

Resume of **Asif Mahmood**

PhD Student

Department of Civil and Environmental Engineering
The George Washington University

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Educational Proficiency:

- Masters in Civil and Environmental Engineering, Hydrology and Hydrodynamics Track, Department of Civil and Environmental Engineering, University of Washington, Seattle, Washington, 2016.
- Bachelor of Science in Civil Engineering, Bangladesh University of Engineering and Technology, February 2013.

Research Interest:

- Hydrologic Modelling
- Remote Sensing.
- Land Surface & Land-Atmosphere Interaction
- Climate Change.

Key Skills:

- Hydrologic Model: Soil water assessment tools (SWAT)
- Numerical Weather Prediction Model: Weather Research and Forecasting (WRF) Model
- Design Software— ArcGIS 10
- Programming Languages: Python, Matlab, Bash/shell
- Remote Sensing & Climate Data Processing, Big data, High Performance Computing

Journal Publication:

Mahmood, A., and Hossain F. (2017) Feasibility of managed domestic rainwater harvesting in South Asian rural areas using remote sensing, *Resources, Conservation and Recycling*, vol. 25, pp. 157-168; <http://dx.doi.org/10.1016/j.resconrec.2017.06.013>

Eldardiry, H., Mahmood, A., Chen, X., Hossain, F., Nijssen, B., Lettenmaier, D. P. (2018) Atmospheric River-Induced Precipitation and Snowpack during the Western United States Cold Season, *Journal of Hydrometeorology*, 20, 613–630, <https://doi.org/10.1175/JHM-D-18-0228.1>

Mamun, A. A., Mahmood, A., Rahman, M. (2013), Identification and Monitoring the Change of Land Use Pattern Using Remote Sensing and GIS: A Case Study of Dhaka City; *IOSR Journal of Mechanical and Civil Engineering (IOSR-JMCE)* e-ISSN: 2278-1684, p-ISSN: 2320-334X, Volume 6, Issue 2 (Mar. - Apr. 2013), PP 20-28.

Professional Experience:

1. Research Assistant, Department of Civil and Environmental Engineering, The George Washington University, Washington D.C

(Sept 2019- Present)

2. Research Assistant, SASWE Research Group, Department of Civil and Environmental Engineering, University of Washington, Seattle, WA

(Sept 2015- Sept 2018)

- Dynamically downscaled 70 years of Reanalysis analysis data for two large domains (NW and SE USA) using Weather Research and Forecasting (WRF) model.
- Dynamically downscaled 2 GCM (CEMS1 and HadGEM2-CC) outputs of 30 years historical and 30 years forecast data for NW USA using WRF model.
- Developed and calibrated hydrologic model for the Ganges, Brahmaputra and Mekong basins.
- Developed an automatic system to generate seasonal forecast of Ganges, Brahmaputra and Mekong basins using North American Multi-model ensemble (NMME) product.

3. Teaching Assistant: Department of Civil and Environmental Engineering, UW

- CEE 475 A: Analysis Techniques for Groundwater Flow (Jan 2018-March2018)
- CEWA 579 A: Quantitative Water Management (Jan 2018-March2018)
- CEE 476/CEWA 576: Physical Hydrology (Sept 2018-Dec 2018)
- CEE 481: Hydraulic Design for Environmental Engineering (Dec 2018-March 2019)

4. Lecturer, Dept. of CE, Presidency University, Dhaka, Bangladesh.

(May 2013-Jan 2014).

- Courses Instructed (Theory): Engineering Materials, Irrigation Engineering, Application of Geographic information system.
- Courses Instructed (Lab): Introduction to ArcGIS, Transportation Eng. Lab, Structural Design Sessional

5. Lecturer, Dept. of CE, University of Asia Pacific, Dhaka, Bangladesh.

(Jan 2014-Aug 2015).

- Courses Instructed (Theory): Surveying, Numerical analysis and Computer Programming.
- Courses Instructed (Lab): Strength of materials lab, Practical Surveying, Computer programming(c++) laboratory.

Extramural Activities:

- Steering Committee member of Freshwater initiative at UW <https://freshwater.uw.edu/person/asif-mahmood/>
- Student Member: American Geophysical Union (AGU), American Meteorological Society (AMS), American Society Of Civil Engineers (ASCE)
- Active member of **CESA (Civil Engineering Students Association) during college.**
- **Team Achievement:** Participated as a player in inter hall football and inter faculty cricket in college.
- **Cultural Involvement-** Participated in Quiz and debate competitions at school level.