SHUN BI 毕顺

My current interest is to build an algorithm blending framework for estimating optical active constitutes, 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.

🎓 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)

2012 | 2016

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, *Early Access*, **IF 5.855**
Bi S, Li Y, Liu G, Song K, Xu J, Dong X, Cai X, Mu M, Miao S, Lyu H

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

Contact Info

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⬤ github.com/bishun945

Ｒ 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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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

📦 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 serveice 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 | 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 Postgradutae Forum**
📍 Nanjing, China

2017 — **the 1st China Plateau Lake Forum**
📍 Kunming, China

2017 — **the 5th Graduate Forum of Jiangsu Society of Oceanology and Lomnology**
📍 Nanjing, China

2017 — **Jiangsu University Geography Postgradutae Forum**
📍 Nanjing, China

References

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Nanjing Normal University
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