CURRICULUM VITAE

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EDUCATION

Ph.D.	Geography, The University of Tennessee, Knoxville, TN, USA, 2015
	Dissertation: *Mobility and Activity Space: Understanding Human Dynamics From Mobile Phone Location Data*
M.S.	Geographic Information Science, Wuhan University, Wuhan, China, 2011
B.S.	Remote Sensing and Photogrammetry, Wuhan University, Wuhan, China, 2009

RESEARCH INTERESTS

Geographic Information Science (GIScience), Human Mobility, Spatial Data Science, Urban Informatics, Geospatial Artificial Intelligence (GeoAI)

PROFESSIONAL POSITIONS

2017 - Present	Assistant Professor, Department of Land Surveying and Geo-Informatics, The Hong Kong Polytechnic University
2016 - 2017	Joint Postdoctoral Associate, MIT SENSEable City Laboratory, Cambridge, MA, USA
	Singapore-MIT Alliance for Research and Technology (SMART), Singapore.
2013 - 2015	Research Intern/Assistant, Oak Ridge National Laboratory (ORNL), Oak Ridge, TN, USA

RESEARCH

A. Grants and Contracts

2022 - 2025	Feature Representation in A Coupled Continuous and Network Space: A New Approach for Travel Demand Forecast for Urban Bike-Sharing Systems, *National Natural Science Foundation of China* (**PI**, RMB$ 560,000).
2022 - 2025	Quantifying the Potential Impact of Shared Autonomous Vehicles on Parking Demand and Fleet Size Requirements in Cities, PolyU *FCE Young Researcher Collaborative Research Fund* (**PI**, HK$ 493,200).
2022 - 2024	Development of Travel Recommendation System Using Machine Learning and Emerging Tourism Big Data, *Private Fund* (**PI**, HK$ 286,956).

2022 - 2023	Developing Indicators of Destination Attractiveness and Competitiveness Through Big Data, *Private Fund* (**PI**, HK$ 143,478).
2021 - 2023	Big Data and Geospatial Technologies for Smart Tourism, *The Hong Kong Polytechnic University* (**PI**, HK$ 800,000).
2020 - 2021	Algorithm Development of Jeju Travel Recommendation System, *Jeju Tourism Organization* (**PI**, HK$ 110,000).
2019 - 2022	Coupling Mobile Phone and Socioeconomic Datasets: A New Approach to Quantifying Dynamic Social Segregation in A Hybrid Physical-Virtual Space, *Research Grant Council (RGC) of Hong Kong, Early Career Scheme* (**PI**, HK$ 886,800).
2019 - 2021	Integrating Spatiotemporal Features for Travel Demand Analysis and Forecast of Dockless Bike-Sharing in Urban Areas, *National Natural Science Foundation of China* (**PI**, RMB$ 251,000).
2019 - 2020	Big Data Analysis on Travel Patterns of Visitors to Jeju, *Jeju Tourism Organization* (Consultancy Project).
2019 - 2020	Travel Pattern Analysis of Foreign Visitors Using Mobile Communication Big Data, *Korea Tourism Organization* (Consultancy Project).
2018 - 2021	Big Data as A Testbed for Urban Theories, *Start-up Fund of Hong Kong Polytechnic University* (**PI**, HK$ 800,000).

B. Refereed Journal Articles

2023	Chen, X., **Xu, Y.***, Park, S., Chen, Y., Liu, X. and Zhuge, C. A cross scale representation of tourist activity space. *Annals of the American Association of Geographers* (Accepted)
2023	Yan, J., Naghedi, R., Huang, X., Wang, S., Lu, J. and **Xu, Y.** Evaluating Simulated Visible Greenness in Urban Landscapes: An Examination of A Midsize US City. *Urban Forestry & Urban Greening*, p.128060.
2023	Lin, Y., **Xu, Y.***, Zhao, Z., Park, S., Su, S. and Ren, M., 2023. Understanding changing public transit travel patterns of urban visitors during COVID-19: A multi-stage study. *Travel Behaviour and Society*, 32, p.100587.
2023	Li, X., **Xu, Y.***, Zhang, X., Shi, W., Yue, Y. and Li, Q., 2023. Improving short-term bike sharing demand forecast through an irregular convolutional neural network. *Transportation Research Part C: Emerging Technologies*, 147, p.103984.
2023	Park, S., Zu, J., **Xu, Y.***, Zhang, F., Liu, Y. and Li, J., 2023. Analyzing travel mobility patterns in city destinations: Implications for destination design. *Tourism Management*, 96, p.104718.
2022	Huang, X., Zhao, Y., Wang, S., Li, X., Yang, D., Feng, Y., **Xu, Y.**, Zhu, L. and Chen, B. Unfolding community homophily in US metropolitans via human mobility. *Cities*, 129, p.103929.
2022	Li, Q., Liang, S., **Xu, Y.**, Liu, L. and Zhou, S. Assessing personal travel exposure to on-road PM2.5 using cellphone positioning data and mobile sensors. *Health & Place*, 75, p.102803.
2022	Li, M., Cao, S., Zhu, X. and **Xu, Y**. Techno-economic analysis of the transition towards the large-scale hybrid wind-tidal supported coastal zero-energy communities. *Applied Energy*, 316, p.119118.
2022	Ren, M., Park, S., **Xu, Y.***, Huang, X., Zou, L., Wong, M.S. and Koh, S.Y. Impact of the COVID-19 pandemic on travel behavior: A case study of domestic inbound travelers in Jeju, Korea. *Tourism Management*, p.104533. (ESI Highly Cited Paper)

