

## **DR. M. A. KARIM, P.E., BCEE, F.ASCE, M.ASEE**

ABET EAC PEV since 2014 and ETAC Commissioner since 2023

8410 Bluejack Drive, Pensacola, Florida 32514, USA.

[Professional website](#) [LinkedIn](#) [ResearchGate](#) [Google Scholar](#)

Founding Chair and Professor, Department of Civil Engineering and

Construction Management, University of West Florida (UWF)

Pensacola, Florida 32514, USA



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**Experience Summary:** I have more than 35 years of experience in administration, teaching, research, consulting, management/leadership, and permitting and regulations in a state government.

### **Administrative:**

- Currently I am serving as a Founding Chair and Professor of Civil Engineering, Department of Civil Engineering and Construction management at University of West Florida (UWF). Year 2024-2025 I served as a Professor and Director of Civil Engineering and created a new Civil Engineering program that was implemented in Fall 2025. I manage a group of seven Civil Engineering and Construction Management faculty, staff and two programs: Civil Engineering and Construction Management and 50+ courses for these two programs.
- Served as an Interim Department Chair of Civil and Construction Engineering (CCE) Department at Kennesaw State University (KSU) and led the department with 20 full-time and 16+ part-time faculty and four undergraduate and one graduate programs. Also served as an Assistant department chair and scheduled 41 courses for four different programs and 20 full-time (FT) and 16+ part-time (PT) faculty, coordinated the ABET self-study reports and program assessments for three engineering programs, hired and managed PT and FT faculty, as well as managed budgets.
- As of now at different universities in USA and Bangladesh, developed and integrated Civil and Environmental Engineering curriculums and coordinated Civil and Environmental Engineering programs at KSU. Developed the Environmental Engineering program at KSU from scratch with new curriculum and program policy effective Fall 2016. Also developed a minor in Environmental Engineering program at KSU effective Fall 2017.
- Practiced and implemented shared governance as a College Faculty Council, Dept Faculty Council chairs and dept chair for number of years.
- Managed a residential hall office at Bangladesh University of Engineering and Technology (BUET) with 12 employees and the budget for the same for maintenance and repairs.

### **Teaching:**

- Developed and taught several environmental engineering new courses for face-to-face and on-line delivery and developed/upgraded environmental engineering labs at Purdue University Fort Wayne (PFW) and KSU.
- Developed and taught more than 20 different graduate and undergraduate courses at KSU, eight different courses at Trine University, two different courses at Virginia Commonwealth University (VCU), two different courses at PFW, three different courses at Stratford University, one course at Cleveland State University, and 14 different graduate and undergraduate courses at BUET.
- Developed and directed a Study Abroad program in Environmental Sustainability and Wastewater Treatment in Germany and France in 2019.

### **Research and Funding:**

- Worked as a Summer Research Fellow at USACE, ERDC, Vicksburg, MS.
- Have about 62 publications in total in different forms: 28 publications are in peer-reviewed journals (23 as first author), 21 in peer-reviewed conference proceedings papers (14 as first author), five invited presentations, three professional reports, two lab manuals, and three other publications in the area of broadly environmental engineering, soil and sediment remediation, solid and hazardous waste management, environmental management, energy generation from wastewater treatment using UASB, soil stabilization using fly-ash and sewage sludge ash (SSA), cement concrete

## Dr. M. A. Karim's CV

behavior mixed with waste recycled materials, statistical hydrology, and engineering education including project- and/or problem-based learning (PBL).

- Submitted a total of 33 (17 Federal Govt. NSF/NASA and 15 others) external grants proposals in the amount of 7.26M (\$5.30M as PI and 1.96M as CoPI) and funded about \$85K. Also submitted about 27 internal grant proposals (including GRA) in the amount of \$387K (312K as PI and 75K as CoPI) and funded about \$133K.
- Research interests are soil and sediment characterization, decontamination and remediation with electrokinetics and coupled electric-hydraulic gradient, solid and hazardous waste management, wastewater treatment and reclamation, energy generation from wastewater treatment, improvements of soil engineering properties with fly-ash (FA) and sewage sludge ash (SSA), cement concrete behavior mixed with recycled waste materials (plastic, rubber, glass, SSA, slags, etc.), project- or problem-based learning (PBL), and engineering education.

### **Professional Services:**

- Serving as an ABET EAC PEV since 2014 and visited several universities in the USA and abroad from ABET and accredited five+ CE programs for the last several years. Also, serving as an ABET EAC PEV for Environmental Engineering (EnvE) program from 2021 and accredited one foreign EnvE program abroad. Selected to serve as PEV for EnvE Technology program and a commissioner for ABET ETAC in 2023.
- Serving as Research Proposal Review Panel member for NSF (CBET, S-STEM, IUSE), USEPA, and USDoE.

### **Industry Experience:**

- Worked as a senior environmental Engineer (SW Permit Writer II) for Virginia Dept of Environmental Quality (VDEQ) for 8+ years.
- Consulted Part-time with two consulting companies and worked on landfill, transfer station, stormwater management, and NSR and NPDES permitting applications.
- Worked as an Application Programmer I and II for ALTELL Information Services where I served as a project manager for small development projects and tracked the works using MS Project 98.

### **Licensure and Professional Membership:**

- A registered professional engineer (PE) for:
  - the State of the Commonwealth of Virginia (0402-037834)
  - the state of Georgia (040550)
- Fellow, American Society of Civil Engineers (F.ASCE)
- Member, American Society for Engineering Education (M.ASEE)
- Board-Certified Environmental Engineer (BCEE 20-20015) from American Academy of Environmental Engineers and Scientists (AAEES).
- Member, Order of the Engineer.

## EDUCATION:

CLEVELAND STATE UNIVERSITY, Cleveland, Ohio 44115, USA; Department of Civil & Environmental Engineering

Doctor of Engineering ( $\approx$  Ph.D.)

Major: Civil/Environmental Engineering

Dissertation Concentration: Geoenvironmental Engineering

Dissertation: Removal of Contaminants from Soils Using Coupled Electric-Hydraulic Gradient Assisted by Ion Exchange Medium.

BUET, Dhaka-1000, BANGLADESH; Department of Civil Engineering.

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M.Sc. Engg. (Civil)

Major: Civil/Environmental Engineering; Minor: Hydrology

Thesis Concentration: Environmental Engineering and Management

Thesis: Impact of Greater Dhaka City Flood Protection Works on the Environment with Specific Reference to Industrial Waste Disposal.

B.Sc. Engg.(Civil)

Major: Civil/Structural Engineering; Minor: Civil/Environmental Engineering

Thesis: Analysis and Design of Flat Plate Using Finite Element Program.

ACADEMIC EXPERIENCE:

UNIVERSITY OF WEST FLORIDA (UWF), *11000 University Parkway, Pensacola, FL 32514, USA.*

08/2025 to date Found Chair and Professor, Department of Civil Engineering and Construction Management (CECM)

- Duties
- Responsible for scheduling the department courses (50 courses, six FT faculty, and three+ PT faculty every semester).
  - Responsible for ABET and ACCE evaluation and coordination of ABET and ACCE activities for 2 programs under CECM dept.
  - Responsible for hiring faculty, their assignments, evaluation, and budget management for the department.

08/2024 to 07/2025 Professor and Director of Civil Engineering, Hal Marcus College of Science and Engineering

- Duties:
- Responsible for developing a new Civil Engineering Program to implement in Fall 2025, teaching, conducting research and publishing articles as well as serving institutional committees as well as professional societies and communities.

KENNESAW STATE UNIVERSITY (KSU), *Marietta Campus, 1100 South Marietta Parkway, Marietta, GA 30060, USA.*

08/2021 to 07/2024 Professor, Department of Civil and Environmental Engineering

- Duties:
- Responsible for teaching, conducting research and publishing articles as well as serving institutional committees as well as professional societies and communities.

02/2020 to 07/2021 Associate Professor, Department of Civil and Environmental Engineering

- Duties:
- Responsible for teaching, conducting research and publishing articles as well as serving institutional committees as well as professional societies and communities.

10/2019 to 01/2020 Associate Professor and Interim Department Chair, Dept. of Civil and Construction Engineering (CCE)

- Duties:
- Responsible for scheduling the department courses (41 courses, 19 FT faculty, and 15+ PT faculty every semester) by the help of Assistant Department Chair.
  - Responsible for ABET evaluation and coordination of ABET activities for 3 programs under CCE dept.
  - Responsible for hiring faculty, their assignments, evaluation, and budget management for the department.

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08/2017 to 09/2019 Associate Professor and Assistant Department Chair, Dept. of Civil and Construction Engineering

Duties:

- Responsible for scheduling the department courses (41 courses, 20 FT faculty, and 15+ PT faculty every semester)
- Responsible for ABET evaluation and coordination of ABET activities for 3 programs under CCE dept.
- Responsible for hiring part-time faculty, assignment, assessment, and budget management for part-time teaching faculty.
- Chair, dept. curriculum committee and on-line committee – 8/2015 – 09/2020.
- Served/Serving at Graduate Program Curriculum Committee (GPCC) as an elected member and executive member – 8/2015 – 09/2020.

08/2016 to 07/2017 Associate Professor and Founding Program Director, BS in Environmental Engineering program.

Duties:

- Responsible for directing the Environmental Engineering (EnvE) program and assessing the program activities and the program faculty.
- Developed a minor in Environmental Engineering program at KSU that launched in fall 2017.
- Remaining is the same as Assistant Professor.

01/2015 to 07/2016 Assistant Professor and Founding Program Director, BS in Environmental Engineering program, Dept. of Civil and Construction Engineering

Duties:

- Developed the BS in Environmental Engineering (BSEnvE) program from scratch at KSU that launched in fall 2016, directed the program, and assess the program activities and the program faculty.
- The remaining remains are the same as Assistant Professor of SPSU as SPSU was merged with KSU in January 2015.

SOUTHERN POLYTECHNIC STATE UNIVERSITY (SPSU), 1100 South Marietta Parkway, Marietta, GA 30060, USA.

08/2011 to 12/2014 Assistant Professor, Dept. of Civil and Construction Engineering

Duties:

- Taught/teaching about 3-4 courses (9-13 credit hours) in a semester. The type of courses taught several times are: CE 3702: Intro to Environmental Engineering, CE 3703: Environmental Engineering Design, CE 3704: Intro to Environmental Engineering Lab, CE 4708: Hazardous Waste Engineering, CET 3320/3320L: Wastewater Collection and Treatment/Lab, ENGR 2214: Statics, ENGR 3131: Strength of Materials, ENGR 3132: Strength of Materials Lab, ENGR 3343: Fluid Mechanics, ENGR 3345: Fluid Mechanics Lab, ENGR 3305: Data Collection and Analysis in Engineering, ENGR 4402: Engineering Ethics, CE 6333: Advanced Hazardous Waste Engineering; CE 6343: Solid Waste Management and Engineering.
- Developed new courses such as CE 3703, CE 3704, CE 4343: Solid Waste Engineering, CE 4708; CE 6333: Advanced Hazardous Waste Engineering; CE 6343: Solid Waste Management and Engineering.
- Advised/advising 50+ students and supervised/mentored Peach State Luis Stokes Alliance and Minority Participation (PSLSAMP) students for summer research.
- Served as Center for Teaching Excellence (CTE) teaching fellow for Advising and Mentoring: 2014-2015.

