu, **Jinzhou Cao**. Method and system for consistency checking and fusion of multi-source location data (CN106203467A)
- Shaoqing Shen, Tu Wei, **Jinzhou Cao**. Method and system for identifying traffic facilities to be improved based on time-space trajectory data (CN108597224A)
- Hongyu Wu, **Jinzhou Cao**. POI update method based on location check-in data (CN103064953B)
- Hongyu Wu, **Jinzhou Cao**. Method for analyzing the quality of crowd-source location data (CN103177189B)
- Softwares Time-space trajectory big data analysis intelligent system (2017SR358941)
- POI evaluation update software (2013SR075407)
- Weibo data crawled software (2013SR075731)

CONFERENCE PRESENTATIONS

- 2021.11 The European Colloquium on Theoretical and Quantitative Geography-ECTQG. Visual Meeting. (Oral presentation)
- 2019.07 The 4th Space Information Intelligent Service Symposium. Wuhan, China. (Oral presentation)
- 2018.04 Association of American Geographers Annual Meeting. New Orleans, USA. (Oral presentation)

- 2016.09 Annual Conference on Theory and Method of Geographic Information Science in China. Shenzhen, China. (Oral presentation)
- 2016.08 The 33rd International Geographical Congress (IGC). Beijing, China. (Oral presentation)
- 2015.06 The 14th International Conference on Computers in Urban Planning and Urban Management (CUPUM). Cambridge, MA USA. (Oral presentation)
- 2014.05 The 13th International Symposium on Web and Wireless GIS (W2GIS). Seoul, South Korea. (Oral presentation)

HONORS and AWARDS

- Post-doc The first Award of Science and Technology Award in the Surveying and Mapping field(RANKED NINTH)
Shenzhen high-level talent
- Postgraduate National Scholarship for Graduate Students, The Ministry of Education(*twice, 8/300*)
The Top Ten Academic Star for Postgraduates, Wuhan University
The third Award for National College Student Curricular Academic Science and Technology Works Competition, The Ministry of Education
- Undergraduate Outstanding Graduate, Wuhan University(*1/10*)
Second Grade Scholarship(*twice*)/ Third Grade Scholarship, Wuhan University(*once*)
Excellent Student Award(*thrice, 5%*)
Outstanding student cadres(*twice, 1%*)
First Award for Summer Social Practice and Survey, Wuhan University(*1%*)

ACADEMIC SERVICES

Professional Memberships

- The International Association of Chinese Professionals in Geographic Information Sciences (CPGIS), member
- Institute of Electrical and Electronics Engineers (IEEE), member
- China Computer Federation (CCF), member

Reviewer of the Following Journals

- Scientific Reports
- Computers, Environment and Urban Systems
- Annals of the American Association of Geographers
- Travel Behaviour and Society
- Data Science for Transportation
- PLOS ONE
- Geomatics and Information Science of Wuhan University (in Chinese)
- Acta Geodaetica et Cartographica Sinica (in Chinese)