2022   Li, X., Huang, X., Li, D. and **Xu, Y.** Aggravated Social Segregation During the COVID-19 Pandemic: Evidence from Crowdsourced Mobility Data in Twelve Most Populated US Metropolitan Areas. *Sustainable Cities and Society*, p.103869.

2022   **Xu, Y.**, Zou, D., Park, S., Li, Q., Zhou, S. and Li, X. Understanding the movement predictability of international travelers using a nationwide mobile phone dataset collected in South Korea. *Computers, Environment and Urban Systems*, 92, p.101753.

2022   Yu, Z., Zu, J., **Xu, Y.***, Chen, Y., and Liu, X. Spatial and Functional Organizations of Industrial Agglomerations in China's Greater Bay Area. *Environment and Planning B: Urban Analytics and City Science*, p.23998083221075641.

2022   Li, X., **Xu, Y.***, Zhang, X., Shi, W., Yue, Y. and Li, Q. Improving short-term bike sharing demand forecast through an irregular convolutional neural network. arXiv preprint arXiv:2202.04376.

2022   Huang, X., **Xu, Y.**, Liu, R., Wang, S., Wang, S., Zhang, M., Kang, Y., Zhang, Z., Gao, S., Zhao, B. and Li, Z. Exploring the spatial disparity of home-dwelling time patterns in the USA during the COVID‐19 pandemic via Bayesian inference. *Transactions in GIS, 26(4), pp.1939-1961.*

2022   Yue, Y. et al. Integration Path of Spatial and Geo-Computing and Computational Social Science. *Geomatics and Information Science of Wuhan University*, 47(1): 1-18 (in Chinese).

2021   Tu, W., Zhu, T., Zhong, C., Zhang, X., **Xu, Y.** and Li, Q. Exploring metro vibrancy and its relationship with built environment: a cross-city comparison using multi-source urban data. *Geo-spatial Information Science, 25(2), pp.182-196.*

2021   Guo, X., Cao, S., **Xu, Y.** and Zhu, X. The Feasibility of Using Zero-Emission Electric Boats to Enhance the Techno-Economic Performance of an Ocean-Energy-Supported Coastal Hotel Building. *Energies*, 14(24), p.8465.

2021   Jian, I.Y., Chan, E.H., **Xu, Y***. and Owusu, E.K. Inclusive public open space for all: Spatial justice with health considerations. *Habitat International*, 118, p.102457.

2021   Li, Q., Zou, D. and **Xu, Y**. Combining individual travel behaviour and collective preferences for next location prediction. *Transportmetrica A: Transport Science,18(3), pp.1754-1776.*

2021   **Xu, Y.**, Santi, P. and Ratti, C. Beyond Distance Decay: Discover Homophily in Spatially Embedded Social Networks. *Annals of the American Association of Geographers*, 112(2), 505-521.

2021   Li, X., **Xu, Y.***, Chen, Q., Wang, L., Zhang, X. and Shi, W. Short-Term Forecast of Bicycle Usage in Bike Sharing Systems: A Spatial-Temporal Memory Network. *IEEE Transactions on Intelligent Transportation Systems, 23(8), pp.10923-10934.*

2021   Yang, X., Fang, Z., **Xu, Y.**, Yin, L. and Zhao, Z. Revealing temporal stay patterns in human mobility using large-scale mobile phone location data. *Transactions in GIS*, 25(4), pp.1927-1948.

