



Professional Background

Professor	2008 - ...	Civil Engineering Department, Sharif University of Technology , Tehran, Iran
Associate Professor	2003 - 2008	Civil Engineering Department, Sharif University of Technology , Tehran, Iran
Visiting Associate Professor	2004 - 2005	Mechanical Engineering Department, University of Maryland, Baltimore County , Baltimore, MD 21250, USA
Visiting Assistant Professor	2002 - 2003	Laboratoire de Mecanique des Solides, Ecole Polytechnique , 91128 Palaiseau, Cedex, France
Assistant Professor	2000 - 2003	Civil Engineering Department, Sharif University of Technology , Tehran, Iran
Research Officer	1998 - 2000	Mechanical Engineering Department, University of Wales Swansea , Swansea SA2 8PP, UK
Research Scholar	1994 - 1998	Civil Engineering Department, University of Wales Swansea , Swansea SA2 8PP, UK
Lecturer	1992 - 1994	Civil Engineering Department, Isfahan University of Technology , Isfahan, Iran

Educational Background

PHD	1995 - 1998	Civil Engineering Department, University of Wales Swansea , Swansea SA2 8PP, UK
MSC	1989 - 1991	Civil Engineering Department, Isfahan University of Technology , Isfahan, Iran
BSC	1984 - 1989	Civil Engineering Department, Isfahan University of Technology , Isfahan, Iran

Member of Scientific Committee

Member of Editorial Board of *Finite Elements in Analysis and Design*

Elsevier (2014 – now)

Member of Editorial Board of *European Journal of Computational Mechanics*

Taylor & Francis (2013 – now)

Member of Editorial Board of *Computational Methods in Civil Engineering*

University of Guilan (2010 – now)

Editor of *SCIENTICA IRANICA, Transactions A: Journal of Civil Engineering*

Sharif University of Technology (2008 – 2011)

Member of Editorial Board of *SHARIF, Journal of Science and Technology*

Sharif University of Technology (2006 – now)

Member of the Academy of Sciences of Iran

Tehran, Iran (2010 – now)

Co-Editor of the *11th International Symposium on Plasticity and Its Current Application*

Kauai, Hawaii, January 3-8, 2005

Chairman of the *First National Congress on Civil Engineering*

Sharif University of Technology, May 12-14, 2004

Appeared in *Who's Who in Computational Science and Engineering 2003*

Saxe-Coburg Publications, United Kingdom, 2003

Awards

- 2014** **Distinguished Professor of Civil Engineering** (Teacher's day)
Sharif University of Technology, Tehran, Iran
- 2013** **Distinguished Researcher of Civil Engineering** (Research week)
Sharif University of Technology, Tehran, Iran
- 2012** **National Distinguished Professor**
National Foundation for Science and Technology (*Iran's National Elites Foundation*), Tehran, Iran
- 2011** **Distinguished Researcher of Civil Engineering** (Research week)
Sharif University of Technology, Tehran, Iran
- 2010** **Distinguished Professor of Civil Engineering** (Teacher's day)
Sharif University of Technology, Tehran, Iran
- 2009** **National Distinguished Professor**
Ministry of Science, Research and Technology, Tehran, Iran
- 2008** **Distinguished Civil Engineering Research Award**
Building and Housing Research Center, BHRC, Tehran, Iran
- 2008** **Distinguished Researcher of Civil Engineering** (Research week)
Sharif University of Technology, Tehran, Iran
- 2007** **Distinguished Scientist of Iranian Civil Engineering**
Asian Civil Research Institute, Tehran, Iran
- 2007** **Book Prize Award for the Best Engineering Book**
Asian Civil Research Institute, Tehran, Iran
- 2007** **Distinguished Researcher of Civil Engineering** (Research week)
Sharif University of Technology, Tehran, Iran
- 2006** **Book Prize Award for the Best Engineering Book**
Ministry of Science, Research and Technology, Tehran, Iran
- 2005** **National Distinguished Researcher**
Ministry of Science, Research and Technology, Tehran, Iran
- 2005** **Distinguished Researcher of Civil Engineering** (Research week)
Sharif University of Technology, Tehran, Iran
- 2004** **Khwarizmi International Award**
Iranian Research Organization for Science and Technology, Tehran, Iran
- 2003** **Distinguished Researcher of Civil Engineering** (Research week)
Sharif University of Technology, Tehran, Iran
- 2002** **French government's BOURSE**
Laboratoire de Mecanique des Soildes, Ecole Polytechnique, Palaiseau, France
- 1998** **European Powder Metallurgy Association Thesis Competition**
PM98 World Congress, Granada, Spain
- 1997** **Ninth Robert J. Melosh Medal Competition**
School of Engineering, Duke University, North Carolina, USA
- 1996** **Eighth Robert J. Melosh Medal Competition**
School of Engineering, Duke University, North Carolina, USA

