Mehdi Bagheri, Ph.D, P.Eng.

Structural Engineer

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Education

UNIVERSITY OF OTTAWA, CANADA **2013 - 2018**

Ph.D. in Civil Engineering – Structural

IRAN UNIVERSITY OF SCIENCE and TECHNOLOGY, TEHRAN, IRAN **2008 - 2010**

M.Sc. in Civil Engineering – Structural

SEMNAN UNIVERSITY, IRAN **2003 - 2007**

B.Sc. in Civil Engineering

Experience

ROAR ENGINEERING **2025– PRESENT**
Structural Engineer

30 FORENSIC ENGINEERING **2023 - 2025**
Structural Associate

Performed site examinations, document review, analysis and building permit submission.

Prepared structural calculations, drawings and technical documents.

Liaised with clients and provide updates throughout the investigation.

OCTAFORM SYSTEMS INC., CANADA **2021 - 2023**
Structural Lead

Conducted structural/seismic assessment of RC circular and rectangular tanks using SAP2000.

Performed structural/cost evaluation of tanks reinforced with micro steel rebars and GFRP rebars- Design optimization and value engineering exercises.

Responsible for structural/non-structural assessments of RC water tanks reinforced with OCTAFORM PVC panel.

FPINNOVATIONS, CANADA **2019 - 2021**
Structural Engineer

Created plans, seismic computer analysis and design of residential/commercial buildings.

Checked drawing reviews and calculations using engineering formulas and skills for design in accordance with established codes, standards, drawings, or other specifications.

Analyzed applicable reports, drawings, blueprints, tests, and related documentation to plan and design projects.

Used computer-assisted engineering and design software to prepare engineering and design documents and calculations.

Conducted field reviews and structural observations.

Responsible for health monitoring and rehabilitation of existing wood bridges.

Supervised testing on durational loading (creep behavior) of CLT beams.

Directed acoustic and vibration design of wood buildings.

Prepared technical report on Increased seismic loads in NBCC 2020.

Conducted fire design of wood buildings.

HUGH JOHN FLEMMING FORESTRY CENTRE, CANADA **2018 - 2019**
Structural Consultant

Conducted structural analysis and health monitoring of timber bridges to assess performance and identify potential failure mechanisms.

Performed testing and led research initiatives on innovative wooden decking systems, including Nail-Laminated Timber (NLT) and Dowel-Laminated Timber (DLT).

Authored and peer-reviewed detailed technical reports, ensuring accuracy, clarity, and compliance with engineering standards.

TEACHING & RESEARCH ASSISTANT, CANADA **2013 – 2018**

Conducted experimental research on the deflection behavior of light-frame timber shear walls with various construction detailing.

Performed finite element modeling and analysis of timber buildings to evaluate structural performance under lateral loads.

Delivered lectures and developed course materials for university-level courses in timber design and advanced concrete structures.

TADBIR SAHEL PARS CONSULTING ENGINEERS INC., IRAN **2008 – 2013**
Design Engineer

Design and building envelope condition assessment of mid and high-rise steel and reinforced concrete buildings.

Analyzed buildings seismically and evaluated damage of reinforced concrete buildings.

Prepared concrete bridge design.

Made important and critical technical decisions.

Documentation and project budget calculation.

Visited site and mentored construction site staff and supported them with technical guidance.

Initiated required meetings to deliver the project goals on time.

Professional Affiliations

Member of Professional Engineers Ontario (PEO)

Member of Ontario Society of Professional Engineers (OSPE)

Member of American Society of Civil Engineering (ASCE)

Member of Engineers and Geoscientists BC

Computer Proficiencies

Prosteel(200h)

Plant3D(300h)

AutoCAD(2000h)

MS Office(4000h)

Civil3D(300h)

SAFE(500h)

Revit(200h)

ETABS(3000h)

Tekla(200h)

STAAD(200h)

Woodworks(1000h)

SAPWood(200h)

S-Frame(200h)

MATLAB(600h)

MS Project(300h)

SAP(2000h)

CADWorks(300h)

Certifications

ISO/IEC 17025:2017

Hybrid Inspection, Maintenance, Restoration and Design of Timber Bridges Level 1 Certification Course

ACI-562-Concrete Repair Code Course, 2020

Professional Summary

Holding graduate degree in structural engineering, majored in structural design & building science

10+ years of experience in building envelope design (conceptual and detailed design) in Residential, ICI (Industrial, Commercial and Institutional) and Infrastructure projects

Excellent coordination skills 3-dimensionally with architectural and structural details, preparing technical reports, shop drawings and constructions drawings

Good understanding of National Building Code (NBCC), BC building code, IBC, ACI-318, ACI-350, NDS-2018, SDPWS-2021, Canadian and US concrete, steel, wood and bridge design codes

Proficiency in structural engineering design software including ETABS, Abaqus, STAAD.Pro, CSiBridge, RAM, S-FRAME, SAP, SAFE, AutoCAD, Revit, MS Project, MATLAB and Civil 3D

Quick learner, detail-oriented and having strong sense of urgency, leadership, problem solving, giving technical presentations, change management and working well in a team environment as well as independently

Excellent communication skills both verbal/written and presentation

Ability to build trust bonds with clients and stakeholders; being involved through all project stages, from definition, through planning, design, and construction, understanding client needs, and managing and delivering projects