SHAH SAKI
shah.saki@uconn.edu | linkedin.com/in/shahsaki | (860) 208-4793

EDUCATIONAL BACKGROUND

- **Ph.D.** Student, Environmental Engineering, Department of Civil and Environmental Engineering
  University of Connecticut, Storrs, CT expected Aug 2025
  Advisor: Dr. Emmanouil Anagnostou
- **M.Sc.**, Civil and Environmental Engineering, Department of Civil and Environmental Engineering
  University of California, Los Angeles, California, United States June 2018
- **B.Sc.,** Water Resources Engineering, Department of Water Resources Engineering,
  Bangladesh University of Engineering & Technology (BUET), Dhaka, Bangladesh March 2016

POFESSIONAL EXPERIENCE

Graduate Assistant
Department of Civil and Environmental Engineering, University of Connecticut, Storrs, CT. August 2021 - Present

Project 1: ***" Characterizing CONUS-wide Spatio-temporal Changes in Daily Precipitation, Flow and Variability of Extremes."***

- The study aims to understand and predict the relationships between hydrologic cycle parameters and extremes at Conus scale.
- Another major objective is to select the most representative thresholds to identify extremes and capture their variability.

Project 2: ***"Energy resilience: A Multi-Year Analysis of Impact of Heatwaves and Thunderstorms on Power Outages."***

- This study aims to investigate statistical relationships between the occurrence of heatwaves and the consequential severity of power disruptions in different regions across Southeastern United States.

Collaborative Research:

- I am currently enhancing the UConn outage prediction model by investigating how climate parameters and changes in land use affect its performance.
- I am actively collaborating to implement the current model in different regions and utility companies like Dominion Energy, Exelon Corporation, and Avangrid, Inc. Our objective is to strengthen the resilience of these regions and bolster their capacity to withstand extreme scenarios. My key responsibilities in this project include event selection, static data preparation, model selection, result analysis, and communication with collaborators.

National Water Center Innovators Program Summer Institute Fellow
National Water Center (In Support of the National Science Foundation and National Oceanic and Atmospheric Administration) June 2022 – July 2022

- Using ML based approaches for large scale prediction of Roughness Coefficient in Channels.

Lecturer,
Department of Civil and Environmental, Presidency University, Dhaka, Bangladesh February 2017 - July 2019
Courses: Surveying, Fluid Mechanics, Open Channel Flow, Introduction to GIS, GIS Lab

Research Assistant
Nuffic – NICHE BGD 155 Project at Bangladesh University of Engineering and Technology. A collaborative Research Project of BUET and UNESCO-IHE, Netherlands. April 2016 - February 2017

- Completed the research work, data collection, preparation and analysis, report writing and oral presentation.

PUBLICATIONS

Journal Publications:

1. S. H. Rahat, **S. Saki**, U. Khaira, N. K. Biswas, I. J. Dollan, A. Wasti, Y. Miura, M. A. E. Bhuiyan, & P. Ray (2024). Bracing for impact: how shifting precipitation extremes may influence physical climate risks in an uncertain future. *Scientific Reports*, *14*, 17398. https://doi.org/10.1038/s41598-024-65618-9
2. M. A. A. Mehedi, **S. Saki**, K. Patel, C. Shen, S. Cohen, V. Smith, A. Rajib, E. Anagnostou, T. Bindas, & K. Lawson (2024). Spatiotemporal Variability of Channel Roughness and its Substantial Impacts on Flood Modeling Errors. *Earth's Future*. First published: 15 July 2024. https://doi.org/10.1029/2023EF004257
3. **S. Saki**, G. Sofia, & E. Anagnostou (2023). Characterizing CONUS-Wide Spatio-temporal Changes in Daily Precipitation, Flow, and Variability of Extremes. *Journal of Hydrology*, *130336*. https://doi.org/10.1016/j.jhydrol.2023.130336

