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Department of Earth System Science, Tsinghua University, Beijing, China

EDUCATION

August 2019 – April 2024 (Expected) Tsinghua University
Ph.D. in Ecology (Advisor: Prof. Bing Xu)

August 2015 – June 2019 Sun Yat-sen University
B.S. in Geographic Information Science (GPA: 4.2/5.0, Ranking: 1/40)

APPOINTMENTS

August 2022 – August 2023 The University of Hong Kong
Research Assistant (Co-Advisor: Dr. Bin Chen)

RESEARCH INTERESTS

Remote Sensing of Land Cover/Land Use Change Monitoring
Geospatial Big Data Mining and Analytics
Urban-Rural Development and Policy Evaluation
Environmental Exposure, Justice, and Health
Sustainable Development Goals (SDGs)

PUBLICATIONS

(*corresponding author, #co-first author)

Articles under consideration

1. **Ying Tu**, Shengbiao Wu, Bin Chen, Qihao Weng, Peng Gong, Yuqi Bai, Jun Yang, Le Yu, and Bing Xu*. "A 30 m annual cropland dataset of China from 1986 to 2021." *Earth System Science Data Discussion*. Preprint available at <https://doi.org/10.5194/essd-2023-190>
2. **Ying Tu**, Bin Chen*, Shengbiao Wu, Jiafu An, Chen Lin, Peng Gong, and Bing Xu*. "Contrasting difference in human access to socio-economic-environmental infrastructure between Global North and Global South." (To be submitted).
3. Bin Chen[#], **Ying Tu**[#], Jiafu An[#], Shengbiao Wu, Chen Lin*, and Peng Gong*. "Assessing Impacts of the Russia-Ukraine Conflict on Agricultural

Production using Publicly Available Satellite Imagery." *Communications Earth & Environment*. (Under review).

Articles in peer-reviewed journals

1. **Ying Tu**, Bin Chen*, Le Yu, Yimeng Song, Shengbiao Wu, Miao Li, Hong Wei, Tingting Chen, Wei Lang, Peng Gong, and Bing Xu*. "Raveling the nexus between urban expansion and cropland loss in China." *Landscape Ecology* (2023): 1-16.
2. **Ying Tu**[#], Bin Chen^{**}, Jun Yang, and Bing Xu*. "Olympic effects on reshaping urban greenspace of host cities." *Landscape and Urban Planning* 230 (2023): 104615.
3. **Ying Tu**, Bin Chen, Wei Lang, Tingting Chen, Miao Li, Tao Zhang, and Bing Xu*. "Uncovering the Nature of Urban Land Use Composition Using Multi-source Open Big Data with Ensemble Learning." *Remote Sensing* 13, no. 21 (2021): 4241.
4. **Ying Tu**, Bin Chen, Le Yu, Qinchuan Xin, Peng Gong, and Bing Xu*. "How does urban expansion interact with cropland loss? A comparison of 14 Chinese cities from 1980 to 2015." *Landscape Ecology* (2021): 1-21.
5. **Ying Tu**, Wei Lang, Le Yu, Ying Li, Junhao Jiang, Yawen Qin, Jiemin Wu, Tingting Chen, and Bing Xu*. "Improved Mapping Results of 10 m Resolution Land Cover Classification in Guangdong, China Using Multisource Remote Sensing Data With Google Earth Engine." *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing* 13 (2020): 5384-5397.
6. **Ying Tu**, Hanlin Zhou, Wei Lang, Tingting Chen, Xun Li*, and Bing Xu*. "A novel cross-sensor calibration method to generate a consistent night-time lights time series dataset." *International Journal of Remote Sensing* 41, no. 14 (2020): 5482-5502.
7. **Ying Tu**, Bin Chen, Tao Zhang, and Bing Xu*. "Regional Mapping of Essential Urban Land Use Categories in China: A Segmentation-Based Approach." *Remote Sensing* 12, no. 7 (2020): 1058.
8. Bin Chen*, **Ying Tu**, Shengbiao Wu, Yimeng Song, Yufang Jin, Chris Webster, Bing Xu, and Peng Gong. "Beyond green environments: Multi-scale difference in human exposure to greenspace in China." *Environment International* 166 (2022): 107348.
9. Bin Chen*, **Ying Tu**, Yimeng Song, David M. Theobald, Tao Zhang, Zhehao Ren, Xuecao Li, Jun Yang, Jie Wang, Xi Wang, Peng Gong, Yuqi Bai*, and Bing Xu*. "Mapping essential urban land use categories with open big data: Results for five metropolitan areas in the United States of America." *ISPRS Journal of Photogrammetry and Remote Sensing* 178 (2021): 203-218.
10. Le Yu*, Zhenrong Du, Runmin Dong, Juepeng Zheng, **Ying Tu**, Xin Chen, Pengyu Hao et al. "FROM-GLC Plus: toward near real-time and multi-resolution land cover mapping." *GIScience & Remote Sensing* 59, no. 1 (2022): 1026-1047.
11. Miao Li, Tao Zhang, **Ying Tu**, Zhehao Ren, and Bing Xu*. "Monitoring

Post-Flood Recovery of Croplands Using the Integrated Sentinel-1/2 Imagery in the Yangtze-Huai River Basin." *Remote Sensing* 14, no. 3 (2022): 690.