- Served/Serving as search committee member for civil engineering and civil engineering technology faculty hiring.
- Served/serving as a lead professor for statics and hiring and supervising adjuncts faculties for statics: Fall 2012 – Spring 2015.
- Attended university meetings and served/serving different university committees, such as University Information Technology Advisory Committee (UITAC), Center for Teaching Excellence Advisory Council (CTEAC), Student Life Committee, and Honors Council, University institutional effectiveness committee, diversity committee.
- Used course management systems such as Blackboard, GeorgiaView Vista, Desire 2 Learn (D2L) for posting class notes, announcements, homework solutions, exam solutions, and grades so that the students can get the most up-to-date information about the course and their grades even from home.
- Published two Environmental Engineering Lab Manuals that were/being used for CE 3704, CE 4371, and CET 3320L.
- NSF (CBET, DUE S-STEM and IUSE) Research Proposal Review Panel Member: 2012 – to date.
- Inter State Technology and Regulatory Council (ITRC) Contaminated Sediment Remediation Team Member: 2011 – June 2013.
- Accreditation Board for Engineering and Technology (ABET) program evaluation volunteer (PEV) for Engineering Accreditation Commission (EAC): Fall 2014 – to date.
- Editorial Board member for *Soil and Sediment Contamination: An International Journal*: 2014 – to date.
- Editorial Board member for *Insight – Civil Engineering*: 2015 – to date.
- Editorial Board member for *Annals Journal of Civil and Environmental Engineering*: 2016 – to date.
- Conducted a seminar on Advising, Mentoring, and Counseling at SPSU CTE on August 27, 2014.
- Conducting Webinar for PDH for several companies since 2015.
  - ✓ Referee for the following Journals
  - ✓ *Environmental Technology*
  - ✓ *Journal of Chemical Engineering*
  - ✓ *International Journal of Environmental Engineering*
  - ✓ *International Journal of Environment and Waste Management*
  - ✓ *Soil and Sediment Contamination: An International Journal*
  - ✓ *The Frontiers: Environmental Health, Public Health, and Sustainability*
  - ✓ *Insight – Civil Engineering*
  - ✓ *Current Pollution Research*
  - ✓ *Journal of Industrial and Engineering Chemistry Research*
  - ✓ *The Pages of Scientific of Soil and Water*
  - ✓ *Journal of Waste Management*
  - ✓ *Journal of Advances in Chemistry*
  - ✓ *International Journal of Water and Wastewater Treatment*
  - ✓ *Annals of Civil and Environmental Engineering*
  - ✓ *MDPI - International Journal of Environmental Research and Public Health*
  - ✓ *MDPI – Sustainability*
  - ✓ *MDPI – Resources and Applied Sciences*

Student Supervision

- Currently supervising a PhD student, supervised before three MSCE students, 27 undergraduate students for undergraduate research, and 16 high school students for internships.

Undergraduates:

- Anxhelo Gjermeni, Project: *Impact of traffic on PM<sub>2.5</sub> air pollutants in and around schools*, Spring 2024.
- Mohammad Ali Rana, Project: *Impact of traffic on PM<sub>10</sub> air pollutants in and around schools*, Spring 2024.
- Justin Chen and Alhagi Kebbeh, First Year Scholar Project: *Metal content and chemical analysis of recycled waste materials by TCLP and FTIR*, Fall 2023 and Spring 2024.
- Ibrahim Alamayreh, Project: *Evaluation of PCC mixed with Fly-ash Type C*, Fall 2023.
- Stuart Suttle, Project: *Evaluation of PCC mixed with Fly-ash Type F*, Fall 2023.
- Brianna Greiner, Project: *Monitoring and assessment of air pollutants, PM<sub>2.5</sub> and others in and around schools*, Fall 2023.
- Lily Wisner, Project: *Monitoring and assessment of air pollutant, PM<sub>2.5</sub> and others in and around schools*, Fall 2023.
- Brandon Perez, Project: *Monitoring and assessment of air pollutant, PM<sub>2.5</sub> in and around schools*, Spring 2023.
- Sravani Ambadapudi and Ibrahim, Project: *Evaluation of cement concrete mix with the combination of recycled waste rubber and plastic*, Spring 2023.
- Mohamad Alamayreh, Project: *Evaluation of cement concrete mix with the combination of recycled waste plastic and glass*, Spring 2023.
- Abdulaziz Alebra, Project: *Evaluation of cement concrete mix with the combination of recycled waste rubber and glass*, Spring 2023.
- Vu Nguyen, Project: *Evaluation of cement concrete mix with sewage sludge ash (SSA)*, Spring 2023.
- Matthew Henry, Project: *Evaluation of cement concrete mix with recycled waste slags*, Spring 2023.
- Brian Banderas Vargas, Project: *Evaluation of cement concrete mix with recycled waste rubber*, Fall 2022. Poster presented in ASEE SE conference in March 2023.
- Kyle Rosales, Project: *The addition of plastic waste within cement concrete mix*, Fall 2022. Poster presented in ASEE SE conference in March 2023.
- Chris Parra, Project: *Evaluation of cement concrete mix with recycled glass*, Fall 2022. Poster presented in ASEE SE conference in March 2023.
- Lissette Chavez and Safa Al-Qaysi, Project: *Improvement of Georgia white clay properties with fly-ash*, Fall 2021. Poster displayed in the Department wall board.
- Darby Sauls and Kenneth Wells, Project: *Improvement of Georgia white clay properties with fly-ash and sewage sludge ash (SSA)*, Spring 2021. Poster displayed in the Department wall board.
- Neha Adnan, Cassidy Hagler and Rachel King, Project: *Comparison of Monthly Emission Rates of: Volatile Organic Compounds (VOCs), Polyaromatic Hydrocarbons (PAHs), Oxides of Nitrogen (NO<sub>x</sub>), Nitrogen Dioxide (NO<sub>2</sub>), Nitrogen Oxide (NO), PM<sub>2.5</sub>, and PM<sub>10</sub>*, Spring 2021. Poster presented in ASEE SE conference in March 2022.
- Ammar Hawa, Project: *Heavy Metal Removal from Sewage Sludge Ash (SSA) by Column Washing*, Fall 2018. Poster presented in ASEE SE conference in March 2019.

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- Charlesha Simons and Faheem Haskin, PLSAMP students supervised in summer 2013 for a project titled: *Empirical Correlation Between BOD<sub>5</sub> and COD: A Case Study for Wastewater*. Poster presented in PLSAMP conference in Fall 2013.

High School Interns:

- Helen Ratiani and Tolani Muiyiwa-Ojo, Internship Project: *Water Quality Monitoring with Image processing augmented by AI Modeling*, Spring 2024.
- Donovan Pettiford, Internship Project: *Metal content and chemical analysis of recycled waste materials by TCLP*, Spring 2024.
- Alexander Russu, Internship Project: *Effect of Temperature on Air Pollutants in and around schools*, Spring 2024.
- Jonas Quick, Internship Project: *Effect of Humidity on Air Pollutants in and around schools*, Spring 2024.
- Josselyn Nicole, Internship Project: *Evaluation of PCC mixed with Fly-ash Type C*, Fall 2023.
- Jack Mitchel, Internship Project: *Evaluation of PCC mixed with Fly-ash Type F*, Fall 2023.
- Landon Meng, Internship Project: *Monitoring and assessment of air pollutant, PM<sub>2.5</sub> in and around schools*, Fall 2023.
- Brandon Kim, Internship Project: *Evaluation of cement concrete mix with the combination of recycled waste rubber and plastic*, Spring 2023.
- James Jeffery, Internship Project: *Monitoring and assessment of air pollutant, PM<sub>2.5</sub> in and around schools*, Spring 2023.
- Juwon Lim, Internship Project: *Establishing a correlation among SS, Turbidity and Coagulant Dose for Water and Wastewater Treatment*, Spring 2022.
- Diego Hergert, Internship Project: *Improvement of Georgia White Clay properties with Fly-ash*, Fall 2021.
- Chase Ferris, Internship Project: *A survey of tTHM in drinking water in East Cobb area*, Spring 2019.
- John Taylor Wetterhan, Internship Project: *A comparative Study of Solid Waste Management in America, Europe, and South Asia*, Spring 2019.
- Joshua Volbracht, Internship Project: *Establishing a correlation between COD and BOD<sub>5</sub> for Domestic Wastewater*, Spring 2019.
- Ashwini Balaganesh, Internship Project: *Heavy Metal Removal from Sewage Sludge Ash (SSA) by Column Washing*, Fall 2018.

Graduate  
Students  
Supervision

- Thaddeus Andrew Peake, PhD.IE Dissertation: N/A, since fall 2022 (student passed away in January 2024).
- Ahmed Hassan, Masters' Thesis: *Utilizing the Higher Percentage of Fly-Ash in Weak Soils to Enhance the Engineering Properties for Subgrade Usage*, Spring 2018.
- James Mark, Masters' Thesis: *Comparative Analysis of Membrane Bioreactor (MBR) and Conventional Wastewater Treatment Plants*, Fall 2016.
- Benjamin Moss, Masters' Thesis: *Comparative Assessment of Methane Generation from Brewery and Domestic Wastewater Using Upflow Anaerobic Sludge Blanket (UASB) Reactor*, Spring 2016.

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- Thesis Committee Served
- Graduate: Melodi Zhan-Moodie, Masters' Thesis: *Spatio-Temporal Analysis of Highway Congestion and Accidents: A Case Study of Interstate 285 in Georgia*, Summer 2019.
  - Graduate: Artine Azimi, Masters' Thesis: *Laboratory Self-Weight Consolidation Testing of Dredged Material from the Savannah Harbor Analyzed Using a One-Dimensional Finite Strain Consolidation Method*, Fall 2018.

### Service at SPSU and KSU (Major Services)

#### Department Services:

- Assistant Department Chair, 08/2017 – 09/2019.
- Interim Department Chair, 10/2019 – 01/2020.
- Committee Chair:
  - Department Promotion and Tenure (P&T) Committee, 08/2021 – to date
  - Department Curriculum Committee (DCC), 01/2015 - 09/2019 and 08/2021 – to date.
  - Department Faculty Council (DFC), 08/2016 - 07/2017.
  - Department Online Adhoc Committee Chair, 08/2015 - 07/2017.
  - Department Adhoc ABET Accreditation Committee, 08/2016 - 07/2019.
- Committee Member:
  - College of Architecture and Construction Management P&T Committee, 08/2022 – 07/2024.
  - Construction Management Department P&T Committee, 08/2021 – 07/2022.
  - Department Faculty Council (DFC), 08/2017 - 07/2018.
  - Department Promotion and Tenure (P&T) Committee, 08/2018 - 07/2020.
  - Department Adhoc ABET Accreditation Committee, 08/2019 - to date.
  - Department Online Adhoc Committee, 08/2017 - 12/2019.
  - Department Research Adhoc Committee, 08/2015 - to date.
- Lead faculty for six CE courses, 08/2011 – to date.

#### College Services:

- Chair, College Faculty Council (CFC), 08/2016 - 07/2019.
- Member:
  - College R2 Roadmap Graduate Committee, 01/2019 - 10/30/2019.
  - SPCEET Research Seminar Committee, 10/2019 - to date.
  - College Curriculum Committee (CCC), 08/2019 - 09/2019.
- College of Architecture and Construction Management P&T Committee, 08/2022 – 07/2024.

#### University Services:

- Faculty Senate Member, 08/2022 – 07/2024 and Executive committee member, 08/2023 – 07/2024.
- General Education Council (Executive Committee member and General Member), 08/2022 – to date
- Graduate Policy and Curriculum Committee (GPCC) Member (Executive Committee Member – 3 years), 08/2015 – 07/2024.
- GPCC Associate chair, 08/2023 – 07/2024.
- KSU Outstanding Teaching Award Committee Member, 02/2020 – 07/2024.
- KSU Energy Start for Austin Residential Buildings Application Professional Engineer (PE), 2019.
- Outstanding Global Achievement Award Committee Member, 01/2015 - 05/2020.
- University Faculty Committee on Global Engagement (UFCGE) Member, 08/2016 - 05/2021.
- Quality Enhancement Plan (QEP) Selection Committee Member, 11/2015 - 05/2016.
- Quality Measures (QM) Reviewer for On-line Course Development, 10/2015 – 12/2018.

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- SPSU CTE Teaching Fellow for Advising, 01/2014 – 12/2014.

#### Professional Society Services:

- PDH Webinar provider for US Professional Engineers (PE), 2017 – to date.
- NSF Review Panel Member (CBET, S-STEM, IUUSE etc.), 2012 - to date
- USDoE (Bioenergy Technologies Office (BETO)) Proposal Review Panel Member: 2021–to date.
- USEPA (Office of Research and Development) Proposal Review Panel Member: 2021 – to date.
- ABET ETAC Commissioner, 2023 – to date
- ABET PEV for CE Program (through ASCE), 2014 - to date.
- ABET PEV for Environmental Engineering Program (through AAEES), 2021 - to date.
- ABET PEV for Environmental Engineering Technology Program (through AAEES), 2023 - to date.
- Served as a Chair of ASEE SE Civil and Environmental Engineering (CEE) Division, 2023-2025
- Served as a Vice-chair of ASEE SE Award and Recognition Program Unit, 2023-2024.
- Served as a Chair of ASEE SE Educational Research and Methods Division, 2023-2024
- Served as Civil Engineering (CE) Division Vice-Chair, ASEE Southeast Section, 2022-2023.
- Served as Research Division Secretary, ASEE Southeast Section, 2022-2023.
- Served as Award and Recognition Division Secretary, ASEE Southeast Section, 2022-2023.
- Served as Civil Engineering (CE) Division Secretary, ASEE Southeast Section, 2021-2022.
- Served as Civil Engineering (CE) Division Vice-Chair, ASEE Southeast Section, 2019-2020.
- Served as Civil Engineering (CE) Division Chair, ASEE Southeast Section, 2016-2017.
- CE Division Program Chair, 2017 ASEE Zone II Conference, San Juan, Puerto Rico, March 2-5, 2017.
- Editorial Board Member for 3 Journals - Soil and Sediment Contamination: an International Journal (2014 - to date); Annals of Civil and Environmental Engineering (2016 - to date); Insight - Civil Engineering (2018 - to date).
- Served as a reviewer for Sabbatical fellowships for laureates of the MISTRZ (MASTER) programme for Poland Govt., 2019.
- Served as an external reviewer for PhD dissertation for Trivbhuvan University, Nepal, 2018.
- Served as a reserach proposal reviewer for Netherlands Organization for Scientific Research (NOW), 2016.

