Qingyu Li

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EDUCATION

2019 – 2022 **Ph.D. degree**, ***Technical University of Munich, Germany***
Thesis: Deep learning for building footprint generation from optical imagery.

2015 – 2018 **Double Master degree in Earth Space Oriented Space Science and Technology & Photogrammetry and Remote Sensing, *Technical University of Munich, Germany & Wuhan University, China***
Thesis: Building footprint generation using deep learning methods

2011 – 2015 **Bachelor degree in Remote Sensing Science and Technology, *Wuhan University, China***
Thesis: Integrating multiple textural features for remote sensing image change detection

PROFESSIONAL APPOINTMENTS

2022 – Now **Postdoctoral researcher**, ***Technical University of Munich, Germany***
Exploration of earth observation through different case studies and using AI and innovative modeling technologies, "Earth Care" project

2019 – 2022 **Research associate**, ***Technical University of Munich, Germany***
Development of frameworks for global building footprint generation, "So2Sat" project
Development of frameworks for undocumented building detection, "Investigation of building cases using AI" project

TEACHING EXPERIENCE

10/2021 - 03/2022;
10/2019 - 03/2020 **Teaching assistant**, ***Technical University of Munich, Germany***
Remote Sensing Seminar, teaching students to do research projects

SERVICE & LEADERSHIP

- **Session chair**
  (1) 2022 IEEE International Geoscience and Remote Sensing Symposium – WE3.O1: Image Segmentation and Mapping; (2) 2021 IEEE International Geoscience and Remote Sensing Symposium – WE1.O.3: Advanced Segmentation and Land Cover Methods for Optical Data
- **Reviewer** for Scholarly Journals
  (1) IEEE Transactions on Geoscience and Remote Sensing; (2) International Journal of Applied Earth Observation and Geoinformation; (3) ISPRS Journal of Photogrammetry and Remote Sensing; (4) Remote Sensing; (5) Photogrammetric Engineering & Remote Sensing; (6) IEEE Geoscience and Remote Sensing Letters

SELECTED AWARDS

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

SELECTED PUBLICATIONS

[1] **Li, Qingyu,** Lichao Mou, Yuansheng Hua, Yilei Shi, Sining Chen, Yao Sun and Xiao Xiang Zhu. "**3DCentripetalNet: Building height retrieval from monocular remote sensing imagery.**" International Journal of Applied Earth Observation and Geoinformation 120 (2023): 103311. **(Impact Factor=7.672)**

[2] **Li, Qingyu**, Sebastian Krapf, Yilei Shi, and Xiao Xiang Zhu. "**SolarNet: A convolutional neural network-based framework for rooftop solar potential estimation from aerial imagery.**" International Journal of Applied Earth Observation and Geoinformation 116 (2023): 103098. **(Impact Factor=7.672)**

[3] **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)**

[4] **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 (2022). **(Impact Factor=8.125)**

[5] **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)**

[6] **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)**

[7] **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)**

[8] **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)**

[9] **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)**

[10] **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)**

TALKS

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.
10/2020	"Mapping the land cover of Africa at 10 m resolution from multi-source remote sensing data with Google Earth Engine." Oral presentation in 2020 Phi-week, European Space Agency
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.

LANGUAGE

Chinese, English, German