FANGZHENG LYU

PHD STUDENT · GEOGRAPHY AND GIS

University of Illinois at Urbana-Champaign, 1301 West Green Street, Urbana, IL 61801
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Education

University of Illinois at Urbana-Champaign   *Champaign, IL*
PHD GEOGRAPHY AND ENVIRONMENTAL STUDIES   *2018 - present*
• Advisor: Dr. Shaowen Wang

University of Illinois at Urbana-Champaign   *Champaign, IL*
MS GEOGRAPHY   *2018 - 2021*
• Advisor: Dr. Shaowen Wang

The University of Hong Kong   *Hong Kong*
BE COMPUTER ENGINEERING   *2014 - 2018*
• Minors in statistics and math
• Undergrad research advisor: Dr. Tak-Wah Lam

Professional Experience

2018-2022 **Graduate Research/Teaching Assistant**, Dept. Geography and GIS, University of Illinois at Urbana-Champaign
2017 **Software Engineer Intern**, L3 Bioinformatics, Hong Kong
2017 **Undergraduate Research Assistant**, Dept. Computer Science, The University of Hong Kong
2016 **Software Engineer Intern**, Netease, Hangzhou

Publications

Wang, C., **Lyu, F.**, et al. 2022. A deep trajectory clustering method based on sequence-to-sequence autoencoder model. Transaction in GIS. DOI: 10.1111/tgis.12905

Lyu, F., Xu, Z., Ma, X., Wang, S., Li, Z., Wang, S. (2021) A vector-based method for drainage network analysis based on LiDAR data, Computers and Geosciences, 2021, 104892, ISSN 0098-3004

Lyu, F., Kang, JY., Wang, S., Han, SY., Li Z., and Wang S. (2021) Multi-scale CyberGIS Analytics for Detecting Spatiotemporal Patterns of COVID-19. In: Shaw SL., Sui D. (eds) Mapping COVID-19 in Space and Time. Human Dynamics in Smart Cities. Springer, Cham

Wang, S., **Lyu, F.**, Wang, S., Catlet, C., Padmanabhan, A., Soltani, K. (2021) Integrating CyberGIS and Urban Sensing for Reproducible Streaming Analytics. Urban Informatics, ISBN 978- 981-15-8983-6. Springer Sinapore

Kang, JY., Michels, A., **Lyu, F.** et al. (2020) Rapidly measuring spatial accessibility of COVID-19 healthcare resources: a case study of Illinois, USA. Int J Health Geogr 19, 36

Lyu, F., Yin, D., et al. (2019) Reproducible Hydrological Modeling with CyberGIS-Jupyter: A Case Study on SUMMA. In Proceedings of the Practice and Experience in Advanced Research Computing on Rise of the Machines

Padmanabhan, A., Yin, D., **Lyu, F.**, Wang, S. (2019). Bridging Local Cyberinfrastructure and XSEDE with CyberGIS-Jupyter. Proceedings of the Practice and Experience in Advanced Research Computing on Rise of the Machines

Awards, Fellowships

2022 **Finalist, AAG-GISS student paper competition**, Association of American Geographers   *$200*

2019 **Finalist, AAG Robert Raskin Student Competition**, Association of American Geographers

2018 **First Division Honor**, The University of Hong Kong

2017	**Dean's Honor List**, The University of Hong Kong	
2015	**HKU Foundation Scholarship for outstanding student**, The University of Hong Kong	*$11,557*
2014	**Soong Ching-ling Scholarship**, Shanghai Soong Ching Ling Foundation	*$30,924*
2013	**First Prize at Zhejiang Physics Olympiad**, Zhejiang Physical Society	

Presentations

Lyu, F. 2022. Fine-Scale Prediction of Urban Heat Island Using Satellite Remote Sensing and Urban Sensor Network Data. 2022 AAG Annual Meeting. Virtual.

Lyu, F. 2019. Vector-Based Drainage Direction Analysis for High-Resolution Digital Elevation Models. 2019 AAG Annual Meeting, Washington, D.C.

Lyu, F. 2019. Reproducible Hydrological Modeling with CyberGIS-Jupyter: A Case Study on SUMMA. PEARC19, Chicago, IL.

Teaching Experience

| Spring2022 | **GEOG 407, Foundations of CyberGIS and Geospatial Data Science**, Teaching Assistant | *UIUC* |
| Fall 2021 | **GEOG 507, High Performance Geospatial Computing**, Instructor | *UIUC* |

Outreach & Professional Development

Peer Review

Transaction in GIS
The Egyptian Journal of Remote Sensing and Space Sciences

Professional Memberships

American Association of Geographers
University Consortium for Geographic Information Science