#### Community Services:

- Future City Competition Judge, 2013 - to date
- PSLSAMP Conference Judge, 2012 - to date
- Science Olympiad Judge, 2014 - to date

STRADFORD UNIVERSITY, *11104 Broad Street, Glen Allen, Virginia 23060, USA.*

10/2010 to 07/2011 Adjunct Faculty, School of Arts and Sciences

Duties

- Used Moodle as a learning management system (LMS) and taught mathematics and computer information systems courses such as college algebra, fundamental of mathematics, and computer office application.

TRINE (formerly TRI-STATE UNIVERSITY (TSU)) UNIVERSITY, *1 University Avenue, Angola, Indiana 46703, USA.*

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01/2008 to 07/2009 Assistant Professor, Department of Civil & Environmental Engineering

- Duties:
- Taught about 4-5 courses (12-14 credit hours) in a semester. The type of courses taught several times are: CE 3103: Environmental Engineering (Aqueous), CE 3101: Environmental Engineering (Aqueous) Lab, CE 4103: Environmental Engineering (Non-Aqueous), CE 4113: Hazardous Waste Engineering, CE 4123: Water Treatment Principles and Design, CE 4223: Wastewater Treatment Principles and Design, ES 323: Fluid Mechanics, CE 4912: Civil/Envl Engineering Design Seminar.
  - Advised 30+ students and supervised senior year capstone design projects.
  - Served as a board member for honors program, represented the Udall Scholarship program, and coordinated civil engineering graduate program.
  - Involved in curriculum revision/update and program assessment for ABET visit in October 2008.
  - Attended university meetings and served different university committees.
  - Used course management systems such as Blackboard for posting class notes, announcements, homework solutions, exam solutions, and grades so that the students can get the most up-to-date information about the course and their grades even from home and other student management software to advise students and create student deficiency reports.
  - Developed three graduate courses: Solid waste management, environmental engineering chemistry, and advanced water/wastewater treatment.

INDIANA UNIVERSITY-PURDUE UNIVERSITY FORT WAYNE (IPFW), *2101 East Coliseum Blvd. Fort Wayne, Indiana 47805, USA.*

08/2008 to 05/2009 Adjunct Faculty, Department of Engineering, Civil Engineering Program

- Duties
- Taught CE 365: Environmental Engineering and CE 366: Environmental Engineering Lab and helped develop the environmental engineering laboratory.
  - Used course management systems such as Blackboard/WebCT for posting class notes, announcements, homework solutions, exam solutions, and grades so that the students can get the most up-to-date information about the course and their grades even from home.

VIRGINIA COMMONWEALTH UNIVERSITY (VCU), *1000 West Cary Street, Richmond, Virginia 23284, USA.*

08/2003 to 05/2008 Affiliate Professor, Center for Environmental Studies and Department of Epidemiology and Community Health

- Duties
- Taught EPID/ENVS 541: Principles of Waste Management and ENVS 591: Introduction to Environmental Engineering several times for Environmental Studies and master's in public health programs.
  - Used course management systems such as blackboard for posting class notes, announcements, homework solutions, exam solutions, and grades so that the students can get the most up-to-date information about the course and their grades even from home and WIMBA interfaced with Blackboard to teach on-line course.

CLEVELAND STATE UNIVERSITY (CSU), *1960 East 24<sup>th</sup> Street, Cleveland, Ohio 44115, USA.*

08/2000 to 12/2001 Adjunct Faculty, Department of Civil & Environmental Engineering

- Duties
- Taught statics & dynamics in *fall 2000*.

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- 09/1996 to 12/1998 Teaching Assistant, Department of Civil & Environmental Engineering  
Duties
- Involved in grading homework and geotechnical engineering lab reports.
  - Delivered occasional class lectures for geotechnical engineering course and helped instructor in geotechnical engineering lab.

BANGLADESH UNIVERSITY OF ENGINEERING & TECHNOLOGY (BUET), *Dhaka-1000, Bangladesh.*

- 01/1994 to 07/1995 Assistant Professor, Department of Civil Engineering  
&  
06/2001 to 09/2001  
Duties
- Graduate and undergraduate courses taught are: Environmental engineering, theory and laboratory (UG), Engineering materials, theory and laboratory (UG), Surveying, theory and practical (UG), Water supply and wastewater disposal systems design (UG), Strength of materials tutorial and laboratory (UG), Estimating (UG), Water pollution and its control (G), Industrial water and waste treatment (G), Theory of sewage treatment (G), Worked as an academic advisor for undergraduate students. UG → undergraduate, G → graduate.
  - Supervised thesis and/or project work for final year undergraduate students.
  - Involved in curriculum development and revision for civil engineering undergraduate degree programs.
  - Involved in regular activities of graduate admissions, advisory & degree offering.
  - Involved in cement, brick, concrete, aggregates, and water testing as well as building and tube-well design for outside clients.
  - Served as an external thesis examiner for Leather Technology College of Dhaka University, Bangladesh.
  - Served as an examiner for Associate Member of the Institution of Engineers (AMIE), Bangladesh for the courses of Surveying and Engineering Materials.

- 11/1992 to 12/1993 Lecturer, Department of Civil Engineering  
Duties
- Same as above as Assistant Professor.

- 12/1989 to 10/1992 Research Lecturer, Institute of Flood Control & Drainage Research (IFCDR, later renamed as Institute of Water and Flood Management, IWFM)  
Duties
- Worked as an associate investigator in engineering related projects.
  - Involved in preparation of project proposals.
  - Supervised the department library employees as part of the management work.

### ADMINISTRATIVE EXPERIENCE:

- 02/1994 to 07/1995 Assistant Provost (Part-time, administrative position), Nazrul Islam Hall (Students' Residential Hall)  
Duties
- Supervised hall employees.
  - Managed students' complaints on a daily basis.
  - Managed the hall budget for the maintenance.

### RESEARCH/SCHOLARSHIP/TRAVEL/GRANT PROPOSALS:

Summary: Submitted a total of 32 (17 Federal Govt. NSF/NASA and 15 others) external grants proposals in the amount of 7.26M (\$5.30M as PI and 1.96M as CoPI) and funded about \$85K. Also submitted about 27 internal grant proposals (including GRA) in the amount of \$387K (312K as PI and 75K as CoPI) and funded about \$133K. A partial list is provided below.

**External:**

1. Title: Elimination of Pathogens Naturally with Sustainable Building Design using Ultraviolet Germicidal Irradiation; PI(s): Md Faruque Hossain; CoPI(s): M. A. Karim, Nazmus Sakib, Da Hu, and Melanie Griffin, Sponsor: National Science Foundation (NSF); Amount: \$449,814; Full Proposal Submitted in February 2024 (under review).
2. Title: Collaborative Research: CyberTraining: Implementation: Medium: Ethically centered Secure and Scalable Machine Learning for Scientists and Engineers (ESSML4SE); PI(s): Nazmus Sakib; CoPI(s): M. A. Karim; Sponsor: National Science Foundation (NSF); Amount: \$180,300; Full Proposal Submitted in January 2024 (under review).
3. Title: MRI: Track 1 Acquisition of a 3D Multi-Frequency Ground Penetrating Radar for Multidisciplinary Research and Education at Kennesaw State University; PI(s): Da Hu; CoPI(s): Alice E. Gooding, Mario Bretfeld, Terry Powis, Adam Kaplan, Other(s): M. A. Karim, Tien Yee, Lian Zhao; Sponsor: National Science Foundation (NSF); Amount: \$324,506; Full Proposal Submitted in November 2023 (under review).
4. Title: Leveraging PBL and TBL Across Disciplines to Develop Student Decision-Making Skills; PI(s): M. A. Karim; CoPI(s): Sumit Chakravarty, Tris Utschig, Sandip Das, Nazmus Sakib, Senior Personal: Parth Bhavsar, Md. Abdullah Al Hafiz Khan, and Maria Valero; Sponsor: National Science Foundation (NSF); Amount: \$749,818; Full Proposal Submitted in July 2023 (Not funded).
5. Title: Collaborative Research: CyberTraining: Implementation: Medium: Ethically centered Secure and Scalable Machine Learning for Scientists and Engineers (ESSML4SE); PI(s): Hossain Shahriar; CoPI(s): M. A. Karim and Nazmus Sakib; Sponsor: National Science Foundation (NSF); Amount: \$281,170; Full Proposal Submitted in February 2023 (Not Funded).
6. Title: RET Site: Connecting Community College and High School Teachers to University Engineering and Computer Science Labs; PI(s): M. A. Karim; CoPI(s): Sumit Chakravarty, Hossain Shahriar, Maia Valero, Md. Abdullah Al Hafiz Khan, and Nazmus Sakib; Sponsor: National Science Foundation (NSF); Amount: \$599,550; Full Proposal Submitted in October 2022 (Not Funded).
7. Title: Building Comprehensive Soil Classification Maps for Southern Coastal Regions in Georgia; PI(s): M. A. Karim; CoPI(s): Adam Kaplan and Youngguk Seo; Sponsor: Georgia Department of Transportation (GDOT); Amount: \$206,358; Research Needs Statement Submitted in September 2022 (Not Funded).
8. Title: Growing Multidisciplinary Research Workforce via a Scalable Blockly Data Science Platform; PI(s): Dan Lo; CoPI(s): Hossain Shahriar, M. A. Karim, Yong Shi, and Chung Ng; Sponsor: National Science Foundation (NSF); Amount: \$499,996; Full Proposal Submitted May 2022 (Not Funded).
9. Title: Development of Comprehensive Soil Classification Systems for Geotechnical Applications in Georgia; PI(s): M. A. Karim; CoPI(s): Youngguk Seo and Adam Kaplan; Sponsor: Georgia Department of Transportation (GDOT); Amount: \$201,000; Research Needs Statement Submitted in September 2021 (Not Funded).
10. Title: Improvement of Soil Engineering Properties with sewage sludge ash (SSA); PI(s): M. Karim; CoPI(s): Youngguk Seo and Adam Kaplan; Sponsor: Georgia Department of Transportation (GDOT); Amount: \$201,000; Research Needs Statement Submitted in September 2021 (Not Funded).
11. Title: Collaborative Proposal: Development of Next Generation Engineers for NASA's Workforce, PIs: Shahriar, H. M., Valero, M. A., Karim, M. A., Chakravarty, S., Hossain, M.,

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Sponsored by National Aeronautics and Space Administration (NASA), Federal, Amount: \$150,000.00, Not Funded. (April 22, 2021).

