

Yuehui Qian | Curriculum Vitae

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Research Interests: Photogrammetry and Remote Sensing; Spatiotemporal Data Mining; Machine learning

Education

Sept 2018-June 2021, M.S., *State Key Laboratory of Information Engineering in Surveying, Mapping and Remote Sensing*, Wuhan University, Average score: 86.2/100

Sept 2014-June 2018, B.S., *School of Remote Sensing and Information Engineering*, Wuhan University, Average score: 87.5/100; GPA: 3.70/4.00 (**Top 10%**)

Peer reviewed publications

Qian, Y., Xing, W., Guan, X., Yang, T., & Wu, H. **2020**. Coupling cellular automata with area partitioning and spatiotemporal convolution for dynamic land use change simulation. *Science of The Total Environment*, 137738. DOI: <https://doi.org/10.1016/j.scitotenv.2020.137738> (SCI paper, IF=6.551)

Xing, W., **Qian, Y.**, Guan, X., Yang, T., & Wu, H. **2020**. A novel cellular automata model integrated with deep learning for dynamic spatio-temporal land use change simulation. *Computers & Geosciences*, 137, 104430. DOI: <https://doi.org/10.1016/j.cageo.2020.104430> (SCI paper, IF=2.991)

Yang, T., Guan, X., **Qian, Y.**, Xing, W., & Wu, H. **2019**. Efficiency evaluation of urban road transport and land use in Hunan Province of China based on hybrid data envelopment analysis (DEA) models. *Sustainability*, 11(14), 3826. DOI: <https://doi.org/10.3390/su11143826> (SCI paper, IF=2.576)

Presentations

Qian, Y. 2020. Dynamic land use simulation based on spatial partition and spatio-temporal convolution. The third "Urban Remote Sensing" seminar, Shanghai, China (**Oral presentation invited**) (10.30.2020-11.01-2020).

Qian, Y., Xing, W., Guan, X., Yang, T., & Wu, H. **2019**. Simulation of *urban expansion* using *self-organizing map neural network* and *spatio-temporal convolution*. 2019 China Annual Conference on Theories and Methods of Geographic Information Science, Shanghai, China (**Oral presentation invited**) (10.18.2019-10.20-2019).

Xing, W., **Qian, Y.**, Guan, X., Yang, T., & Wu, H. **2018**. Based on *random forest* and *long short-term memory (LSTM)* for dynamic simulation of land use. 2018 China Annual Conference on Theories and Methods of Geographic Information Science, Taiyuan, Shanxi province, China (**Oral presentation invited**) (11.02.2018-11.04-2018).

Project Experience

- ◆ **2017-present, Key service and application demonstration of spatial information in economic regional construction and management of urban agglomerations.** *The National Key Research and Development Program* of China (Grant No.: 2017YFB0503802).

Combining high-resolution remote sensing images and multi-source socioeconomic data, the built-up areas were classified. I am the *designer and implementer* of this model. The research results have been published in an internationally renowned multi-disciplinary journal, *Science of the Total Environment* (IF = 6.551).

- ◆ **2016-2017, Recognition of human hand movement based on optical flow estimation.** Project of Innovation and Entrepreneurship Training for Undergraduates Wuhan University (No. S2016725).

With an improvement of Lucas-Kanade method for optical flow estimation, the motion trajectories of gestures were extracted more accurately. I am the *key participant* of this research group. We have successfully completed the final report of this research.

Scholarships & Awards

Scholarships for High Academic Achievement:

- In 2020, **National Scholarship**, Ministry of Education, P. R. China (Top 2.5%)
- In 2020, The First-Class Academic Scholarship, Wuhan University, P. R. China (Top 5%)
- In 2018, **National Encouragement Scholarship**, Ministry of Education, P. R. China (Top 5%)
- In 2018, First-Class Scholarship, Wuhan University, P. R. China (Top 5%)
- In 2017, **National Encouragement Scholarship**, Ministry of Education, P. R. China (Top 5%)
- In 2017, Third-Class Scholarship, Wuhan University, P. R. China (Top 15%)

Honorary Titles:

- In 2020, Merit Students of Wuhan University
- In 2018, Outstanding Graduates of Wuhan University
- In 2018, Merit Students of Wuhan University
- In 2017, Excellent Student Cadre of Wuhan University
- In 2017, Outstanding Students of Wuhan University

Competition Awards:

- In 2017, Third Prize of the 10th Central Chinese Mathematic Contest in Modeling.
- In 2016, Second Prize of the 8th Mathematics Competition of Chinese University Student.
- In 2016, Second prize of the 5th Mathematics Competition of University Student in Hubei Province.

Technical Skills

- Programming Languages: Python, MATLAB, C/C++, etc.
- Others: Familiar with deep learning platforms like Tensorflow.