

DR. MOHAMMAD NAZMUL ISLAM

Professor and Chair, Department of Civil and Environmental Engineering
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Employment History

- i) **Professor and Chair**, Department of Civil and Environmental Engineering, North South University, Dhaka, Bangladesh. (July 1, 2017 - continuing).
- ii) **Professor**, Department of Civil and Environmental Engineering, North South University, Dhaka, Bangladesh. (February 1, 2016 - continuing).
- iii) **Associate Professor**, Department of Civil and Environmental Engineering, North South University, Dhaka, Bangladesh. (May 30, 2013 – continuing).
- iv) **Associate Professor and Head**, Department of Civil Engineering, Presidency University, Dhaka, Bangladesh. (May 2007 – May 2013).
- v) **Assistant Professor**, Department of Civil Engineering, Presidency University, Dhaka, Bangladesh. (May 2005 - May 2007).
- vi) **Research Fellow**, Bridge and Structures Laboratory, Department of Civil Engineering, the University of Tokyo, Japan. (December 2004 – April 2005).
- vii) **PhD Student**, Applied Mechanics/Rock Mechanics Laboratory, Department of Civil Engineering, the University of Tokyo, Japan. (October 2001 – September 2004).
- viii) **Research Scholar**, Department of Civil Engineering, National University of Singapore, Singapore. (October 1999 – August 2001).
- ix) **Engineer**, Bangladesh Institute of Bank Management, Dhaka, Bangladesh. (April 1999 - August 1999).
- x) **Design Engineer**, Khalid and Partners Limited, Dhaka, Bangladesh. (November 1998 – March 1999).

Other occupations

- i) **Adjunct Faculty**, Department of Architecture, North South University, Dhaka, Bangladesh. January 2009 – May 2013.
- ii) **Consultant**, Snowy Mountain Engineering Corporation (SMEC), an Australia based multinational company, attached to its Regional Office –South Asia 2, Dhaka, Bangladesh. April 2011 – May 2013.
- iii) **ADB Staff Consultant**, Civil and Structural Specialist, South Asian Tourism Infrastructure Development Project (SATIDP), July 2012 – December 2012.

- iv) **ADB Staff Consultant**, Road Safety Expert, Road Safety Improvement Programs, (RSIP), November 2013– June 2014.
- v) **External Auditor**, Bureau Veritas Bangladesh, Structural Engineering Assessment of Garment Industry Buildings, April 2014 – September 2014.

Education

- i) **Ph.D. in Civil Engineering** (Structural Engineering), the University of Tokyo, Tokyo, Japan. 2004.
- ii) **M. Eng. in Civil Engineering** (Structural Engineering), National University of Singapore, Singapore. 2001.
- iii) **B.Sc. Engg. (Civil)**, (major: Structural Engineering, minor: Geotechnical Engineering), Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh. Ranked 7 among 133 students. 1998.
- iv) **Higher Secondary Certificate**, public exam in Secondary Education Board, Comilla, Bangladesh, ranked 6 among more than 100,000 students, 1991.
- v) **Secondary School Certificate**, public exam in Secondary Education Board, Comilla, Bangladesh, ranked 11 among more than 100,000 students, 1989.

Academic Awards

- i) Monbukagakusho (MEXT, Government of Japan) Award throughout 2001 – 2004.
- ii) Research Scholarship, National University of Singapore during 1999 – 2001.
- iii) Technical Scholarship (First Grade), Bangladesh University of Engineering & Technology (BUET), throughout 1993 – 1998.
- iv) Dean's List Award, 1994 – 1998.
- v) Dr. Syed Hasan Scholarship for outstanding Civil Engineering Student in BUET, 1998.
- vi) Bangladesh Scholarship Council Award for outstanding academic performance, 1998.
- vii) Board Scholarship (First Grade), Comilla Board, Bangladesh for outstanding performance in the public examinations throughout 1989 – 1991 and 1993 – 1998.

