



Shun Bi

PH.D. STUDENT

School of Geography, Nanjing Normal University

+86 156 5190 9539 | bishun1994@foxmail.com | Shun_Bi | bishun945 | bishun945

Research Interests

My current interest is to build an algorithm blending framework for estimating optical active constituents, such as Chlorophyll-a concentration, across Case I and II waters from remote sensing data.

My other interests include building Chla algorithms for specific water types (e.g., turbid Case II waters), column-integrated algal biomass for inland lakes, atmospheric correction, and data gap-filling for satellite imagery.

Education

School of Geography, Geomatics and Planning, Jiangsu Normal University

BSc Jiangsu, Xuzhou 2012 - 2016

School of Geography, Nanjing Normal University

Ms Jiangsu, Nanjing 2016 - 2018

School of Geography, Nanjing Normal University

PH.D. Jiangsu, Nanjing 2018 - Now

Awards and Honors

Jun-2017 the Third Prize of 2017 NNU Graduate Mathematical Modeling Competition China
Dec-2017 the Second Prize of 2017 National Graduate Mathematical Modeling Competition China
Nov-2018 ESA-MOST China Dragon 4 Cooperation: BEST POSTER AWARD China
Apr-2019 the Third Prize of the 6th Sharing Cup College Student Science and Technology Resources sharing service innovation competition China
Oct-2019 the First Prize of the 1st Hyspectral Imagery Processing Competition - Orbit Cup China

Grants and Fellowships

Dec-2018 the Postgraduate Research & Practice Innovation Program of Jiangsu province, China Grant: KYCX18-1205
Sep-2017 the Second Prize Scholarship of 2016 China
Sep-2018 the First Prize Scholarship of 2017 China
Sep-2019 the First Prize Scholarship of 2018 China
Nov-2019 the Scholarship of Saiteng Fenghui of 2019 China
Sep-2020 the First Prize Scholarship of 2019 China
Nov-2020 the National Scholarship of 2020 China

Publications

PEER-REVIEWED JOURNAL ARTICLES

- Bi, S., Li, Y., Xu, J., Liu, G., Song, K., Mu, M., Lyu, H., Miao, S., & Xu, J. (2019). Optical classification of inland waters based on an improved fuzzy c-means method. *Optics Express*, 27(24), 34838–34856.
- Bi, S., Li, Y., Lyu, H., Mu, M., Xu, J., Lei, S., Miao, S., Hong, T., & Zhou, L. (2019). Quantifying spatiotemporal dynamics of the column-integrated algal biomass in nonbloom conditions based on olci data: A case study of lake dianchi, china. *IEEE Transactions on Geoscience and Remote Sensing*, 57(10), 7447–7459.
- Bi, S., Li, Y., Wang, Q., Lyu, H., Liu, G., Zheng, Z., Du, C., Mu, M., Xu, J., Lei, S., & others. (2018). Inland water atmospheric correction based on turbidity classification using olci and slstr synergistic observations. *Remote Sensing*, 10(7), 1002.

