

# Vala Mazrouei

Master of Science Student in Structural Engineering

## Contact

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## RESEARCH INTERESTS

- Seismic Design of Steel Structures
- Development of Damping Systems, Seismic Isolation, and Energy Dissipation Devices
- Hybrid (Experiment-Analysis) Simulation
- Earthquake Impact Assessment and Mitigation
- Design and Evaluation of Bridges

## SKILLS

### Language

- Persian
- English TOEFL (Total = 103)
  - Reading: 27
  - Listening: 29
  - Writing: 25
  - Speaking: 22

### Computer Skills

- Python, Machine Learning, MATLAB, HTML, Abaqus, ETABS, SAP2000, SAFE, AutoCAD 2D, Photoshop, Microsoft Office

## EDUCATION

**Master of Science in Structural Engineering** Sep 2023 – Present  
University of Alberta, Edmonton, Canada  
Advisor: Dr. Ali Imanpour

**Bachelor of Science in Civil Engineering** Sep 2018 – Aug 2022  
Isfahan University of Technology, Isfahan, Iran  
GPA: **3.93/4**

## PUBLICATIONS

1. F. Behnamfar, A. Ahmadi, A.M. Gohari Anaraki, **V. Mazrouei**, "Performance evaluation of concentrically braced frames equipped with pure bending yielding damper" *Structures, Volume 58, 2023*
2. Nasimifar, M., Hosseini, F., Mousavi, L., and **Mazrouei, V.** "Evaluation of Impacts of Climate Change on Pavement Performance and it's Economic and Environmental Costs." *Under Professor Review.*

## HONORS AND AWARDS

- Was **ranked 1st** among Ninety Students in Bachelor's Degree.
- Honored to be a Member of Iran's National Elites Foundation.
- Ranked in the Top 1% of the Nationwide University Entrance Exam for Bachelor of Science.

## WORK EXPERIENCE

### Teaching Assistant

Course: Steel Structures I Sep 2022 – Present  
Bashir Movahedian, Ph.D. | Isfahan University of Technology

- Prepared and Graded All Assignments
- Conduct Weekly Classes on Problem-Solving
- Held Weekly One-on-One Meetings with Students

### Teaching Assistant

Course: Steel Structures II Sep 2021 – Present  
Mojtaba Azhari, Ph.D. | Isfahan University of Technology

- Prepared and Graded All Assignments
- Resolved Problems Encountered by Students

### Structural Engineering Intern

PeySepar Structural Company | Isfahan, Iran July 2022 – Sep 2022  
Work Performed Included:

- Designed Residential Buildings with ETABS.
- Participated in Planning, Designing, and Reviewing Plans for Buildings.
- Designed Reinforced Concrete and Steel Structures.

### Structural Engineering Intern

AtashBad Structural Company | Isfahan, Iran July 2021 – Sep 2021  
Work Performed Included:

- Cost Estimation for the Construction of Residential Buildings.
- Prepared Report on Construction Progress.

## NOTABLE COURSES

### M.Sc.:

660. Advanced Structural Analysis **A**  
670. Design and Analysis of Steel Members **A+**

### B.Sc.:

Earthquake Engineering 17.9/20  
Steel Structures II 18.3/20  
Steel Structures I 18.3/20  
Design of Concrete Structures II 17.2/20  
Design of Concrete Structures I 18/20  
Structural Analysis I 18/20  
Strength of Materials I 17.8/20

## REFERENCES

### Ali Imanpour, Ph.D.

Associate Professor of Civil and Environmental Engineering  
Department, University of Alberta  
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### Davood Mostofinejad, Ph.D.

Professor of Civil Engineering  
Department, Isfahan University of Technology  
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### Mojtaba Azhari, Ph.D.

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### Mahdi Nasimifar, Ph.D.

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## ACADEMIC PROJECTS

### Python Coding for Structural Analysis of 2D-Frames and Trusses

Adviser: Professor Yong Li Fall 2023

- Python Coding Skills and Algorithm Development Enhanced

### Compressive Strength Prediction of Recycled Concrete by Using Artificial Neural Network and Multiple Linear Regression Models

Adviser: Dr. Qipei Mei Fall 2023

- Python Coding Skills and Algorithm Development Enhanced
- Several ML Methods Practiced

### Analysis and Design of a 9-Floor Concrete Structure in a Seismic Zone

Adviser: Professor Davood Mostofinejad Feb 2022 – July 2022

- ETABS and SAFE Skills in Concrete Structures Developed

### Analysis and Design of an 8-Floor Steel Structure in a Seismic Zone

Adviser: Professor Mojtaba Azhari Oct 2021 – Feb 2022

- ETABS and SAFE Skills in Steel Structures Developed
- Improved Organizing and Planning Skills

## VOLUNTEER ACTIVITIES

- Main Member of the Design team of the UoA's **Canadian National Steel Bridge Competition** Team Sep 2023 – Present
- Member of **Steel Center Research Group** Sep 2023 – Present
- Member of **Student Publication** of Civil Engineering Department Isfahan University of Technology Dec 2021 – Jul 2023
- President of Civil Engineering **Student Society** Isfahan University of Technology Sep 2021 – Sep 2022
- Member of the **Student Executive Committee** of the 13<sup>th</sup> national Congress on Civil Engineering May 2022
- Member of Civil Engineering **Student Society** Isfahan University of Technology Sep 2019 – Sep 2021

## COURSES AND CERTIFICATES

### Machine Learning Specialization

Stanford University | Coursera, Online | 18 hours

### Seismic Design of Steel Structures

Mojtaba Azhari, Professor of Civil Engineering Department of Isfahan University of Technology | Isfahan, Iran | 40 hours

### Scientific Article Writing

Pezhvak-Danesh Group | OxfordCert Universal Academy, Online | 8hours

### Plastic Analysis and Design of Structures

Nasrin Jafari, Assistant Professor of Civil Engineering Department of Isfahan University of Technology | Isfahan, Iran | 40 hours

### Maintenance, Repair, and Retrofit of Structures

Payam Asadi, Associate Professor of Civil Engineering Department of Isfahan University of Technology | Isfahan, Iran | 30 hours

### Design of Industrial Structures

Bashir Movahedian, Associate Professor of Civil Engineering Department of Isfahan University of Technology | Isfahan, Iran | 30 hours