Sk Amjad Hossain, P.E.
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CAREER OBJECTIVE Assistant Professor of Instruction.

EDUCATION

Doctor of Philosophy (Candidate) Structural and Earthquake Engineering, Concordia University, Montreal, Canada
Successfully passed Comprehensive (Candidacy) Exam.
Successfully passed Proposal defense Exam.
Preparing for Dissertation Defense in Fall 2026
Dissertation topic: Seismic Performance of Reinforced Concrete Shear Wall (2018 – To date) Expected 2026.

Master of Applied Science Civil Engineering, Structural Engineering, Concordia University, Montreal, Canada, 2006, Topic of Thesis: Analysis of Simply Supported Prismatic Box Sections.

Bachelor of Science Civil Engineering, Khulna University of Engineering and Technology, Khulna, Bangladesh, 1993

PROFESSIONAL SKILLS:

- Working as a full time Lecturer position in department of Civil, Environmental and Construction Management at University of Texas, Tyler (Houston Engineering Center)
- Over 17 years' experience in finite element analysis and design of industrial, commercial structures, residential buildings and bridge projects.
- Worked as an Adjunct Professor in Department of Construction Management, University of Houston.
- Specialist in static, dynamic, seismic analysis and 3D modeling.
- Performed lateral load analysis (wind and seismic) and designed concrete and steel structures.
- Performed advanced structural strength analysis particularly finite element method.
- Experienced in design of steel I girder bridge.
- Experienced in prestressed concrete girder bridges.
- Experienced in industrial steel structural design.
- Performed finite element analysis and design of steel and concrete multistoried buildings and blast resisting buildings.
- Prepared proposals, feasibility studies, preliminary design, engineering specifications and contract documents.
- Familiar with ACI, ASCE, BS, AASHTO, UBC, NBCC, CHBDC and CSA codes
- Highly analytical and organized, good interpersonal skill, flexible and quick learner.

SPECIAL SKILLS:

- **Problem-solving**: Excellent ability to find effective solutions to unique problems in civil engineering projects.
- **Team Player**: Strong ability to liaise between clients and professionals with different area of expertise.

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- **Computer Programs**: Proficient in STAAD PRO, SAP-2000, ANSYS, MATHCAD, LARSA, RISA-3D SAFE, ETABS, PC Bridge, PCA Slab/Beam, PCA Column, MSC PATRAN, MSC NASTRAN, AutoCAD, MS Word, Excel, Micro station and Power Point.

PROFESSIONAL/TEACHING EXPERIENCE

Lecturer, College of Engineering, University of Texas, Tyler, Aug. 2018- To date

- Have been teaching in department of civil engineering and construction management undergraduate students.
- Courses taught: Statics, Estimating-I, Estimating-II, Senior Seminar, Mechanical and Plumbing design for Buildings

Adjunct Professor, University of Houston, TX, 2016 – 2019

- Have been teaching steel and timber design in department of construction management, undergraduate students in University of Houston since 2016.
- Course taught: Reinforced Concrete Design, Steel Structure Design

Structural Engineer, Fluor Corporation, Houston, TX, 2012 – 2018

- Performed analysis and design of Pipe Rack superstructure and foundations (pile and spread footings).
- Checked other engineer's design calculations.
- Performed detail design calculations of steel I girder bridge and pile foundations.
- Performed detail design of multistoried steel buildings and mat foundations in high seismic zone.
- Developed spreadsheet programming for detail wind and seismic load calculations.
- Developed spreadsheet programming for detail Anchor Bolt design calculations according to ACI-318, Appendix-D.

Lead Civil/Structural Engineer, Qatar KENTZ W.L.L, Qatar, Doha, 2010 to 2012

- Performed analysis and design of different kind of steel and concrete structures.
- Performed analysis and design of Pipe Rack superstructure and foundations.
- Checked other engineer's design calculations.
- Performed analysis and design of equipment foundations.
- Performed checking, analysis and design calculations of blast resisting buildings.
- Leading and supervising a group of senior and junior engineers, designers in different projects (02 numbers).