Theses Written

- i) I. M. Nazmul. "Regularization of Inverse Problems in Concrete Fracture and Determination of Rebar Force from Crack Opening Displacements", Ph.D. thesis, Department of Civil Engineering, the University of Tokyo. Supervisor: Associate Professor Takashi Matsumoto

- ii) I. M. Nazmul. "Reissner Plate Solutions In Terms Of Classical Thin Plate Solutions", M.Eng. thesis, Department of Civil Engineering, National University of Singapore. Supervisor: Professor Wang Chien Ming.
- iii) I. M. Nazmul. "Analysis and Design for Torsion in Reinforced Concrete Beams", undergraduate thesis, Department of Civil Engineering, Bangladesh University of Engineering and Technology. Supervisor: Professor Alamgir Habib.

Research Interests

- (i) Computational Mechanics
- (ii) Theory of Inverse Problems and Regularization
- (iii) Mechanics and Fracture Mechanics of Reinforced/Fiber Reinforced Concrete

Contributed Book Chapters

- i) Takashi Matsumoto and Mohammad Nazmul Islam, "Determination of Rebar Forces Based on the Exterior Crack Opening Displacement Measurement of Reinforced Concrete." Sensing Issues in Civil Structural Health Monitoring, Chapter III, Pages 175-183, Springer Netherlands 2005.
- ii) Subash Chandra Barua and Mohammad Nazmul Islam, "Transportation Governance". State of cities: Governance for a Livable Chittagong, BRAC Institute of Governance and Development (BIGD) BRAC University, September 2014.

Publications in International Journals

- i) M. N. Islam, "Tikhonov Regularization Method to Determine the Shear and Moment Functions of Euler-Bernoulli beams from noisy displacement data." Journal of Structural Technology, Vol. 3, Issue 1, April 2018.
- ii) M. N. Islam, "Regularization of noisy displacement data to estimate magnitude and distribution of antecedent beam loads." Journal of Structural Engineering, its Applications and Analysis, Vol. 1, Issue 1, April 2018
- iii) **I.M. Nazmul** and T. Matsumoto, "Theory of Inverse Problems for Crack Bridging Stress Determination." International Journal of Solids and Structures, Vol. 49, No. 1, January 2012.
- iv) S. Quayyum, **I.M., Nazmul**, M.M., Iasmin, K.M., Amanat, "Effects Of Randomly Distributed Infill On The Columns Of Reinforced Concrete Frames With Soft Ground Storey," International Journal of Structural Stability and Dynamics, Vol. 10, No. 3, September 2010.

- v) **I.M. Nazmul** and T. Matsumoto, “Regularization of Inverse Problems in Reinforced Concrete Fracture.” *Journal of Engineering Mechanics - ASCE*, Vol. 134, No.10, pp. 811 – 819, October 2008.
- vi) **I.M. Nazmul** and T. Matsumoto, “High resolution COD image analysis for health monitoring of reinforced concrete structures through inverse analysis.” *International Journal of Solids and Structures*, Vol. 45, No. 1, pp 159-174, January 2008.
- vii) C. M. Wang, **I. M. Nazmul**, Q. Wang and T. Matsumoto. “Bending Solutions of Sectorial Thick Plates Based on Reissner Plate Theory”, *Mechanics Based Design of Structures and Machines*, Vol. 33, No. 1, pp. 51 – 77, January 2005.
- viii) **I. M. Nazmul** and T. Matsumoto. “Inverse Analysis to Determine Re-bars’ Force from External Crack Width Measurements”, *Journal of applied mechanics - JSCE*, Vol. 7. August, 2004.
- ix) C. M. Wang, **I. M. Nazmul** and Q. Wang. “Exact Bending Solutions of Axisymmetric Reissner Plates in Terms of Classical Thin Plate Solutions”, *Advances in Structural Engineering - An International Journal*, Vol. 7, no. 1, pp. 129-145, April 2004.
- x) **I. M. Nazmul** and T. Matsumoto. “Inverse Analysis to Determine Crack Bridging Stresses in Fiber Composites”, *Journal of Applied Mechanics - JSCE* Vol. 6, pp. 1097 - 1104, August, 2003.
- xi) C. M. Wang, C. Y. Wang and **I. M. Nazmul**. “Stability Criteria for Euler Columns with Intermediate and End Axial Loads”, *Journal of Engineering Mechanics - ASCE*, Vol. 129, No.4, pp. 468 - 472, April, 2003.
- xii) C. M. Wang and **I. M. Nazmul**. “Buckling of Columns with Intermediate Elastic Restraint”, *Journal of Engineering Mechanics - ASCE*, Vol. 129, No.2, pp. 241 – 244, February, 2003.

