

CURRICULUM VITAE

DR. MST. FARZANA RAHMAN ZUTHI

Chittagong University of Engineering and Technology (CUET)
Chittagong-4349, Bangladesh

∞ OBJECTIVE

To conduct an innovative and cutting-edge research on environmental engineering that will help me to realize my dream of being a vanguard of technical innovations in that field.

∞ EDUCATIONAL PROFILE

Doctor of Philosophy in Civil Engineering

(Majoring in environmental engineering)

Year of Passing: October 2014

University of Technology Sydney, Australia

Thesis title: New mathematical models of biomass viability and membrane fouling in a membrane Bioreactor

Master of Engineering in Environmental Engineering and Management

(Specialization in environmental toxicology, technology and management)

Year of Passing: August 2004

Asian Institute of Technology, Thailand

(in association with Mahidole University and Chulabhorn Research Institute of Thailand)

Thesis title: Potential Use of Fly Ash and Sludge as a Soil Conditioner

Bachelor of Science in Civil Engineering

(Majoring in Environmental Engineering)

Year of Passing: April 2002

Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh

Thesis title: Determination of Total Hydrocarbon in the Buriganga River Water of Bangladesh by Gas-Liquid Chromatographic Method.

Higher Secondary Certificate (H.S.C)

Year of Passing: 1995

Board of Secondary and Higher Secondary Education, Jessore, Bangladesh

Secondary School Certificate (S.S.C)

Year of Passing: 1993

Board of Secondary and Higher Secondary Education, Rajshahi.

∞ PROFESSIONAL EXPERIENCE

Associate Professor of the Department of Civil Engineering at CUET (from 30/03/17 to date)

Assistant Professor of the Department of Civil Engineering at CUET (from 10/03/08 to 29/03/18)

Lecturer of the Department of Civil Engineering at CUET (from 12/07/05 to 09/03/08)

As a Faculty member of CUET responsible for teaching undergraduate courses on environmental engineering (Theory of sewage treatment; Socio-economic aspects of WSS projects; Health,

hygiene and education; Design of water supply and sewer system; Environmental pollution and control; Computer programming in civil engineering and numerical methods etc.).

Also responsible for supervising undergraduate students in their project and thesis. Besides undergraduate students, responsible to supervise postgraduate students, and currently supervising two post-graduate students (one Master and one PhD).

∞ **OTHER EXPERIENCE**

Actively participate in the testing and consulting services offered by BRTC of CUET. Tube well design, water quality assessment for different purposes and bitumen mix design are some of the important consultancy performed recently

Served as Test-in-Charge of BRTC, CE Dept. CUET from January 2017 to December 2017

Served as Conference Secretary of the 3rd international Conference on Advances in Civil Engineering (ICACE-2016) in 2016 organized by the department of Civil engineering, CUET

Participated the short course on “Flood Risk Assessment and Management” organized by CUET, Bangladesh and UNESCO-IHE during 29 November to 3rd December 2015 at CUET, Bangladesh.

Completed the training course on “University Teaching Qualification” organized by organized by CUET, Bangladesh and UNESCO-IHE during 23-25 November 2014 (1st phase) and 16-18 May 2015 (2nd phase) at CUET, Bangladesh

Completed professional development program in Civil and Environmental Research during February 2012 to December 2012 and February 2011 to December 2011 organized by Centre for Technology in Water and Wastewater, University of Technology Sydney (UTS) at UTS, Australia

Completed orientation course on “Gender and Participation in WATSAN Development” held during 9-10 February 2008 at ITN-BUET, Dhaka, Bangladesh

Served as an assistant provost at ladies hall, CUET from January 2006 to December 2008

Attended the lecture on “Network Arches for Bridges” organized by the ICE -IABSE- ESCB on 12 November 2007, at BRAC Centre, Dhaka

Participated in the training workshop on “Integrated Water Resource Management” jointly organized by BCAS in association with IFS and Cap-Net during 2-3 September 2007 in Chittagong, Bangladesh

Completed the specialized course on “Computerized Evaluation Technique of Training Courses” held during 10 May 2007 at ITN- BUET, Dhaka, Bangladesh

Completed specialized course on “Arsenic Contamination in Bangladesh” held during 10-15 March 2007 at ITN-BUET, Dhaka, Bangladesh

Got certificate of appreciation for generous support of the five-day “Biosand Filter Program Implementer Workshop” held at CUET between February 12 and 16, 2006 organized by C.U.E.T, Bangladesh in collaboration with the University of Victoria, Canada and CAWST, Canada

Audited the postgraduate course on “Integrated Life Science” and “Water Quality Management” during the January 2003 and May 2003 term respectively at Asian Institute of Technology (AIT), Thailand

Completed the course on “Introduction to Computer Networking” offered by the Institute of Information and Communication Technology, BUET, Dhaka held from 29 July 2001 to 09 August 2001

∞ **SCHOLARSHIPS AND AWARD**

Awarded postgraduate scholarship offered by Australian Government to conduct PhD study in Australia

Awarded the AIT Fellowship for M.Sc. education in Environmental Engineering and Management at the Asian Institute of Technology, Thailand.

