

Samrin Sumaiya Sauda

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Specialization	Hydroclimatology, Hydrology, Machine Learning, Remote Sensing	
Education	Penn State State College, PA Ph.D. in Geography (GIScience) Advisor: Dr. Manzhu Yu	Expected May 2027
	Virginia Tech Blacksburg, VA M.S. in Geography (GPA: 4.00/4.00) Advisor: Dr. Stephanie Zick	May 2023
	University of Dhaka Dhaka, Bangladesh B.Sc. in Geography and Environment (CGPA: 3.74/4.00)	Dec 2018
Skills	GIS: ArcGIS Pro, ArcGIS Online & ArcMap Image Analysis: ERDAS Imagine, Cloud Compare & Google Earth Engine Programming: Python, R & R Studio Other: JMP, Microsoft Office (Word, PowerPoint, Excel)	
Experience	<i>Graduate Teaching Assistant, Penn State</i>	Aug 2023 – Present
	<ul style="list-style-type: none">• Geographic Information in a Changing World: Introduction to GIScience – teach, grade, and assist around 100 students in practical lab classes.	
	<i>Graduate Teaching Assistant, Virginia Tech</i> <i>Graduate Research Assistant, Virginia Tech</i>	Jan 2021 - May 2022 Jun 2021 - Aug 2021
	<ul style="list-style-type: none">• Principles of GIS – mentor, grade, and assist 180 students in practical lab classes.• Advanced Remote Sensing – instructor and assists 88 students in the lab classes• GRA Research Project: Analysis of NASA’s GPM IMERG dataset to investigate the precipitation evolution during landfalling tropical cyclones.<ul style="list-style-type: none">○ Worked for NSF-funded collaborative research titled An Object-Oriented Approach to Assess the Rainfall Evolution of Tropical Cyclones in Varying Moisture Environments	
<i>Project Lead (Fort Collins, CO), NASA DEVELOP Program</i>	Jun 2022 – Aug 2022	
<ul style="list-style-type: none">• Research Project: Monitoring Water Quality and Evaluating Potential Drivers of Algae Blooms in the Upper Yampa River Watershed<ul style="list-style-type: none">○ Utilized satellite data to assess temperature and spectral indices and correlated with in-situ measurements to determine the water quality trend.		

Research Assistant, University College London, UK

Mar 2019– Aug 2019

- Assisted Dr. Mark Jones in data collection and interpretation with his Ph.D. Dissertation on “A Capability Analysis of Energy Justice in Informal Settlements: Dhaka’s Slum as a case study”

Peer-Reviewed Publications

- Ramseyer, C. A., Stanfield, T. J., Van Tol, Z., Gingrich, T., Henry, P., Forister, P., Lamkin, B., Stackhouse, S., and **Sauda, S. S.** (2022). Identifying eastern US atmospheric river types and evaluating historical trends. *Journal of Geophysical Research: Atmospheres*, 127(17). <https://doi.org/10.1029/2021jd036198>
- Saha, M., **Sauda, S. S.**, Real, H. R., & Mahmud, M. (2022). Estimation of annual rate and spatial distribution of soil erosion in the Jamuna Basin using RUSLE model: A geospatial approach. *Environmental Challenges*, 8. <https://doi.org/10.1016/j.envc.2022.100524>

Conference Papers and Posters

- **Sauda, S. S.** and Zick, S. (2023). *The Evolution and Distribution of Precipitation during the Tropical Cyclones Landfalls using the GPM IMERG product*. Presented at the 2023 AAG Annual Meeting, Denver, Colorado, March 23-27.
- **Sauda, S. S.** and Barua, G. (2023). *Predicting Urban Heat Island Effect in Phoenix, Arizona for 2026*, Presented at Esri Federal Conference, Washington DC, February 6-8
- **Sauda, S. S.** and Zick, S. (2022). *The Evolution and Distribution of Precipitation during the Tropical Cyclones Landfalls using the GPM IMERG product*. Poster presented at Southern Appalachian Weather and Climate Workshop 2022, Asheville, North Carolina, March 25-26.
- Saha, M., and **Sauda, S. S.** (2020). *Rapid Upstream Rainfall Induced Flood Mapping and Monitoring Using Open-Source Data: A Case of The July 2020 Flood in the Jamuna Basin*, presented at the AGU Fall Meeting 2020, Online, December 1-17.
- Saha, M., **Sauda, S. S.**, and Mahmud, M. S. (2019), *Estimation of Annual Soil Erosion Rate using RUSLE: A Study On The Jamuna River Sub-basin in Bangladesh*, presented at the European Space Agency (ESA) Living Planet Symposium 2019, Milan, Italy, 13-17th May. Online Reference: <https://lps19.esa.int/NikalWebsitePortal/living-planet-symposium-2019/lps19/Speaker>
- Saha, M. and **Sauda, S.S** (2018) Coastal Vulnerability Assessment of The South-Central Coast Of Bangladesh And Subsequent Relation To Human Vulnerabilities, Proceedings of the International Conference on Disaster Risk Management (ICDRM 2019), Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh. Online Reference: https://jidpus.buet.ac.bd/ICDRM2019/resources/proceedingspapers/94_ICDRM_2019_Proceedings1.pdf
- **Sauda, S.S.**, Hasan, H., Sultana, N. and Islam, M.S. (2018) Application of Remote Sensing Techniques for Studying River and Charland Morphology Change of the Teesta River in Bangladesh, BAPA-BEN Special Conference on Flood, Waterlogging, and Landslides, Dhaka, Bangladesh, January 12-13, 2018.
- **Sauda, S.S.** and Saha, M. (2018) Flood Vulnerability Mapping and Associated Applications in Resource Management and Disaster Risk Reduction: a case of Sunamganj District in Bangladesh, Presented at the 3rd CSD Annual Conference on Sustainable Development, Dhaka October 21-22, 2018.

Extra-curricular Activities & Awards

- **Academic Chair** (2021-2022) at **Geography Student Alliance**, Virginia Tech
- **Second Runner-Up** at **AAG Student Paper Competition** (Climate Specialty Group)
- **AAG Climate Specialty Group Travel Award 2023**
- **GPM Mentorship Program 2022**
- **Georgia Pacific Scholarship** at Virginia Tech
- **Former Executive and Coordinator** (2015-2019) at Environment Club, University of Dhaka
- **Best Paper Award** at the **International Conference on Disaster Management (ICDRM) 2019**, organized by BUET-Japan Institute for Disaster Prevention and Urban Safety.

- **Champion** at **CLIMATHON 2018**, Dhaka. Climathon is the largest global climate action program for cities and citizens supported by the European Union.
- **First Runner Up** at **Poster Presentation Competition 2018** organized by Water Resource Engineering Department of Bangladesh University of Engineering and Technology.
- **Champion** at **National Nature Olympiad 2017** and **First Runner Up** at the **Poster Presentation Competition 2017** organized by Environment Watch of Bangladesh University of Engineering and Technology

**Professional
Affiliations**

Association of American Geographers (AAG), Women in GIS, Women in Geospatial+