2021   Yu, Z., Zhu, X., Liu, X., Wei, T., Yuan, H., **Xu, Y.**, et al. Reopening International Borders without Quarantine: Contact Tracing Integrated Policy against COVID-19. *International Journal of Environmental Research and Public Health*, 18(14), 7494.

2021   **Xu, Y.**, Xue, J., Park, S. and Yue, Y. Towards a multidimensional view of tourist mobility patterns in cities: A mobile phone data perspective. *Computers, Environment and Urban Systems*, 86, p101593.

2021   Kwok, C.Y.T., Wong, M.S., Chan, K.L., Kwan, M.P., Nichol, J.E., Liu, C.H., Wong, J.Y.H., Wai, A.K.C., Chan, L.W.C., **Xu, Y.** and Li, H. Spatial analysis of the impact of urban geometry and socio-demographic characteristics on COVID-19, a study in Hong Kong. *Science of The Total Environment*, 90, p102901.

2021   Zhou, Y., Thill, J.C., **Xu, Y.** and Fang, Z. Variability in individual home-work activity patterns. *Journal of Transport Geography*, 90, p102901.

2021	**Xu, Y.**, Li, J., Belyi, A. and Park, S. Characterizing destination networks through mobility traces of international tourists — A case study using a nationwide mobile positioning dataset. *Tourism Management*, 82, p.104195. (IFITT Journal Paper of the Year Award)
2020	**Xu, Y.**, Li, J., Xue, J., Park, S. and Li, Q. Tourism geography through the lens of time use — A computational framework using fine-grained mobile phone data. *Annals of the American Association of Geographers*, 111(5), 1420-1444.
2020	**Xu, Y.**, Li, X., Shaw, S. L., Lu, F., Yin, L. and Chen, B. Effects of data preprocessing methods on addressing location uncertainty in mobile signaling data. *Annals of the American Association of Geographers*, 111(2), 515-539.
2020	Park, S., **Xu, Y.**, Jiang, L., Chen, Z. and Huang, S. Spatial structures of tourism destinations: A trajectory data mining approach leveraging mobile big data. *Annals of Tourism Research*, 84, p. 102973. (IFITT Journal Paper of the Year Award)
2020	Tu, W., Mai, K., Zhang, Y., **Xu, Y.**, Huang, J., Deng, M., Chen, L. and Li, Q. Real-time Route Recommendations for E-Taxies Leveraging GPS Trajectories. *IEEE Transactions on Industrial Informatics*, 17(5), pp.3133-3142.
2020	Zhao, P., **Xu, Y.***, Liu, X. and Kwan, M.P. Space-time dynamics of cab drivers' stay behaviors and their relationships with built environment characteristics. *Cities*, 101, p.102689.
2019	**Xu, Y.**, Belyi, A., Santi, P. and Ratti, C. Quantifying segregation in an integrated urban physical-social space. *Journal of the Royal Society Interface*, 16(160), 20190536.
2019	Yu, H., Fang, Z., Lu, F., Murray, A.T., Zhao, Z., **Xu, Y.** and Yang, X. Massive Automatic Identification System Sensor Trajectory Data-Based Multi-Layer Linkage Network Dynamics of Maritime Transport along 21st-Century Maritime Silk Road. *Sensors*, 19(19), p.4197.
2019	Jia, T., Yu, X., Shi, W., Liu, X., Li, X., and **Xu, Y.** Detecting the regional delineation from a network of social media user interactions with spatial constraint: A case study of Shenzhen, China. *Physica A: Statistical Mechanics and its Applications*, 121719.
2019	Yang, X., Fang, Z., **Xu, Y.**, Yin, L., Li, J. and Lu, S. Spatial heterogeneity in spatial interaction of human movements — Insights from large-scale mobile positioning data. *Journal of Transport Geography*, 78, 29-40
2019	**Xu, Y.**, Chen, D., Zhang, X., Tu, W., Chen, Y., Shen, Y. and Ratti, C. Unravel the landscape and pulses of cycling activities from a dockless bike-sharing system. *Computers, Environment and Urban Systems*, 75, 184-203. (ESI Highly Cited Paper & ESI Hot Paper)
2018	Zhang, X., **Xu, Y.***, Tu, W. and Ratti, C. Do different datasets tell the same story about urban mobility — A comparative study of public transit and taxi usage. *Journal of Transport Geography*, 70, pp.78-90.
2018	Zhu, J., **Xu, Y.***, Fang, Z., Shaw, S.L. and Liu, X. Geographic Prevalence and Mix of Regional Cuisines in Chinese Cities. *ISPRS International Journal of Geo-Information*, 7(5), p.183.
2018	**Xu, Y.**, Belyi, A., Bojic, I. and Ratti, C. Human mobility and socioeconomic status: Analysis of Singapore and Boston. *Computers, Environment and Urban Systems*. 72, 51-67. (ESI Highly Cited Paper)
2017	Tu, W., Cao, J., Yue, Y., Shaw, S.L., Zhou, M., Wang, Z., Chang, X., **Xu, Y.** and Li, Q., 2017. Coupling mobile phone and social media data: a new approach to understanding urban functions and diurnal patterns. *International Journal of Geographical Information Science,* 31(12), 2331-2358. (ESI Highly Cited Paper)
2017	Fang, Z., Yang, X., **Xu, Y.**, Shaw, S.L. and Yin, L. Spatiotemporal model for assessing the stability of urban human convergence and divergence patterns. *International Journal of Geographical Information Science,* 31(11), 2119-2141.

