





SHUN BI 毕顺

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. I am also interested in 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.

WORK EXPERIENCE

- 2022
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Now
- **Helmholtz-Zentrum Hereon**
Post-doc  Geesthacht, Germany
Optical Oceanography, Institute of Carbon Cycles
 - **Helmholtz-Zentrum Hereon**
Post-doc  Geesthacht, Germany
Optical Oceanography, Institute of Coastal Ocean Dynamics

EDUCATION

- 2016
|
2021
- **Nanjing Normal University**
Ph.D in Remote Sensing of Geo-Environment  Nanjing, China
Thesis: Remote Sensing of Column-integrated Algal Biomass for Inland Waters Based on Soft Classification
(Qualified for the Successive Master-Doctor Program in 2018)
 - **Jiangsu Normal University**
B.S. in Remote Sensing Science and Technology  Xuzhou, China
Thesis: Analysis of Spatiotemporal Characteristics of Drought in Qinghai-Tibet Region Based on Meteorological Drought Composite Index

SELECTED PUBLICATIONS

- 2021
- **Assessment of algorithms for estimating chlorophyll-a concentration in inland waters: A round-robin scoring method based on the optically fuzzy clustering**
IEEE Transactions on Geoscience and Remote Sensing, 60, 1-17, IF 5.855
Bi S, Li Y, Liu G, Song K, Xu J, Dong X, Cai X, Mu M, Miao S, Lyu H



Contact Info

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 Shun_Bi
 bishun945

For more information, please contact me via email.

Skills

Experienced in atmospheric correction, Chla algorithm and optical water clustering.

Full experience in remote sensing image processing.

R, Python, IDL, MATLAB, SeaDAS, SNAP, Ubuntu, macOS.

Languages

Mandarin (native), English (written and oral)

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Last updated on 2022-01-19

- 2019 ● **Optical classification of inland waters based on an improved Fuzzy C-Means method**
Optics Express, 27(24), 34838–34856, IF 3.669
Bi S, Li Y, Xu J, Liu G, Song K, Mu M, Lyu H, Miao S, Xu J
- 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, IF 5.855
Bi S, Li Y, Lyu H, Mu M, Xu J, Lei S, Miao S, Hong T, Zhou L
- 2018 ● **Inland water atmospheric correction based on turbidity classification using OLCI and SLSTR synergistic observations**
Remote Sensing, 10(7), 1002, IF 4.118
Bi S, Li Y, Wang Q, Lyu H, Liu G, Zheng Z, Du C, Mu M, Xu J, Lei S
- 2018 ● **Estimation of chlorophyll-a concentration in Lake Erhai based on OLCI data**
Journal Lake Science, 30(3), 701–712 (*in Chinese*), IF 1.445
Bi S, Li Y, Lu H, Zhu L, Mu M, Lei S, Wen S, Ding X
- 2020 ● **Tracking spatio-temporal dynamics of POC sources in eutrophic lakes by remote sensing**
Water Research, 168, 115162, IF 9.13
Xu J, Lei S, Bi S, Li Y, Lyu H, Xu J, Xu X, Mu M, Miao S, Zeng S & 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, IF 9.085
Liu G, Li L, Song K, Li Y, Lyu H, Wen Z, Fang C, Bi S, Sun X, Wang Z & others
- 2021 ● **Simultaneous inversion of concentrations of POC and its endmembers in lakes: A novel remote sensing strategy**
Science of the Total Environment, 770, 145249, IF 6.551
Xu J, Li Y, Lyu H, Lei S, Mu M, Bi S, Xu J, Xu X, Miao S, Li L, & others
- 2021 ● **Characteristics of the chromophoric dissolved organic matter of urban black-odor rivers using fluorescence and UV-visible spectroscopy**
Environmental Pollution, 268, 115763, IF 6.793
Miao S, Lyu H, Xu J, Bi S, Guo H, Mu M, Lei S, Zeng S, Liu H
- 2021 ● **Urban Water Quality Assessment Based on Remote Sensing Reflectance Optical Classification**
Remote Sensing, 13(20), 4047, IF 4.118
Cai X, Li Y, Bi S, Lei S, Xu J, Wang H, Dong X, Li J, Zeng S, Lyu H