12. Title: Intelligent Pavement Distress Monitoring System; PI(s): Parth Bhavsar (CEE), CoPI(s): Dr. Billy Kihei (ECE), Dr. Sumit Chakravarty (ECE), Dr. Ramazan Aygun (CS), Dr. M. A. Karim (CEE), Dr. Youngguk Seo (CEE); *From Rowan University, NJ*: Dr. Yusuf Mehta (CE), Dr. Nidhal Bouaynaya (ECE); Sponsor: Georgia Department of Transportation (GDOT); Amount: \$400,000; Research Needs Statement, Submitted September 2020 (Not funded).
13. Title: Improvement of Soft Soil Engineering Properties with sewage sludge ash (SSA) and fly-ash (FA) for Subgrade Use; PI(s): M. Karim; CoPI(s): Youngguk Seo; Sponsor: Georgia Department of Transportation (GDOT); Amount: \$150,000; Research Needs Statement Submitted September 2019 (*Not funded*).
14. Title: RUI: Energy Generation from Brewery Wastewater Treatment; PI(s): M. Karim; CoPI(s): Bill Diong; Sponsor: National Science Foundation (NSF); Amount: \$329,834; Submitted July 2019 (*Not funded*).
15. Title: A New Approach to Extract Contaminants from Coarse-Grained Solid Phase; PI(s): M. Karim; Sponsor: National Science Foundation (NSF); Amount: \$325,796; Submitted September 2018 (*Not funded*).
16. Title: RUI: Contaminants Release from Sediments and their Effects in Terrestrial Environments; PI(s): M. Karim; CoPI(s): Adrienne King; Sponsor: National Science Foundation (NSF); Amount: \$266,839; October 2015 (*Not funded*).
17. Title: CAREER: An Approach to Remove Contaminants from Coarse-Grained Solid Phase; PI(s): M. Karim; Sponsor: National Science Foundation (NSF); Amount: \$504,247; July 2015 (*Not funded*).
18. Title: StormChamber Water Quality Testing; PI(s): Wasim Barham and M. Karim; Sponsor: Practical Environmental Solutions (DBA: Hydrologic Solutions); Amount: \$54,000 (Water Quality Testing) and \$32,000 (Structural Testing); March 2015 (*Funded*).
19. Title: RUI: Contaminants Release from Sediments and their Effects in Terrestrial Environments; PI(s): M. Karim; CoPI(s): Adrienne King; Sponsor: National Science Foundation (NSF); Amount: \$314,013; November 2014 (*Not funded*).
20. Title: Engaging Young Women in Engineering Science (EYES): A Weeklong Summer Experience; PI(s): M. Karim, CoPI(s): Jennifer Louten, Simin Nasser, and Chi Zhang; Sponsor: National Science Foundation (NSF); Amount: \$89,332; November 2014 (*Not funded*).
21. Title: Travel grant to visit University Miami, Florida for Accreditation PEV in November 2014; PI(s): M. Karim; Sponsor: ABET; Amount: \$850.38; 11/2014 (*Funded*).
22. Title: CAREER: An Innovative Approach to Remove Contaminants from Coarse-Grained Solid Phase; PI(s): M. Karim; Sponsor: National Science Foundation (NSF); Amount: \$502,362; July 2014 (*Not funded*).
23. Title: Travel grant to attend 2014 Reconnect Workshop in Mass Maritime Academy in Buzzards Bay, Massachusetts; PI(s): M. Karim; Sponsor: National Science Foundation (NSF), through Department of Homeland Security (DHS) and Center for Discrete Mathematics and Theoretical Computer Science (DIMACS); Amount: \$300 (plus meal & lodging were paid for a week); 06/2014.
24. Title: Travel grant to attend 2014 ABET PEV training in Baltimore, Maryland; PI(s): M. Karim; Sponsor: ABET; Amount: \$382.45 (plus meal & lodging were paid for two days); 04/2014.

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25. Title: Removal of Contaminants from Coarse-Grained Solid Phase using a new Process/Technology; PI(s): M. Karim; Sponsor: National Science Foundation (NSF); Amount: \$261,606; 02/10/2014 (*Not funded*).
26. Title: Travel grant to attend Reconnect Workshop in Baltimore, Maryland; PI(s): M. Karim; Sponsor: National Science Foundation (NSF), through Department of Homeland Security (DHS) and Center for Discrete Mathematics and Theoretical Computer Science (DIMACS); Amount: \$500 (plus meal & lodging were paid for a week); 06/2013 (*Funded*).
27. Title: Summer Research Fellowship in US Army Corps of Engineer, ERDC, WES, Vicksburg, MS; PI(s): M. Karim; Sponsor: US Army Corps of Engineer, ERDC, WES, Vicksburg, MS; Amount: \$20,425; 06/2012 (*Funded*).
28. Title: Travel, lodging, and meal grant to work in Environmental Laboratory in US Army Corps of Engineer, ERDC, WES, Vicksburg, MS; PI(s): M. Karim; Sponsor: US Army Corps of Engineer, ERDC, WES, Vicksburg, MS; Amount: \$5,371; 06/2012 (*Funded*).
29. Title: Travel grant to attend ITRC sediment remediation team meeting in Des Moines, Iowa; PI(s): M. Karim; Sponsor: Interstate Technological and Regulatory Commission (ITRC); Amount: \$1,004; 04/2012 (*Funded*).
30. Title: A Unified Approach or Policy for the Use of Alternate Daily Covers in Sanitary Landfills; PI(s): M. Karim; Sponsor: Environmental Research and Education Foundation (EREF); Amount: \$33,281 (submitted on 11/2011, *Not funded*.)
31. Title: Travel grant to attend an invited presentation in US Army Corps of Engineer, ERDC, WES, Vicksburg, MS; PI(s): M. Karim; Sponsor: US Army Corps of Engineer, ERDC, WES, Vicksburg, MS; Amount: \$753; 10/2011(*Funded*).
32. Title: Travel grant to attend ITRC sediment remediation team meeting in Annapolis, Maryland; PI(s): M. Karim; Sponsor: ITRC; Amount: \$565; 06/2011(*Funded*).

Internal

1. Title: A comparative Study of Wastewater Treatment in Bangladesh and the USA; PI: M. A. Karim, KSU Office of Undergraduate Research (OUR); Amount: \$5,000.00; 09/2023 (*Funded*). It is a part of Study Abroad Program in Bangladesh in May 2024.
2. Title: Evaluation of Partial Replacement of Fine Aggregate and Cement with Waste Recycle Materials in Portland Cement Concrete; PI: M. A. Karim, CoPI: Youngguk Seo; Sponsor: KSU Office of Undergraduate Research (OUR); Amount: \$2,000.00; 09/2023 (*Funded*). For students, Ibrahim Alamayreh and Stuart Suttle.
3. Title: Monitoring and Assessment of Air Pollutants in and Around Schools; PI: M. A. Karim, CoPI: Parth Bhavsar; Sponsor: KSU Office of Undergraduate Research (OUR); Amount: \$2,000.00; 09/2023 (*Funded*). For students, Brianna Greiner and Lily Wisner.
4. Title: Monitoring and Assessment of Air Pollutants PM<sub>2.5</sub> in and Around Schools; PI: M. A. Karim, CoPI: Parth Bhavsar; Sponsor: KSU Office of Undergraduate Research (OUR); Amount: \$1,000.00; 02/2023 (*Funded*). For a student, Samantha Johnson.
5. Title: Cement Concrete Behavior Mixed with Recycled Waste Materials; PI: M. A. Karim, CoPI: Youngguk Seo; Sponsor: KSU Office of Undergraduate Research (OUR); Amount: \$6,000.00; 02/2023 (*Funded*). For six undergraduate students, Vu Nguyen, Matthew Henry, Sravani Ambadapudi, Abdulaziz Alebra, Mohamad Alamayreh, and Ibrahim Alamayreh.
6. Title: Technology funding for lab equipment; PI: M. A. Karim, Sponsor: KSU UITS; Amount: \$21,483.00; 09/2022 (*Funded*).
7. Title: Cement Concrete Behavior Mixed with Waste Materials; PI: M. A. Karim, CoPI: Youngguk Seo; Sponsor: KSU Office of Undergraduate Research (OUR); Amount: \$3,000.00; 09/2022 (*Funded*). For three undergraduate students, Brian Vargas, Kyle Rosales, and Chris Parra.
8. Title: Understanding the Interconnectivity between Intersection Traffic Congestion, Hospital Indoor and Outdoor Air Quality, and Patient Health; PI(s): Bhavsar, P. (PI), Karim, M. A.

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- (Co-PI), Mehta, Y. (Co-PI), Pandey, M. (PI), Torlapati, J. (Co-PI), Sponsor: KSU OVRP, \$75,000.00, Submitted in March 2020 (Not Funded).
9. Title: Design and Optimization of UASB/Microbial Fuel Cell System for Energy Generation; PI(s): Karim, M. A. (PI), Diong, B. M. (CoPI); Sponsor: KSU OVRP, \$15,000.00, Submitted in April 2020 (Not Funded).
  10. Title: Graduate Research Assistantship (GRA); PI(s): M. Karim; Sponsor: KSU Graduate College, Amount: \$11,000; 08/2019 - 05/2020 (*Funded*).
  11. Title: Graduate Research Assistantship (GRA); PI(s): M. Karim; Sponsor: KSU Graduate College, Amount: \$6,500; 05/2019 - 07/2019; (*Funded*).
  12. Title: Graduate Research Assistantship (GRA); PI(s): M. Karim; Sponsor: KSU Graduate College, Amount: \$7,700; 08/2018 - 05/2019 (*Funded*).
  13. Title: Graduate Research Assistantship (GRA); PI(s): M. Karim; Sponsor: KSU Graduate College, Amount: \$4,000; 05/2018 - 07/2018; (*Funded*).
  14. Title: Graduate Research Assistantship (GRA); PI(s): M. Karim; Sponsor: KSU Graduate College, Amount: \$11,000; 08/2017 - 05/2018 (*Funded*).
  15. Title: Graduate Research Assistantship (GRA); PI(s): M. Karim; Sponsor: KSU Graduate College, Amount: \$3,000; 05/2017 - 07/2017 (*Funded*).
  16. Title: Graduate Research Assistantship (GRA); PI(s): M. Karim; Sponsor: KSU Graduate College, Amount: \$7,000; 08/2016 - 05/2017 (*Funded*).
  17. Title: Wastewater Treatment Pilot Plant Study; PI(s): M. Karim and Amy Gruss; Sponsor: Kennesaw State University Research Foundation (KSURF), Amount: \$2,500; 06/2017 (*Funded*).
  18. Title: Wastewater Treatment Pilot Plant Study; PI(s): M. Karim and Amy Gruss; Sponsor: SPCEET; Amount: \$13,500; 07/2016 (*Funded*).
  19. Title: Travel grant to attend and present a paper in ASEE Zone II Conference and held in San Juan, Puerto Rico on March 2-5, 2017; PI(s): M. Karim; Sponsor: Kennesaw State University, Graduate College; Amount: \$2,000; 12/2016 (*Funded*).
  20. Title: Travel grant to attend and present a paper in ASEE Zone II Conference and held in San Juan, Puerto Rico on March 2-5, 2017; PI(s): M. Karim; Sponsor: Kennesaw State University, CETL; Amount: \$1,000; 02/2017 (*Funded*).
  21. Title: Travel grant to attend and present a paper in ASEE SE Annual Conference and held in Tuscaloosa, Alabama on March 13-15, 2016; PI(s): M. Karim; Sponsor: Kennesaw State University, CETL; Amount: \$1,000; 03/2016 (*Funded*).
  22. Title: Travel grant to attend and present a paper in 122<sup>nd</sup> ASEE Conference and Exposition held in Seattle, Washington on June 14-17, 2015; PI(s): M. Karim; Sponsor: Kennesaw State University, CETL; Amount: \$1,000; 04/2015 (*Funded*).
  23. Title: CTE Teaching Fellowship for Advising and Mentoring; PI(s): M. Karim; Sponsor: CTE Fellowship; Amount: \$3,000; 2014-2015 (*Funded*).
  24. Title: Project Based Learning in Environmental Engineering: A Case Study; PI(s): M. Karim; Sponsor: CTE mini grant; Amount: \$750; Spring 2014 (*Funded*).
  25. Title: A Week-Long Summer Camp Through Women's EYES: Engaging Young Women in Engineering Science; PI(s): M. Karim, S. Nasser, J. Louten; Sponsor: SPSU mini grant; Amount: \$19,541; 12/10/2013 (*Not funded*).
  26. Title: Spatial Variation of Total Trihalomethane Concentration in Drinking Water: A Case Study in East Cobb; PI(s): M. Karim; Sponsor: SPSU mini grant; Amount: \$5,000; 11/22/2013 (*Not funded*).
  27. Title: Environmental Engineering Laboratory Equipment Enhancement; PI(s): M. Karim; Sponsor: SPSU; Amount: \$140,078, Tech fee proposal; 11/11/2013 (*Not funded*).
  28. Title: Environmental Engineering Laboratory Equipment Upgrade; PI(s) M. Karim; Sponsor: SPSU; Amount: \$15,323.62; Tech fee proposal; 11/11/2013 (*Funded*).

PUBLICATIONS:

Summary: Sixty (62) publications in total in different forms: 28 publications are in peer-reviewed journals (23 as the first author), 21 in peer-reviewed conference proceedings papers (14 as the first author), five invited presentations, three professional reports, two lab manuals, and three other publications. The list is given below by category, can also be found in [my google-scholar](#) as well as can be viewed the google citations.

