CURRICULUM VITAE

Personal

Name : **Dr.Mohammad Jahangir Alam**.

Date of Birth : 30th November, 1960.

Permanent Address : Mohammadpur, Kanchannagar,

Chandanaish, Chittagong.

Martial Status : Married, Children: One daughter and one son.

Previous Position hold : 1. **Professor & Head** of Civil Engineering,

2. **Director**, Research & Extension, CUET.

3. **Director**, Planning & Development, CUET.

4. Coordinator, Earthquake Engineering

Research Center (EERC), CUET.

5. Member, Syndicate of CUET.

6. Member, Syndicate of USTC.

Recent past positions hold : 1. **Vice Chancellor,** CUET.

2. **Member**, Strategic Studies on IT for Higher

Education in Bangladesh, UGC.

Present Position : 1. **Professor** of Civil Engineering, CUET.

2. **Senate Member**, BSMRMU, Bangladesh.

Educational Achievements

• **Secondary School Certificate** Examination 1976-First Division.

- **Higher Secondary Certificate** Examination 1978-First Division.
- **B.Sc. Engineering (Civil Engineering)** 1984-First Class.
- Master's in Engineering (Structural Engineering) 1991-First Class with Distinction, ANNA University, Madras, India.
- Ph.D. in Civil Engineering 1994, ANNA University, Madras, India.
- Advanced Course on Finite Element Method of Structural Analysis & Design, AIT, Thailand.

• International Post-Graduate Studies on Earthquake Engineering & Engineering Seismology 1999, IZIIS, Skopje, Macedonia.

<u>Professional Achievements and Teaching Experiences</u>

- From July 1984 to October 1984, worked as **Design Engineer** at M/S. Techno Consultants Ltd., Chittagong.
- Joined as **Lecturer** in Civil Engineering at Engineering College, Chittagong in the month of November 1984.
- Promoted as **Assistant Professor** in Civil Engineering at BIT, Chittagong in the month of March 1988.
- Promoted as **Associate Professor** in Civil Engineering at BIT, Chittagong in the month of April 1999.
- Promoted as **Professor** in Civil Engineering at BIT, Chittagong in the month of July 2001.

Teaching Experiences

33 years at Undergraduate and Postgraduate Levels at CUET.

Publications (Not listed all)

- International Journals
- 1. **M.J.Alam**, K.Natarajan & A.R.Santhakumar, Design Wind Speeds for Transmission Line Structures, **International Journal of Structures**, India, Vol. 12, No.1, Jan-Jun. Pp.1-19, 1992.
- M.J.Alam & A.R.Santhakumar, Probabilistic Wind Load Design of Transmission Line Structure in India, International Journal of Engineering Structures, UK, Vol.16 (3), pp.181-189, 1994.
- M.J.Alam & A.R.Santhakumar, System Reliability Analysis of Transmission Line Tower, International Journal of Computer & Structures, USA, Vol.53.2, pp.343-450, 1994.
- 4. **M.J.Alam** & A.R.Santhakumar, Reliability Analysis and Full Scale Testing of Transmission Tower, **International Journal of Structural Engineering**, **ASCE**, USA, Vol.122, No.3, 1996.
- M.J.Alam & A.R.Santhakumar, Formulation of System Level Reliability based Design of Transmission Tower, International Journal of Structural Safety, No.448, 1996.
- 6. A.Nour & **M.J.Alam**, Use of Generalized Smith Boundary for Loads Having Non-vanishing Tine Average, **International Journal of Computers and Geotechnics**, Vol.29, pp.235-255, 2002.

- 7. A.Nour, N.laouami & M.J.Alam, Settlement Prediction Using Monte Carlo Based Stochastic Finite Element Method, International Journal of Earthquake Engineering & Structural Dynamics, 2008.
- 8. Ram Krishna Mazumder, Abul Khair, Nazmus Sakib, Md. Abdur Rahman Bhuiyan and **Md. Jahangir Alam**, Rapid Assessment Procedure for Seismic Evaluation of Existing Buildings: A Case Study for CUET Campus, **Journal of South Asian Disaster Studies**, July 2015.
- 9. **Mohammad Jahangir Alam** and Ajoy Paul, Seismic Vulnerability & Retrofit of RC Flat Plate Structure, **Journal of Disaster Management**, India, 2014.
- Mohammad Mohinuddin Ahmed, Md. Jahangir Alam and Ing Uwe E. Dorka, Seismic Vulnerability Assessment of Concrete Pile Foundation, International Conference on Engineering and Applied Science, Osaka, Japan, November, 2013.
- 11. Mohammad Mohinuddin Ahmed, Israt Jahan and **Dr. Md. Jahangir Alam**, Earthquake Vulnerability Assessment of Existing Buildings in Cox's-Bazar using Field Survey & GIS, **International Journal of Engineering Research & Technology**, Vol.3, Issue 8, August, 2014.