2017	**Xu, Y.**, Belyi, A., Bojic, I. and Ratti, C. How Friends Share Urban Space: An Exploratory Spatiotemporal Analysis Using Mobile Phone Data. *Transactions in GIS,* 21(3), pp.468-487.
2017	**Xu, Y.**, Wang, D., Janjusic, T., Wu, W., Pei, Y. and Yao, Z. A Web-based Visual Analytic Framework for Understanding Large-scale Environmental Models: A Use Case for The Community Land Model. *Procedia Computer Science*, *108*, pp.1731-1740.
2017	**Xu, Y.**, Wang, D., Iverson, C., Walker, A. and Warren, J. Building a Virtual Ecosystem Dynamic Model for Root Research. *Environmental Modelling & Software*, 89(C), 97-105.
2016	Yang, X., Fang, Z., **Xu, Y.**, Shaw, S-L., Zhao, Z., Yin, L., Zhang, T. and Lin Y. Understanding Spatiotemporal Patterns of Human Convergence and Divergence Using Mobile Phone Location Data. *ISPRS International Journal of Geo-Information*, 5(10), 177.
2016	**Xu, Y.**, Shaw, S-L., Fang, Z. and Yin, L. Estimating Potential Demand of Bicycle Trips from Mobile Phone Data ─ An Anchor Point Based Approach. *ISPRS International Journal of Geo-Information*, 5(8), 131.
2016	He, H., Wang, D., **Xu, Y**. and Tan, J. Data synthesis in the Community Land Model for ecosystem simulation. *Journal of Computational Science*, 13, 83-95.
2016	**Xu, Y.**, Shaw, S-L., Zhao, Z., Yin, L., Lu, F., Chen, J., Fang, Z. and Li, Q. Another Tale of Two Cities — Understanding Human Activity Space Using Actively Tracked Cellphone Location Data. *Annals of the American Association of Geographers,* 106(2), 489-502.
2016	Zhao, Z., Shaw, S-L., **Xu, Y.**, Lu, F., Chen, J. and Yin, L. Understanding the Bias of Call Detail Records in Human Mobility Research. *International Journal of Geographical Information Science*, 30(9), 1738-1762.
2015	**Xu, Y.**, Shaw, S-L., Zhao, Z., Yin, L., Fang, Z. and Li. Q. Understanding aggregate human mobility patterns using passive mobile phone location data: a home-based approach. *Transportation*, 42(4), 625-646.
2014	Wang, D., **Xu, Y.**, Thornton, P., King, A., Steed, C., Gu, L. and Schuchart, J. A functional test platform for the Community Land Model. *Environmental Modelling & Software*, 55, 25-31.
2014	Wang, D., Schuchart, T., Janjusic, T., Winkler, F., **Xu, Y.** and Kartsaklis. Toward Better Understanding of the Community Land Model within the Earth System Modeling Framework. *Procedia Computer Science*, 29, 1515-1524.
2011	**Xu, Y.**, Li, Q. and Tang, L. Road Damage Detection from Remote Sensing Imagery Based on Road Network Vector Data. *Bulletin of Surveying and Mapping*, 4, 14-16 (in Chinese).