Senior Civil/Structural Engineer, Proplant Inc. Qatar, Doha, 2010

- Performed analysis and design of Pipe Rack superstructure and pile foundation
- Performed analysis and design of spread footing foundations.
- Performed analysis and design of existing structure with additional loading**.**
- Developed spreadsheet programming for detail Anchor Bolt design calculations according to ACI-318, Appendix-D.

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Senior Structural Engineer, Fluor Daniel Inc. Houston, TX, USA, 2007 to 2009
BP PROJECT: Whitting, Indiana, USA

- Performed finite element analysis and design a lot of Horizontal and Vertical Vessel foundations.
- Performed analysis and design of blast resisting buildings.
- Developed spreadsheet programming for vertical seismic load distribution.
- Analyzed and designed PDC and RIE building pile and mat foundations.
- Reviewed project documents prior to issue for scope and presentation including checking for technical accuracy.

MARATHAN PROJECT: Garyville Major Expansion Project, Louisiana, USA

- Performed finite element analysis and detail design of Crude Pre Flash Drum support structure.
- Performed finite element analysis and detail design of Crude Substation Buildings.
- Analyzed and detail design of Concrete, Wood and Steel multistoried buildings.
- Prepared proposals, feasibility studies, preliminary design, engineering specifications and contract documents.
- Developed spreadsheet programming for detail wind and seismic load calculations.
- Developed spreadsheet programming for detail Anchor Bolt design calculations according to ACI-318, Appendix-D.

VALERO MSAT II PROJECT: USA

- Analyzed and designed main Pipe Rack in Sulfolane Unit, steel connection details and pile mat foundations.
- Analyzed and designed interconnecting Pipe Rack, superstructures and pile foundations.
- Coordinating and working with project members
- Prepared specifications and contract documents.

Technical Advisor, Structural, KBR Inc. Houston, TX, 2006
EGTL PROJECT:

- Performed finite element analysis and designed of Compressor Table Top, superstructure and pile raft foundations.
- Analyzed and designed of Grillage Beams for Sea Transportation of modular structures.
- Calculated differential settlement of Compressor Shelters, Pipe Racks using APRAF and equivalent raft method.
- Developed spreadsheet programming for different types of steel connection design in BS Code.
- Performed finite element modeling for plane stress analysis and thin plate design with non-linear deflection.
- Experienced in machine foundation design.

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Structural Engineer, Aqua Industrial Ltd. # 205, 9912 Franklin Avenue, Fort McMurray, Alberta, Canada, 2005 to 2006

- Analyzed and designed of industrial steel structures according to S16-01 and CISC design manual.
- Supervised the on-going sites of fabrication of steel structure of Suncor Energy Inc and CNRL.
- Responsible for project management works.
- Analyzed and detail design of Concrete, Wood and Steel multistoried buildings.
- Prepared tender documents.
- Experienced in inspection and stability analysis of concrete and steel structures.

Assistant Engineer, Municipality, Magura Paurashava, Bangladesh 2000-2001

- In charge of design and project management of different types of multistoried commercial and residential buildings, design checking for approval of civil structures.
- Designed a lot of residential buildings superstructures and foundations.

Structural Engineer, Local Government Engineering Department, Bangladesh 1996 to 2000

The department is responsible for urban and rural infrastructure development and rehabilitation

- Performed analysis and design of steel plate girder, prestressed concrete girder and segmental box girder bridges.
- Performed structural load calculation and assisted with geometric layout.

- Performed analysis and design of box culverts, retaining structures, slope protection works, school buildings, community health clinics, and different administrative buildings.
- Investigation and condition assessment of the bridge and building structures.
- Performed bridge seismic retrofit and retaining structures.
- Supervised construction of all the civil works, like drains, bridges, box culverts and some other hydraulic structures.
- Experienced in visual inspection of existing bridges and other hydraulic structures.
- Provided engineering support during constructions.