4. S. H. Rahat, T. Steissberg, W. Chang, X. Chen, G. Mandavya, J. Tracy, A. Wasti, G. Atreya, **S. Saki**, M. A. E. Bhuiyan, & P. Ray (2023). Remote sensing-enabled machine learning for river water quality modeling under multidimensional uncertainty. *Science of The Total Environment*, *898*, 165504. https://doi.org/10.1016/j.scitotenv.2023.165504
5. M. M. S. Yazdan, **S. Saki**, & R. Kumar (2023). Untangling Energy Consumption Dynamics with Renewable Energy Using Recurrent Neural Network. *Analytics*, *2*, 132–145. https://doi.org/10.3390/analytics2010008

Conference Proceedings

Poster Presentations

1. S. Saki, G. Sofia, B. Kar and E. Anagnostou, 2023: A Statistical Approach to Unraveling the Impact of Heatwaves and Thunderstorms on Power Outages- A case study of Southeastern United States, AGU 2023 Fall Meeting, Dec 11-15, 2023.
2. D. Cerrai, E. Anagnostou, X. Zhang, K. Udeh, S. Saki, B. Filipiak, S. Nyame and F. Yang, 2023: Predicting Weather Related Power Outages in the Northeast United States, , AGU 2023 Fall Meeting, Dec 11-15, 2023.
3. M.A.A. Mehedi, S. Saki, K. Patel, S. Cohen, C. Shen, A. Rajib, V. Smith, and E. Anagnostou, 2022: Large Scale Prediction of Channel Roughness Coefficient Using Machine Learning, AGU 2022 Fall Meeting, Dec 12-17, 2022. Poster presentation
4. S. Saki, G. Sofia, and E. Anagnostou, 2022: Potential of Gini Index to Predict Extreme Events in the Contiguous United States, AGU 2022 Fall Meeting, Dec 12-17, 2022. Poster presentation
5. S. Saki, G. Sofia, and E. Anagnostou, 2021: Spatio-temporal Changes in Daily Precipitation, Flows and Variability in Extremes: A Continental US Prospective, AGU 2021 Fall Meeting, Dec 12-17, 2021. Poster presentation

Oral Presentations

6. U. Khaira, S. Saki, F. Alvee, M. Islam, 2018: Evaluation of Landslide Susceptibility of The Chittagong City Using the Method of Multi-Criteria Analysis (MCA), Proceedings of the 4th International Conference on CivilEngineering for Sustainable Development (ICCESD 2018), KUET, Khulna, Bangladesh, Presentation by co-author.
7. S. Saki, M.M. Miah, 2016: Changes of Hydro-morphology of Shitalakhya River and Effect of Proposed Bridge Using HEC-RAS 1D Model, 3rd International Conference on Advances in Civil Engineering 2016 (ICACE 2016), CUET, Chittagong, Bangladesh. Presentation.
8. M. A. Rahman, S. Saki, F. M. Alvee and A. T. M. H. Zobeyer, 2016: Assessment of salinity intrusion in the central coastal zone of Bangladesh, 3rd International Conference on Advances in CivilEngineering 2016 (ICACE 2016), CUET, Chittagong, Bangladesh. Presentation.

REVIEW ACTIVITY

Reviewer, Journal of the American Water Resources Association (JAWRA), Science of the Total Environment (STOTEN), Journal of Hydrology (JoH)

SKILLS

- Programming languages: Python, R, Latex
- Software: Microsoft Word, Excel, PowerPoint
- Modeling System: HEC-RAS, ArcGIS, QGIS
- Others: Machine learning, High Performance Computing
- Good oral and written communication skills
- Ability to work with a diverse group of people.

LEADERSHIP AND AWARDS

- Vice President, John Lof Leadership Academy (JLLA) at UConn August 2023 – Present
- Senator, Graduate Student Senate (GSS), University of Connecticut, Storrs, CT, Year 2023-2024
- Member, Student Association of Graduate Engineers (SAGE) August 2021 – Present
- Professional Membership, Student member of the American Geophysical Union) August 2021 – Present
- Merit Scholarship for maintaining excellent results at Bangladesh University of Engineering and Technology (2011-2012)