R PACKAGES

- 2021 ● **FCMm: Water spectra fuzzy-clustering, algorithm assessment, and blending**
Version 0.11.1
Bi S, Li Y, Liu G
- 2021 ● **DAMATO: Data Management Toolbox**
Version 0.0.8
Bi S, Li Y, Cheng X
- 2021 ● **Algal Game: Solver of the reaction-diffusion-taxis model of phytoplankton, nutrients, and light in water column**
Version 0.1
Bi S, Li Y, Li J
- 2020 ● **seadasr: Running seadas with R**
Version 0.0.1 (*private*)
Bi S, Liu G, Li Y
- 2019 ● **TSSIM: Time-Series-based Spatial Interpolation Method**
Version 0.0.2 (*private*)
Bi S, Li Y



AWARDS AND HONORS

- 2017 ● **the Third Prize of 2017 NNU Graduate Mathematical Modeling Competition**
Title: Research on Feature Selection and Classifier Algorithm in Intrusion Detection (*in Chinese*)
Bi S, Chen B, Ding X
- 2017 ● **the Second Prize of 2017 National Graduate Mathematical Modeling Competition**
Title: Foreground target extraction based on surveillance video (*in Chinese*)
Bi S, Chen B, Ding X
- 2018 ● **ESA-MOST China Dragon 4 Cooperation: BEST POSTER AWARD**
Title: Inland water atmospheric correction based on turbidity classification using OLCI and SLSTR synergistic observations
- 2018 ● **the Third Prize of the 6th Sharing Cup College Student Science and Technology Resources sharing service innovation competition**
Title: Evaluation of atmospheric correction methods for inland lakes based on Sentinel-3 OLCI data (*in Chinese*)
Bi S, Hong T, Zhou L

- 2019 ● **the First Prize of the 1st Hyerspectral Imagery Processing Competition - Orbit Cup**
Title: Evaluation of the application of ZH-1 data in remote sensing of water color in inland lakes (*in Chinese*)
Bi S, Hong T, Li L
- 2021 ● **Outstanding Graduate in Nanjing Normal University**



GRANTS AND FELLOWSHIPS

- 2018 ● **Postgraduate Research & Practice Innovation Program of Jiangsu province, China**
Project title: Research on the three-dimensional spatiotemporal pattern of the total biomass of cyanobacteria in Taihu Lake based on remote sensing technology (*in Chinese*)
- 2020 ● **China National Scholarship**
Funded by Ministry of Education of the People's Republic of China
- 2019 ● **Scholarship of Saiteng Fenghui**
Funded by Suzhou Secote Precision Electronic Co., Ltd.
- 2017
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2020 ● **the First Prize Scholarship**
Funded by Nanjing Normal University
- 2016 ● **the Second Prize Scholarship**
Funded by Nanjing Normal University



CONFERENCES AND PRESENTATIONS

- 2021 ● **Looking back on my PhD**
📍 Nanjing, China
- 2020 ● **ALGAL GAME**
📍 Nanjing, China
- 2020 ● **National Forum for Doctoral Students in Geographic Information Science**
📍 Online
- 2020 ● **the 2nd Wetland Remote Sensing Conference in China**
📍 Online
- 2019 ● **the 19th Water Color Remote Sensing Conference in China**
📍 Sanya, China
- 2019 ● **the 1st Wetland Remote Sensing Conference in China**
📍 Changchung, China
- 2018 ● **the 18th Water Color Remote Sensing Conference in China**
📍 Zhanjiang, China
- 2018 ● **National Forum for Doctoral Students in Geographic Information Science**
📍 Nanjing, China

- 2018 ● **ESA-MOST DRAGON 4 PROGRAMME - Advanced Training Course in Ocean & Coastal Remote Sensing**
📍 Shenzhen, China
- 2018 ● **Jiangsu University Geography Postgraduates Forum**
📍 Nanjing, China
- 2017 ● **the 1st China Plateau Lake Forum**
📍 Kunming, China
- 2017 ● **the 5th Graduate Forum of Jiangsu Society of Oceanology and Limnology**
📍 Nanjing, China
- 2017 ● **Jiangsu University Geography Postgraduates Forum**
📍 Nanjing, China