Design Engineer, **Shaheedullah and Associates Ltd. 137, Jahanara Garden, Green Road, Dhaka, Bangladesh** 1994 to 1996

- Designed prestressed concrete girder bridges
- Designed segmental box girder bridges.
- Designed a lot of R.C.C, multi-storied residential buildings superstructure and pile foundations.

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PROFESSIONAL AFFILATIONS:

- Licensed Professional Engineer (P.E.) with Texas, USA, Member # 115743
- Licensed Professional Engineer (P.E.) with State of Washington, USA, Member # 53418
- Former Licensed Professional Engineer (P.Eng.) with Alberta, Canada
- Registered member of the Institute of Engineers Bangladesh (IEB)

Publications:

Conferences Papers:

- C1. Hossain, S.A., and Bagchi, A., 2020, "Seismic Performance of existing Buildings Concrete shear Wall", 5th International Conference of Structural Engineering and Concrete Technology, Paper No. ICSECT 126, DOI: 10.11159/icsect20.126;
- C2. Hossain, Sk Amjad, and Bagchi, Ashutosh., 2020, "Seismic Performance of existing Buildings Concrete shear Wall", XI International Conference on Structural Dynamics, EURODYN 2020, Proceedings Volume II, ISBN (vol II): 978-618-85072-1-0, Page # 4816 to 4825;
- C3. Hossain, Sk Amjad, and Bagchi, Ashutosh, 2022, "Plastic Hinge Length Requirements for Reinforced Concrete Couple Shear Wall Buildings." Presented and accepted for publication in the 11th International Conference on Structural Health Monitoring of Intelligent Infrastructure, (SHMII-11), Montreal, Canada, 2022.
- C4. Hossain, Sk Amjad, and Bagchi, Ashutosh, "Plastic hinge length in reinforced concrete couple shear wall buildings for seismic reinforcement detailing – A comparison study." 2nd International Conference in Civil Engineering, Dhaka, Bangladesh, CICM 2023.

Journal Papers:

- J1. S. A. Hossain, A. Bagchi, "Seismic Performance of Reinforced Concrete Shear Wall Buildings." International Journal of Civil Infrastructure (IJCI), Volume 4, Year 2021, ISSN: 2563-8084, DOI:10.11159/ijci.2021.003
- J2. Hossain Sk Amjad, Bagchi Ashutosh, "Plastic Hinge Length Requirements for Reinforced Concrete Couple Shear Wall Buildings." Journal of Civil and Environmental Engineering (Open Access), Published: 28 March 2024, Volume 14: 02, 2024, DOI: 10.37421/2165-784X.2024.14.535.
- J3. Hossain, Sk Amjad, and Bagchi, Ashutosh, "The Failure Mechanism of Reinforced Concrete Couple Shear walls and Coupling Beams– A ductility approach." Journal of Civil and Environmental Engineering (Open Access), Published: 16 July 2024, Volume 14: 4, 2024, DOI: 10.37421/2165-784X.2024.14.551.

Invited Speaker:

- GSCAEE 2021, (Global Summit on Civil, Architectural and Environmental Engineering, Barcelona, Spain July 19-2021) International Conference at Barcelona, Spain (July 19-21, 2021).
- INFRAMEET 2022, (International Meet on Infrastructure and Construction), Chicago, USA, Nov. (10-22), 2022.

Courses Taught (Undergraduate Program)

- CMGT-3310 & 3315 – Construction Structural Systems I and II
- CMGT-3312 – Advanced Estimating
- CMGT-4313 – Construction Applications for Concrete
- CMGT-4315 -Construction Applications for Steel
- ENGR-4109 – Senior Seminar (Law and Ethics)

REFERENCES:
Available upon request.