Peer-Reviewed Journal Publications:

1. Karim, M. A., Seo, Y., Alamayreh, I., & Suttle, S. (2025). Optimizing the Use of Fly Ash as Partial Replacement of Fine Aggregate and Cement in Portland Cement Concrete Mixes. *MDPI CivilEng*, 6(3), 33. DOI: <https://doi.org/10.3390/civileng6030033>
2. Karim, M. A., Seo, Y., Vargas, B., Rosales, K., Parra, C., Henry, M., and Yun, A. (2024), *Optimum Use of Recycled Waste Materials as Partial Replacement of Fine Aggregate in Portland Cement Concrete Mixes*, *Journal of Waste Management & Recycling Technology*, Vol 2, No. 5, September 2024, pp. 1-7, DOI: [doi.org/10.47363/JWMRT/2024\(2\)135](https://doi.org/10.47363/JWMRT/2024(2)135)
3. Karim, M. A. and Akinkunmi, I. (2021), *Management of Sewage Sludge Ash and Fly-Ash through the Improvement of Soil Engineering Properties*, *Cosmos Journal Engineering & Technology*, Vol 11, No. 2, July, pp. 1-10, DOI: <https://www.cosmosjournal.in/wp-content/uploads/2021/08/2-CET-JD21-M.-A.-Karim.pdf>
4. Karim, M. A. (2021), *Hybrid and Online Synchronous Delivery of Environmental Engineering During COVID-19 Pandemic: A Comparative Study on Perception, Attitude, and Assessment*, *European Journal of STEM Education*, Vol.6, No.1 (Pub No. 05), February, pp. 01-11, DOI: <https://doi.org/10.20897/ejsteme/9688>.
5. Karim, M. A., Hassan, A. S. and Hawa, A. (2020), *Enhancement of Soil Engineering Properties with Sewage Sludge Ash*, *MOJ Ecology and Environmental Science*, 5(5), October, pp. 230-236. DOI: [10.15406/mojes/2020.05.00198](https://doi.org/10.15406/mojes/2020.05.00198).
6. Karim, M. A., Hassan, A. S. and Kaplan, A. (2020), *Optimization of Soil to Fly-Ash Mix Ratio for Enhanced Engineering Properties of Clayey Sand for Subgrade Use*, *Applied Sciences*, 10(20), pp. 1-13. DOI: [10.3390/app10207038](https://doi.org/10.3390/app10207038)
7. Karim, M. A. and Wetterhan, J. T. (2020), *A comparative study of solid waste management in the United States, Europe and Asia*, *Ann Civil Environ Eng*, 4: 003-011, April. <https://doi.org/10.29328/journal.acee.1001019>
8. Karim, M. A. and Corazzini, B. (2019), *The current status of MSW disposal and energy production: a brief review of waste incineration*, *MOJ Ecology & Environmental Science*, 4(1), February, pp. 34-37, DOI: [10.15406/mojes.2019.04.00129](https://doi.org/10.15406/mojes.2019.04.00129).
9. Zhao, L. and Karim, M. A. (2018), *Use of geosynthetic materials in solid waste landfill design: A review of geosynthetic related stability issues*, *Ann Civil Environ Eng*, 2: 006-015, June. <https://doi.org/10.29328/journal.acee.1001010>
10. Lowder, L.; Atiqullah, M.; Colebeck, D.; Das, S.; Karim, M. A.; Khalid, A. and Singh, R. (2017), *Peer Observation: Improvement of Teaching Effectiveness through Class Participation at a Polytechnic University*, *Journal of STEM Education*, 18(4), Oct-December 2017.
11. Karim, M. A. and Moss, B. L. (2017), *A Preliminary Laboratory Investigation of Methane Generation Potential from Brewery Wastewater using UASB Reactor*, *Ann Civil Environ Eng*, 1: 034-041, May. <https://www.heighpubs.org/hjcee/acee-aid1004.php>
12. Karim, M. A. and Mark, J. L. (2017), *A Preliminary Comparative Analysis of MBR and CAS Wastewater Treatment Systems*, *International Journal of Water and Wastewater Treatment*, 3(2), DOI: <http://dx.doi.org/10.16966/2381-5299.138>, March.

13. Karim, M. A. (2016), *Analytical Solution for Modeling of Transport and Removal of Contaminants from Solid Phase by the CEHIXM Process*, Insights in Analytical Electrochemistry, 2(1:5), pp.1-7, DOI: <http://dx.doi.org/10.4172/2470-9867.100013>, May.
14. Karim, M. A., Schroeder, P. R. and Bunch, B. W. (2015), *A Preliminary Laboratory Investigation of PCB Flux from Dredge Resuspensions and Residuals*, Soil and Sediment Contamination: an International Journal, 24(5), DOI:10.1080/15320383.2015.986263, May.
15. Karim, M. A. (2014), *Electrokinetics and soil decontamination: concepts and overview*, Journal of Electrochemical Science and Engineering - jESE, 3(4), pp.1~17. September. DOI:10.5599/jese.2014.0054.
16. Karim, M. A. and Khan, L. I. (2014), *Comparison of Heavy Metal Removal from Chemically Interactive and Non-Interactive Solid Phases by CEHIXM Process*, Separation Science & Technology, 49(10), pp. 1449~1460, July. DOI:10.1080/01496395.2014.894523.
17. Karim, M. A., Bunch, B. W. and Schroeder, P. R. (2014), *A Preliminary Laboratory Study of Initial Copper Release from Dredge Residuals*, Remediation Journal, 24(2), pp.61~75, March.
18. Karim, M.A. and Khan, L.I.(2012), *Enhancement of Electrokinetic Decontamination with EDTA*, Environmental Technology, DOI:10.1080/09593330.2012.665493, pp.1~8, April.
19. Karim, M.A. and Khan, L.I.(2011), *Effect of the Secondary Electrode Configuration in Removing Metal Contaminants from Soils by the CEHIXM Process*, Soil and Sediment Contamination: an International Journal, 20(7), pp.857~875, November.
20. Karim, M.A. and Khan, L.I.(2003), *An Apparatus for Testing Soil Decontamination by the CEHIXM Process*, Journal of Civil Engineering, The Institution of Engineers, Bangladesh, CE 31(1), pp.53~65, June.
21. Karim, M.A. and Khan, L.I.(2002), *CEHIXM Extraction of Pb, Cd, Zn and Mn from High Permeable Soils*, Soil and Sediment Contamination: an International Journal, 11(1), pp.57~69, January.
22. Karim, M.A. and Khan, L.I.(2001), *EDTA-Enhanced Extraction of Heavy Metals from a Coarse-Grained Simulated Soil by the CEHIXM Process*, Journal of the Air & Waste Management Association, 51(8), pp.1178~1184, August.
23. Karim, M.A. and Khan, L.I.(2001), *Removal of Heavy Metals from Sandy Soils Using CEHIXM Process*, Journal of Hazardous Materials, B81(1-2), pp.83~102, January.
24. Karim, M.A. and Chowdhury, J.U.(1995), *A Comparison of Four Distributions Used in Flood Frequency Analysis in Bangladesh*, Hydrological Sciences Journal, 40(1), pp.55~66, February, U.K.
25. Rahman, M.M. and Karim, M.A.(1995), *Impact of Greater Dhaka Flood Protection Embankment on Surface Water Quality with Respect to Tannery Waste Disposal*, Journal of Pollution Research, 14(2), pp. , Karad 415 110, India.
26. Karim, M.A. and Rahman, M.M.(1994), *Water Quality of Begunbari Canal in Dhaka City*, Journal of the Institution of Engineers, Bangladesh, 22(2), pp.93~97, April.
27. Chowdhury, J.U. and Karim, M.A.(1994), *Which Distribution is Appropriate for Flood Frequency Analysis in Bangladesh?* Journal of the Institution of Engineers, Bangladesh, 22(3-4), pp. , July-October.
28. Islam, M.Z. and Karim, M.A.(1992), *Water, Sanitation and Hygiene in Rural Bangladesh*, Journal of Irrigation Engineering and Rural Planning, Japanese Society of Irrigation, Drainage, and Reclamation Engineering, No. 23, Tokyo, Japan, pp. 57~69, July.

Peer-Reviewed Conference/Proceedings Publications:

1. Karim, M. A. (2025), *Impact of Attendance on Student Performance in Environmental Engineering Courses after the End of COVID-19 Intervention: A Case Study*, [Proceedings](#)

- [of the ASEE SE Conference](#), Mississippi State University, Starkville, MS, USA, March 9-11, 2025.
2. Karim, M. A., Seo, Y. and Bhavsar, P. (2024), *Do the Independent Studies Help Students Learn Better? A Case Study on Student Perception and Attitude*, Proceedings of the 2024 ASEE Annual Conference and Exhibition, Portland, OR, USA, June 23-26, 2024.
  3. Hossain, M. F. and Karim, M. A. (2023), *Application of Solar Energy in Building Design to Eliminate Pathogens Naturally*, Proceedings of the IEEE CARL K. CHANG Symposium on Software Services, IEEE Xplore, Chicago, IL, July 1-7, 2023. [DOI 10.1109/ICDH60066.2023.00048](#)
  4. Akter, M. S., Shahriar, H., Iqbal, I., Hossain, M. F., Karim, M. A., Clincy, V., and Voicu, R. (2023), *Exploring the Vulnerabilities of Machine Learning and Quantum Machine Learning to Adversarial Attacks using a Malware Dataset: A Comparative Analysis*, Proceedings of the IEEE CARL K. CHANG Symposium on Software Services, IEEE Xplore, Chicago, IL, July 1-7, 2023. [DOI 10.1109/SSE60056.2023.00037](#)
  5. Karim, M. A. (2023), *Does In-Class Problem-Solving Approach Help Students Learn and Improve their Performance? A Case Study*, Proceedings of the 2023 ASEE SE Section's Annual Conference, George Mason University, Arlington, VA, March 12-14, 2023.
  6. Karim, M. A. and Adhikari, S. (2022), *Does the Active Learning Help Students Learn and Improve their Performance? A Case Study of Engineering and Management*, Proceedings of the 2022 ASEE Annual Conference, Minneapolis, Minnesota, June 26-29, 2022.
  7. Karim, M. A. (2022), *Do the Pre-recorded Lecture Videos Help Students' Learning During COVID-19 Pandemic? A Case Study*, Proceedings of the 2022 ASEE SE Section's Annual Conference, The Citadel, Charleston, SC, March 13-15, 2022.
  8. Karim, M. A. (2022), *Online Synchronous Delivery of Environmental Engineering During COVID-19 Pandemic: A Case Study on Assessment*, Proceedings of the 2022 ASEE SE Section's Annual Conference, The Citadel, Charleston, SC, March 13-15, 2022.
  9. Karim, M. A. (2021), *Online Synchronous Delivery of Environmental Engineering During COVID-19 Pandemic: A Case Study on Perception and Attitude*, Proceedings of the 2021 ASEE SE Section Annual Conference, Virtual, March 07-10, 2021.
  10. Karim, M. A. (2019), *Can Teamwork be Effective in Learning Software Packages and Improving Report Writing Skills? A Case Study*, Proceedings of 2019 ASEE-SE Conference held in NC State University, Raleigh, North Carolina, March 10-12, 2019.
  11. Balaganesh, A., Hawa, A., Karim, M. and Hassan, A. (2019), Removal of Heavy Metals from SSA by Column Washing, presented a poster in 2019 ASEE-SE Conference held in NC State University, Raleigh, North Carolina, March 10-12, 2019.
  12. Yang, J., Kretlow, B., Yee, T. and Karim, M. A. (2018), *Traffic Congestion Patterns Recognition – A Deep Learning Approach Using Convolutional Neural Networks*, Presentation to ASCE International Conference on Transportation & Development 2018, Pittsburgh, Pennsylvania, July 15-18, 2018.
  13. Karim, M. A. (2018), *Inclusion of Field Trips in Teaching of Environmental Engineering for Civil Engineering Program: A Case Study*, Proceedings of 2018 ASEE-SE Conference held in Embry-Riddle Aeronautical University, Daytona Beach, Florida, March 4-6, 2018.
  14. Karim, M. A. (2017), *Importance and Sequence of Laboratory courses in Environmental Engineering: A Case Study*, Presented in 2017 ASEE Zone II Conference held in San Juan, Puerto Rico, March 2-5, 2017.
  15. Karim, M. A. (2016), *Hybrid Delivery of Environmental Engineering: Perception, Attitude, and Assessment*, Presented in 2016 ASEE 123<sup>rd</sup> Annual Conference and Exposition held in New Orleans, Louisiana, June 26-29, 2016.
  16. Karim, M. A. (2016), *Learning Environmental Engineering - On-line, Hybrid, or Face-to-Face: A Case Study*, Presented in 2016 ASEE SE Section's Annual Conference held in Tuscaloosa, Alabama, March 13-15, 2016.