C. Book Chapters

2019	**Xu, Y.** and Ratti, C. Conquer the Divided Cities. *Towards a New Enlightenment: A Transcend Decade*. pp.428-455. BBVA Open Mind, Spain.
2019	Liu, X., **Xu, Y.** and Ye, X. Outlook and Next Steps: Integrating social network and spatial analyses for urban research in the new data environment. In *Cities as Spatial and Social Networks*, pp. 227-238. Springer, Cham.
2018	**Xu. Y.**, Shaw, S-L., Lu, F., Chen, J. and Li, Q. Uncovering the Relationships Between Phone Communication Activities and Spatiotemporal Distribution of Mobile Phone Users. In *Human Dynamics Research in Smart and Connected Communities,* pp. 41-65, Springer, Cham.

D. Conference Proceedings

2022   Chen, X. and **Xu, Y***. Quantifying exploration and preferential return in tourist mobility using mobile phone data. The 29th International Conference on Geoinformatics, 2022, Online.

2022   Mai, K., **Xu, Y*.**, Park, S. and Chen, A. Understanding and Modelling Tourist Intra-City Destination Choice Using Mobile Phone Data. *5th Global Tourism and Hospitality Conference, 12-14 June, 2022, Hong Kong.* (Best Paper Award)

2020   Luo, Y., Xiang, L., **Xu, Y.** and Gui, Z. Road Network Extraction from GPS Trajectories–A Tensor Voting Based Algorithm. *Proceedings of the GISRUK 2020, London.*

2015   **Xu, Y.**, Shaw, S-L., Yin, L. and Zhao, Z. Understanding Individual Daily Activity Spaces Based on Large Scale Mobile Phone Location Data. *Proceedings of The 13th International Conference on GeoComputation.* Dallas, Texas, USA. pp. 256-261.

2014   **Xu, Y.**, Wang, D., Janjusic, T. and Xu, X. A Web-based Visual Analytic System for Understanding the Structure of Community Land Model. *Proceedings of The 13th International Conference on Software Engineering Research and Practice.* Las Vegas, NV. USA. pp. 3-9.

2014   Wang, D. and **Xu. Y**. Software Engineering for Scientific Application: Effort Report on The Community Land Model within the Earth System Modeling Framework. *Proceedings of The 7th International Congress on Environmental Modelling and Software.* San Diego, CA, USA.

2012   **Xu, Y.**, Shaw, S-L., Chen, J., Li, Q., Fang, Z. and Li, Y. Uncover Repeated Spatiotemporal Behavioral Patterns Embedded in GPS-based Taxi Tracking Data. *Proceedings of The 7th International Conference on Geographic Information Science* (Extended abstract). Columbus, OH, USA.

E. Presentations Delivered at Professional Conferences

2023   "跳出空间邻近性思维：一种基于非规则卷积的共享单车出行需求预测模型"，第十八届中国地理信息科学理论与方法年会, Guilin, China, 19-21 May, 2023.

2022   "*Quantifying exploration and preferential return in tourist mobility using mobile big data*", The 29th International Conference on Geoinformatics, Beijing, China, 15-18 August, 2022.

2021   "*A new approach to understanding spatial and social network segregation in cities*" (online presentation), 2021 City+ International Conference, Milan, Italy

2021   "大数据视角下的旅游地理与游客时间分配" (online presentation), 2021 中国地理信息科学理论与方法学术年会, 杭州

2020   "大数据视角下的旅游地理与游客时间分配", 第十六届空间行为与规划研究会, 厦门大学, December 12.

2020   *"A new approach to understanding spatial and social-network segregation in cities"*, Virtual Symposium on Big Data and Neighborhood Change, The University of Sydney & University of California, Berkeley, August 10-25.

2019   "*Unravel the Landscape and Pulses of Cycling Activities From A Dockless Bike-Sharing System – A case study of Singapore*", presentation at the 26th ITS World Congress, Singapore, October 21-25.

2019   "*Uncover Spatiotemporal Dynamics of Cycling Activities From A Dockless BikeSharing System*", presentation at the 16th International Conference on Computers in Urban Planning and Urban Management (CUPUM), Wuhan, China, July 8-12.

2019   "*Unravel the Landscape and Pulses of Cycling Activities From A Dockless Bike-Sharing System*", presentation at the 2nd International Conference on Urban Informatics (ICUI), Hong Kong, China, June 24-26.