Awarded Board of Secondary and Higher Secondary Education, Bangladesh scholarship throughout the undergraduate education for academic excellence

Awarded talent pool scholarship throughout the SSC and HSC level of education

∞ **PAPER PRESENTATION**

The paper titled “An Assessment of the Effects of Microbial Products on the Specific Oxygen Uptake in Submerged Membrane Bioreactor” was presented in ICEBESE 2014 : 16th International Conference on Environmental, Biological, Ecological Sciences and Engineering World Academy of Science and Technology (WASET), February 13 - 14, 2014, Kuala Lumpur, Malaysia

The paper titled “The Effects of Biomass Parameters on the Dissolved Organic Carbon Removal in a Sponge Submerged Membrane Bioreactor” was presented in ICEBESE 2013: International Conference on Environmental, Biological and Ecological Sciences, and Engineering organized by World Academy of Science and Technology (WASET), June 2013 in New York, USA.

A paper “ A simplified approach for modelling the formation and degradation of soluble microbial products (SMP) in an integrated mathematical model of MBR” was presented *on the international Conference on Challenges in Environmental Science and Engineering (CESE-2012)* organized by Deakin University, Australia during 9-13 September 2013 in Melbourne, Australia.

The paper “A study on leaching potential of heavy metals from fly ash, sludge and artificial soil” was presented by me on the 14th Tri-university international joint seminar and symposium, ,Chiang Mai University Thailand on 24th October,2007.

∞ **PUBLICATION**

A. **International Journal:**

1. **M.F.R. Zuthi**, H.H. Ngo, W.S. Guo, L.D. Nghiem F.I. Hai, S.Q. Xia, Z.Q. Zhang, J.X. Li (2015): Biomass viability: An experimental study and the development of an empirical mathematical model for submerged membrane bioreactor. *Bioresource Technology* 190, 352–358
2. Lijuan Deng, Wenshan Guo, Huu Hao Ngo, **Mst. Farzana Rahman Zuthi**, Jian Zhang, Shuang Liang, Jianxin Li, Jie Wang, Xinbo Zhang (2015): Membrane fouling reduction and improvement of sludge characteristics by bioflocculant addition in submerged membrane bioreactor. *Separation and Purification Technology* 156, 450–458
3. **M. F. R. Zuthi**, H. H. Ngo, W. S. Guo, S. S. Chen, N. C. Nguyen, L. J. Deng, T. D. C. Tran (2014): An Assessment of the Effects of Microbial Products on the Specific Oxygen Uptake in Submerged Membrane Bioreactor. *International*

Journal of Environmental, Ecological, Geological and Marine Engineering 8.2
90-94

4. **M.F.R. Zuthi**, W.S. Guo, H.H. Ngo, L.D. Nghiem, F.I. Hai (2013): Enhanced biological phosphorus removal and its modeling for the activated sludge and membrane bioreactor processes. *Bioresource Technology* 139, 363–374
5. **M.F.R. Zuthi**, H.H. Ngo, W.S. Guo, J. Zhang, S. Liang (2013): A review towards finding a simplified approach for modelling the kinetics of the soluble microbial products (SMP) in an integrated mathematical model of membrane bioreactor (MBR). *International Biodeterioration & Biodegradation* 85, 466-473
6. **M.F.R. Zuthi**, H.H. Ngo, W.S. Guo, J.X. Li, S.Q. Xia, Z.Q. Zhang (2013): New proposed conceptual mathematical models for biomass viability and membrane fouling of membrane bioreactor. *Bioresource Technology* 142, 737–740
7. **M.F.R. Zuthi**, H.H. Ngo, W.S. Guo (2012): Modelling bioprocesses and membrane fouling in membrane bioreactor (MBR): A review towards finding an integrated model framework. *Bioresource Technology* 122, 119–129
8. **M. F. R. Zuthi**, H. H. Ngo, W. S. Guo, and T. T. Nguyen (2013): The Effects of Biomass Parameters on the Dissolved Organic Carbon Removal in a Sponge Submerged Membrane Bioreactor. *International Journal of Environmental, Chemical, Ecological, Geological and Geophysical Engineering* 7.6, 266-270
9. **Zuthi M. F. R.**, Biswas M. and Bahar M. N (2009): Assessment of supply water quality in the Chittagong city of Bangladesh. *ARP Journal of Engineering and Applied Sciences* 4.3, 73-80; ISSN 1819-6608

