

Dr. LIN Yinyi

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Education

2017.8-2021.8 Ph.D. in Earth System and GeoInformation Science, The Chinese University of Hong Kong
2013.9-2017.6 B.Eng. in Geographic Condition Monitoring, Wuhan University

Working Experience

2021.9-Present Postdoctoral Researcher, The Department of Geography, The University of Hong Kong
2020.9-2020.12 Intern, Space Applications Section, Information and Communications Technology and Disaster Risk Reduction Division, United Nations ESCAP

Research Interests

- Urban remote sensing
- Multisource remote sensing data fusion
- Image processing and cloud computing

Journal Publications

- [1] **Lin, Y.**, Wan, L., Zhang, H.*, Wei, S, Ma, P.*, Li, Y., Zhao Z. (2021). Leveraging optical and SAR data with a UU-Net for large-scale road extraction. *International Journal of Applied Earth Observation and Geoinformation*, 103, 102498. (IF2020: 5.933)
- [2] **Lin, Y.**, Zhang, H.*, Lin, H., Gamba, P. E., & Liu, X. (2020). Incorporating synthetic aperture radar and optical images to investigate the annual dynamics of anthropogenic impervious surface at large scale. *Remote Sensing of Environment*, 242, 111757. (IF2020: 10.164)
- [3] **Lin, Y.**, Zhang, H.*, Li, G., Wang, T., Wan, L., & Lin, H. (2019). Improving impervious surface extraction with shadow-based sparse representation from optical, SAR, and LIDAR data. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 12(7), 2417-2428. (IF2020: 3.784)
- [4] Zhang, H., **Lin, Y.**, Wei, S., Loo, B. P., Lai, P. C., Lam, Y. F.*, Wan, L., & Li, Y. (2021). Global association between satellite-derived nitrogen dioxide (NO₂) and lockdown policies under the COVID-19 pandemic. *Science of The Total Environment*, 761, 144148. (IF2020: 7.963)
- [5] Wei, S., **Lin, Y.**, Wan, L., Lin, G., Zhang, Y., Zhang, H.*. (2021). Developing a grid-based association rules mining approach to quantify the impacts of urbanization on the spatial extent of mangroves in China. *International Journal of Applied Earth Observation and Geoinformation*, 102, 102431. (IF2020: 5.933)
- [6] Ling, J., Zhang, H., & **Lin, Y.** (2021). Improving Urban Land Cover Classification in Cloud-Prone Areas

- with Polarimetric SAR Images. *Remote Sensing*, 13(22), 4708. (IF2020: 4.848)
- [7] Wei, S., **Lin, Y.**, Zhang, H.*, Wan, L., Lin, H., & Wu, Z. (2021). Estimating Chinese residential populations from analysis of impervious surfaces derived from satellite images. *International Journal of Remote Sensing*, 42(6), 2303-2326. (IF2020:3.151)
- [8] Guo, Y., Wan, L., Zhang, H.*, **Lin, Y.**, & Wang, H. A seasonal resilience index to evaluate the impacts of super typhoons on urban vegetation in Hong Kong. (2021). *Annals of the American Association of Geographers*. DOI:10.1080/24694452.2021.1989284. (IF2020: 3.302)
- [9] Wan, L., Zhang, H.*, Liu, M., **Lin, Y.**, & Lin, H. (2020). Early Monitoring of exotic mangrove sonneratia in Hong Kong using deep convolutional network at half-meter resolution. *IEEE Geoscience and Remote Sensing Letters*, 18(2), 203-207. (IF2020:3.966)
- [10] Wan, L., **Lin, Y.**, Zhang, H.*, Wang, F., Liu, M., & Lin, H. (2020). GF-5 hyperspectral data for species mapping of mangrove in Mai Po, Hong Kong. *Remote Sensing*, 12(4), 656. (IF2020: 4.848)
- [11] Zhang, H., Wan, L.*, Wang, T., **Lin, Y.**, Lin, H., & Zheng, Z. (2019). Impervious surface estimation from optical and polarimetric SAR data using small-patched deep convolutional networks: A comparative study. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 12(7), 2374-2387. (IF2020: 3.784)
- [12] Fonseka, H. P. U., Zhang, H.*, Sun, Y., Su, H., Lin, H., & **Lin, Y.** (2019). Urbanization and its impacts on land surface temperature in Colombo metropolitan area, Sri Lanka, from 1988 to 2016. *Remote Sensing*, 11(8), 957. (IF2020: 4.848)
- [13] Zhang, H.*, Wang, T., Zhang, Y., Dai, Y., Jia, J., Yu, C., Li, G., **Lin, Y.**, Lin, H., & Cao, Y. (2018). Quantifying short-term urban land cover change with time series Landsat data: A comparison of four different cities. *Sensors*, 18(12), 4319. (IF2020: 3.576)
- [14] Zhang, H.*, **Lin, Y.**, Wang, T., Wan, L., Li, Y., Lin, H., Zhang, Y. (2018). Fusing optical and SAR remote sensing data for urban impervious surface estimation. *Geography and Geo-Information Science*, 34(3), 39-46.
- [15] Lin, H., Zhang, H.*, **Lin, Y.**, Wei, S. (2018). Spatiotemporal changes of gridded urban population in the Guangdong-Hong Kong-Macao Greater Bay Area based on impervious surface-population correlation. *Progress in Geography*, 37(12), 1644-1652.

Conference Publications

- [1] **Yinyi Lin**, Hongsheng Zhang, Gang Li, Ting Wang, & Hui Lin. (2018, July). Sparse representation for impervious surface area extraction using WorldView-2 and TerraSAR-X data. *IGARSS 2018*. Oral presentation.
- [2] **Yinyi Lin**, Hongsheng Zhang, Hui Lin. (2019, May). Wind speed and temperature simulation in Hong Kong under Typhoon Hato using WRF: Impact on mangroves. *iEMSs 2019* regional conference (Asian Region). Oral presentation.
- [3] **Yinyi Lin**, Hongsheng Zhang, Peifeng Ma, Hui Lin. (2020, September). A shadow free multisource stack sparse autoencoder framework for urban impervious surface mapping. *IGARSS 2020*. Oral presentation.
- [4] **Yinyi Lin**, Hongsheng Zhang, Peifeng Ma, Hui Lin. (2020, November). Impervious surface impact on spatiotemporal dynamics of NO₂ from Sentinel-5 Precursor in China using geographic weighted regression modelling. *Hong Kong Geography Day 2020*. Participation in Postgraduate Student Paper

Competition.

- [5] **Yinyi Lin**, Hongsheng Zhang, Peifeng Ma. (2021, July). Multisource shadow-based fuzzy set (MSFS) approach for impervious surfaces mapping from optical and SAR data. *IGARSS 2021*. Multi-media presentation.

Honours and Awards

- 2021 Postgraduate Research Output Award, The Chinese University of Hong Kong (Totally 8 awardees)
2019 Travel Grants, 1st Regional Conference on Environmental Modeling and Software (Asian Region)
2017 Excellent Undergraduate's Dissertation, Wuhan University
2015 National Scholarship, China
2014 National Scholarship, China

Services

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| Student Representative | Institute of Space and Earth Information Science, The Chinese University of Hong Kong, 2018-2019 |
| Member | Institute of Electrical and Electronics Engineers (IEEE) |
| Member | IEEE Geoscience and Remote Sensing Society (GRSS) |
| Member | International Environmental Modelling and Software Society (iEMSs) |
| Reviewer | International Journal of Applied Earth Observation and Geoinformation IEEE Transactions on Geoscience and Remote Sensing International Journal of Remote Sensing IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing |