

## KAVEH BARRI

1133 Ashland RD, #307, MO 65201  
Columbia, Missouri  
Email: [kbh7b@mail.missouri.edu](mailto:kbh7b@mail.missouri.edu)  
Tel: +1 573 529 6478

### EDUCATION

---

- PhD Student, Civil Engineering, University of Missouri-Columbia 2018-2023
- MSc in Civil Engineering, Sahand University of Technology, Tabriz, Iran 1998-2002  
Government Scholarship  
Cumulative GPA: 3.7 (16.30 out of 20)  
Thesis: Lagrangian Formulation for Geometrical Nonlinearity of 3-Dimensional Frames
- BSc in Civil Engineering, Tabriz University, Tabriz, Iran 1994-1998  
Cumulative GPA: 3.2 (15.39 out of 20)

### PUBLICATIONS AND CONFERENCES

---

- Mirzahosseini M., Jiao P., **Barri K.**, Riding K.A., Alavi A.H., “New machine learning prediction models for compressive strength of concrete modified with glass cullet” *Engineering Computations, Emerald*, in press, 2019. [DOI: 10.1108/EC-08-2018-0348] [ISI, IF= 1.177]
- Davami O., Jahangiri B., **Barri K.**, Buttlar W.G., Alavi A.H., “Smartphone-based molecular sensing for advanced characterization of asphalt concrete materials” *Measurement, Elsevier*, Under Review. [ISI, IF= 2.218]
- Bolandi H., **Barri K.**, Alavi A.H., “Bond strength prediction of FRP-bar reinforced concrete: A multi-gene genetic programming approach”, *The Genetic and Evolutionary Computation Conference (GECCO 2019)*, Prague, Czech, Accepted.

### STUDIES AND REPORTS

---

- Concrete Damages Study in Ring Foundation of Cylindrical Storage Tanks Due to Expansion and Contraction of Tanks and Proposition the Repair Method, Esfahan Oil Refinery.
- Effects of Impact on Concrete Buildings.
- Using new technologies in Building materials.
- Dynamic Analysis for Design of Rotary Equipment Foundations.
- Modelling and Analysis of the Masonry Bridge in Ilam Road and Proposition the Strengthening Design.
- Concrete Damage Study in a Foundation Due to Execution Mistakes and Proposition of Repair Method.
- Strengthening Design of the Existing Steel Structure in order to Changing in Loading.
- Lagrangian Formulation for Geometrically Nonlinear Analysis of Bending Elements.
- Preparing a code in Fortran and Verifying with ANSYS and LUSAS Finite Element Software for Elastic Instability Analysis of 3-Dimensional Frames.
- Preparing Code in Fortran and Verifying with ANSYS and LUSAS Finite Element Software for Elastic Instability Analysis of 2-Dimensional Frames.

### RESEARCH INTERESTS

---

- Structural Health Monitoring Systems
- Nondestructive Testing and Evaluation (NDT&E) Methods
- Energy Harvesting/Self-Powered Sensors
- Composite Concrete Materials
- Machine Learning
- Numerical Methods in Structural Analysis

## WORK EXPERIENCE

---

- Research Assistant at the University of Missouri-Columbia, USA
- I worked as a Civil and Structure Designer, Supervisor, Manager in various engineering companies in the following areas from 2002 to 2016:
  - Design of steel & reinforced concrete buildings
  - Design of industrial structures
  - Supply the Calculation Note and other technical required documents
  - Control of Detail & Shop drawings
  - Quantity surveying and supplying MTO, according to project documents
  - Construction and fabrication supervising of buildings & structures
  - Supply of Civil Basic Designs Document
  - Design Procedures Preparation
  - Preparing the Tender Documents
  - Road Design and construction

## TEACHING EXPERIENCES

---

- Graduate Teaching Assistant, Department of Civil and Environmental Engineering, University of Missouri, Columbia, 2018-2019.
- Instructor of Statics, Reinforced Concrete and Steel Structure Design, Azad University, Roudehen, Iran, 2009-2014.
- Instructor of Land & Civil Design Software, Tehran, Iran, 2010-2014.
- Instructor of Road Design, Tehran, Iran, 2010-2014.
- Instructor of Structural Software Including SAP2000, SAFE, ETABS, Tehran, Iran, 2010-2014.
- Instructor of Reinforced Concrete and Steel Structure Design, Tehran, Iran, 2010-2014.
- Instructor of Statics, Strength of Materials, Structural Analysis, Design of Steel Structures, Azad University, Tabriz, Iran, 2004-2009.
- Teaching Assistant, Department of Civil and Environmental Engineering, Sahand University of Technology, Tabriz, Iran, 2000-2002.

## CERTIFICATES

---

- ISO 9001/2008, 2011
- TS 29001/2010, 2011
- LRFD Seismic Analysis and Design of Steel Structures, 2011
- Teamwork and Interpersonal Skills Workshop, 2011
- PDMS, 2012
- Critical Thinking, 2012
- Tekla Structures, 2013
- Comprehensive Project Management Based on PMBOK 5th Edition, 2013
- NDT Methods in Structural Inspection, 2013
- Welding Inspection Course, 2013
- Negotiation Methods, 2014
- Claim Management, 2014
- Special Concrete and Special Placing Concrete Methods, 2014
- Tall Building Structural Systems, 2014
- Connection Design In Steel Structures, 2014
- Excavation Techniques, Geotechnics and Supporting Structures Workshop, 2015
- Formwork and Stripping Techniques Workshop, 2015
- Construction And Controlling Methods for Steel Structure Connections, 2015
- Welding Engineering, 2015
- English language Courses (Market Leader), 2014-2015
- Labor Laws and Administrative Affairs, 2015
- Applied Principles of contract, 2015
- Balanced Scorecard Workshop (BSC), 2016

### **COMPUTER SKILLS**

---

- Structural Analysis and Design Software: SAP2000, SAFE, ETABS.
- Civil Design Software: Civil 3D Design, Autodesk Land and Civil Design.
- Drafting: AutoCAD.
- Civil MTO & Cost Estimation: TADBIR, TAKSA.
- Project Control: Microsoft Project.
- General: Windows, Microsoft Office, Internet.
- Familiar with: Tekla Structures, LUSAS, ANSYS, ABAQUS, AFES, MathCad, PDMS, Navisworks, Fortran, Basic, MATLAB.

### **ACTIVITIES & VOLUNTEER WORKS**

---

- Cooperating in 5th Civil Engineering Conference, 1998.
- Cooperating in Preparation of Iran's dam specifications for Tabriz University Engineering Library, 1997.
- Working unpaid for Mahak-charity (supports the children suffering from cancer)
- Helping to the victims of Tabriz Earthquake, Summer 2012
- Teaching to high school students in Ilam's villages, 2006-2008

### **PROFESSIONAL MEMBERSHIP**

---

- Member of the Iranian Construction Engineering Organization, having Top Grade in Structural Design, Supervising and Execution.

### **AWARDS AND HONORS**

---

- Ranked 240th (Top 1%) among approximately 25,000 participants in the national university entrance exam for M.Sc. (Civil Eng.), 1998.
- Ranked 1880th (Top 1%) among approximately 400,000 participants in the national university entrance exam for B.Sc., 1994.