

# Munshi Md Rasel

Graduate Research Assistant, Department of Civil, Environmental, and Infrastructure Engineering  
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## EDUCATION

### **Ph.D. in Civil, Environmental, and Infrastructural Engineering**

George Mason University, Fairfax, VA, USA | CGPA: 4.0 on a scale of 4.0 (continuing) | Major: Environmental Engineering (Air pollution modelling) | August 2020- December 2023 (Anticipated)

### **M.Sc. in Civil & Environmental Engineering**

The George Washington University, Washington, DC, USA | CGPA: 3.83 on a scale of 4.00 | Major: Environmental Engineering (Wastewater Research) | May 2017 – August 2019

### **B.Sc. in Civil Engineering**

Ahsanullah University of Science and Technology (AUST), Dhaka, Bangladesh | CGPA: 3.96 on a scale of 4.00 | April 2010 – June 2014

## PROFESSIONAL EXPERIENCE

- *Graduate Research Assistant*, Dept. of Civil, Environmental, and Infrastructure Engineering, GMU, Fairfax, VA (August 2020- Present)
  - Sector-wise air pollution trend analysis
  - Air quality modelling using EPA's sector-wise emission data
  - Policy analysis and evaluation in terms of health benefits
- *Graduate Research Assistant*, District of Columbia Water and Sewer Authority, Washington, DC (June 2017-August 2019)
  - Evaluated the impact of thermal dose on sludge rheology due to thermal hydrolysis pre-treatment process
  - Evaluated the performance of anaerobic digesters under dynamic operation.
  - Development of acoustic fingerprint to control and monitor the performance of anaerobic digesters
  - Worked with the full-scale anaerobic digesters to monitor its operating conditions.
- *Lecturer*, Department of Civil and Environmental Engineering, Ahsanullah University of Science and Technology, Bangladesh (October 2014 -December 2016)

## CONFERENCE PROCEEDINGS

- **Munshi Md Rasel**, Mandy Mitchel, Rumana Riffat, Matthew Higgins, Charles Bott, Sudhir Murthy, Ahmed Al-Omari, Christine de Barbadillo, Haydee De Clippeleir, "*Gelation factor as potential Indicator of overcooking solids in thermal hydrolysis process*" 93<sup>rd</sup> Annual Water Environment Federation Technical Exhibition & Conference, Chicago, Sept 2019
- **Munshi Md Rasel**, Mandy Mitchel, Rumana Riffat, Matthew Higgins, Charles Bott, Sudhir Murthy, Ahmed Al-Omari, Christine de Barbadillo, Haydee De Clippeleir, "*Determination of the optimal thermal dose input for maximum AD kinetics based on the gelation potential of sludge*" WEF/IWA Residuals and Biosolids Conference, Florida, May 2019

## TECHNICAL SKILLS

Air pollution modeling: WRF-ARW, CMAQ, SMOKE | Programming language: C, C++, R, RStudio, Python, Matlab | Analysis Software: Lab VIEW, Origin Lab, WAVE, SUMO | Drawing: Auto CAD 2D-3D | Others: Adobe Photoshop, Microsoft office

## **PROFESSIONAL AFFILIATIONS**

American Society of Civil Engineers (ASCE) | Water Environment Federation (WEF) | Institute of Engineers of Bangladesh (IEB) | Federal Water Quality Association | International Water Association (IWA) | American Academy of Environmental Engineers & Scientists (ACEES) | Air & Waste Management Association (A&WMA)

## **AWARDS**

- Graduate Research Assistantship: George Mason University, USA
- Graduate Fellowship Award: The George Washington University, USA
- Accelerate GW-ICORPS Award: The George Washington University, USA
- Teaching Assistantship: George Washington University, USA
- Graduate Research Assistantship Award: The George Washington University, USA
- Professional Development Fund: The George Washington University, USA
- Dean's List of Honors: Ahsanullah University of Science and Technology, Bangladesh
- Tuition Award: Ahsanullah University of Science and Technology, Bangladesh
- Junior Scholarship: Government of Bangladesh.

## **VOLUNTARY EXPERIENCE**

- Volunteered for Sewer Science Lesson organized by DC Water at Maret School (DC)
- Ex-Vice President of Civil Engineering Society at Ahsanullah University of Science and Technology.
- Ex-General Secretary of Civil Engineering Society at Ahsanullah University of Science and Technology.
- Volunteered for constructing a bioswale and a green educational infrastructure at Treme Recreation Community Center, New Orleans, LA

## **REFERENCE**

Lucas R.F. Henneman, Ph.D.

Assistant Professor of Environmental Engineering

Sid and Reva Dewberry Dept. of Civil, Environmental, & Infrastructure Engineering

George Mason University

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