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Career Objectives

To reach career excellence through dedication, sincerity, creativity, hard work and aspiring for a challenging and growth oriented career in engineering profession wherein I can prove my ability in serving the organization and the country as a whole.

Professional Summary

- Teaching experience of 3.5 years as a University lecturer
- Intensive research experience at The University of British Columbia (UBC), Vancouver, Canada and Annacis wastewater center, Metro Vancouver, Delta, BC

Research Interests

Water quality, Wastewater treatment, Nutrients and energy recovery, Drinking water quality, treatment and supply, Water resources management, Pollution control and waste management

Strength and Skill

<ul style="list-style-type: none">• Excellent communication skill• Experienced in public speaking & people management• Very friendly & amiable• Confident & Independent worker as well as team player	<ul style="list-style-type: none">• Ability to multitask & prioritize responsibilities• Good organization & time management skill• Passionate & hard-working• Quick & keen learner	<ul style="list-style-type: none">• Enthusiastic with loads of positive energy• Good with numbers & creative• MS words and excel, AutoCAD, Arc GIS, ETABS, Staad Pro, HEC RAS
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Educational Attainment

Graduate

M.A.Sc. in Civil Engineering Graduation: **September, 2015**
Areas of Specialization: **Environmental Engineering** (Pollution Control and Waste Management)
Institution: **The University of British Columbia (UBC), Vancouver, Canada**

Undergraduate

B.Sc. in Civil Engineering Graduation: **February, 2011**
Institution: **Bangladesh University of Engineering and Technology (BUET)**

Job Experiences

- ✚ Lecturer, Dept. of Civil and Environmental Engineering, North South University (NSU), Dhaka, Bangladesh
[Aug 2015- Present]
 - Planning, Preparing and delivering lecture to undergraduate Civil Engineering Students
 - Preparing questions and marking assignments, quizzes and exam papers as well as invigilating
 - Conducting lab experiments for sessional classes, advising students for course selection & registration
 - Coordinating and organizing seminars & workshops, cultural events
 - Courses: Introduction to Civil and Environmental Engineering, Solid & Hazardous Waste Management, Water supply & Treatment, Computer Aided Drawing (Auto CAD) for Engineers, Introduction to Surveying & GIS, Introduction to Environmental Sciences

- ✚ Graduate Research Assistant, Dept. of Civil Engineering, Univ. of British Columbia (UBC), Vancouver, Canada
[Sep 2012- Jan 2015]
 - Involved in research on wastewater treatment by planning, setting and running experiments
 - Conducted different experiments, Sample testing and experimental data analysis on wastewater
 - Worked on wastewater nutrients recovery at Annacis wastewater center, Metro Vancouver, Delta, BC

- ✚ Graduate Teaching Assistant, Dept. of Civil Engineering, Univ. of British Columbia (UBC), Vancouver, Canada
[Sep 2013- April 2015]
 - Coordinated with course instructors for planning course outline
 - Helped & guided the students in tutorial classes for solving assignments and led them to perform lab experiments
 - Conducted quizzes & invigilated final exams, Marked assignments & quizzes as well as prepared grades
 - Courses: Environmental Laboratory Analysis, Environmental Impact Studies, Hydraulics and Open Channel Flow, Fluid Mechanics, and Engineering Hydrology

- ✚ Lecturer, Dept. of Civil Engineering, Univ. of Information Technology & Sciences (UITS), Dhaka, Bangladesh
[May 2011- May 2012]
 - Advised students, Delivered lectures to undergrad Civil Engg. Students and prepared exam questions
 - Invigilated exams and Marked assignments, quizzes and exam papers
 - Conducted sessional classes for lab, marked lab reports and prepared grades
 - Courses: Surveying, Fluid Mechanics, Engineering Materials, Structural Analysis and Design I, Structural Analysis and Design II, Environmental Engineering Lab I, Civil Engineering Drawing, AutoCAD, Details of Construction lab

Professional Development Trainings

Workshops & Trainings at NSU

- Training on *Outcome Based Learning and Assessment* conducted by Institutional Quality Assurance Cell (IQAC) at NSU on 30 March 2017
- Training on *Effective Communication and Delivery, Student Psychology and Stress Management* conducted by Leadership Education and Development (LEAD) at NSU on 22 February, 01 March, 08 March, 15 March, 2018
- Training on *Rainwater Harvesting* conducted by WaterAid Bangladesh and RAIN Forum at NSU on 06 March 2018

Conferences Attended in Canada

- BCWWA 2013 Annual Conference & Trade Show, April 20-24, 2013, Kelowna, BC, Canada
- WEF/IWA Nutrient Removal and Recovery 2013: Trends in Resource Recovery and Use conference, July 28 - 31, 2013, Vancouver, BC, Canada

Certifications & Licenses in Canada

- Engineer-In-Training (EIT), Engineers and Geoscientists BC, Canada
- **BC Class V Driver's** License
- Preventing and Addressing Workplace Bullying and Harassment Training Course (Course Completion Date: May 17, 2014, Certificate ID: 2014-OyEY2, UBC, Vancouver)
- RMS Laboratory Chemical Safety Course Including WHMIS (Course Completion Date: Oct 23, 2013, Certificate ID: CS-2013-129386 UBC, Vancouver)

Research Experiences

Current Research Project at NSU

- Developing a low cost flash flood warning system coupling with hydrological modelling for developing countries like Bangladesh

