Mumtahina Riza

Trustees Doctoral Fellow
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EDUCATION

University of Central Florida, Orlando, FL — Fall 2023 – Spring 2027
PhD student in Integrative and Conservation Biology
Thesis: Investigation of the mineral-associated organic matter in Everglades Agricultural Area to optimize carbon stabilization for regulating climate-influencing carbon emissions
Major Advisor: Dr. Lisa G. Chambers

North Carolina State University, Raleigh, NC — August 2023
MS in Biology — CGPA: 3.81
Thesis: Risk screening of phosphorus (P) capturing materials for eutrophication mitigation: Environmental impacts and sustainability
Major Advisor: Khara D. Grieger, PhD

Bangladesh University of Professionals (BUP), Bangladesh — March 2021
MSc in Environmental Science and Management — CGPA: 3.86/4.00
Position: 1st out of 40 students
Thesis: Phytoremediation of heavy metal contaminated soil located around textile industries
Supervisor: Dr. Sirajul Hoque

Bangladesh University of Textiles, Bangladesh — June 2014
BSc in Textile Engineering — CGPA: 3.77/4.00
Position: 1st out of 42 students
Prime Minister Gold Medal Awardee

PUBLICATIONS (Google Scholar)

Journal Articles

Submitted

Riza, M., Grieger, K., Horgan, M., Burkholder, J., Jones, J. (2023), Environmental Impacts of Selected Metal Cations for Phosphorus (P) Capture in Natural Waters: A Synthesis. Chemosphere. *(Submitted on 10/10/2023)*

Ehsan, M. N., **Riza, M.**, M., Pervez, Md. N., & Liang, Y. (2023). Source identification and distribution of per- and polyfluoroalkyl substances (PFAS) in the freshwater environment of USA. Water Research *(Under review since 09/19/2023)*

Published

Ehsan, M. N., **Riza, M.**, M., Pervez, Md. N., Khyum, M. M. O., Liang, Y., & Naddeo, V. (2023). Environmental and health impacts of PFAS: Sources, distribution and sustainable management in North Carolina (USA). Science of The Total Environment, 878, 163123. https://doi.org/10.1016/j.scitotenv.2023.163123

Riza, M., Ehsan, M. N., Pervez, M. N., Khyum, M. M. O., Cai, Y., & Naddeo, V. (2023). Control of eutrophication in aquatic ecosystems by sustainable dredging: Effectiveness, environmental impacts, and implications. Case Studies in Chemical and Environmental Engineering, 7, 100297, doi:10.1016/j.cscee.2023.100297

Pervez, M. N., Yeo, W. S., Shafiq, F., Jilani, M. M., Sarwar, Z., **Riza, M.,** Lin, L., Xiong, X., Naddeo, V., & Cai,Y. (2023). Sustainable fashion: Design of the experiment assisted machine learning for the environmental-friendly resin finishing of cotton fabric. Heliyon, 9 (1), e12883. https://doi.org/10.1016/j.heliyon.2023.e12883

Riza, M., & Hoque, S. (2021). Phytoremediation of Copper and Zinc Contaminated Soil around Textile Industries using Bryophyllum pinnatum Plant. Journal of Ecological Engineering, 22(4), 88–97. https://doi.org/10.12911/22998993/134035

Riza, M., Ehsan, M. N., & Hoque, S. (2021). Portrayal of Textile Based Pollutants and its Impact on Soil, Plants and Fisheries. Nature Environment and Pollution Technology, 20(3). https://doi.org/10.46488/NEPT.2021.v20i03.038

Book Chapter

M.N. Pervez, **M. Riza**, M.E. Talukder, K. M. F. Hasan, M.A. Habib, M.A. Jahid, G. K. Stylios, V. Naddeo, P. I. Dolez, F. Ahmed, M.I.H. Mondal, Y. Cai, Sustainable e-textiles–Development and importance, in: Smart Textiles from Natural Resources, Elsevier, 2024. ISBN: 9780443154713. *In Press*

RESEARCH & PROFESSIONAL APPOINTMENT

- Fall 2023 – Spring 2027, Trustees Doctoral Fellow, Department of Biology, University of Central Florida
- Summer 2023 (summer II), Lab Technician, Aquatic Biogeochemistry Lab, University of Central Florida
- Fall 2021- Summer 2023, Graduate Research Assistant, Science and Technologies for Phosphorus Sustainability (STEPS), Department of Applied Ecology, North Carolina State University
- 2015 – 2021, Lecturer, Department of Textile Engineering, Southeast University, Dhaka, Bangladesh

