

Shuo Chen

Ph.D.

Odum School of Ecology

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A. Education

Ph.D. 2021

The University of Alabama (Tuscaloosa, Alabama, USA)

- Geological Sciences, GPA: 4.0
- Advisor: Dr. Yuehan Lu
- Dissertation title: Watershed Export of Dissolved Organic Matter in Response to Anthropogenic and Hydrologic Drivers in Subtropical Streams and Rivers
- Concentrations: Biogeochemistry, Stream Ecology

B.Sc. 2014

Ocean University of China (Qingdao, China)

- Marine Chemistry, GPA: 3.2
- Advisor: Dr. Chunying Liu
- Senior thesis: Evaluating the production of dimethylsulfide (DMS) and acrylic acid (AA) by the degradation of dimethylsulfoniopropionate (DMSP) from *Nitzschia Closterium*

B. Positions and Appointments:

2021-present: NSF-funded Postdoctoral Fellow, Department of Biological Sciences, Idaho State University

2021-present: Visiting Scholar, Odum School of Ecology, University of Georgia

C. Publications

Peer-reviewed Papers (published, in review or revision):

Lu, Y., Shang, P., **Chen, S.**, Du, Y., Bonizzoni, M. and Ward, A.K. (2021). Discharge and Temperature Controls of Dissolved Organic Matter (DOM) in a Forested Coastal Plain Stream. *Water*, 13(20), p.2919. (IF = 3.103)

Chen, S., Du, Y., Das, P., Lamore, A.F., Dimova, N.T., Elliott, M., Broadbent, E.N., Roebuck Jr, J.A., Jaffé, R., Lu, Y. (2021). Agricultural land use changes stream dissolved organic matter via altering soil inputs to streams. *Science of The Total Environment*, 796, p.148968. (IF = 7.963)

Wei, S., Lu, Y., **Chen, S.**, Shang, P., Xia, Y., Zhang, Y. (2021). Fractional-derivative model simulations of reach-scale uptake and transport dynamics of natural fluorescent dissolved organic matter in a temperate forested stream in southeastern US. *Journal of Hydrology*, p.126878. (IF = 5.722)

Chen, S. (2021). Watershed Export of Dissolved Organic Matter in Response to Anthropogenic and Hydroclimatic Drivers in Subtropical Streams and Rivers (Doctoral dissertation, University of Alabama Libraries).

Hopper, G. W., **Chen, S.**, Sanchez Gonzalez, I., Bucholz, J. R., Lu, Y., Atkinson, C. L. (2021). Aggregated filter-feeders govern the flux and stoichiometry of locally available energy and nutrients in rivers. *Functional Ecology*, 35(5), 1183-1195. (IF = 5.610)

Sankar, M.S., Dash, P., Lu, Y., Mercer, A.E., Turnage, G., Shoemaker, C.M., **Chen, S.**, Moorhead, R.J. (2020). Land use and land cover control on the spatial variation of dissolved organic matter across 41 lakes in Mississippi, USA. *Hydrobiologia*, 847(4), pp.1159-1176. (IF = 2.781)

- Chen, S.**, Lu, Y., Dash, P., Das, P., Li, J., Capps, K., Majidzadeh, H., Elliott, M. (2019). Hurricane pulses: small watershed exports of dissolved nutrients and organic matter during large storms in the Southeastern USA. *Science of The Total Environment*, 689, pp.232-244 (IF = 7.963)
- Sankar, M S., Dash, P., Sigh, S., Lu, Y., Mercer, A., **Chen, S.** (2019). Effect of Photo-biodegradation and Biodegradation on the Biogeochemical Cycling of Dissolved Organic Matter Across Diverse Surface Water Bodies, *Journal of Environmental Sciences* (IF = 4.302)
- Liu, C., Gao, C., Zhang, H., **Chen, S.**, Deng, P., Yue, X. A., Guo, X. (2014). Production of dimethylsulfide and acrylic acid from dimethylsulfoniopropionate during growth of three marine microalgae. *Chinese journal of oceanology and limnology*, 32(6), 1270-1279 (IF = 1.068)

Peer-reviewed Papers (in preparation):

- Chen, S.**, Lu, Y. (2021). Composition and Transformation of Dissolved Organic Matter in Relation to Changes in Stream Metabolism from a Fluvial Section of a Subtropical River. (In preparation for *Water*)
- Xu, M., Liu, H., Mitchell, D., Liu, Y., Lu, Y., Beck, R., **Chen, S.** (2021). Water Turbidity Measurements for Rivers in Tombigbee River Basin and the Mobile Bay from Satellite Multispectral Imagery. (In preparation for *Journal of Hydrology*)

Published Abstract at Professional Meetings:

- Chen, S.**, Lu, Y., Dash, P., Das, P., Li, J., Capps, K., Majidzadeh, H. and Elliott, M. (2019). Hurricane pulses: small watershed exports of dissolved nutrients and organic matter during large storms in the Southeastern USA, Gordon Research Conference – 2019 Catchment Science: Interactions of Hydrology, Biology & Geochemistry Abstract.
- Chen, S.**, Lu, Y., Shang, P. (2018). Effects of Agricultural Land Use on the Sources and Composition of Dissolved Organic Matter (DOM) in Subtropical Streams, Goldschmidt2018 Abstract.
- Chen, S.**, Lu, Y., Shang, P. (2017). Agricultural Land Use Influence on the Export of Dissolved Organic Matter (DOM) in Northeastern Alabama, 2017 Alabama Water Resources Conference Abstract.
- Chen, S.**, Lu, Y., Shang, P. (2017). Spatiotemporal Variations of the Sources and Composition of Dissolved Organic Matter (DOM) in Subtropical Agricultural Streams, Gordon Research Conference – 2017 Catchment Science: Interactions of Hydrology, Biology & Geochemistry Abstract.

D. Presentations

- 06/2020 **Association for the Science of Limnology and Oceanography – Society of Freshwater Science (ASLO-SFS)** (Poster Presentation, Madison, Wisconsin)
- 12/2019 **Alabama Water Institute Symposium** (Invited Talk, Tuscaloosa, Alabama)
- 11/2019 **The 25th Biennial Conference, Coastal & Estuarine Research Federation** (Poster Presentation, Mobile, Alabama)
- 09/2019 **Alabama Water Resources Conference and Symposium** (Poster Presentation, Orange Beach, Alabama)
- 07/2019 **Mississippi Academy of Sciences, Third Annual Summer Student Science Symposium** (Poster Presentation, Starkville, Mississippi)
- 06/2019 **Gordon Research Conference -- Catchment Science: Interactions of Hydrology, Biology & Geochemistry** (Poster Presentation, Andover, New Hampshire)
- 08/2018 **Goldschmidt Conference** (Poster Presentation, Boston, Massachusetts)
- 09/2017 **Alabama Water Resources Conference and Symposium** (Poster Presentation, Orange Beach, Alabama)
- 06/2017 **Gordon Research Conference -- Catchment Science: Interactions of Hydrology, Biology & Geochemistry** (Poster Presentation, Lewiston, Maine)

02/2017 **Women In STEM Experience Conference 2017 Symposium at the University of Alabama** (Poster Presentation, Tuscaloosa, Alabama)

E. Graduate Honors and Awards

08/2020 – 05/2021 Graduate Council Fellowship at the University of Alabama
08/2016 – 05/2020 Graduate Teaching Assistantship at the University of Alabama, Geology 105 & 103 Course (Weekly lab instructor for undergraduate students)
10/2020 Student Research Grant from the Gulf Coast Association of Geological Societies
04/2020 Philip E. & Bunnie LaMoreaux International Graduate Student Award, The University of Alabama
03/2020 Graduate Student Research Grants of the Geological Society of America
04/2019 John G. Newton/John S. Winefordner Scholarship of the Alabama Geological Society
2016 – 2020 A.S. Johnson Travel Funds, The University of Alabama
2016 – 2020 W. Gary Hooks Endowed Funds, The University of Alabama
2016 – 2020 Graduate School Conference & Research Support Funding, The University of Alabama
06/2017 Geological Science Advisory Board Summer Fellowship, The University of Alabama
12/2013 The 3rd National Conference for Scientific Activity of College Students in Chemistry (Second-Class Prize for Poster Competition)
2011–2013 Scholarship from the National Marine Chemistry Laboratory, Ocean University of China

F. Experience

2016 – 2020 **Graduate Teaching Assistant**, The University of Alabama
Lab Taught: GEO 105 Sustainable Earth (Fall 2016 – Spring 2019)
GEO 103 Introduction to Oceanography (Fall 2019 – Spring 2020)
2020 **PARAFAC (Parallel Factor) for DOM Fluorescence Graduate Online Course**, Chalmers University of Technology
2019 **Access and Work with National Ecological Observatory Network (NEON) Workshop**, Ecological Society of America (ESA) Annual Meeting 2019
2019 **Field Investigation on Water Turbidity in Alabama with NEON** (team leader and data collection)
2016 **Field Investigation on Freshwater Quality in Alabama with US Geological Survey** (sample collection and data analysis)
2013 **Internship at the National Urban Water Supply and Water Quality Observatory Network**, Qingdao China
2013 **Talent Training Project**, Ocean University of China (team leader, Studied the water quality of three main estuaries of Jiaozhou Bay, China and the water treatment conditions of the nearby sewage plants)
2013 **Undergraduate Research & Development Project**, Ocean University of China (Studied the generation, distribution, migration and transformation of acrylic acid in six marine microalgae)

F. Synergistic Activities

2020 GSA (Geological Society of America) Member

Shuo Chen CV

2017 Volunteer Instructor, Geology Class for the Arcadia Program (Geokids) at the Tuscaloosa Magnet Elementary School

G. References

Dr. Yuehan Lu:

Research Associate and Dissertation Supervisor (Dissertation for Ph.D. Degree)

University of Alabama

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