### Dr. M. A. Karim's CV

17. Karim, M. A. (2015), *Project Based Learning of Environmental Engineering: A Case Study*, Presented in ASEE's 122<sup>nd</sup> Annual Conference & Exposition held in Seattle, Washington, June 14-17, 2015.
18. Lowder, M. L., Keyser, R. S., Khalid, A., Ferreira, D., Stutzmann, B., Atiqullah, M., Bohannon, J. L., Chin, C., Singh, R., Yee, T. M., Acharya, K., Karim, M. A. and Colebeck, D. (2015), *Student and Faculty Perceptions of Attendance Policies at a Polytechnic University*, Presented in ASEE's 122<sup>nd</sup> Annual Conference & Exposition held in Seattle, Washington, June 14-17, 2015.
19. Lowder, M. L., Vandenbussche, J., Ferreira, D., Khalid, A., Karim, M., Singh, R., Chin, C., Acharya, K., Colebeck, D., Sweigart, J., Atiqullah, M., Das, S., and Yee, T. (2015), Promoting Peer Observation of Teaching in Higher Education, presented a poster in the SoTL Common Conference held in Savannah, Georgia on March 25-27, 2015.
20. Karim, M.A.(2001), *Modeling of Transport and Removal of Contaminants from Soils the CEHIXM Process*, Proceedings of the First Annual Paper Meet and International Conference on Civil Engineering, Organized by the Institution of Engineers, Bangladesh (IEB), Civil Engineering Division of IEB, FEISCA, IEB Chittagong Center, November 2-3, pp.328-340.
21. Karim, M. A., and Chowdhury J.U. (1996), *Comparison of Five Distributions for Suitability in Flood Frequency Analysis in Bangladesh*. In: Singh V.P., Kumar B. (eds) Proceedings of the International Conference on Hydrology and Water Resources, New Delhi, India, December 1993. Water Science and Technology Library, vol 16. Springer, Dordrecht. [https://doi.org/10.1007/978-94-011-0389-3\\_37](https://doi.org/10.1007/978-94-011-0389-3_37).

#### Invited Presentations:

1. Presented a topic titled "Beneficial Use of Fly-Ash through Soil Stabilization and Portland Cement Concrete Mix" in World of Coal Ash Conference 2024, 13 - 16 May, held at Grand Rapids, Michigan, USA. [Online Copy](#)
2. Presented a topic titled "A Comparative Study of Solid Waste Management in the United States, Europe & Asia" in an International Conference on Waste Business and Management, Organized by Pakistan ACADEMY of Environmental Sciences and Pakistan Environmental Protection Agency, September 12-13, 2023 (Virtual video presentation).
3. Presented a topic titled "Waste Regulations and Global Management" in an annual meeting of National Safety Council (NSC) held at Oxon Hill, Maryland on February 14, 2023.
4. Presented a topic titled "A Comparative Study of Solid Waste Management in the United States, Europe & Asia" at the Fairbank Museum in Atlanta, GA, organized by SCS Engineers on May 10, 2022.
5. Presented a topic titled "CEHIXM Extraction of Metals from Soils and Sediments" at the US Army Engineer Research and Development Center (ERDC) Waterways Experiment Station (WES) Environmental Laboratory, Vicksburg, MS on October 31, 2011.

#### Published Reports:

1. Karim, M. A. (2013), "Contaminant Release from Dredge Resuspension and Residuals" Final Report Submitted to the US Army Corps of Engineers Research and Development Center (ERDC), Waterways Experiment Station (WES), 3909 Halls Ferry Road, Vicksburg, MS, Contract No. TCN 12-057, Solicitation No. W911NF-11-D-0001, to be submitted in December 2012, Revised January 2013.
2. Chowdhury, J.U. and Karim, M.A.(1993), Selection of Probability Distribution Function for Flood Frequency Analysis in Bangladesh, Final Report, R01/93, Institute of Flood Control and Drainage Research (IFCDR), BUET, Dhaka, Bangladesh, June.

### Dr. M. A. Karim's CV

3. Karim, M.A. and Rahman, M.M.(1992), Impact of Greater Dhaka City Flood Protection Embankment on the Disposal of Industrial Wastes and Environment, Final Report, A Joint Research Initiative of United Nations Center for Regional Development (UNCRD), Nagoya, Japan and Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh, August.

#### Lab Manuals:

1. Karim, M. A. (2020), Laboratory Manual I for Environmental Engineering, Tavenner Publishing Company, 406 Sutton Place, Anderson, SC 29621, First Edition, July 2013, ISBN: 978-1-937435-64-6, 2<sup>nd</sup> edition, July 2014, 3rd edition, July 2016, 4th Edition, December 2018, ISBN: 978-1-6422003-5-5, 5th Edition, December 2020, ISBN: Print 978-1-64220-116-1, eBook 978-1-64220-115-4.
2. Karim, M. A. (2021), Laboratory Manual II for Environmental Engineering, Tavenner Publishing Company, 406 Sutton Place, Anderson, SC 29621, First Edition, December 2016, 2nd Edition, December 2018, 3rd Edition, December 2020, ISBN: Print 978-1-64220-117-8, eBook 978-1-64220-122-2, Fourth Edition, December 2021, ISBN: Print 978-1-422015-9-8.

#### Other Publications:

1. Karim, M. A. (2014), Project-Based Learning of Environmental Engineering: A Case Study, SPSU Center for Teaching Excellence (CTE), October 2014.
2. Karim, M. A. and Vasilevska, V. (2015), Having Fun with Graph Theory and Forensics: CSI Fingerprint Analysis, Whose fingerprint is this one? A teaching module developed as a part of the workshop titled, Reconnect 2014 Workshop: Forensics” held at Mass Maritime Academy, Bazzards Bay, Massachusetts from June 1 – 7, 2014 organized by CCICADA, DHS, and DIMACS and funded by NSF. Submitted on February 14, 2015, for review.
3. Debnath, J. and Karim, M. A. (2013), Water: The Risky Business, A teaching module developed as a part of the workshop titled, Reconnect 2013 Workshop: Water Infrastructure, Contamination and Risk Assessment” held at Morgan State University, Baltimore, Maryland from June 2 – 8, 2013 organized by Command, Control, and Interoperability Center for Advanced Data Analysis (CCICADA), Department of Homeland Security (DHS) and Center for Discrete Mathematics and Theoretical Computer Science (DIMACS) and funded by National Science Foundation (NSF).

#### HONORS AND AWARDS:

- National Board scholarships (1981 to 1983 & 1984 to 1989).
- BUET talent scholarship (1986 to 1989); and
- One-year UNCRD research fellowship (01/1991 to 12/1991).

#### PROFESSIONAL CERTIFICATION:

- Professional Engineer (PE), for the State of Ohio (E-67135 inactive since 2010), Commonwealth of Virginia (0402-037834), and State of Georgia (040550), USA.
- OSHA 40-hr certification.

#### PROFESSIONAL MEMBERSHIP:

- Fellow, American Society of Civil Engineers (F.ASCE).
- Board Certified Environmental Engineer (BCEE) through American Academy of Environmental Engineers and Scientists (AAEES).

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- Member, American Society for Engineering Education (M.ASEE).
- Fellow, Institution of Engineers, Bangladesh (F.IEB).
- Life Member, National Oceanographic and Maritime Institute (LM.NOAMI); and
- Member, Order of the Engineer

PRACTICAL/INDUSTRY EXPERIENCE:

*GEOSYNTEC CONSULATANTS, INC., 1255 Roberts Boulevard, Suite 200, Kennesaw, GA 30144.*

10/2011 to 12/2015 Senior Staff Engineer (Part-time)

Duties

- Worked on design and calculations for Solid and Hazardous Waste Landfill Permit Applications.

*VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (VDEQ)*

08/2009 to 07/2011 Environmental Specialist II (Environmental Engineer Senior): VDEQ Piedmont Regional Office (PRO), 4949-A Cox Road, Glen Allen, Virginia 23060.

- Worked as a CEDS (Comprehensive Environmental Database System) core user for Piedmont Regional Office Waste Program.
- Reviewed Part A authorization and amendment (landfill siting) and Part B permit and permit amendment applications for solid waste landfills and other solid waste management facilities to ensure all regulatory requirements are met in accordance with applicable laws and regulations.
- Reviewed geotechnical and hydrogeological reports for solid waste site suitability evaluation
- Reviewed landfill impact statement (LIS), which is equivalent to environmental impact assessment (EIA) for landfill siting projects and includes alternative evaluations and assessment. The LIS primarily addresses the potential impact of landfills on parks, recreational areas, wildlife management areas, critical habitat areas of endangered species, public water supplies, marine resources, wetlands, historic sites, fish and wildlife, water quality, and tourism.
- Prepared draft permits, wrote public notices, attended public hearings, and prepared written responses to public comments.
- Met with applicants and/or consultants to discuss regulatory technical requirements.
- Reviewed construction quality assurance documentation, technical specifications for liner, foundation, geomembrane, leachate collection layer, closure, gas management and control systems, and conducted follow-up inspections after construction.
- Ran EPA HELP Model to verify the performance of Landfill liner systems.
- Reviewed and updated issued permits. Issued Permit-by-Rule (PBR) for Transfer Stations, Yard Waste Composting Facilities, Materials Recovery Facilities, etc.
- Employee Recognition Program Representative of PRO – *January 2011 to July 2011.*
- Inter State Technology and Regulatory Council (ITRC) Sediment Remediation Team Member – *May 2011 to July 2011.*

*SOLID WASTE SERVICES, LLC (SWS), 11706 Bowman Green Drive, Reston, Virginia 20190*

05/2008 to 05/2009 Project Engineer (Part-time)

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- Reviewed the Loudoun County Landfill Virginia pollutant Discharge Elimination System (VPDES) Permit Stormwater Pollution Prevention Plan (SWPPP) and completed the annual evaluation report for SWPPP for the year July 1, 2006, to June 30, 2008.
- Completed the Loudoun Composting VPDES permit renewal application and submitted to DEQ for review and approval.
- Finished the Design Report for the permit amendment for Fairfax County I-95 Sanitary Landfill.
- Completed the New Source Review (NSR) Permit and Title V Permit applications for Loudoun County Landfill which involved emission calculations using EPA LandGEM, EPA Tanks 4 model, and other related procedures as prescribed in EPA AP-42 Manual.

*VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (VDEQ)*

08/2005 to 12/2007 Environmental Specialist II (Environmental Engineer Senior): VDEQ Central Office, 629 East Main Street, Richmond, Virginia 23219.

Duties

- Reviewed Part A authorization and amendment (landfill siting) applications for solid waste landfills and other solid waste management facilities (SWMF) to ensure all regulatory requirements are met in accordance with applicable laws and regulations.
- Reviewed geotechnical and hydrogeological reports for solid waste site suitability evaluation
- Reviewed landfill impact statement (LIS), which is equivalent to environmental impact assessment (EIA) for landfill siting projects and includes alternative evaluations and assessment. The LIS primarily addresses the potential impact of landfills on parks, recreational areas, wildlife management areas, critical habitat areas of endangered species, public water supplies, marine resources, wetlands, historic sites, fish and wildlife, water quality, and tourism.
- Prepared draft Part A authorizations and amendments and issued Part A final authorizations and amendments.
- Met with applicants and/or consultants to discuss regulatory technical requirements.
- Coordinated permitted effort for Virginia water protection (VWP) permits for wetlands and streams impacting landfill siting.
- Coordinated the review of local or regional solid waste management plan (SWMP) to ensure the consistency of Part A application with the SWMP.
- Ran GSS PCSTABL 3.0 for Windows to verify the slope stability for the Part A and Part B applications for SWMF.
- Reviewed and updated issued Part A authorizations and amendments.

11/2002 to 07/2005 Environmental Specialist II (Environmental Engineer Senior): VDEQ Piedmont Regional Office, 4949-A Cox Road, Glen Allen, Virginia 23060.

Duties

- Worked as a CEDS (Comprehensive Environmental Database System) core user for Piedmont Regional Office Waste Program.
- Created CEDS reports for waste program using Oracle Discover.
- Reviewed Part B permit and permit amendment applications for solid waste landfills and other solid waste management facilities to ensure all regulatory requirements are met in accordance with applicable laws and regulations.