2018	"*Human Mobility and Socioeconomic Status: Analysis of Singapore and Boston*", presentation at The 2018 Annual Meeting of the American Association of Geographers. New Orleans, USA, April 10-14.
2017	"*How Friends Share Urban Space – Evidence From Mobile Phone Data*", presentation at The 2017 Esri User Conference. San Diego, CA, USA, July 10-14.
2017	"*How Friends Share Urban Space – An Exploratory Spatiotemporal Analysis Using Mobile Phone Data*", presentation at The 2017 Annual Meeting of the American Association of Geographers. Boston, USA, April 5-9.
2016	"*Comparing Home Detection Methods Through Multi-Source Geo-Social Data*", Future Urban Mobility Symposium 2016, National University of Singapore, Singapore, July 25-26 (Poster Presentation).
2015	"*Understanding Individual Daily Activity Spaces Based on Large Scale Mobile Phone Location Data*", presentation at the GeoComputation 2015 Conference, Dallas, Texas, USA, May 20-23.
2014	"*Understand Individual and Aggregate Human Mobility Patterns from Mobile Phone Location Data — A Case Study in Shenzhen, China*", presentation at The 2014 Annual Meeting of the Association of American Geographers, Tampa, Florida, USA, April 8-12.
2014	"*A Web-based Visual Analytic System for Understanding the Structure of Community Land Model*", presentation at The 2014 International Conference on Software Engineering Research and Practice, Las Vegas, NV, USA, July 21-24.
2013	"*Exploring spatiotemporal changes of user generated content from Flickr data*", presentation at The 2014 Annual Meeting of the Association of American Geographers, Los Angeles, CA, USA, April 9-13.
2012	"*Uncover Repeated Spatiotemporal Behavioral Patterns Embedded in GPS-based Taxi Tracking Data*", presentation at The 2012 International Conference on Geographic Information Science, Columbus, OH, USA, September 18-21.

F. Invited Talks and Guest Presentations

2023/04	Invited talk at the School of Remote Sensing and Information Engineering, Wuhan University ("*Human Mobility Sensing – A multifaceted perspective*")
2023/03	Invited talk at Shenzhen University ("*Human Mobility Sensing – A multifaceted perspective*")
2022/10	Invited talk at the Department of Geography and Resource Management, The Chinese University of Hong Kong ("*Understanding social segregation – A new computational framework, and what we find in both physical and social network spaces*")
2022/03	Invited talk for CPGIS Educational Webinar on Geospatial Big Data Analytics ("*Understanding human mobility in a dynamic and changing world: A dual perspective of urban residents and visitors*")
2022/03	Invited talk at Department of Geography at Hong Kong Baptist University ("*Understanding human mobility in a dynamic and changing world: A dual perspective of urban residents and visitors*")
2021/06	Invited talk at School of Geography and Planning, Sun Yat-Sen University ("科技论文中的数据可视化与表达")
2021/05	Invited panel speech at Smart Tourism in the Great Bay Area Forum, organized by The School of Hotel and Tourism Management, The Hong Kong Polytechnic University ("*Understanding tourist travel behavior from cellphone big data*")
2021/04	Invited talk by GeoInsider ("*Using cellphone big data to measure human mobility and interactions in cities*")
2021/03	Guest lecture at the School of Architecture and Urban Planning, Shenzhen University ("*Big Data for Human Mobility*")

2021/01	Guest lecture at the Department of Urban Planning and Design, Hong Kong University ("*Big Data for Human Mobility*")
2019/11	Invited talk at the School of Urban Informatics, Shenzhen University ("*Quantifying segregation in an integrated urban physical-social space*")
2019/11	Invited talk at the School of Resource and Environmental Sciences, Wuhan University ("*Big Data for Smart Urban Mobility*")
2019/06	Invited talk at the School of Urban Informatics, Shenzhen University ("*Urban Informatics – Some Practice and Thoughts*")
2019/06	Invited talk at the School of Resource and Environmental Sciences, Wuhan University ("*Urban Informatics and Applications for Smart Cities*")
2019/06	Invited talk at the School of Urban Design, Wuhan University ("*Urban Informatics and Applications for Smart Cities*")
2019/06	Invited talk at the Central China Normal University ("*Urban Informatics and Applications for Smart Cities*")
2019/04	Invited DBA Public Lecture at the Faculty of Business, The Hong Kong Polytechnic University, Hong Kong ("*Future of Urban Sensing and Smart Cities*")
2019/04	Invited talk at the FCE Translational Research Forum on Sustainable Urban Development in the Greater Bay Area, The Hong Kong Polytechnic University, Hong Kong ("*Big Data for Sustainable Urban Mobility*")
2018/10	Invited talk at the Hong Kong FinTech Week – FinTech and Beyond, Hong Kong, China ("*Latest Research Progress in Smart Cities*").
2018/06	Invited talk at Sinagpore-MIT Alliance for Research and Technology (SMART), Singapore ("*Quantifying Urban Dynamics Using Large-Scale Mobility Datasets*").
2018/03	Invited speech at the Workshop on Urban and Transport Analytics, Hong Kong Baptist University ("*Urban Analytics – A Mobile Phone Data Perspective*").
2018/01	Invited seminar talk at the Institute of Space & Earth Information Science, Chinese University of Hong Kong ("*Urban Sensing – A Mobile Phone Data Perspective*").
2017/11	Invited speech at 2017 中国地理信息科学理论与方法学术年会 ("*Sensing Urban and Social Dynamics Using Large-Scale Mobile Phone Data*").
2017/06	Invited keynote speech at 2017 EmTech Hong Kong Conference ("*SENSEable Cities*").
2016/10	Invited seminar talk at Sinagpore-MIT Alliance for Research and Technology (SMART), Singapore ("*How Friends Share Urban Space: Evidence from Mobile Phone Data*").
2016/06	Invited presentation at School of Remote Sensing and Information Engineering, Wuhan University, Wuhan, China ("*Mobility and Activity Space: Understanding Human Dynamics from Mobile Phone Location Data*").
2016/04	Invited presentation at the 3rd Wuhan University International Forum for Interdisciplinary Sciences and Engineering, Wuhan, China ("*Mobility and Activity Space: Understanding Human Dynamics from Mobile Phone Location Data*").