4. Bi, S., Li, Y., Lu, H., Zhu, L., Mu, M., Lei, S., Wen, S., & Ding, X. (2018). Estimation of chlorophyll-a concentration in lake erhai based on olci data. *J. Lake Sci.*, 30(3), 701–712 (in Chineses).
5. Xu, J., Lei, S., Bi, S., Li, Y., Lyu, H., Xu, J., Xu, X., Mu, M., Miao, S., Zeng, S., & others. (2020). Tracking spatio-temporal dynamics of poc sources in eutrophic lakes by remote sensing. *Water Research*, 168, 115162.
6. Liu, G., Li, L., Song, K., Li, Y., Lyu, H., Wen, Z., Fang, C., Bi, S., Sun, X., Wang, Z., & others. (2020). An olci-based algorithm for semi-empirically partitioning absorption coefficient and estimating chlorophyll a concentration in various turbid case-2 waters. *Remote Sensing of Environment*, 239, 111648.
7. Xu, J., Li, Y., Lyu, H., Lei, S., Mu, M., Bi, S., Xu, J., Xu, X., Miao, S., Li, L., & others. (2021). Simultaneous inversion of concentrations of poc and its endmembers in lakes: A novel remote sensing strategy. *Science of the Total Environment*, 145249.
8. Miao, S., Lyu, H., Xu, J., Bi, S., Guo, H., Mu, M., Lei, S., Zeng, S., & Liu, H. (2021). Characteristics of the chromophoric dissolved organic matter of urban black-odor rivers using fluorescence and uv–visible spectroscopy. *Environmental Pollution*, 268, 115763.
9. Lyu, H., Yang, Z., Shi, L., Li, Y., Guo, H., Zhong, S., Miao, S., Bi, S., & Li, Y. (2020). A novel algorithm to estimate phytoplankton carbon concentration in inland lakes using sentinel-3 olci images. *IEEE Transactions on Geoscience and Remote Sensing*, 58(9), 6512–6523.
10. Miao, S., Li, Y., Wu, Z., Lyu, H., Li, Y., Bi, S., Xu, J., Lei, S., Mu, M., & Wang, Q. (2020). A semianalytical algorithm for mapping proportion of cyanobacterial biomass in eutrophic inland lakes based on olci data. *IEEE Transactions on Geoscience and Remote Sensing*, 58(7), 5148–5161.
11. Miao, S., Lyu, H., Wang, Q., Li, Y., Wu, Z., Du, C., Bi, S., Mu, M., Lei, S., & others. (2019). Estimation of terrestrial humic-like substances in inland lakes based on the optical and fluorescence characteristics of chromophoric dissolved organic matter (cdom) using olci images. *Ecological Indicators*, 101, 399–409.
12. Mu, M., Wu, C., Li, Y., Lyu, H., Fang, S., Yan, X., Liu, G., Zheng, Z., Du, C., & Bi, S. (2019). Long-term observation of cyanobacteria blooms using multi-source satellite images: A case study on a cloudy and rainy lake. *Environmental Science and Pollution Research*, 26(11), 11012–11028.

R PACKAGES

1. Shun Bi, Y. L., & Liu, G. (2020). *FCMm: Water spectra fuzzy-clustering, algorithm assessment, and blending*. <https://github.com/bishun945/FCMm>
2. Shun Bi, Y. L., & Cheng, X. (2019). *DAMATO: Data management toolbox*. <https://github.com/bishun945/DAMATO>
3. Shun Bi, G. L., & Li, Y. (2020). *Seadasr (private): Running seadas with r*. <https://github.com/bishun945/seadasr>
4. Bi, S., & Li, Y. (2019). *TSSIM (private): Time-series-based spatial interpolation method*. <https://github.com/bishun945/TSSIM>

Conferences

May-2017	Jiangsu University Geography Postgradutae Forum (2017)	Jiangsu, Nanjing
Sep-2017	the 5th Graduate Forum of Jiangsu Society of Oceanology and Lomnology	Jiangsu, Nanjing
Oct-2017	the 1st China Plateau Lake Forum	Yunnan, Kunming
Apr-2018	Jiangsu University Geography Postgradutae Forum (2018)	Jiangsu, Nanjing
Nov-2018	ESA-MOST DRAGON 4 PROGRAMME - Advanced Training Course in Ocean & Coastal Remote Sensing	Guangdong, Shenzhen
Nov-2018	National Forum for Doctoral Students in Geographic Information Science (2018)	Jiangsu, Nanjing
Nov-2018	the 18th Water Color Remote Sensing Conference in China	Guangdong, Zhanjiang
Aug-2019	the 1st Wetland Remote Sensing Conference in China	Jilin, Changchung
Nov-2019	the 19th Water Color Remote Sensing Conference in China	Hainan, Sanya
Aug-2020	the 2nd Wetland Remote Sensing Conference in China	Online
Dec-2020	National Forum for Doctoral Students in Geographic Information Science (2020)	Online

Languages

Mandarin (native), English (written and oral)

Skills

Programming skills R, Python, IDL, MATLAB

Operating systems Windows, Linux (Ubuntu), macOS

Remote sensing processing tools SeaDAS, SNAP, QGIS, POLYMER, ACOLITE, ENVI, GEE, Hydro/EcoLight

Experiment skills Apparent optical properties collection: ASD HH2, TriOS RAMSES; Inherent optical properties collection: HydroScat-6, LISST-100X; Quantitative filter technique.

References

Yunmei Li, Ph.D., Professor

School of Geography

Nanjing Normal University, Nanjing, China

+86 138 1383 3136

liyunmei@njnu.edu.cn