

MARIAM KHANAM

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Research Interest

- Floodplain/river-corridor hydrodynamics
- Streamflow forecasting and data assimilation
- Hyper Resolution hydrologic/hydraulic modeling
- Natural and anthropogenic impacts on the future of water

Education

PhD in Environmental Engineering

University of Connecticut, Storrs, CT

2018-present

M. Sc. in Geography

University of Alabama, Tuscaloosa, AL

2018

B. Sc. in Water Resources Engineering

Bangladesh University of Engineering and Technology

2015

Publications

- Grimley L, **Khanam M**, Tiernan E & Tijerina D. (2017). *Hyper-resolution Modeling in Urban Landscapes*. National Water Centers Innovators Program Summer Institute Report. Consortium of Universities for the Advancement of Hydrologic Science, Inc. Technical Report No 14 Volume102. Page 23-31. [CUAHSI 207SI TR14V102 DOI.pdf](#)
- **Khanam M** & Navera U. K. (2016). *Hydrodynamic and Morphological Analysis of Gorai River Using Delft3D Mathematical Model*. 3rd International Conference on Civil Engineering for Sustainable Development (ICCESD 2016). ISBN: 978-984-34-0265-3.
http://www.iccesd.com/proc_2016/Papers/ICCESD-2016-536.pdf

Presentations

Title: *The impact of bathymetry input on flood simulations*

- American Geophysical Union Annual Meeting 2017 in Global Floods: Forecasting, Monitoring, Risk Assessment, and Socioeconomic Response III Posters Session. [Poster](#). [Abstract](#)

Title: *The Effect of River Bathymetry on Riverine Flood Simulation*

- Community Surface Dynamics Modeling System (CSDMS) Annual meeting 2017 at University of Colorado, Boulder. [Poster](#)
- Global Flood Partnership Conference 2017 at The University of Alabama
- 2017 Water Policy Summit at The University of Alabama

Title: *Design of a Retention/ Infiltration Basin and Bioswales: Alleviating Flooding and Water quality and Use Issues Near Bryant-Denny Stadium.*

- SEC Academic Conference 2017 at Mississippi State University. [Poster](#)

Title: *Hyper-Resolution Modeling in Urban Landscapes*

- American Geophysical Union Annual Meeting 2017 (Planning Extended Work)
- The CUAHSI Conference on Hydroinformatics 2017 at The University of Alabama. [Poster](#)

Appointments

Graduate Research:

- Graduate Research Assistant, *Hydrometeorology and Hydrologic Remote Sensing group* || *University of Connecticut* 2018 - Present
- Graduate Research Assistant, *Surface Dynamics Modeling Lab* || *The University of Alabama*, Regional Geospatial Modeling Grant funded by NOAA through MSU 2016 - 2018
- Research Fellow, *Innovators Program, National Water Center, NOAA (organized by CUAHSI)* Summer 2017
- Research Intern, *Division of Coast Port & Estuary, Institute of Water Modeling (IWM), Bangladesh* Summer 2015

Teaching:

- GY 202: *The Water Planet, Instructor, The University of Alabama* Fall 2016
- GY 430/ 530: *Geographic Information Systems, Teaching Assistant, The University of Alabama* Fall 2016

Professional Experience

Junior Water Resources Engineer 2015-2016
Resource Planning and Management Consultants (pvt.) Ltd. (RPMC)
Bangladesh Water Development Board (BWDB); Northwest Hydraulic Consultants.
Project: Flood and Riverbank Erosion Risk Management Investment

Training and Field Experiences

- Workshop on GIS Programming & AutoRoute/OSGeo/ QGIS at the University of Alabama arranged by [UA-NWC Water Research Group](#) Fall 2017
- Training on GSSHA and ADHyro model at the Summer Institute Innovators' Program, National Water Center; CUAHSI. Summer 2017
- Workshop on HECRAS 2D, Google Earth Engine and SWAT model at the University of Alabama arranged by [UA-NWC Water Research Group](#). Spring 2017
- Bathymetry: Flow, Velocity, and Depth Data Collection at Several Rivers- Using Manually Operated Devices and ADCP. Summer & Fall 2017
- Inspection and Resettlement Survey on the Erodible Bank of Jamuna River, Bangladesh. Summer 2016

Awards

- Eversource Energy Center Graduate Fellowship (Fall 2018 and Spring 2019)
- Chairperson's Award 2017, Department of Geography, The University of Alabama
- University of Alabama Graduate School Travel Award; December 2017
- Regional Geospatial Modeling Grant funded by NOAA through MSU, Travel Award; May 2017
- US EPA P3 Student Sustainability Program - Phase 1, 2017-18, GIS Enabled Green Infrastructure Design Tool; (PI Andrew Graettinger, co-PIs Mark A. Elliott, R. Pitt and Sagy Cohen, UA)
- [NOAA National Water Center Innovators' Program Summer Institute](#); CUAHSI/NWS/NSF Research & Travel Award
- [Campus Water Matters Challenge](#)- Student Competition; SEC Academic Conference; Mississippi State University; Project Implementation and First place award. (PI Sagy Cohen, UA) [Certificate.pdf](#)

Technical Knowledge

Programming Language	C++, Python, MATLAB
Hydraulic Modeling	HECRAS 2D, Delft 3D, MIKE 21, MIKE URBAN
Hydrologic Modeling	GSSHA, ADHydro, SWAT
Geospatial/ Remote Sensing	ArcGIS, QGIS, ERDAS IMAGINE
Statistical software	SPSS

Organizations and Affiliations

- American Geophysical Union (AGU).
- Community Surface Dynamics Modeling System (CSDMS).