Binata Roy

Assistant Professor
Institute of Water and Flood Management (IWFM),
Bangladesh University of Engineering & Technology, (BUET),
Dhaka, Bangladesh

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RESEARCH INTEREST

- Hydrologic and Hydrodynamic modeling
- Statistical analysis in hydrology
- Climate Change
- GIS and Remote Sensing

EDUCATION

MSc in Water Resources Engineering	Bangladesh University of Engineering & Technology (BUET) Dissertation: *Fluvial Flood Hazard and Risk Assessment of Arial Khan River Floodplain under Future Climate Change Scenarios* CGPA: 3.92/4.00	**Jan 2019**
BSc in Water Resources Engineering	Bangladesh University of Engineering & Technology (BUET) Dissertation: *Hydrodynamic and Morphological Behavior of Padma River using Delft3d Model.* CGPA: 3.85/4.00 (Awarded with Honors, Class rank: 2nd out of 29) *University Merit Scholarship, (2011-2014)* *Undergrad Dean List Scholarship, (2012-2014)*	**Oct 2015**

RESEARCH EXPERIENCE

Assistant Professor, IWFM, BUET   **Jul 2019 - Till Date**

- Co-investigator, "*Developing Flash Flood Early Warning System (FFEWAS), Capacity Building and Knowledge Management for the Haor Region of Bangladesh*", funded by IFAD
- Co-investigator, "*Diagnosing Water Security in hard to reach mountainous areas with an environmental security framework*", funded by ICIMOD
- Researcher, "*Promoting Resilience of vulnerable through access to Infrastructure, Improved Skills and Information (PROVATI)*", funded by IFAD.
- Junior Engineer, "*Feasibility Study for Flood Control, Drainage and Irrigation System at Gowainghat in Sylhet District*", funded by BWDB

Lecturer, IWFM, BUET   **Oct 2015 – Jul 2019**

- Researcher, "*Research on Disaster Prevention / Mitigation against Floods and Storm Surges in Bangladesh*", funded by JST-JICA
- Junior Engineer, "*Feasibility Study with ESIA for Resuscitation of Ichamoti River in Pabna District*" funded by BWDB

TEACHING EXPERIENCE

Assistant Professor, IWFM, BUET   **Apr 2019 - Till Date**
- Course Title: *Watershed Hydrology (WFM 5101),* PG. Dip. (WRD)
- Topics: Hydrologic cycle, Precipitation, Evaporation, Infiltration, Unit Hydrography, Frequency Analysis, Effects of landuse change; Climate change.

PUBLICATIONS

Peer Reviewed Journal

Roy, B., Islam, A. S., Islam, G. T., Khan, M. J. U., Bhattacharya, B., Ali, M. H., Khan, A.S., Hossain, M.S., Sarker, G.C.; & Pieu, N. M. (2019). *Frequency Analysis of Flash Floods for Establishing New Danger Levels for the Rivers in the Northeast Haor Region of Bangladesh*. *Journal of Hydrologic Engineering*, *24*(4), 05019004.

Conference Papers

Roy, B., Islam, G. M. T., Islam, A.K.M. S., Bhattacharya B., & Khan, M. J. U. (2019). ***Trend Analysis of Pre-Monsoon Flash Flood of the North East Haor Region of Bangladesh***. In 7th International Conference on Water and Flood Management (ICWFM 2019), March 2- 4, 2019, Dhaka, Bangladesh.

Roy B., Islam, A.K.M. S., & Islam, G. M. T. (2017). ***Recommending new warning levels for the river system of the haor region of Bangladesh in forecasting flash floods***. In 6th International Conference on Water and Flood Management (ICWFM 2017), March 4- 6, 2017, Dhaka, Bangladesh, pp. 39 – 48.

Islam, M. R., **Roy, B.**, Haque, S., Rahman, M. M., Dustegir, M., Nakagawa, H., & Hasegawa, Y. (2017). ***Preliminary Measurement along an Eroding Bend in a Sand Bed Braided River Using Acoustic Doppler Current Profiler***. Proceedings of the International Conference on Engineering Research, Innovation and Education 2017 (ICERIE 2017), 13‒15 January, SUST, Sylhet, Bangladesh, pp. 60 – 66.

Roy B., & Saha P. (2016). ***Temporal Analysis of Land Use Pattern Changes in Chittagong District of Bangladesh using Google Earth and ArcGIS***. Annual Int'l Conference on Chemical Processes, Ecology & Environmental Engineering (ICCPEE'16), April 28-29, 2016, Pattaya, Thailand. (ISBN 978-93-84468-51-4), pp.243-248.

Roy, B., Haider, M. R., & Yunus, A. (2016). ***A Study on Hydrodynamic and Morphological Behavior of Padma River using Delft3D Model***. Proceedings of the 3rd International Conference on Civil Engineering for Sustainable Development (ICCESD 2016), 12~14 February 2016, KUET, Khulna, Bangladesh. (ISBN: 978-984-34-0265-3), pp. 561-572.

Presentations

Roy, B., Khan, S. M., Islam, A.K.M. S., Mohammad, K., & Khan, J.U. (2018). ***A Study on Monsoon Flood Hazard of Arial Khan River Floodplain under Future Climate Change Scenario.*** 2018 International Workshop for Young Scientists of the Hindu Kush Himalayan, 5-6 November, 2018, in Beijing, China.

Roy, B., Shampa, Dustegir, M. M., Islam, M. R., Haque, S., Rahman, M. M., & Haque, A. (2017). ***Simulation of Flow Field along the Jamuna River of Bangladesh***. 3rd International Conference on the Status and Future of the World's Large Rivers, April 18-21, 2017, New Delhi, India.

PROFESSIONAL TRAININGS & WORKSHOPS

Resource Person, Short course on **Weather Forecasting, Basin Hydrological Modeling and River Hydrodynamic Modeling for Flash Flood Forecasting**
IWFM, BUET, Dhaka, Bangladesh

May 2019

Participant**,** Workshop on **Scientific Paper Writing for High Impact Journals**
Institutional Quality Assurance Cell (IQAC), BUET, Dhaka, Bangladesh

Apr 2019

Participant, Workshop on **South Asian Extreme Climate Research Networking to Inform Adaptation and Mitigation Policies**
IWFM, BUET, BRAC Center Inn, Dhaka.

Oct 2018

Participant, **2018 International Workshop for Young Scientists of the HKH**
UCAS, ICIMOD, Beijing, China

Nov 2018

Participant, **HUC Academy 2018**
HUC, ICIMOD, Kathmandu & Pokhara, Nepal

Jul 2018

Participant, **2017 TPE Science & Technology Training on Research Methods, technology and achievements in Third Pole Region**
Institute of Tibetan Plateau Research, CAS, Beijing & Lanzhou, China

Jul 2017

Participant, Training on **River and Delta Morphology: Evolution, Dynamics and Prediction**
CEGIS, Dhaka, Bangladesh

Dec 2016

Participant, Workshop on **Teaching-Learning and Curriculum Development**
IQAC, BUET, *Dhaka, Bangladesh*

Dec 2016

Participant**,** Workshop on **Integrated Urban Flood Management in IWRM**
BCAS, Dhaka, Bangladesh

May 2016

Internship, **River Morphology Division**
Institute of Water Modeling, Dhaka, Bangladesh

Jan 2015

SKILLS

Models and Applications
Delft3D, Delft Dashboard, HEC-RAS, ArcGIS, Arc-SWAT

Programming
MATLAB, R, C++

Platforms
AutoCAD, MS Office