Technical Reviewer

International Journal for Numerical Methods in Engineering
International Journal of Solids and Structures
International Journal of Mechanical Sciences
International Journal of Plasticity
Computer Methods in Applied Mechanics and Engineering
Computational Mechanics
Finite Elements in Analysis and Design
European Journal of Computational Mechanics
Engineering Fracture Mechanics
Engineering Computations
Applied Mathematical Modelling
Journal of Materials Processing Technology
Soil Dynamics and Earthquake Engineering

Research Projects

- 2013 - 2014** "Modeling of crack propagation in saturated/unsaturated porous soil via the extended finite element method", Office of Research, Civil Engineering Department, Sharif University of Technology, Tehran, **for the Iran National Science Foundation (INSF).**
- 2012 - 2013** "Modeling and optimization of the cold and warm powder compaction processes using an efficient frictional contact algorithm and a thermal pressure-dependent plasticity model", Office of Research, Civil Engineering Department, Sharif University of Technology, Tehran, **for the Iran National Science Foundation (INSF).**
- 2011 - 2012** "Modeling of crack and discontinuity in porous saturated soil with extended finite element method", Office of Research, Civil Engineering Department, Sharif University of Technology, Tehran, **for the Iran National Science Foundation (INSF).**
- 2009 - 2011** "Multi-scale modeling of nano-materials using parallel-processing", Office of Research, Civil Engineering Department, Sharif University of Technology, Tehran, **for the Iran National Science Foundation (INSF).**
- 2008 - 2009** "Modeling of fracture and crack propagation using adaptive finite element technique", Office of Research, Civil Engineering Department, Sharif University of Technology, Tehran, **for the Iran National Science Foundation (INSF).**
- 2006 - 2008** "Modeling of large plasticity deformations and contact problems using XFEM technique", Office of Research, Civil Engineering Department, Sharif University of Technology, Tehran, **for the Iran National Science Foundation (INSF).**
- 2006 - 2008** "An integrated computer software for 3D numerical modeling of earth and rockfill dams", Office of Research, Civil Engineering Department, Sharif University of Technology, Tehran, **for the Iran Water Resource Management Organization (IWRMO).**
- 2003 - 2005** "A computer software for numerical modeling of earth and rockfill dams", Office of Research, Civil Engineering Department, Sharif University of Technology, Tehran, **for the Iran Water Resource Management Organization (IWRMO).**

2003 - 2004	"Pre- and post-processing computer software for numerical simulation of powder forming processes", Office of Research, Civil Engineering Department, for Sharif University of Technology, Tehran.
2002 - 2003	"A finite element software for simulation of powder forming processes", Office of Research, Civil Engineering Department, for Sharif University of Technology, Tehran.
2001 - 2003	"Localization phenomena in saturated and semi-saturated earth dam", Office of Research, Civil Engineering Department, Sharif University of Technology, Tehran, for the Iran Water Resource Management Organization (IWRMO).
2001 - 2002	"Application of quasi-nonlinear analysis in finite element modelling of powder forming processes", Office of Research, Civil Engineering Department, for Sharif University of Technology, Tehran.
2000 - 2001	"Numerical modelling of localization phenomena in dynamic loading", Office of Research, Civil Engineering Department, for Sharif University of Technology, Tehran.
1998 - 2000	"Characterisation and optimisation of bulk recovery processes", Office of Research, Mechanical Engineering Department, University of Wales Swansea (UK), for the IMCO Recycling (UK) Ltd.
1995 - 1998	"Finite element simulation and adaptive remeshing of metal powder forming processes", Office of Research, Civil Engineering Department, for the University of Wales Swansea (UK).
1994 - 1995	"Dynamic analysis of fluid-saturated porous media by the boundary element method", Office of Research, Civil Engineering Department, for Isfahan University of Technology, Isfahan.

