Curriculum Vitae

Mohammad Salahi Nezhad

Department of Industrial and Materials Science, Chalmers University of Technology, Gothenburg, Sweden

PERSONAL INFORMATION

Date of Birth	November, 9th, 1993
Nationality	Iranian
Gender	Male
Telephone	(+46) 76 - 939 – 71 17
Email	salahi@chalmers.se mohammadsalahinezhad@gmail.com
LinkedIn	https://www.linkedin.com/in/mohammad-salahi-nezhad-135a7a164/

EDUCATION

Chalmers University of Technology — Gothenburg, Sweden

- Doctoral student in Material and Computational Mechanics — Sep. 2019 -
  Project: *Growth of rolling contact fatigue cracks*.
  Supervisors: Prof. Fredrik Larsson, Anders Ekberg and Elena Kabo

Sharif University of Technology — Tehran, Iran

- Master of Science in Structural Engineering — Sep. 2015 - Jan. 2018
  GPA (Without Thesis): 17.25/20 – 3.88/4
  Thesis: *Multiscale Modeling of Cohesive Crack Growth based on XFEM and Damage Model*.
  Supervisor: Prof. Amir Reza Khoei

Shiraz University — Shiraz, Iran

- Bachelor of Science in Civil and Environmental Engineering — Sep. 2011 - Sep. 2015
  GPA: 18.39/20 – 3.92/4

Towheed Iranian School — Dubai, United Arab Emirates

- High School Diploma in Mathematics and Physics Discipline. — Sep. 2007 - Sep. 2011
  GPA: 19.73/20 – 4/4

RESEARCH INTERSTS

- Damage Mechanics
- Multiscale Modeling
- Homogenization Techniques
- Crack Growth Simulation

HONORS

- Awarded as one of 4 top students of Shiraz University by "Haj Mohammad Hassan Kazemi Shirazi Endowment". 2016
- Ranked within top 0.3% among approximately 35,400 participants of nationwide M.Sc. civil engineering program entrance exam. 2015
- Accepted as an exceptionally talented student for graduate studies (exemption from national entrance exam) in structural engineering at Shiraz University, AmirKabir University of Technology and Sharif University of Technology. 2015
- Awarded as the best B.Sc. student of civil and environmental engineering department by Shiraz University alumni association. 2015
- Ranked 1st among 55 B.Sc. students of class 2011 of Civil and Environmental Engineering Department. 2015
- Top Mark of 34 courses of 65 courses during B.Sc. program. 2011 - 2015
- Ranked within top 2.2% among approximately 284,000 participants of nationwide university entrance exam in the Mathematics and Physics field. 2011
- Ranked 1st in high school form junior to senior. 2007 - 2011
- Ranked 1st in cultural and experimental competitions among students of Persian schools in Dubai, United Arab Emirates. 2007 - 2011

RESEARCH EXPRIENCES

Sharif University of Technology Tehran, Iran

Research Assistantship at Parallel Processing Center Aug. 2016 – Dec. 2017

Supervisor: Prof. Amir Reza Khoei

In this research, multi-scale modeling of mixed-mode cohesive crack growth in quasi-brittle materials is presented, in which macro-cracks are modeled using XFEM and its microscopic sample exhibits diffusive damage. For more realistic modeling of crack growth in heterogeneous media, some analyzes are performed on microscopic samples. After the appropriate microscopic crack initiation and crack growth direction criteria are selected, a comparative study is performed employing different criteria of crack initiation and growth direction for cohesive crack growth in heterogeneous media. The first multiscale model is based on the microscopic crack initiation and propagation criteria and the second multiscale model is on the basis of macroscopic crack initiation and propagation criteria. The validity of the proposed method is shown by comparing the results of multiscale models against DNS model (a mono-scale model that exhibits diffusive damage).

Shiraz University Shiraz, Iran

Research Assistantship at R-factor Determination Project Sep. 2014 – Dec. 2014

Supervisor: Prof. Mohammad Reza Banan

The objective of this research was to show that the R-factors that given by seismic design codes were overestimated. The project was the master thesis's extension of one of Prof. Banan's master graduated student. My duty was to model buildings with different plans, heights, and R-factors in ETABS. After finalizing design in ETABS, I modified some specific parts of the input files of OPENSEES based on ETABS outputs.

Research Assistantship at Abrasion-Resistant Concrete Production Project May 2015 – Aug. 2015

Supervisor: Dr. Alireza Vosoughi

The objective of this research was to produce an abrasion-resistant concrete. The research team consisted of three members. My duty was to test cement and aggregates to determine their physical properties. After that, I wrote a concrete mix design based on our desired strength and material properties that we obtained in the previous part. Finally, I performed 28-day compressive strength of cylindrical specimens to investigate our concrete mix design whether adequate or not.

TEACHING EXPRIENCES

Shiraz University Shiraz, Iran

- Theory of Elasticity, Teaching Assistant, Dr. Broumand — Fall 2018
- Structural Analysis I, Teaching Assistant, Dr. Takalloozadeh — Fall 2018
- Design of Steel Structures by ETABS (ETABS Tutorial), Instructor — Spring 2018
- Advanced Finite Element Method, Teaching Assistant, Dr. Broumand — Spring 2018
- Design of Steel Structures I, Teaching Assistant, Dr. Banan — Spring 2015
- Fluid Mechanics, Teaching Assistant, Dr. Amiri — Spring 2015
- Design of RC Structures II, Teaching Assistant, Dr. Anvar — Spring 2015
- Design of RC Structures I, Teaching Assistant, Dr. Anvar — Fall 2014

WORK EXPERIENCE

Internship at "Marvast Rah" Company, Summer 2015 Shiraz, Iran

Supervisor: Dr. Amiri

TECHNICAL SKILLS

- Programming Language: MATLAB
- Software: ETABS, SAP200, SAFE, SeismoSignal, AUTOCAD (Certificated), ICDL (Certificated), Abaqus (Elementary expertise)

LANGUAGUES

- Persian (Native)
- English (Fluent)

ENGLISH TEST SCORE

- TOEFL iBT (Sep. 29th, 2018) : 95/120 (Reading: 29/30, Listening: 21/30, Speaking: 21/30, Writing: 24/30)

SELECTED COURSE PROJECTS

Sharif University of Technology Tehran, Iran

- Finite Element Method II, Prof. Khoei Spring 2016
  - Development of a FEM code for static contact problems in MATLAB.
  - Development of a FEM code for plasticity in MATLAB.
  - Development of FEM codes for large deformation in MATLAB.
- Advanced Reservoir Simulation, Prof. Pishvaie Spring 2016
  - Development of FDM codes for modeling two and three phase of fluid flow modeling in porous media in MATLAB.
  - Development of FDM codes for solving an ODE using different time discretization methods in MATLAB.
- Finite Element Method I, Prof. Khoei Fall 2015
  Development of a FEM code for evaluate infinitesimal deformation and stress in MATLAB.
- Vibration of Structures, Dr. Ahmadizadeh Fall 2015
  - Development of a code for Newmark Method for linear and nonlinear systems.
  - Development of a code for response spectra (displacement, velocity, acceleration) of SDOF.

Shiraz University Shiraz, Iran

- Steel Structures Project, Dr. Banan Spring 2015
  Development of spreadsheets for designing base plates in steel structures in Microsoft Excel.
- Concrete Structures Project, Prof. Maheri Spring 2015
  Development of spreadsheets for designing various concrete structures members in Microsoft Excel.
- Steel Structures II, Dr .Banan Spring 2014
  Development of spreadsheets for designing some types of steel connections in Microsoft Excel.