Graduate Thesis

Worked on the **M.A.Sc. thesis** project of "**A Pilot Scale Study of Combining Struvite Precipitation with UniBAR-Anammox process as a Sustainable Unified Solution for Managing Nutrients in Centrate**" at **Annacis Wastewater Center** Research Facility, Metro Vancouver, Delta, BC, under the supervision of **Prof. Dr. Donald S Mavinic**, Professor, Department of Civil Engineering, Pollution Control and Waste Management Group, **The University of British Columbia (UBC), Vancouver, Canada.**

- Conducted a year-long Pilot Scale Study on nutrients recovery in the form of struvite pellets (a slow release fertilizer) from centrate at Annacis Wastewater Center (AWC) Research Facility, Metro Vancouver, Delta, BC, Canada
- Experienced in physical, chemical and biological treatment processes, reactor design, process flow design, system maintenance, laboratory experiments
- Designed and built pilot scale struvite reactor for struvite precipitation (a chemical process) and UniBAR-Anammox reactor for Anammox process (a biological process) to remove and recover phosphorus and nitrogen from wastewater
- Conducted different experiments, Sample testing and experimental data analysis on wastewater (centrate) while running the pilot scale reactors continuously over a year

Undergraduate Thesis

Undergraduate Thesis entitled "**Effect of Chlorination on Domestic and Textile Wastewater**" under the supervision of **Dr. Md. Delwar Hossain**, Professor, Dept. of Civil Engineering, Bangladesh Univ. of Engineering and Technology (BUET)

- Conducted bench scale study on domestic and textile wastewater by applying different chlorine doses and observed the change in water quality
- Determined the optimal chlorine dose and contact time for BOD and COD removal from wastewater
- Performed comparative analyses on other treatment options like Aeration and Alum coagulation effect on domestic wastewater

Volunteering Experiences in Canada

- Engineering Power UP! Event by UBC engineering & WWEST, Canada [Apr/2014]
Job Responsibility: Conducting lab experiments for high school girls to encourage in engineering carriers
- Graduate student event at UBC for prospective graduate students, Canada [Oct/2014]
Job Responsibility: Organizing the event involving 5 engineering schools of Canada

Other Work Experiences

- Survey on Gulshan Traffic Congestion Mitigation Project, Bangladesh [Oct/2010]
Job Responsibility: Traffic Volume count
- Pre-Feasibility Study of Grade Separated Intersections in Mirpur road, Bangladesh [July/2010]
Job Responsibility: Classified Directional Manual Traffic Count Survey
- Socio-economic Evaluation of Submercible Rural Roads in Sunamganj Project, Bangladesh [May/2010]
Job Responsibility: Household Survey in Sunamganj upazilla and Biswamverpur upazilla
- Origin-Destination (OD) survey, Bangladesh [Nov/2009]
Job Responsibility: OD survey at road intersections

Awards and Honors

- Canadian Association on Water Quality Award, The University of British Columbia (UBC), Vancouver, Canada.
- Faculty of Applied Science Graduate Award, The University of British Columbia (UBC), Vancouver, Canada.
- Graduate Research Assistantship, The University of British Columbia (UBC), Vancouver, Canada, 2012-2015.
- Graduate Teaching Assistantship, The University of British Columbia (UBC), Vancouver, Canada, 2013-2015.
- Sweden and Bangladesh Trust Scholarship, Ministry of Finance, Dhaka, Bangladesh, 2013.
- Dean's Award, Dept. of Civil Engineering, Bangladesh Univ. of Engineering and Technology, Dhaka.
- Academic Merit Scholarship, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh.
- Dhaka Education Board Scholarship (Talent pool), for excellent result in the S.S.C. & H.S.C. Examination.
- Dhaka Education Board Scholarship (Talent pool), 2nd in Primary & 4th in Secondary Scholarship Examination.

Field Visit

- Annacis Island Wastewater Treatment Plant, Delta, BC, Canada
- Northwest Langley Wastewater Treatment Plant, Langley, BC, Canada
- Seymour-Capilano Filtration Plant, Drinking water Treatment Plant, North Vancouver, BC, Canada
- Coquitlam Water Treatment Plant, Drinking water Treatment Plant, Coquitlam, BC, Canada
- 3rd Karnafuli River Bridge construction, Chittagong, Bangladesh
- Kaptai Hydro-electric project, Kaptai, Rangamati, Bangladesh

Extracurricular Activities and Awards

Awards in Debate, Sports, Extempore Speech, Recitation, Song and Quiz competition

Publication List

i) Conference Presentation (Abstract Published)

S. Kalam, D. S. Mavinic, and B. Rezaia, "Wastewater Nutrients Removal and Recovery by Combining Struvite Precipitation with UniBAR-Anammox Process," in *50th Central Canadian Symposium on Water Quality Research Conference*, Feb 18-19, 2015, p. 16.

ii) Conference Presentation (Oral)

S. Kalam, D. S. Mavinic, and B. Rezaia, "Optimization of Combined Struvite Precipitation and UniBAR-Anammox process as a Sustainable Unified solution for Nutrients management in wastewater sector," in *Water and Environment Student Talks (WEST) Conference*, June 8-10, 2014.

iii) Conference Presentation (Poster)

F. Islam, M. Maisha, I. Shohidul, H. S. Mohammed, C. Nabila, R. Tabassum, S. Kalam, and N. Ahmed, "Shona Bondhu IoT based Flood monitoring system," in *4th International Conference on Networking, Systems and Security (4th NSysS)*, 2017.

iv) Magazine Article

S. Kalam, "Electronic Waste – Are We Ready?," *Towards Sustainable Development*, vol. 1, Dhaka, Bangladesh, p. 32-33, Oct 27, 2015, ISBN No: 978-0-99-36241-2-4.

I hereby declare that all the information above is correct & true.

Sifat Kalam