12. Tingting Chen, Eddie CM Hui, **Ying Tu**, and Wei Lang*. "Growth or Shrinkage: Discovering Development Patterns and Planning Strategies for Cross-Border Areas in China." *Journal of Urban Planning and Development* 147, no. 4 (2021): 05021046.
13. Xinyu Dou, Cuijuan Liao, Hengqi Wang, Ying Huang, **Ying Tu**, Xiaomeng Huang, Yiran Peng, Biqing Zhu, Jianguang Tan, Zhu Deng, Nana Wu, Taochun Sun, Piyu Ke, Zhu Liu*. "Estimates of daily ground-level NO₂ concentrations in China based on Random Forest model integrated K-means." *Advances in Applied Energy* 2 (2021): 100017.
14. Wenjia Cai[#], Chi Zhang[#], Hoi Ping Suen[#], ..., **Ying Tu** ..., and Peng Gong*. "The 2020 China report of the Lancet Countdown on health and climate change." *The Lancet Public Health* (2020).
15. Ruiyun Li[#], Bin Chen[#], Tao Zhang, ..., **Ying Tu** ..., and Bing Xu*. "Global COVID-19 pandemic demands joint interventions for the suppression of future waves." *Proceedings of the National Academy of Sciences* 117, no. 42 (2020): 26151-26157.
16. Peng Gong*, Bin Chen, Xuecao Li, ..., **Ying Tu** ..., and Bing Xu*. "Mapping essential urban land use categories in China (EULUC-China): preliminary results for 2018." *Science Bulletin* 65, no. 3 (2020): 182-187.

Conference proceedings

1. **Ying Tu**, Bin Chen, Le Yu, Qinchuan Xin, Peng Gong, and Bing Xu*. "Urban-Expansion Driven Farmland Loss Follows with the Environmental Kuznets Curve Hypothesis: Evidence from Temporal Analysis in Beijing, China." *In Geoinformatics in Sustainable Ecosystem and Society*, pp. 394-412. Springer, Singapore, 2019.
2. Shengjie Liu, Haowen Luo, **Ying Tu**, Zhi He, and Jun Li*. "Wide contextual residual network with active learning for remote sensing image classification." *In IGARSS 2018-2018 IEEE International Geoscience and Remote Sensing Symposium*, pp. 7145-7148. IEEE, 2018.

AWARDS

Year	Awards
2023	First Scholarship of Tsinghua University
2022	National Scholarship of China (for Doctoral Students)
2021	Second Scholarship of Tsinghua University
2020	First Scholarship of Tsinghua University
2020	Best Report in the 610 th Doctoral Forum of Tsinghua University
2019	Best Student Paper in the Geoinformatics in Sustainable Ecosystem and Society (GSES) Conference
2019	Outstanding Undergraduate Thesis of Sun Yat-sen University

- 2019 “Top 10 Graduation Student” of School of Geography and Planning, Sun Yat-sen University
- 2017 National Scholarship of China (for Undergraduate Students)
- 2016 First Scholarship of Sun Yat-sen University
- 2015 First Scholarship of Sun Yat-sen University

LANGUAGES

Chinese (native); English (professional, IELTS 7.5); Cantonese (fluent)

SKILLS

Programming: Python, JavaScript, Matlab, C/C++, VB, etc.

Software: Google Earth Engine, ArcGIS, QGIS, ENVI, Photoshop, etc.

Other: large-scale dataset processing, time-series analysis, machine learning, deep learning, change detection, statistical analysis, causality analysis, etc.

JOURNAL REVIEWS

ISPRS Journal of Photogrammetry and Remote Sensing; Food Security; GIScience & Remote Sensing; Geo-spatial Information Science; IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing; Remote Sensing in Ecology and Conservation; Remote Sensing; International Journal of Remote Sensing; International Journal of Digital Earth; International Journal of Electrical and Computer Engineering; International Journal of Environmental Research and Public Health; Land; etc.

TEACHING EXPERIENCES

The University of Hong Kong:

FA 2022	ARCH 3097	Landscape Representation: Systems and Simulations	Dr. Bin Chen	TA
FA 2022	ARCH 7176	Landscape Media	Dr. Bin Chen	TA

Tsinghua University:

FA 2020	DESS 1003	Global Change and Sustainable Development	Prof. Peng Gong	TA
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