B. National Journal:

1. **MFR Zuthi**, MH Mazumder, SA Eti and MI Shovon (2015): An assessment of the feasibility of ecological sanitation (EcoSan): Bangladesh Perspective. *Port City International University Journal*, V 1(2), p-36-43
2. **Zuthi, M.F. R.**, Satayavivad, J., Preeda, P (2014): Chemical fertility analysis of artificial soil produced from fly ash and sewage sludge *Journal of Civil and earthquake engineering (JCEE)*, CUET, Vol JCEE 3.1, p 1-14; ISSN 1996-9066
3. Rahman M. M., **Zuthi M. F. R** and Mazumder M. H (2007): Concentration of total hydrocarbon in Buriganga river and its effects. *Journal of Civil and earthquake engineering (JCEE)*, CUET, Vol 1, p 79-92; ISSN 1996-9066
4. **Zuthi M. F. R.** and Bahar M. M (2005). A comparative risk assessment of hazardous toxic and potentially toxic elements generating from coal-fired power plant and waste water treatment plant, Thailand. *Khulna University Studies*. Vol 6, Number 1 &2, p 25-28; ISSN 1563-0897

C. Proceedings of International Conference/Seminar/Workshop:

1. **M. F. R. Zuthi**, M. M. Banu, S. Kumar, T. Hossain & A. Al-Masud (2017): Environmental impact assessment of textile industries of Chittagong city. *Proceedings of the International Conference on Mechanical Engineering and Renewable Energy 2017 (ICMERE2017)* 18 – 20 December, 2017, Chittagong, Bangladesh.

2. **M. F. R. Zuthi, M. H. Mazumder, M. Billah & M. T. Islam (2016):** A review on environmental pollution from the use of pesticides in Bangladesh Proceedings of 3rd International Conference on Advances in Civil Engineering, 21-23 December 2016, CUET, Chittagong, Bangladesh, 152-158
3. **M. F. R. Zuthi, R. Dey & S. Dasgupta (2016):** Assessment of water quality of Bamun shahi canal of Chittagong city Proceedings of 3rd International Conference on Advances in Civil Engineering, 21-23 December 2016, CUET, Chittagong, Bangladesh, 159-164
4. **F. Khan & M. F. R Zuthi (2016):** Disinfection by-products (DBPs) in drinking water and their associated health risk: a review Proceedings of 3rd International Conference on Advances in Civil Engineering, 21-23 December 2016, CUET, Chittagong, Bangladesh, 165-169
5. **Zuthi M. F. R., Tina D.Y.K and Imran A. F. (2008)** Hospital waste management scenario in Chittagong city of Bangladesh. 1st International Conference on Engineering Management (ICEM-2008): Benchmarking Management Practices in Developing Countries 4th – 5th March, Mehran University of Engineering & Technology Jamshoro, Sindh, PAKISTAN ; p 212-228
6. **Zuthi M. F. R., Satayavivad J. and Parkpian P. (2007):** .A study on leaching potential of heavy metals from fly ash, sludge and artificial soil Proceeding of the 14th Tri-university international joint seminar and symposium; 21st - 26th October, Chiang Mai University, Thailand, p- 158

⌘ **COMPUTER LITERACY**

- Visual Basic 6.0, Fortran-77, MATLAB
- Geotechnical Analysis and design software: PLAXIS, CODE_BRIGHT
- Structural Analysis and Design Software: ETABS Nonlinear etc.
- Database and Statistical Package (SPSS)
- MS Office, AutoCAD 2000 etc.

⌘ **FOREIGN LANGUAGE PROFICIENCY**

Completed undergraduate and postgraduate education in English.
Conducting teaching and research activities in English.

German language at beginner level.

⌘ **MEMBERSHIP OF PROFESSIONAL ORGANIZATION**

Name of professional body: The Institution of Engineers, Bangladesh.
Type or class of Membership: Member, Membership No. F-20922

⌘ **PERSONAL INFORMATION**

Sex:	Female
Date of Birth:	29/09/1978
Father's Name:	Md. Matiar Rahman
Mother's name:	Marium Begum
Marital Status:	Married
Religion:	Islam

Nationality: Bangladeshi by birth
Email: farzana@cuet.ac.bd
fzuthi@yahoo.com
Mobile: 880-1798227769

⌘ **ADDRESS**

Permanent Address

Village + Post Office: Chowbari
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Bangladesh

Present/Contact Address

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Chittagong-4349

⌘ **REFEREES**

1. *Dr. Md. Delwar Hossain*
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2. *Dr. Huu Hao Ngo*
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3. *Dr. Mahmood Omar Imam*
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