National Journal

- M.H.Ali, D.Chowdhury, S.K.Paul and M.J.Alam, Water Loss in Chittagong City Corporation Area, Journal of Civil & Earthquake Engineering, Chittagong University of Engineering & Technology, 2007.
- 13. **Dr. M. Jahangir Alam**, Rebeka Ahsan, Firoza Akhter and Dr. Md.Hazrat Ali, Earthquake resistant non-engineered building construction in rural Bangladesh, **Journal of Civil & Earthquake Engineering**, Department of Civil Engineering, CUET, 2009.
- 14. Dr. M. Jahangir Alam and M. Arifur Rahman Khan, Seismic vulnerability Assessment of existing RC buildings in GIS environment-a case Study, Journal of Civil & Earthquake Engineering, Department of Civil Engineering, CUET, 2009.
- 15. Md. Abdur Rouf and Dr. M. Jahangir Alam, A study on liquefaction potential of cox's bazar city, Bangladesh, **Journal of Civil & Earthquake Engineering**, Department of Civil Engineering, CUET, 2009.
- 16. Dr. M. Jahangir Alam, M.N.Ullah², S.B.Reza and Dr. Md. Hazrat Ali, Seismic vulnerability assessment and retrofit of a major buried natural gas pipeline–a case study, **Journal of Civil & Earthquake Engineering**, Department of Civil Engineering, CUET, 2009.

Seminars, Conferences & Symposium

- 1. **M.J.Alam** & A.R. Santhakumar, Probabilistic Design of Transmission Line Structures, National Seminar on Computer Application in Civil Engineering, Association of Consulting Civil Engineers, Madras, India, 1992.
- 2. **M.J.Alam**, K.R. Sastri & A.R. Santhakumar, Plasticizer Based Concrete in Foundation, National Seminar on Foundation Problems and Remedial Measures, madras, India, 1992.
- 3. **M.J.Alam** & A.R.Santhakumar, Steel Fibre Reinforced Silica Fume Shotcrete (SFRSES) to protect TL Tower Foundation, National Seminar on High Strength Structural Concrete, Madras, India, 1992.
- 4. **M.J.Alam** & A.R.Santhkumar, Structural Reliability of Transmission Lines, National Seminar on Energy Structures, Madras, India, 1993.
- 5. **M.J.Alam** & A.R.Santhkumar, Probability-based Wind Speeds in India, 3rd Asia-Pacific Symposium on Wind Engineering, Hong Kong, 1993.
- 6. **M.J. Alam** & A.R. Santhakumar, Dynamic Analysis of Transmission Line System under Broken Wire Conditions, Workshop on Advances in Structural Dynamics, Indian Institute of Technology, Madras, India, 1993.
- 7. **M.J. Alam** & A.R. Santhakumar, Nonlinear Dynamic Analysis of Transmission Line System under Broken Wire Conditions, International Symposium on Strides in Civil Engineering, Madras, India, 1993.
- 8. C.S. Khrishnna, J.J. Atoba, H.C. Malik, **M.J.Alam** & A.R. Santhakumar, Structural Design of Steel Amusement Structures, International Symposium on Strides in Civil Engineering, Madras, India, 1993.
- 9. **M.J. Alam** & A.R. Santhakumar, Reliability Based Renovation and Reconductoring of Transmission Line Structural System, International Conference on rehabilitation, Renovation and Repair of Structures, Andhra Pradesh, India, 1994.
- 10.M.J. Alam & A.R. Santhakumar, Wind Loading and Reliability Based Design of Transmission Lines, 9th International Conference on Wind Engineering, Roorkee University, India, 1995.
- 11.K. Naryanan, **M.J. Alam** & A.R. Santhakumar, TL-EXPERT-A Software of Design of Transmission Line Towers, 2nd International Conference on Power Development in Afro-Asian Countries, Malaysia, 1994.
- 12. **M.J. Alam** & A. R. Santhakumar, Reliability-Based Wind Speed and Critical Review in Indian Context, Seminar on Behavior of Structures and Claddings under Cyclonic Wind Loading, National Building Organization, Anna university, Madras, India, 1993.