AWARD & HONORS

- August 2023 - May 2027: Board of Trustees Doctoral Fellowship (for four years), $25000 stipend/9 month + $7200/summer work, Total $32200/year + Full tuition waiver and Health insurance benefit, University of Central Florida, Orlando, FL
- September 2022: Winner of "SRA Advanced Materials and Technologies Specialty Group (AMTSG) Student Merit" Award. $750
- August 2021 - June 2023: Graduate Research Assistantship, Annual $28,600 + Full tuition waiver and Health insurance benefit, Department of Applied Ecology, North Carolina State University, Raleigh, NC
- 2021 Fall & 2022 Spring: American Rescue Plan (ARP) Emergency Fund, Office of Scholarships and Financial Aid, NC State University. $750 + $750
- 2017: Prime Minister Gold Medal Award 2014 for holding 1st position in the Faculty of Textile Engineering, Bangladesh University of Textiles, University Grants Commission, Bangladesh
- 2010 - 2013: Student Merit Based Academic Scholarship, Bangladesh University of Textiles
- 2006: Exim Bank Merit-Based Scholarship, Exim Bank Ltd. Bangladesh
- 2006: Prothom Alo Meritorious Student Award, Prothom Alo Daily Newspaper

CONFERENCE/POSTER PRESENTATION

Riza. M, December 2022. Risk screening of phosphorus (P) capturing materials for eutrophication control: Environmental impacts and sustainable management. SRA Annual Meeting, Tampa, Florida. *Abstract*

Riza. M, Grieger. K, November 2022. Phosphorus-capturing materials for eutrophication control: Environmental risk, impacts, and implications for sustainable management, Phosphorus Week 2022, Raleigh, NC. *Poster*

Riza. M, October 2021. Phytoremediation of Copper and Zinc Contaminated Soil around Textile Industries using *Bryophyllum pinnatum* Plant. Research Triangle Regional Organization, Society for Risk Analysis. *Online Poster*

TECHNICAL REPORT & OTHERS

Grieger, K., **Riza, M.**, Horgan, M., Merck, A. (2022). Society for Risk Analysis Strategic Initiative Funding: Final Report. Prepared for the Society for Risk Analysis, grant no. 2020-1006, SRA internal account code 879-265

Hoque, S., **Riza, M**., (2023). Phytoremediation, Banglapedia, National Encyclopedia of Bangladesh. https://en.banglapedia.org/index.php/Phytoremediation

PROFESSIONAL DEVELOPMENT & OUTREACH ACTIVITIES

2021- 2023: Treasurer, Society of Risk Analysis- Research Triangle- Regional Organization, NC
2022: Student Lead of Session 1: Feast or Famine: P Sustainability in Agriculture, Phosphorus Week 2022, Sustainable Phosphorus Summit, Raleigh, NC
2022- 2023: Seminar Coordinator, Graduate Student Association of Biology, NC State University
2022- 2023: Patron Representative, Feed the Pack, NC State University, 2022-2023 Board
2022: NC State Feed the Pack's Panel Discussion with Multicultural Student Affairs

SKILLS

- Soil health analysis: Seal AQ2 Discrete Water Quality Analyzer, Elementar VarioMicro CN Analyzer, BioTek Synergy HTX spectrophotometer, Cilas 1190 Particle Size Analyzer
- MS Office, R, Spreadsheet, Tableau, ArcGIS Pro

JOURNAL SERVICE

Reviewer of Manuscript
- Lake and Reservoir Management
- Chemosphere

CERTIFICATION & TRAINING

Advanced Soil Health International Certificate Training Course (Oct 3 – Nov 14, 2023), College of Agriculture and Life Sciences, Cornell University
Professional Certification Program on Wetland Delineation Workshop (Society of Wetland Scientists)
Collaborative Institutional Training Initiative (CITI program), NC State University
NC State University Office of Information Technology (OIT) Data Security, NC State University
Gallup Clifton Strength Assessment
Water Research Foundation Webcast, Water Research Foundation

MEMBERSHIP

2023 – Present: Member, Society of Wetland Scientists, South Atlantic Chapter
2023 – Present: Member, Wetlands Club, University of Central Florida
2021-2023: Student Member, Society for Risk Analysis
2022: Member, Student Leadership Council, Science and Technologies for Phosphorus Sustainability (STEPS)