

Biography

BSc in Civil Engineering (1994-1998), Sharif University of Technology, Tehran, Iran.

MSc in Structural Engineering (1998-2000), Sharif University of Technology, Tehran, Iran.

PhD in Structural Engineering (2001-2005), Sharif University of Technology, Tehran, Iran.

Courses

Courses

Advanced Mechanics of Materials
Elasticity Theory
Plasticity Theory
Fracture Mechanics

Research

Research Interests

Damage-Plasticity Constitutive Modeling of Quasi-Brittle Materials
Mesoscale Modeling of Heterogeneous Materials
Discrete/Lattice Modeling
Mechanical Behavior of Cellular Solids (Honeycombs, Porous Metals, and Foams)
Ductile Fracture in Metals under Monotonic and Cyclic Loads
Impact Dynamics and Structural Crashworthiness
Advanced Numerical Method (X-FEM, LDPM, ...)

Book Chapters

Sharif Shahbeyk (2012). *Yield/Failure Criteria, Constitutive Models, and Crashworthiness Applications of Metal Foams*. In N. Dukhan (Ed.) **Metal Foams: Fundamentals and Applications**, DEStech Publications, pp. 131-214.

Refereed Journal Publications

H. Ramezansafat, **S. Shahbeyk**. **The Chaboche hardening rule: A re-evaluation of calibration procedures and a modified rule with an evolving material parameter**. *Mechanics Research Communications* (Accepted).

M. Mousavi Rahimi, **S. Shahbeyk**. **A systematic approach for the modeling of replicated foams**. *Advanced Engineering Materials* (2015); Vol 17(6).

F. Javidan, **S. Shahbeyk**, and M. Safarnejad. **Lattice discrete particle modeling of compressive failure in hollow concrete blocks**. *Computers and Concrete* (2014); Vol 13(4).

H.R. Amiri, A.A. Aghakouchak, **S. Shahbeyk**, and M.D. Engelhardt. **Finite element simulation of ultra low cycle fatigue cracking in steel structures**. *Journal of Constructional Steel Research* (2013); Vol 89.

S. Shahbeyk, M. Yaghoobi, and A. Vafai. **Explicit dynamics X-FEM simulation of heterogeneous materials**. *Finite Elements in Analysis and Design* (2012); Vol 56.

S. Shahbeyk, M. Hosseini, and M. Yaghoobi. **Mesoscale finite element prediction of concrete failure**. *Computational Materials Science* (2011); Vol 50(7).

S. Shahbeyk, D. Rahiminejad, and N. Petrinic. **Local solution of the stress and strain fields in the necking section of cylindrical bars under uniaxial tension**. *European Journal of Mechanics - A/Solids* (2010); Vol 29(2).

S. Shahbeyk, and A. Abvabi. **A numerical study on the effect of accident configuration on the pedestrian lower extremity injuries**. *Scientia Iranica* (2009); Vol 16(5).

S. Shahbeyk, N. Petrinic, and A. Vafai. **Numerical modelling of dynamically loaded metal foam-filled square columns**. *International Journal of Impact Engineering* (2007); Vol 34(3).

S. Shahbeyk, A. Vafai, and N. Petrinic. **Axial crushing of metal foam-filled square columns: Foam density distribution and impactor inclination effects**. *Thin-Walled Structures* (2005); Vol 43(12).

S. Shahbeyk, A. Vafai, and H. Estekanchi. A parametric study of the bending crash performance of empty and metal foam-filled box-beams. International Journal of Crashworthiness (2004); Vol 9(4).

A. Vafai, **S. Shahbeyk**, and A. Kamalan. **A modified approach to determine the energy dissipation capacity of the basic folding mechanism.** Thin-Walled Structures (2003); Vol 41(9).

S. Shahbeyk, A. Kamalan, and M. Osanlou. A comparative study on vehicle aluminum and steel hood assemblies. International Journal of Crashworthiness (2003); Vol 8(4).