- 13. K. Narayanan, **M.J. Alam** & A.R. Santhakumar, **Bridge Super CAD** A Software for Design of RC Bridges, 2nd International Conference on New Dimension in Bridges and Flyovers, Malaysia, 1994.
- 14. **M.J. Alam**, K Narayanan & A.R. Santhakumar, Reliability Analysis of Transmission Tower Member Subjected to Buckling, 3rd International Kerensky Conference on Global Trends in Structural Engineering, Singapore, 1994.
- 15.**M.J. Alam** Computer Aided Analysis, Design and Drafting of RC Highway Bridges, National Seminar on Bridge Design & Construction, IEB, Dhaka, 1995.
- 16. M.J. Alam, F. K. Wong, C.Y. Kang & M.J. Clarke, Binary Housing System- A Complete Solution of Building Industries in Bangladesh, Seminer on Construction Problems of Building Industries in Bangladesh, IEB, Dhaka, 1997.
- 17. K.Narayanan, **M.J.Alam and** A.R. Santhakumar, Knowledge-Based Fuzzy Systems For Monitoring Structures, 3rd International Kerensky Conference on Global Trends in Structural Engineering, Singapore, 1994.
- 18.**M.J. Alam**, Investigation on the Failure of 5-Storied Residential Building at Chittagong during 1997 Earthquake, Presented in the 12-Week International Postgraduate Courses on Aseismic Design & Construction, Institute of Earthquake Engineering and Engineering Seismology (IZIIS), Macedonia, 1999.
- 19.**M. J. Alam**, H. Ali, E.Ahmed and A.Paul, Repair and Strengthening of Existing RC Structural Elements for Future Earthquake, The first International Conference and Annual Paper Meet on Civil Engineering, IEB, Chittagong Center, 2001.
- 20.**M. J. Alam**, H. Ali, E.Ahmed and A.Paul, Guidelines on Seismic Structural Planning of RC Buildings, The first International Conference and Annual Paper Meet on Civil Engineering, IEB, Chittagong Center, 2001.
- 21.E.Ahmed, W.H.Wan Badaruzzaman, M.H.Ali and M.J.Alam, Finite element Elastic analysis of Profiled Steel sheet Dry Board Folded Plate Structures, The first International Conference and Annual Paper Meet on Civil Engineering, IEB, Chittagong Center, 2001.
- 22.E.Ahmed, W.H.Wan Badaruzzaman, **M.J.Alam** and M.H.Ali, Two Way Bending Behavior of Profiled Steel Sheet Dry Board Composite Panel System, The first **International Conference and Annual Paper Meet on Civil Engineering**, IEB, Chittagong Center, 2001.
- 23.**Alam M.Jahangir** and Paul Ajoy, Guidelines on Seismic Structural planning of RC Buildings, Symposium on Seismology, Earthquake Hazard Assessment and Risk Management, **Asian Seismological Commission**, **NSET-Nepal**, **2002**.
- 24.**Alam M.Jahangir** and Paul Ajoy, Repair and Strengthening of the Existing RC Structural Elements for Future Earthquake, Symposium on Seismology,