HONORS AND AWARDS

2023	2023 年地理信息科技进步奖，一等奖（群体行为时空计算关键技术及城市治理应用）
	中国地理信息产业协会，*China Association for Geospatial Industry and Sciences*
2022	*CPGIS Young Scholar Award*
	The International Association of Chinese Professionals in Geographic Information Sciences (CPGIS)
2022	*First Prize, Huawei ICT Competition 2021-2022 Global Final*
	Team members: Zhong Xiu Ming, Feng Yun Lin and Tang Man Kit
	Instructor: Dr. Yang Xu
2022	*Best Paper Award for the 5th Global Tourism and Hospitality Conference, Hong Kong, 12-14 June 2022*
	Awarded Paper: Understanding and Modelling Tourist Intra-City Destination Choice Using Mobile Phone Data.
2022	*International Federation for IT and Travel & Tourism (IFITT) Journal Paper of the Year Award 2022 (First Place)*
	Awarded Paper: Characterizing destination networks through mobility traces of international tourists — A case study using a nationwide mobile positioning dataset. *Tourism Management.*
2021	*1) First Prize, Huawei ICT Competition Hong Kong SAR 2021-2022*
	2) Third Prize, Huawei ICT Competition Asia Pacific 2021-2022 (Cloud Track)
	Team members: Zhong Xiu Ming, Feng Yun Lin and Tang Man Kit
	Instructor: Dr. Yang Xu
2021	*International Federation for IT and Travel & Tourism (IFITT) Journal Paper of the Year Award 2021 (Second Place)*
	Awarded Paper: Spatial structures of tourism destinations: A trajectory data mining approach leveraging mobile big data. *Annals of Tourism Research.*
2020	*FastCompany's Innovation by Design Award* (Honorable Mention, Data Design Category)
	Awarded Project: "Singapore Calling"
2020	*LSGI's Awards for Excellent Performance / Achievement in Teaching,* Department of Land Surveying and Geo-Informatics, The Hong Kong Polytechnic University
2020	Successful recruitment of awardee of the *Hong Kong PhD Fellowship Scheme*
2018	*LSGI's Awards for Excellent Performance / Achievement in Teaching,* Department of Land Surveying and Geo-Informatics, The Hong Kong Polytechnic University
2015	*Exceptional Professional Accomplishment Award*, Department of Geography, The University of Tennessee, Knoxville
2015	*NSF Travel Award*, The 13th International Conference of GeoComputation
2015	*Graduate Student Publication Award*, Department of Geography, The University of Tennessee, Knoxville
2014	*Graduate Student Publication Award*, Department of Geography, The University of Tennessee, Knoxville
2011	*Outstanding Graduate Student*, Wuhan University, China
	Second-class Scholarship for Graduate Student, Wuhan University, China
2007	*First-class Undergraduate Scholarship*, Wuhan University, China

TEACHING

A. University Courses Offered

The Hong Kong Polytechnic University (2017 – present)

CE634	Urban Big Data (PhD Level)
LSGI524	Urban Big Data (Master Level)
LSGI544	Urban Science and Systems
LSGI3315	GIS Engineering
LSGI3431A	System Customization and Development
LSGI3243A	Geospatial Database
LSGI3292A	Internet GIS and Web Services
LSGI4653A	Utility Data Management