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- Prepared draft permits, wrote public notices, attended public hearings and prepared written responses to public comments.
- Met with applicants and/or consultants to discuss regulatory technical requirements.
- Reviewed construction quality assurance documentation, technical specifications for liner, foundation, geomembrane, leachate collection layer, closure, gas management and control systems, and conducted follow-up inspections after construction.
- Ran EPA HELP Model to verify the performance of Landfill liner systems.
- Reviewed and updated issued permits. Issued Permit-by-Rule (PBR) for Transfer Stations, Yard Waste Composting Facilities, Materials Recovery Facilities, etc.

03/2002 to 10/2002 Environmental Specialist II (Environmental Engineer Senior): VDEQ Central  
Duties Office, 629 East Main Street, Richmond, Virginia 23219.

- Reviewed Part B permit and permit amendment applications for solid waste landfills and other solid waste management facilities to ensure all regulatory requirements are met in accordance with applicable laws and regulations.
- Prepared draft permits, wrote public notices, attended public hearings and prepared written responses to public comments.
- Met with applicants and/or consultants to discuss regulatory technical requirements.
- Reviewed construction quality assurance documentation, technical specifications for liner, foundation, geomembrane, leachate collection layer, closure, gas management and control systems, and conducted follow-up inspections after construction.
- Ran EPA HELP Model to verify the performance of Landfill liner systems.
- Reviewed and updated issued permits. Issued PBR for Transfer Stations, Yard Waste Composting Facilities, Materials Recovery Facilities, etc.

OTHER EXPERIENCE:

*ALLTEL Information Services (AIS), 2000 Highland Road, Twinsburg, Ohio 44087, USA.*

02/99 to 05/01 & Applications Programmer I & II

10/01 to 02/02

Duties

- Developed software according to the software development methodology (SDM) in a team. Worked on project management as a PM, team building for different projects.
- Involved in documentation, unit testing, implementation, and installation of software.
- Provided mentoring to new hires and other colleagues.

TRAINING AND/OR SHORT COURSE:

Summary: Attended more than 100 short courses/seminars/workshops (More than 60 during SPSU/KSU tenure) related to teaching, research, service, and leadership here in the USA and abroad. The detail list is provided below.

- A 1.5-hour webinar “Locally Enhanced Electric Field Treatment (LEEFT) for Disinfection” organized by AAEES, offered by Xing Xie, Assistant Professor of CE at Georgia Tech, October 5, 2022.
- A 1.5-hour webinar “Regulations, Sampling and Operating PFAS Treatment Systems in the US” Organized by AAEES, offered by Jay Brady, Principal Engineer, Stanley Consultants, August 24, 2022.

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- A 1-hour webinar “Modernizing Multiple Choice Assessment” organized and offered by Gradescope, February 25, 2022.
- A 1-hour on-line seminar “Active Learning Techniques that Work in All Teaching Modalities” organized by KSU CETL and offered by Dr. Tris of KSU on August 23, 2021
- A 1.5-hour on-line seminar “Metals Analysis Evolution – Basic Principles to the Latest in Trace Metals Part 2 – Advanced Topics” organized and offered by Eurofins Environment Testing America on July 6, 2021
- A 1.5-hour on-line seminar “Inclusive Change Leadership” organized by and offered by KSU CETL on February 10, 2021
- A 1-hour on-line seminar “Water Policy for American People” organized by and offered by Board on Earth Sciences and Resources - National Academy of Science Engineering and Medicine (NASEM), January 26, 2021
- A 1.25-hour on-line seminar “Internships and Co-ops Online - Engaging Students with Potential Futures” organized by KSU CETL and offered by of KSU on November 16, 2020
- A 1-hour on-line seminar “Leading with Emotional Intelligence” organized by KSU CETL and offered by of KSU on October 21, 2020
- A 1-hour on-line workshop “PFAS: Advanced Discussion, Part 4” organized and offered by Eurofins Environment Testing America on October 13, 2020
- A 1-hour on-line seminar “Thinking Outside the Box: Alternative Assessment Methods” organized and offered by ASEE on October 01, 2020
- A 1-hour on-line workshop “PFAS: Data Defensibility and Usability, Part 3” organized and offered by Eurofins Environment Testing America on September 29, 2020
- A 1-hour on-line training “Contributing to KSU's It is About Engagement! Initiative Online” organized by KSU CETL and offered by Dr. Michelle DiPietro and Dr. Tristan Utschig of KSU on September 10, 2020.
- A 1-hour on-line training “Leadership and Intercultural Competence” organized by KSU CETL and offered by Dr. Nyasha M. GuramatunhuCooper of KSU on April 30, 2020.
- A 2-hour on-line training “Mandated Reporters: Critical Links in Protecting Children in Georgia” organized and offered by ProSolutions Training on February 28, 2020.
- A 1.5-hour workshop “Let's Really Communicate: Leading with Authentic Communication” organized by KSU CETL and offered by Dr. Justin Pettigrew of KSU on February 26, 2020.
- A 1.5-hour workshop “Introduction to Leadership for Emerging Leaders” organized by KSU CETL and offered by Dr. Chuck Powell of University System of Georgia on January 29, 2020.
- A 1.5-hour workshop “ARDs and FPAs Best Practices: An Administrator’s Perspective” organized by KSU CETL and offered by Dr. Ron Matson and Dr. Michele DiPietro of KSU on January 15, 2020.
- A 3-hour seminar on “Integrating Critical and Creative Thinking into Problem/Project-Based Learning Through an Engineering Curriculum” organized by ASEE SE 2019 Conference held in Raleigh, NC and offered by Dr. Russell Gorga and Dr. Jeff Joines of NC State University on March 10, 2019.
- A 1.5-hour seminar on “Fostering a Positive Departmental Culture” organized by KSU CETL and offered by Dr. Michele DiPietro of KSU on September 13, 2018.
- A 5-day seminar/workshop on “2018 Excel Leadership Program” organized by KSU Center for University Learning and offered by Kevin Gecowets and Lisa Lewis-Fears of KSU on May 7-11, 2018.
- A 2-hour seminar/workshop on “Adaptive Learning: Background, Applications and Lesson Building” organized by ASEE-SE 2018 Conference and offered by Autar Kaw and Eleonora

Delgado of *University of South Florida* at Embry-Riddle Aeronautical University, Daytona Beach, Florida on March 4, 2018.

- An 8-day seminar/workshop on “The Global Challenge of Sustainable Development” organized by KSU Provost Office and hosted by European Academy Otzenhausen, Germany, May 12-19, 2017.
- A 1.5-hour seminar on “Team-Based Learning Experience” organized by KSU CETL and offered by Dr. Tristan Utschig of KSU on February 14, 2017.
- A 4-hour seminar on “Resolving Conflict” organized by KSU Center for University Learning and offered by Lisa Lewis-Fears of KSU on December 2, 2016.
- A 4-hour seminar on “Communicating for Leadership Success” organized by KSU Center for University Learning and offered by Lisa Lewis-Fears of KSU on November 16, 2016.
- A 1.5-hour seminar on “Maximizing Student Learning and Engagement through Multi-HIP Experiences” organized by KSU CETL and offered by Stephanie Foote of KSU on March 2, 2016.
- A 2-week on-line workshop titled “Becoming a QM Reviewer” organized by KSU CETL and offered by Josie Baudier and Traci Stromie of KSU on October 1 to November 3, 2015
- A 3-hour seminar titled, “Introduction to Quality Matters” organized by UITS and offered by Derrell Sterling of KSU on July 23, 2015.
- A 1.5-hour seminar titled “7 Principles: Student Development” organized by KSU CETL and offered by Dr. Michele DiPietro of KSU on October 9, 2015.
- A 1-hour seminar titled, “Classroom Assessment Technique” organized by KSU CETL and offered by Dr. Thomas Pusateri of KSU CETL on March 20, 2015
- A 2-hour seminar titled “The Scholarship of Teaching and Learning (SoTL) 101: How to Strengthen your Teaching Practice” organized by SPSU CTE and offered by Dr. Donna Troka of Emory University, Atlanta, Georgia on October 22, 2014
- A 1-hour session titled “Teaching through Change” organized by SPSU CTE and offered by Dr. Sonia Toson on September 15, 2014.
- A 7-day workshop titled “Reconnect 2014 Workshop: Forensic” held at Mass Maritime Academy, Bazzards Bay, Massachusetts from June 1 – 7, 2014 organized by Command, Control, and Interoperability Center for Advanced Data Analysis (CCICADA), Department of Homeland Security (DHS) and Center for Discrete Mathematics and Theoretical Computer Science (DIMACS) and funded by National Science Foundation (NSF).
- A training program titled “TADL II 2014 – Self Paced” organized by SPSU CTE and Office of Faculty Development and Support (OFDS) and offered by Travis Melton, Derrick Sterling, and Kathy Morgan, November 2013 to April 2014.
- A 1.5-hour webinar titled “STEM-IWBW: IUSE Webinar 6” organized and conducted by NSF Department of Undergraduate Education on December 12, 2013.
- A 1-hour session titled “Advising Students with Academic Probation” organized by SPSU CTE and offered by Dr. Jennifer Louten on November 8, 2013.
- A 2-hour session titled “Faculty Advising Training: Degree Works” organized by SPSU CTE and offered by Dr. Julie Newell and Maralee Clarke on September 27, 2013.
- A 7-day workshop titled “Reconnect 2013 Workshop: Water Infrastructure, Contamination and Risk Assessment” held at Morgan State University, Baltimore, Maryland from June 2 – 8, 2013 organized by Command, Control, and Interoperability Center for Advanced Data Analysis (CCICADA), Department of Homeland Security (DHS) and Center for Discrete Mathematics and Theoretical Computer Science (DIMACS) and funded by National Science Foundation (NSF).
- A 1-hour session titled “Appreciative Advising: What every Advisor needs to Know” organized by SPSU CTE and offered by Sonia Toson on April 2, 2013.

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- Attended a 3-hour session titled “TADL 2013” organized by SPSU Office of Faculty Development and Support (OFDS) and offered by Travis Melton, Derrick Sterling, Kathy Morgan on March 29, 2013.
- Attended a 3-hour session titled “TADL 2013” organized by SPSU Office of Faculty Development and Support (OFDS) and offered by Travis Melton, Derrick Sterling, Kathy Morgan on March 22, 2013.
- A 2-hour class titled “Getting Started with the Scholarship and Teaching and Learning” organized by SPSU Center for Teaching Excellence (CTE) and offered by Dr. Donna C. Llewellyn, Associate Vice Provost for Learning Excellence of Georgia Institute of Technology on March 19, 2013.
- A 3-hour session titled “TADL 2013” organized by SPSU Office of Faculty Development and Support (OFDS) and offered by Travis Melton, Derrick Sterling, Kathy Morgan on March 15, 2013.
- A 1-hour class titled “Go To Training” organized by SPSU Center for Teaching Excellence (CTE) and offered by Patrick Fisk of SPSU on March 14, 2013.
- A 1-hour class titled “D2L Classlist and Groups” organized by SPSU Center for Teaching Excellence (CTE) and offered by Travis Melton of SPSU on December 3, 2012.
- A 1.5-hour class titled “D2L Manage Files and Course Builder” organized by SPSU CTE and offered by Travis Melton of SPSU on November 14, 2012.
- A 1.5-hour class titled “D2L and Grades” organized by SPSU CTE and offered by Travis Melton of SPSU on November 8, 2012.
- A 1.5-hour class titled “D2L Manage Files and Content” organized by SPSU CTE and offered by Travis Melton of SPSU on November 7, 2012.
- A 1-hour class titled “Wimba Voice Board in D2L” organized by SPSU CTE and offered by Travis Melton of SPSU on November 6, 2012.
- A 1-hour class titled “Respondus Quiz Builder in D2L” organized by SPSU CTE and offered by Travis Melton of SPSU on November 1, 2012.
- A 1-hour class titled “D2L and Dropbox” organized by SPSU Center for Teaching Excellence (CTE) and offered by Travis Melton of SPSU on October 31, 2012.
- A 1-hour titled “D2L Intelligent Agents” organized by SPSU CTE and offered by Travis Melton of SPSU on October 31, 2012.
- A 1-hour class titled “Wimba Classroom in D2L” organized by SPSU CTE and offered by Travis Melton of SPSU on October 30, 2012.
- A 2-hour Boot Camp Part 2 titled “Desire 2 Learn” organized by SPSU CTE and offered by Travis Melton of SPSU on October 25, 2012.
- A 1-hour class titled “Discussions in D2L” organized by SPSU CTE and offered by Travis Melton of SPSU on October 23, 2012.
- A 2-hour Boot Camp Part 1 titled “Desire 2 Learn” organized by SPSU CTE and offered by Travis Melton of SPSU on September 21, 2012.
- A 1-hour class titled “The Scholarship of Application” organized by SPSU CTE and offered by Dr. Becky Rutherford and Dr. Chi Zhang of SPSU on April 10, 2012.
- A 1-hour class titled “Scholarship of Teaching & Learning (SoTL)” organized by SPSU CTE and offered by Dr. Adeel Khalid of SPSU on November 16, 2011.
- A 1-hour class titled “Learning Styles” organized by SPSU CTE and offered by Dr. Becky Rutherford of SPSU on November 3, 2011.
- A 1-hour class titled “Advising Update Workshop” organized by SPSU CTE and offered by Dr. Sonia Toson and Dr. Greg Conrey of SPSU on October 24, 2011.
- A 1-hour class titled “Pedagogy vs. Behavior” organized by SPSU CTE and offered by Dr. Greg Conrey of SPSU on October 19, 2011.