- Earthquake Hazard Assessment and Risk Management, **Asian Seismological Commission, NSET-Nepal, 2002.**
- 25.**Jahangir Alam,** Liquefaction Potential Study of Chittagong City, First **Bangladesh Earthquake Symposium**, Bangladesh Earthquake Society (BES), Dhaka, 2005.
- 26.Dr.M.Jahangir Alam, M.Abdur Rahman Bhuiyan and M. Roqibul Islam, Seismic Structural Assessment of Damaged Chittagong Public Library Building During 27 July 2003 Earthquake, Paper No. 282, 4th International Conference on Earthquake Engineering, NCREE, Taiwan, 2006.
- **27.**M.Abdur Rahman Bhuiyan, **Dr.M.Jahangir Alam**, Tuhin Roy and A.K.Barua, Generation of Liquefaction Potential Map for Chittagong City Area, Bangladesh, Paper No. 283, 4th **International Conference on Earthquake Engineering, NCREE, Taiwan, 2006.**
- 28. M. Jahangir Alam, M.Neyamat Ullah and Skib Bin Reza, Seismic Vulnerability Assessment of Buried Gas Pipeline in Chittagong, Bangladesh, The Asian-Pacific Network of Centers for Earthquake Engineering Research, 2009 ANCHER Workshop, University of Illinois, Urbana, USA, August, 2009.
- 29. **Dr. M. Jahangir Alam**, M. Arifur Rahman Khan and Ajoy Paul, Seismic vulnerability assessment of existing RC buildings in GIS environment, 14th **World Conference on Earthquake Engineering**, Beijing, China, 2008.
- 30. Dr. M. Jahangir Alam, Rebeka Ahsan, Firoza Akhter and Ajoy Paul, Earthquake resistant non-engineered building construction for rural area in Bangladesh, 14th World Conference on Earthquake Engineering, Beijing, China, 2008.
- 31. Abdur Rouf, M. Jahangir Alam, Pradip Nath, Muhammad Tarequl Alam, Asiful Haque, A. R. Bhuiyan, A Study on Liquefaction Potential of Cox's Bazar City Area, Bangladesh, Paper No.380, International Symposium on Innovation & Sustainability of Structures in Civil Engineering, South China University of Technology, China, 2009.
- 32. Shishir Kumar Sikder Amit, Mazharul Islam, **Md. Jahangir Alam**, A Methodology for Seismic Vulnerability Assessment of Existing RC Buildings, **International Conference on Disaster Risk Mitigation**, BUET-Japan Institute of Disaster Prevention and Urban Safety & Department of Civil Engineering, BUET, Dhaka, Bangladesh, 2017.
- 33. Md. Rasel Mahmud, Md. Al-Muktadir and **Dr. Md. Jahangir Alam**, Formulation of a Guideline for Seismic Design of Oil, Acid & Gas Storage Tanks, **International Conference on Disaster Risk Mitigation**, BUET-Japan Institute of Disaster Prevention and Urban Safety & Department of Civil Engineering, BUET, Dhaka, Bangladesh, 2017.

Book Published

Earthquake Resistant Non-engineered Building Construction: Seismic Risk Reduction: Physical Vulnerability and Structural Mitigation, LAP LAMBERT Academic Publishing, Berlin, Germany, 2017.

Joint Collaboration with CUET as Coordinator

- ACECOMS, Asian Institute of Technology (AIT), Bangkok, Thailand.
- Institute of Earthquake Engineering and Engineering Seismology (**IZIIS**), University St. Cyril Methodius, Skopje, **Macedonia.**
- Kassel University (UNIK), Germany.
- South East Asian Network for Disaster & Environmental Engineering-Bangladesh, Nepal, India and Germany under DAAD fund).
- Capacity Development in Higher Education on Water Resources Management Under The Netherlands, NICHE fund.
- CUET Climate Change Application Center with HU, USA.

International Workshop Conducted as Coordinator

 M/SEAP-10: International Workshop on Micro Computer Applications in Civil and Structural Engineering Problems- Jointly with BUET (Dhaka), BIT, Chittagong and ACECOMS, AIT (Bangkok), in the year of 1996 at the Department of Civil Engineering, BUET, Dhaka, Bangladesh.

National Seminar/Workshop Organized as Coordinator

- Earthquake Resistant Building Construction at CUET, 2000.
- Earthquake Damage Assessment due to Bandarban Earthquake-1997, at Institution of Engineers Bangladesh (IEB), Chittagong Center, 2000.
- Workshop on Earthquake Awareness fo the Policy Makers & Public at Chittagong City Corporation, 2002.
- Earthquake Disaster & Precautionary Measures at IEB, Chittagong Center, 2003.
- Rangamati Earthquake-2003 at DC office, Rangamati, 2003.
- Rangamati Earthquake-2003 at IEB, Chittagong Center, 2003.
- Earthquake Awareness for Ward Commissioners at Chittagong City Corporation, 2004.

