

MD SADIUL ALAM CHYON

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**RESEARCH
INTEREST**

- Morphological impact of sand mining
- Application of GIS & Remote Sensing in Fluvial geomorphology

**RESEARCH
EXPERIENCE**

Aug 2020- To Date

PhD Thesis: Study on the quantification and morphological and socio-economic impact of sand mining. *Advisor: James Leonard Best*, Professor, Geography & Geographic Information Science, University of Illinois at Urbana-Champaign.

Nov 2019-Oct 2021

M.Sc. Thesis: Integrated flood risk assessment in Madaripur Sadar Upazila *Supervisor: Dr. M. Shahjahan Mondal*, Professor, IWFM, Bangladesh University of Engineering & Technology.

- A calibrated and validated hydrologic model of the study area's water channels formed for estimating the future flow in HEC-HMS.
- A HEC-RAS 1D/2D coupled model of the river floodplain will be developed to generate flood hazard and vulnerability maps for present and future flood flow scenarios.

Sep 2014-Sep 2015

B.Sc. Thesis: Laboratory study on performance of horizontal slotted submerged Breakwater

Supervisor: Dr. Ataur Rahman

- A 21.3-meter laboratory flume was used to determine and compare the reflection coefficients, transmission coefficients, wave energy loss coefficients of the breakwaters with different porosity for varying unidirectional wave conditions (T=1.6s, 1.7s, 1.8s.)

EDUCATION

May 2021- To Date

PhD Candidate in Geography and GIS (STEM Program)

University of Illinois at Urbana Champaign, Illinois, USA

Oct 2016- Oct 2021

Master of Science

Water Resources Development, Bangladesh University of Engineering & Technology (BUET)

CGPA: 3.83 out of 4.0

May 2010-Sep 2015

Bachelor of Science

Water Resources Engineering, Bangladesh University of Engineering & Technology (BUET)

CGPA: 3.59 out of 4.0 (CGPA in **last 4 Semesters: 3.87 out of 4.0**)

Class position: 8th out of 32 graduating students.

PROFESSIONAL EXPERIENCE

Aug 2015

Jan 2016-Jun 2016

Oct 2016-Nov 2020

Feb 2021-Present

(On leave)

Jan 2018-Jun 2018

Internship at Institute of Water Modeling (IWM)

Lecturer at World University Bangladesh (6 Months)

Assistant Engineer, Bangladesh Water Development Board

Sub-Divisional Engineer, Bangladesh Water Development Board

Guest Lecturer at BSMRSTU

ACADEMIC PROJECTS

- Temporal analysis and projection of Bangladesh average temperature for 2000-2100 from RCP-8.5 Global Circulation Model
- Sensitivity analysis and sediment modeling of Ganges River using HEC-RAS
- Geospatial Exploration of Planform of the Ganges River

ENGINEERING PROJECTS

Dec 2016- Jun 2017

- Engineer-in-charge at West Gopalganj Integrated Water Management Project
- Engineer-in-charge at South-West Area Integrated Water Resources Planning & Management Project, Additional Financing [ADB Loan No.3302 & DON Grant No.0441]

Jan 2018-Feb 2021

Key Roles: Hydrological modeling of the project catchment; Planning, design, cost estimation and construction supervision of hydraulic structures and riverbank protection work.

PUBLICATIONS

Journal Articles

- **Chyon, M. S. A.**, Biswas, S., Mondal, M. S., Roy, B., & Rahman, A. (2023). Integrated assessment of flood risk in Arial Khan floodplain of Bangladesh under changing climate and socioeconomic conditions. *Journal of Flood risk management*, 16(2), e12876.
- **Chyon M.S.A**, Rahman A., Rahman D.M.A, 2017, “Comparative Study on Hydrodynamic Performance of Porous and Non-Porous Submerged Breakwater”, *Procedia Engineering, Elsevier*, vol.194 pp. 203-210.
- **Chyon M.S.A.**, Rahman A. 2017, “Hydrodynamic and Morphological Impact of Hydraulic Structural Interventions: An Investigative Case Study on Feni-Muhuri River System of Bangladesh”, *Journal of Water Resources and Pollution Studies*, vol. 2, no. 2, pp.1-15.

Conference Proceedings

- **Chyon, M. S. A.**, Best, J., Hackney, C. R., Smigaj, M., & Haq, S. M. A. (2023). Quantification of Alluvial Sand Mining in Bangladesh through Detection and Tracking of Sand Transport Vessels. AGU Fall Meeting 2023.
- **Chyon M.S.A.**, Best J.L., Islam A.N., Haq S.M.A. (2022). Extensive Alluvial Sand Mining and its Geomorphological Impacts in North-Eastern (NE) Bangladesh. AGU Fall Meeting 2022.

- Nourin F.T.J., Mahmood S., **Chyon M.S.A**, Siddika A., Khan M.S.A, 2017, “Assessment of different dimensions of irrigation water security in a coastal polder of Bangladesh”, *6th International Conference on Water & Flood Management, Dhaka, 17th Nov.*
- **Chyon M.S.A**, Moshfika M, Mita K.S., Mehzabin S., Sumayia U.H., Rahman A., 2017, “An investigation at Titporol along the Jamuna river in Bangladesh”, *6th International Conference on Water & Flood Management, Dhaka, 17th Nov.*
- **Chyon M.S.A.**, Rahman A., Samarakoon S.M.L.D., 2017, “Gender analysis of irrigation projects: a comparative analysis on Mahaweli irrigation project and Carchi irrigation project”, *6th International Conference on Water & Flood Management, Dhaka, 17th Nov.*
- **Chyon M.S.A.**, Rahman A., 2016, “Laboratory study on performance of horizontal slotted submerged Breakwater”, *3rd International Conference on Civil Engineering for Sustainable Development, Khulna, 12-14 Feb.*

Book Review

- **Chyon M.S.A.**, *Water Use and Poverty Reduction*, by Md. Fakhurul Islam. Reviewed in *SAWAS Journal*, Volume 8, Issue 1, June 2018.

TECHNICAL SKILLS

Languages: Python

Engineering Analytical Tools: HEC-RAS, ArcGIS Pro, Delft 3D, ENVI, AutoCAD, GEE.

AWARDS

**Oct 2015- Oct 2017
2013-2015**

- Russel Fellowship 2024-25
- Graduate Student Summer Field Research Award 2021, 2022, 2023.
- Dissertation Travel Grant 2023
- Fred W. and D. Foster Graduate Fellowship in Geography
- SAWA Fellowship Award, funded by IDRC, Canada
- Regional Training of South Asia Water Studies (SAWA) Fellows on “Interdisciplinary Research Concepts & Methodologies” held at Kandy, Sri Lanka from 28 Nov to 3rd Dec 2015 funded by IDRC, Canada.
- Engineering Foundation Training held at Kaptai Engineering Academy, BWDB from 7 Dec-29 Dec 2016.
- Training on Public Procurement Rules (e-GP) held at CPC, BWDB, Dhaka from 27 feb-02 Mar 2017.
- Attended the Westlaw Nalsar Inter-Varsity Debating Championship held at Hyderabad, India from 6th Apr- 8th Apr 2012.
- Workshop on Innovation in Public Services held at Circuit House, Gopalganj from 4th Apr-7th Apr 2017.

TRAINING, WORKSHOPS & ECA