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- A 1-hour class titled “Reappointment and Annual Review” organized by SPSU CTE and offered by Dr. Becky Rutherford of SPSU on October 11, 2011.
- A 2-hour class titled “Wimba Classroom: Intermediate” organized by SPSU CTE and offered by Travis Melton of SPSU on September 21, 2011.
- A 1-hour class titled “Enhancing Your Online Class with Podcasting” organized by SPSU CTE and offered by Tommy Tornroos and Derrick Sterling of SPSU on September 13, 2011.
- 8 Hour HAZWOPER Refresher - 1-day training held in VDEQ Piedmont Regional Office, Glen Allen, Virginia, USA, May 11, 2011.
- Investigating Fish Kills – 1-day course held in Virginia Department of Environmental Quality (VDEQ) Central Office, Richmond, Virginia, USA, November 18, 2010.
- Saltwater Fish Taxonomy – 1-day course held in Virginia Commonwealth University, Richmond, Virginia, USA, November 17, 2010.
- National Incident Management System An Introduction, ICS 700 – On-line, September 23, 2010.
- Single Resources and Initial Action Incidents, ICS 200 – On-line, September 20, 2010.
- Introduction to the Incident Command System, ICS-100 – On-line, September 15, 2010.
- TRB Environment and Energy Research Conference – 3-day conference held in Raleigh, North Carolina, USA, June 7-9, 2010.
- Basics of Supervision – 1-day training held in Virginia Department of Environmental Quality (VDEQ) Central Office, Richmond, Virginia, USA, June 3, 2010.
- 8 Hour HAZWOPER Refresher - 1-day training held in VDEQ Piedmont Regional Office, Glen Allen, Virginia, USA, May 12, 2010.
- 17<sup>th</sup> Annual Landfill and Landfill Gas Seminar – 4.0-hour seminar organized by SCS Engineers, held in Richmond, Virginia, USA, April 30, 2010.
- Engineers Finding Solutions Today, 1-day ASCE Indiana Section Annual Conference (6.0 PDH) held in Purdue University, West Lafayette, Indiana, USA, March 26, 2009.
- Science, Technology, Engineering, and Mathematics Education Scholar (STEMES) Program – 3-day training held in Vanderbilt University, Nashville, Tennessee, June 2-4, 2008.
- Food Waste Collection & Composting – 3-day workshop organized by USEPA, held in Camp Hill, Pennsylvania, USA, June 21-23, 2007.
- Negotiation Skills Workshop – 2-day workshop held in VDEQ Central Office, Richmond, Virginia, USA, March 27-28, 2007.
- 8 Hour HAZWOPER Refresher - 1-day training held in VDEQ Central Office, Richmond, Virginia, February 8, 2007.
- Project Management Overview Training – 2-day training conducted by Sabre Consulting Services, LLC, held in DEQ Piedmont Regional Office, Glen Allen, Virginia, September 12-13, 2006.
- Ethics and the Environment – 1.5-hr PDH (0.15 CEU), Air & Waste Management Association’s Audio + Web Conference – on-line Webinar, November 15, 2006.
- VDEQ VWPP Annual Staff Conference - 2-day training held in Sheraton Hotel, Virginia Beach, Virginia, USA, September 12-13, 2006.
- Team Building & Project Team Performance - 1-day training held in VDEQ Piedmont Regional Office, Glen Allen, Virginia, USA, October 26, 2006.
- Communication Technical Information to Non-Technical Audience - 1-day training held in VDEQ Piedmont Regional Office, Glen Allen, Virginia, USA, October 4, 2006.
- Facilitation Skills Training for Managers and Team Leaders - 3-day training held in VDEQ Piedmont Regional Office, Glen Allen, Virginia, USA, September 28-30, 2006.
- 8 Hour HAZWOPER Refresher - 1-day training held in DEQ Central Office, Richmond, Virginia, USA, March 15, 2006.

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- 13<sup>th</sup> Annual Landfill and Landfill Gas Seminar – 4.0-hour seminar organized by SCS Engineers, held in Richmond, Virginia, USA, April 28, 2006.
- Introduction to GIS – 3-day training held in VDEQ Central Office, Richmond, Virginia, USA, November 7-9, 2005.
- 8 Hour HAZWOPER Refresher - 1-day training held in VDEQ Piedmont Regional Office, Glen Allen, Virginia, USA, March 16, 2005.
- 12<sup>th</sup> Annual Landfill and Landfill Gas Seminar – 4.0-hour seminar organized by SCS Engineers, held in Richmond, Virginia, USA, April 22, 2005.
- How to handle People with Tact and Skills – 1-day training conducted by CAREERTRACK, held in VDEQ Piedmont Regional Office, Glen Allen, Virginia, March 14, 2005.
- 11<sup>th</sup> Annual Landfill and Landfill Gas Seminar – 4.0-hour seminar organized by SCS Engineers, held in Richmond, Virginia, USA, April 23, 2004.
- Landfill Surveying, Mapping, & Documentation Yesterday, Today, and Tomorrow – 1-day workshop jointly organized by VDEQ and WMI, held in Sussex County, Virginia, April 7, 2004.
- 8 Hour HAZWOPER Refresher - 1-day training held in DEQ Piedmont Regional Office, Glen Allen, Virginia, February 4, 2004.
- Hazardous Materials Incident Response Operations (165.5) – 5-day (40-hour OSHA, 3.7 CEU) training course conducted by Tetra Tech NUS, Inc. on behalf of USEPA, held in Fort AP Hill, Virginia, USA, April 7-11, 2003.
- 10<sup>th</sup> Annual Landfill and Landfill Gas Seminar – 4.0-hour seminar organized by SCS Engineers, held in Richmond, Virginia, April 25, 2003.
- Workshop on Bioreactor Landfills – 2-day workshop organized by USEPA, held in Hyatt Regency Crystal City, Arlington, Virginia, USA, February 27-28, 2003.
- Landfill Waste Acceptance – Safeguards, Programs, and Regulations – 1-day workshop jointly organized by DEQ and WMI, held in Sussex County, Virginia, USA, February 20, 2003.
- 8 Hour HAZWOPER Refresher - 1-day training held in VDEQ Piedmont Regional Office, Glen Allen, Virginia, January 24, 2003.
- Landfill Gas Control and Air Emissions – 1-day workshop jointly organized by VDEQ and WMI, held in Sussex County, Virginia, USA, October 31, 2002.
- Introduction to C Programming - 5-day training conducted by ALLTEL Information Services, held in Twinsburg, Ohio, USA, January 14-18, 2002.
- Microsoft Project 98 – 2-day training conducted by ALLTEL Information Services, held in Twinsburg, Ohio, USA, October 3-4, 2000.
- Introduction to Wireless – 1-day training conducted by ALLTEL Information Services, held in Twinsburg, Ohio, USA, September 15, 2000.
- Introduction to Wireline – 1-day training conducted by ALLTEL Information Services, held in Twinsburg, Ohio, USA, September 7, 2000.
- Writing Advantage – 1-day training conducted by ALLTEL Information Services, held in Twinsburg, Ohio, USA, August 14, 2000.
- Time Management “What Matters Most” - 1-day training conducted by ALLTEL Information Services, held in Twinsburg, Ohio, USA, September 13, 1999.
- Presentation Skills - 1-day training conducted by ALLTEL Information Services, held in Twinsburg, Ohio, USA, May 25, 1999.
- IDMS Concepts & Programming - 5-day training conducted by Morini, Raymundo & Associates for ALLTEL Information Services, held in Twinsburg, Ohio, USA, May 10-14, 1999.

### Dr. M. A. Karim's CV

- Programming and Computer Skills - 1-day training conducted by ALLTEL Information Services, held in Twinsburg, Ohio, USA, April 23, 1999.
- Working Together - 1-day training conducted by ALLTEL Information Services, held in Twinsburg, Ohio, USA, March 5, 1999.
- CMAS Billing Overview - 1-day training conducted by ALLTEL Information Services, held in Twinsburg, Ohio, USA, March 1, 1999.
- Project Hydrology - 10-day (2-week) training funded by Indian Ministry of Education, held in Roorkee University, Uttar Pradesh, India, July 1-15, 1992.

### COMPUTER KNOWLEDGE:

- Language: FORTRAN , COBOL, C, PL/SQL & SQL.
- Operating System: Most recent Windows Operating System.
- Software: MS Word, MS Excel, MS PowerPoint, MS Project 98, MS Origin, MacDraw, GSS PCSTABL 3.0 for Windows, EPA HELP Model, LandGEM.
- GUI: MS Visual Basic; and DBMS: MS Access, IDMS, Personal Oracle etc.

### OTHER LEADERSHIP ACTIVITIES:

- Treasurer – BUET Teachers' Association (1995)
- Assistant General Secretary – BUET Teachers' and Staffs' Club (1994)
- Assistant General Secretary – BUET Teachers' Association (1994)
- Entertainment Secretary – BUET Teachers' Association (1993).

### PUBLIC SPEAKING:

- Conducted multiple public hearings and presented the permits to the public during public hearings and answered technical questions. Presented several papers to diverse audiences in conferences.

### REFERENCES:

1. **Dr. Lutful I. Khan, P.E.** Associate Professor and Chair, Department of Civil & Environmental Engineering, Cleveland State University, 1960 East 24<sup>th</sup> Street, Cleveland, Ohio 44115, USA; Phone #: (216) 687-2231; Fax: (216) 687-5395; Email: [l.khan@csuohio.edu](mailto:l.khan@csuohio.edu). URL: [http://facultyprofile.csuohio.edu/csufacultyprofile/detail.cfm?FacultyID=L\\_KHAN](http://facultyprofile.csuohio.edu/csufacultyprofile/detail.cfm?FacultyID=L_KHAN)
2. **Mike Dishman, J.D., Ed.D.**, Professor of Education Policy & Governance, Dean, College of Education, University of West Georgia, GA, USA; Phone #: (770) 846-6382, Email: [mdishman@westga.edu](mailto:mdishman@westga.edu) URL: <https://www.westga.edu/academics/education/deans-office.php>
3. **Dr. Suleiman Ashur, P.E.**, Professor, School of Visual & Built Environments, 202K Roosevelt, Ypsilanti, Michigan 48197, USA. Phone: (734) 487-1832; Email: [sashur@emich.edu](mailto:sashur@emich.edu), URL: [https://www.emich.edu/cot/faculty/faculty\\_profiles/suleiman\\_ashur.php](https://www.emich.edu/cot/faculty/faculty_profiles/suleiman_ashur.php)
4. **Dr. Tim Tyler**, Professor of Civil Engineering, Trine University, Angola, IN 46703, USA; Phone: 260-665-4821, Email: [tylert@trine.edu](mailto:tylert@trine.edu); URL: <https://www.trine.edu/academics/colleges-schools/faculty/engineering/tyler-tim.aspx>
5. **Dr. Barry W. Bunch**, Research Environmental Engineer, US Army Corps of Engineers, Water Experimental Station (WES), 3909 Halls Ferry Road, Vicksburg, MS 39180, USA; Phone: 601-634-3617; Email: [barry.w.bunch@usace.army.mil](mailto:barry.w.bunch@usace.army.mil)
6. **Dr. Ignatius Fomunung**, Professor of Civil Engineering, University of Tennessee at Chattanooga (UTC), 3913 Bentwood Cove Dr., Apison, TN 37302, Phone: (423) 425-2005 (O), (678) 516-3185 (Cell); Email: [Ignatius\\_Fomunung@utc.edu](mailto:Ignatius_Fomunung@utc.edu); URL: [faculty profile](#)