- **Fundamental of Earthquake Engineering,** yearly regular workshop for final year students of Civil Engineering at CUET.
- Earthquake Awareness for Scouts at School Level at Chittagong, 2005.
- Workshop on Disaster Preparedness and Management at Sub national Level at ISDE Bangladesh and CAMPE at Chittagong, 2006.

Worked as Member/Coordinator

- **Coordinator**, International Training Network (ITN), Sub-Center, BIT, Chittagong.
- **Course-Coordinator** for Postgraduate Studies & Research, Department of Civil Engineering, BIT, Chittagong, Bangladesh.
- **Member** of the Advisory Committee to the Director, BIT, Chittagong, Bangladesh.
- **Member** of the Academic Council of BIT, Chittagong, Bangladesh.
- **Member** of the UG Courses and Studies, Dept. of Civil Engineering, BIT, Chittagong.
- **Member Secretary** for the Formulation of Postgraduate Courses and Academic Rules of BIT, Chittagong.

Working as Member/Coordinator

- Coordinator, Earthquake Engineering Research Center (EERC), CUET.
- Member of Academic Council of CUET.
- **Syndicate Member** of University of Science & Technology Chittagong (USTC).
- Member of the UG & PG Courses and Studies, Dept. of Civil Engineering, CUET.
- **Member** of the Selection Committee of Staff at CUET.
- **Member** of the Committee for Disaster Management at IEB Chittagong Center.
- Adviser to the Chittagong Chamber of Commerce & Industries (CCCI) for the Construction of 20-storied World Trade Center (WTC) Building at Chittagong, Bangladesh.
- **Member** of the Committee for Disaster Management of Chittagong Port Authority (CPA), Chittagong, Bangladesh.

• Member of Nagar Unnayan Committee at Chittagong Development Authority (CDA), Chittagong.

Membership in Professional Societies

- **Member** of the American Society of Civil Engineers (ASCE), USA.
- Member of the New York Academy of Sciences, USA.
- **Member** of the Asian Center for Engineering Computations and Software (ACECOMS), Asian Institute of Technology (AIT), Thailand.
- **Membe**r of the Indian Concrete Institute (ICI), India.
- **Life Member** of the Indian Society of Wind Engineering, India.
- **Life Fellow** of the Institution of Engineers Bangladesh (IEB), Bangladesh.
- **Member** of the International Association of Electricity Generation, Transmission & Distribution, CIGRE, India.
- **Member** of the International Association of Shell and Spatial Structures, Indian Chapter, India.
- Member of the Indian society of Concrete and Construction technology, India
- Honorary Vice President, Royal Institute of Civil Engineers, Singapore.
- **Honorary Treasurer**, Royal Institute of Structural Engineers, Singapore.

Worked as Member of the Investigation Committee

- **Member** of the Investigation Committee for the Investigation of Causes of Failure of 5-storied Residential Building During **1997 Earthquake** at Chittagong, IEB, Chittagong, Bangladesh.
- Member of the Investigation Committee for the Investigation on the Quality
 of Construction Work Done by the Facilities Department for Primary &
 Secondary schools at Chittagong, Commilla & Cox's Bazar Districts through
 Ministry of Education, Dhaka.
- Chairman of the Investigation Committee for the Investigation of Damages
 Caused due to the 2003 Rangamati Earthquake, IEB, Chittagong,
 Bangladesh.
- Member of the Investigation Committee for the Damage Assessment of BSCIR Chittagong Building Structures due to Rangamati Earthquake of 2003, Bangladesh.

Biographical Listing

- Biography is included in the "WHO's **WHO IN THE WORLD**"-2001, USA.
- Biography is included in the "OUTSTANDING PEOPLE IN THE 21ST CENTURY", 1st Edition, Cambridge, England.
- Biography is included in the "WHO's **WHO IN ASIA**", 2006, SINGAPORE.