SERVICE

A. Reviewer of Manuscripts for the Following Journals

ACM Transactions on Knowledge Discovery from Data

Annals of the American Association of Geographers

Annals of Tourism Research

Applied Geography

Cities

Computers, Environment and Urban Systems

Ecosystem Services

Environment and Planning B: Urban Analytics and City Science

EPJ Data Science

Geographical Analysis

Geo-spatial Information Science

IEEE Intelligent Transportation Systems Magazine

IEEE Transactions on Big Data

IEEE Transactions on Systems, Man, and Cybernetics: Systems

IEEE Intelligent Transportation Systems Magazine

International Journal of Applied Earth Observations and Geoinformation

International Journal of Digital Earth

International Journal of Geographical Information Science

International Journal of Sustainable Transportation

International Journal of Tourism Research

Journal of Geographical Systems

Journal of Geovisualization and Spatial Analysis

Journal of Hospitality and Tourism Management

Journal of Rural Studies

Journal of The Royal Society Interface

Journal of Transport Geography

Journal of Transport & Health

Journal of Urban Technology

Scientific Report

Singapore Journal of Tropical Geography

Transactions in GIS

Transactions in Urban Data, Science, and Technology

Transportation Research Part A: Policy and Practice

Transportation Research Part C: Emerging Technologies

Transportmetrica A: Transport Science

Travel Behaviour and Society

Tourism Geographies

Tourism Management Perspectives

Urban Informatics

B. Guest Editor for the Following Journals

2023	Special issue on "Geospatial Foundation Model in Urban Environments: Challenges and New Technologies", *Remote Sensing* (Guest Editors: Dr. Haifeng Li, Dr. Di Zhu, Dr. Wei Tu, Dr. **Yang Xu**)
2020	Special issue on "Human Dynamics Research in the Age of Smart and Intelligent Systems", *ISPRS International Journal of Geo-Information* (Guest Editors: Dr. Shih-Lung Shaw, Dr. **Yang Xu**)

C. Organizer/Chair for Conference Sessions and Workshops

2023	Co-Chair, "Symposium on Human Dynamics Research: Exploring Social Inequality and Segregation with Geospatial Big Data", Annual Conference of American Association of Geographers, Denver, USA, March 23-27
2022	Co-Chair, Session on "Human Dynamics for Urban Data Science", The 29th International Conference on Geoinformatics, Beijing, China (Hybrid Mode)
2022	Program Committee, The 3rd Spatial Data Science Symposium, University of California, Santa Babara (Virtual/Online)
2021	Co-Organizer, Session on "Examining Social Connect and Segregation by Leveraging Emerging Mobility Data", The 2nd Spatial Data Science Symposium, University of California, Santa Babara (Virtual/Online)
2021	Program Committee, Workshop on Advancing Movement Data Science (AMD'21), 11th International Conference on Geographic Information Science (GIScience).
2020	Chair, Co-Organizer, Symposium on Human Dynamics Research: Spatial-Social Networks and Network Science, Annual Conference of American Association of Geographers, Denver, USA, April 6-10.

2019	Co-Organizer, Workshop on "Smart Mobility and Big Data", RISUD Annual International Symposium, Hong Kong, China, November 25-26.
2018	Chair, Co-Organizer, Symposium on New Horizons in Human Dynamics Research: Spatial-Social Networks in GIS (I), Annual Conference of American Association of Geographers, New Orleans, USA, April 10-14.
2018	Co-Organizer, Symposium on New Horizons in Human Dynamic Research: Time-Geography – a way of thinking, Annual Conference of American Association of Geographers, New Orleans, USA, April 10-14.

D. Service to the Professional Society

ACM SIGSPATIAL 中国分会执行委员, 2022 – present

中国人工智能学会社会计算与社会智能专委会委员, 2021 – present

Board Member, Chinese Professionals in Geographic Information Sciences (CPGIS), 2018 – 2019

Member, American Association of Geographers, 2015 – present

E. Service to the University

Program leader, MSc in Urban Informatics and Smart Cities, Department of Land Surveying and Geo-Informatics, The Hong Kong Polytechnic University, 2020 – present;

Deputy program leader, MSc in Geomatics, Department of Land Surveying and Geo-Informatics, The Hong Kong Polytechnic University, 2018 – present;

Department program exchange officer, Department of Land Surveying and Geo-Informatics, The Hong Kong Polytechnic University, 2018 – present