

Qingyu Li

Data Science in Earth Observation, Technical University of Munich, Munich, Germany
Remote Sensing Technology Institute, German Aerospace Center, Wessling, Germany
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EDUCATION

- 04/2019 – now **Technical University of Munich, Germany**
Ph.D. degree, Supervisor: Prof. Xiaoxiang Zhu
Thesis: Deep learning for building footprint generation from optical imagery.
- 09/2015 – 11/2018 **Technical University of Munich, Germany & Wuhan University, China**
Double Master degree in Earth Space Oriented Space Science and Technology & Photogrammetry and Remote Sensing
Thesis: Building footprint generation using deep learning methods
Honors: passed with distinction
- 09/2011 – 06/2015 **Wuhan University, China**
Bachelor degree in Remote Sensing Science and Technology
Thesis: Integrating multiple textural features for remote sensing image change detection
Honors: passed with high distinction

PROFESSIONAL APPOINTMENTS

- 04/2019 – Present **Research Associate**
Data Science in Earth Observation, Technical University of Munich
- Development of frameworks for global building footprint generation, “So2Sat” project (European Research Council)
 - Development of frameworks for undocumented building detection, "Investigation of building cases using AI" project, (Bavarian Agency for Digitization, High-Speed Internet and Surveying)

TEACHING EXPERIENCE

- 10/2021 - 03/2022; Graduate
10/2019 - 03/2020 *Technical University of Munich*
Remote Sensing Seminar - TA
Teaching students to do research projects

LANGUAGE

Chinese, English, German

SELECTED PUBLICATIONS

- [1] Li, Qingyu, Hannes Taubenböck, Yilei Shi, Stefan Auer, Robert Roschlaub, Clemens Glock, Anna Kruspe, and Xiao Xiang Zhu. "Identification of undocumented buildings in cadastral data using remote sensing: Construction period, morphology, and landscape." **International Journal of Applied Earth Observation and Geoinformation** 112 (2022): 102909. (Impact Factor=7.672)

- [2] Li, Qingyu, Yilei Shi, and Xiao Xiang Zhu. "Semi-supervised building footprint generation with feature and output consistency training." **IEEE Transactions on Geoscience and Remote Sensing** 60 (2022): 1-17. **(Impact Factor=8.125)**
- [3] Li, Qingyu, Lichao Mou, Yuansheng Hua, Yilei Shi, and Xiao Xiang Zhu. "CrossGeoNet: A Framework for Building Footprint Generation of Label-Scarce Geographical Regions." **International Journal of Applied Earth Observation and Geoinformation** 111 (2022): 102824. **(Impact Factor=7.672)**
- [4] Li, Qingyu, Stefano Zorzi, Yilei Shi, Friedrich Fraundorfer, and Xiao Xiang Zhu. "RegGAN: An End-to-End Network for Building Footprint Generation with Boundary Regularization." **Remote Sensing** 14, no. 8 (2022): 1835. **(Impact Factor=5.349)**
- [5] Li, Qingyu, Yilei Shi, Stefan Auer, Robert Roschlaub, Karin Möst, Michael Schmitt, Clemens Glock, and Xiaoxiang Zhu. "Detection of Undocumented Building Constructions from Official Geodata Using a Convolutional Neural Network." **Remote Sensing** 12, no. 21 (2020): 3537. **(Impact Factor=5.349)**
- [6] Li, Qingyu, Lichao Mou, Yuansheng Hua, Yilei Shi, and Xiao Xiang Zhu. "Building footprint generation through convolutional neural networks with attraction field representation." **IEEE Transactions on Geoscience and Remote Sensing** 60 (2021): 1-17. **(Impact Factor=8.125)**
- [7] Li, Qingyu, Yilei Shi, Xin Huang, and Xiao Xiang Zhu. "Building footprint generation by integrating convolution neural network with feature pairwise conditional random field (FPCRf)." **IEEE Transactions on Geoscience and Remote Sensing** 58, no. 11 (2020): 7502-7519. **(Impact Factor=8.125)**
- [8] Li, Qingyu, Chunping Qiu, Lei Ma, Michael Schmitt, and Xiao Xiang Zhu. "Mapping the land cover of Africa at 10 m resolution from multi-source remote sensing data with Google Earth Engine." **Remote Sensing** 12, no. 4 (2020): 602. **(Impact Factor=5.349)**
- [9] Li, Qingyu, Xin Huang, Dawei Wen, and Hui Liu. "Integrating multiple textural features for remote sensing image change detection." **Photogrammetric Engineering & Remote Sensing** 83, no. 2 (2017): 109-121. **(Impact Factor=1.083)**

TALKS

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| 07/2022 | "Feature and Output Consistency Training for Semi-supervised Building Footprint Generation." Oral presentation in 2022 IEEE International Geoscience and Remote Sensing Symposium. |
| 07/2021 | "End-to-End Semantic Segmentation and Boundary Regularization of Buildings from Satellite Imagery." Oral presentation in 2021 IEEE International Geoscience and Remote Sensing Symposium. |
| 09/2020 | "Instance Segmentation of Buildings Using Keypoints." Oral presentation in 2020 IEEE International Geoscience and Remote Sensing Symposium. |
| 09/2020 | "Detection of Undocumented Buildings using Convolutional Neural Network and Official Geodata." Oral presentation in 2020 XXIVth ISPRS Congress. |

SERVICE & LEADERSHIP

- **Session chair** for 2022 IEEE International Geoscience and Remote Sensing Symposium – WE3.O1: Image Segmentation and Mapping; 2021 IEEE International Geoscience and Remote Sensing Symposium – WE1.O.3: Advanced Segmentation and Land Cover Methods for Optical Data
- **Reviewer** for Scholarly Journals:
IEEE Transactions on Geoscience and Remote Sensing, International Journal of Applied Earth Observation and Geoinformation, ISPRS Journal of Photogrammetry and Remote Sensing, Remote Sensing, Photogrammetric Engineering & Remote Sensing, IEEE Geoscience and Remote Sensing Letters

SELECTED AWARDS

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| 10/2020 | Geodesy Award of German Association for Geodesy, Geoinformation, and Land Management |
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