Professional, Teaching and Research Interests

Major Fields of Professional Interest

- Finite Element Analysis of structural systems
- Dynamic Analysis of Structures
- Wind Resistant Design of Structures
- Aseismic Design & Construction of Buildings and Engineering Structures.
- Reliability Analysis, Assessment & Design of Structures.
- Computer Applications in Civil & Structural Engineering Problems.
- Soil & Foundation Dynamics
- Seismic Vulnerability Assessment of Buildings, critical infrastructures, lifelines.
- Planning for Seismic Risk Reduction

Major Subjects of Teaching Interest

- Engineering Mechanics
- Strength of Materials
- Engineering Materials & Mechanics of Materials
- Theory of Structures
- Advanced Theory of Structures
- Reinforced Concrete Design
- Structural Steel Design
- Finite Element Method
- Computer Aided Structural Analysis & Design of Structures

- Theory of Elasticity
- Theory of Plates & Shells
- Dynamics of Structures & Earthquake Engineering
- Aseismic Design of High-rise Buildings
- Aseismic Design of Bridges
- Aseismic Design of Dams
- Aseismic Design of Industrial Buildings
- Aseismic Design of Life line Structures
- Seismic Vulnerability Assessment & Strengthening of Engineering Structures
- Soil & Foundation Dynamics
- Practical Structural Analysis & Computer Applications
- Advanced Steel Design of Structures
- Advanced RC Design of Structures
- Reliability-Based Analysis and Design of Structures

Major Areas of Research Interest

- Soil-Structure Interaction
- Liquefaction Assessment of Soil
- Fluid-Structure Interaction
- Behavior of Offshore Structural System under Seismic Excitation
- Seismic Assessment & Strengthening of Existing Structures
- Reliability-Based Design of Industrial installations, Gas, Oil and Acid storage tanks.

Recent Research Works Completed

- Earthquake Vulnerability Study of Existing Building Structures of Chittagong City Corporation Area, Bangladesh.
- Earthquake Vulnerability Study of Hospital Building Structures of Chittagong City Corporation Area, Bangladesh.

- Earthquake Vulnerability Study of Educational Building Structures of Chittagong City Corporation Area, Bangladesh.
- Liquefaction Potential Study of Chittagong City Corporation Area, Bangladesh.
- Suitability of Concrete Hollow Blocks for Earthquake Resistance.
- Behavior of RC Frame with Solid Brick & holed Brick as infill.
- Seismic Design of Low Cost Brick Masonry Buildings.
- Development of Seismic Structural Strength Assessment Methodology of Building Structures.
- Rural Building Structural Risk Assessment & Formulation of Guidelines for Housing.
- Structural Strength Assessment of Damaged Chittagong Public Library Building during Earthquake 2003, Bangladesh.
- Structural Strength Assessment of Damaged Buildings of Chittagong Polytechnique Institute During 2003 Earthquake, Bangladesh
- Structural Strength Assessment of Damaged Buildings of BSCIR Chittagong Buildings During 2003 Earthquake, Bangladesh.

On Going Research Work

- Earthquake Vulnerability Study on the Life Line Structures of Chittagong City Corporation Area.
- Liquefaction Potential Study of Cox's Bazar Town Area.
- Seismic Improvement of Existing Construction Procedure of Rural Mud House.
- Seismic Strengthening Methodology of Existing Mud House.
- Low Cost Post Earthquake Rehabilitation Shelter Using Locally Available Materials & Technology.
- Low Cost Field Earthquake Intensity Measuring Device.
- Earthquake Vulnerability Study on Chittagong Port.
- Earthquake Vulnerability Study on Petrochemical Industries at Chittagong.
- Formulation of SVA Guidelines for Buildings of Bangladesh.
- Formulation of Seismic Design Guidelines for Acid, Gas and Oil Storage Tanks.

Joint Collaborative Foreign Research Work

- **1.** Development of Jute Based Seismic Rehab Technology on Building Structures.
- 2. Curriculum Development on International Master's Degree on Disaster & Environmental Engineering at CUET and SUST.

Sponsor and Participating Organizations:

- UNIVERSITY OF KASSEL (UNIK), Germany.
- CHITTAGONG UNIVERSITY OF ENGINEERING & TECHNOLOGY (CUET).
- SHAJALAL UNIVERSITY OF SCIENCE & TECHNOLOGY (SUST).
- COMMISSARIAT A L'ENERGIE ATOMIQUE (CEA), France.
- GERMAN ACADEMIC EXCHANGE PROGRAM (DAAD).

Curriculum Vitae

Of

Prof. Dr. MOHAMMAD JAHANGIR ALAM

Professor of Civil Engineering and Former Vice Chancellor Chittagong University of Engineering & Technology (CUET) Chittagong, Bangladesh.