Seminars

- i) Application of Theory of Inverse Problems to Fracture Mechanics, Department of Civil and Natural Resources Engineering, University of Canterbury, NZ, October 2010.
- ii) Beam buckling considering warping and design implications, Department of Civil and Natural Resources Engineering, University of Canterbury, NZ, October 2010.
- iii) Analysis and Design of Aluminum sections, Institution of Engineers, Bangladesh, July 2011.
- iv) Road Safety Awareness, Asian Development Bank, Bangladesh Resident Mission, June 2014.

Presentations and Publications in Conference Proceedings

- i) **I. M. Nazmul** and T. Matsumoto. “Rebar Stress Determination based on Inverse Analysis of Crack Widths” *Workshop on Smart and Intelligent Structures*, Honolulu, Hawaii, November 2004.

- ii) **I. M. Nazmul** and T. Matsumoto. “Inverse Analysis to Determine Re-bars’ Force from External Crack Width Measurements”, JSCE Applied Mechanics Symposium September, 2004.(presenter)
- iii) **I. M. Nazmul** and T. Matsumoto. “Determination of steel stress in reinforced concrete structures from crack opening profile”, Proceedings of the first conference on structural health monitoring and intelligent infrastructure, SHMII-1'2003, Tokyo, Japan. (presenter)
- iv) **I. M. Nazmul** and T. Matsumoto. “Inverse Analysis to Determine Crack Bridging Stresses in Fiber Composites”, JSCE Applied Mechanics Symposium September, 2003.(presenter)
- v) C. M. Wang, **I. M. Nazmul** and Q. Wang. “Relationships between Axisymmetric Plate Solutions of Reissner and Kirchhoff Plate Theories”, Proceedings of the Thirteenth KKNN Seminar on Civil Engineering, December 7-8, 2000. Taipei, Taiwan. (presenter)

Finished Graduate Courses with grades

- i) Finite Element Method (National University of Singapore): A
- ii) Plate Structures (National University of Singapore): B+
- iii) Wave Propagation in Solids (the University of Tokyo): B
- iv) Dynamics of Structures (the University of Tokyo): B
- v) Non-linear Mechanics of Reinforced Concrete (the University of Tokyo): A
- vi) Mechanics of Materials I (the University of Tokyo): A
- vii) Mechanics of Materials II (the University of Tokyo): A

IT skills

Expertise level

Advanced	STAAD	Mathematica	Office applications: Word, Excel, PowerPoint and Access.
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Average	ETABS	AutoCAD	Adobe illustrator, Revit Structure
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English Language

Obtained the highest grade “Exempted”, in “English Diagnostic Test” comprising written and oral examinations conducted by the Department of English, National University of Singapore.

References

- i) Wang Chien Ming: Main Roads Chair in Civil Eng (Str), School of Civil Engineering, Faculty of Engineering, Architecture and Information Technology, University of Queensland (UQ), Australia. Tel: +61 7 336 54356, E mail: cm.wang@uq.edu.au. Supervisor of Master’s Research.
- ii) Takashi Matsumoto: Associate Professor, Bridge and Structural Design Engineering Lab. Graduate School of Engineering, Hokkaido University, N13, W8, Kita-ku, Sapporo 060-8628 Japan. Tel: 81-011-706-6171. FAX: +81-11-706-6141, E mail:

takashim@eng.hokudai.ac.jp . Former Associate Professor, Department of Civil Engineering, the University of Tokyo. Supervisor of PhD.