Software Design

SUT_DAM (version 4.0)

An integrated software environment for geotechnical engineering

For more information about the software see the following paper:

A.R. Khoei, S.A. Gharehbaghi, A.R. Azami and A.R. Tabarraie,
 'SUT-DAM: An integrated software environment for multi-disciplinary geotechnical engineering',
Advances Engineering Software, **37**, 728-753, 2006.

Teaching

Static, Mechanic of Materials, Advanced Mechanic of Materials, Finite Element Method, Advanced Finite Elements, Extended-FEM Method	(UG) (UG) (UG) (PG) (PG) (PG)	2000 - now	Sharif University of Technology, Civil Engineering Department, Tehran, Iran
Finite Elements in Elasticity and Plasticity	(PG)	2005	University of Maryland, Baltimore, Mechanical Engineering Department, Baltimore, USA

Research Interests

Computational Nano-mechanics
Computational plasticity (FEM, X_FEM and Meshless methods)
Computational Fracture Mechanics
Computational Soil Mechanics
Large deformation analysis
Error estimation and adaptivity for plasticity problems
Contact and frictional modelling
Strain localization analysis

Graduate Students Supervised

PHD Students

2014	P. Broumand	Extended-FEM modeling of dynamic/cyclic ductile fracture propagation using a coupled visco-plasticity/damage model
2013	H. DorMohammadi	A temperature-dependent multi-scale model for mechanical and thermal properties of Silicon nano-structures
2012	O.R. Biabanaki	Polygonal-FEM modeling of large deformation contact-impact problems on non-conformal meshes
2011	T. Mohamadnejad	Extended-FEM modeling of cohesive crack growth in multi-phase porous media
2010	O.R. Barani	Modeling of cohesive crack propagation in saturated-unsaturated porous media
2009	H. Moslemi	3D modeling of large deformation in crack propagation of brittle and ductile materials
2008	S. Keshavarz	Numerical modeling and shape optimization of cold and hot metal powder forming processes
2008	M. Anahid	Extended arbitrary Lagrangian-Eulerian finite element method in large plasticity deformations of solid mechanics
2007	S.A. Gharehbaghi	3D adaptive finite element analysis in large plasticity deformation of continuum mechanics problems
2002	A. Bakhshiani	Finite deformation of elasto-plasticity of pressure sensitive materials based on endochronic plasticity

MSC Students

2014	A. Imani	A temperature-dependent multi-scale modeling of fatigue crack growth in nano-materials
2014	A. Shafieyoon	Multi-scale modeling of heterogeneous nano-materials using a representative volume element
2014	H. Karimi	Dynamic multi-scale modeling of dislocations in nano-crystalline materials
2014	E. Abedian	Numerical modeling of two-phase hydraulic fracture propagation in fractured reservoirs using X-FEM technique
2014	N. Hosseini	Modeling of cohesive crack propagation in fractured reservoirs with two-phase fluid flow using X-FEM method
2014	H. Akhondzadeh	Modeling stress singularities in isotropic composite materials with X-FEM technique
2013	O. Alizadeh	A concurrent multi-scale method for crack growth simulation with the X-FEM method
2013	M.R. Hirmand	Modeling of hydraulic fracture propagation in fractured porous media using the X-FEM method
2013	R. Mohammadi	Modeling of hydraulic fracture propagation in fractured non-isothermal saturated porous media with X-FEM
2013	M. Babaei	Molecular dynamic modeling of nano-powder compaction
2013	F. Hosseinzadeh	Molecular dynamics simulation of gold nano-particles with clustered and colloid models in the aquatic environments
2013	F. Shirazian	Quantum effects of electro-magnetic fields on Gold nano-particles for biomedical applications
2012	F. Jahanbakhshi	A concurrent multi-scale method in modeling of heterogeneous nano-structures
2012	M. Babazadeh	Modeling the dynamic cohesive crack growth with the XFEM technique in saturated porous media
2012	R. Yasbelaghi	Modeling of crack propagation without remeshing based on the polygonal finite element method
2011	A. Aramoon	A concurrent multi-scale method in modeling the mechanical behavior of crystalline nano-structures
2011	M. Eghbalian	Modeling the dynamic crack growth in ductile materials with the continuum damage model and adaptive mesh refinement
2011	S. Moallemi	Modeling of crack propagation in non-isothermal saturated porous media using XFEM
2011	H. Saffar	Thermo-mechanical modeling of contact–impact bodies in large deformations with the Taylor–Galerkin method
2010	P. Ghahremani	A temperature-dependent hierarchical multi-scale method in modeling of surface effects in nano-materials
2010	M. Sharifi	3D cohesive fracture modeling of non-planar crack growth with the adaptive finite element technique
2010	M. Vahab	Crack growth modeling in saturated porous media using X-FEM technique
2010	L. Farrokhpour	Modeling two-phase fluid porous media using X-FEM technique
2010	R. Eslahi	A nonlinear contact constraint method in modeling the contact-impact problems
2010	M. Zeinali	Modeling of frictional contact-impact in large finite element deformations

