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h-index (Scopus):

9

Citations (Scopus):

420

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Structural and Earthquake Engineering










## Research Interests

#	Title	Start date
1	Fracture & fatigue mechanics	
2	Nonlinear solid mechanics	
3	Plasticity & crystal plasticity models	
4	Numerical technology development (MPM, IGA, XFEM, Phase Field, Multiscale Ab-initio/MD/Micromechanics/Continuum)	
5	Parallel Computing (Cross-platform highly-object-oriented generic C++, OpenMP & MPI for CPU, CudaC for GPU)	

## Supervised MSc Theses

#	Thesis title	By	Date
1	Improvement of the classical theory of fracture mechanics based on the theory of material instability to enable accurate simulation of cracks in graphene	Mohammad Madadi &	September 2021
2	Development of continuum fracture models for 2D nanomaterials to study their reinforcing effects as an additive in concrete	Babak Mosavi &	May 2021

## Taught Courses

#	Course title	Description	Headlines	Date
1	Large Deformations of Solids Theory	This course provides an introduction to the basic elements of continuum mechanics (in the presence of large deformations) in a sufficiently rigorous manner		Fall 2021
2	Theory of Structure (I)	Stability and indeterminacy, Influence lines, Deflection of the structures; Analysis of the indeterminate structures		Fall 2021
3	Fracture Mechanics	Griffith's theory, Classical linear and nonlinear fracture mechanics, Fatigue, Computational methods		Spring 2021
4	Strength of Material (II)	Basic concepts of the stress and strain tensors; Techniques to determine the deflections of the structures; Basic concepts of the structural stability		Spring 2021
5	Theory of Structure (I)	Stability and indeterminacy, Influence lines, Deflection of the structures; Analysis of the indeterminate structures		Spring 2021
6	Theory of Structure (I)	To classify the structures to determinate, indeterminate, or unstable; To learn how to determine the internal forces and moments in the beams, frames, and trusses; To determine the influence lines for the statically determinate structures; To apply t		Fall 2020
7	Large Deformations of Solids Theory	This course provides an introduction to the basic elements of continuum mechanics (in the presence of large deformations) in a sufficiently rigorous manner		Fall 2020