2009	S. Mohajeri	Dynamic modeling of large deformation contact problems using X-FEM
2009	P. Broumand	XFEM modeling of elasto-plastic deformation in crack propagation using coupled plasticity-damage model
2009	E. Haghighat	Modeling of saturated-unsaturated porous media using XFEM technique
2009	M.H. Poormatin	Modeling of crack propagation in brittle material under dynamic loading
2009	P. Banihashemi	Implementation of parallel processing method in molecular dynamics analysis of nano-composites
2008	M.J.A. Qomi	Multi-scale hierarchical modeling of surface effect in crystalline nano-structures via Cauchy-Born hypothesis
2008	M. HajiBabai	Implementation of couple damage-plasticity model in non-linear fracture mechanics
2008	M. Soleymani	Application of neural network in adaptive finite element analysis
2008	M. TaheriMusavi	Implementation of augmented-Lagrangian formulation in large deformation contact problems
2008	P. MirKhosravi	Implementation of mixed u-p formulation in XFEM analysis of incompressible material
2007	H. Azadi	Modeling of crack propagation via adaptive finite element method
2007	K. Karimi	XFEM modeling of shear band localization using Cosserat theory
2007	I. Yadegaran	Modeling of contact problems using XFEM technique
2007	M. Zarrinfar	Numerical analysis of partially saturated soils
2007	O.R. Biabanaki	3D modeling of contact problems using XFEM technique
2006	S. Yadegari	3D modeling of shear band localization using Cosserat theory
2006	H. DorMohammadi	A single cap plasticity model for isotropic-kinematic material behavior
2006	K. Shahim	Implementation of ALE modeling in XFEM technique
2005	A.R. Forghani	Implementation of XFEM in modeling of cohesive crack propagation
2004	M. Nikbakht	Application of XFEM in numerical modeling of contact problems
2004	A. Shamloo	Application of XFEM in numerical modeling of double-surface plasticity model
2004	M. Samimi	Application of RKPM in numerical simulation of pressure-sensitive material using cap plasticity model
2003	M. Anahid	Application of arbitrary Lagrangian-Eulerian methods in large elasto-plastic deformation
2003	A. Riahi	Error estimation and adaptivity in plasticity problems
2003	S. Azizi	3D numerical simulation of powder forming processes using a cap plasticity model
2003	R. Alizadeghan	Computational modeling of elasto-plastic behavior using meshless methods
2003	N. Jamali	Modeling of saturated soils under cyclic loading with isotropic and kinematic hardening models
2003	S. Abrishami	Numerical modeling of unsaturated geotechnical structures based on three-phases solid-fluid-air behavior
2002	A.R. Tabarraie	Finite element modeling of plastic deformation in strain localization

- | | | |
|------|----------------|---|
| 2002 | S. Keshavarz | Pre- and post-processing computer software for modeling of large elasto-plastic deformation problems |
| 2002 | H.R. Irannejad | Mathematical and FE modeling of mechanical interaction of FRP rods with concrete |
| 2002 | A.R. Azami | Dynamic analysis of rockfill dams using a double-surface plasticity model in saturated and semi-saturated media |
| 2001 | A.R. Salimi | Computational of elastic fields for interfacial cracks using element-free-Galerkin method |