

Haim Waisman

Education

- Ph.D. in Civil Engineering (Computational Mechanics) Jan 2002-Dec 2005
Rensselaer Polytechnic Institute, Troy, NY
- M.Sc. in Aerospace Engineering (Structures), Oct 1999-Dec 2001
Technion-Israel Institute of Technology, Haifa, Israel
- B.Sc. in Aerospace Engineering, Oct 1995-Jun 1999
Technion-Israel Institute of Technology, Haifa, Israel

Academic Experience

- Associate Professor Jul 2013-present
Department of Civil Engineering and Engineering Mechanics, Columbia University, NY
- Assistant Professor Jul 2008-Jun 2013
Department of Civil Engineering and Engineering Mechanics, Columbia University, NY
- Postdoctoral Research Fellow Sep 2006-Oct 2007
Mechanical Engineering Department, Northwestern University, Evanston, IL
- Postdoctoral Research Fellow Nov 2005-Aug 2006
Scientific Computation Research Center (SCOREC), Rensselaer Polytechnic Institute, Troy, NY
- Summer Student Internship Program summer of 2002, 2003, 2004
Computer Science Research Institute (CSRI), Sandia National Labs, Livermore, CA

Non-academic Experience

- Senior Research Scientist, Oct 2007-May 2008
Global Engineering and Materials Inc., Columbia, MD

Certifications or Professional Registrations

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Current Membership in Professional Organizations

- Member of the American Association of Civil Engineers (ASCE)
- Member of the American Association of Mechanical Engineers (ASME)
- Member of the United States and International Associations for Computational Mechanics (USACM), (IACM)

Honors and Awards

- EMI Leonardo da Vinci Award, the ASCE-Engineering Mechanics Institute, Aug 2014.
- DOE-Early Career Award, Department of Energy, Advanced Scientific Computing Research (ASCR) program, May 2012.
- Finalist, The 18th Robert J. Melosh medal competition, Duke University, NC, Apr 2018
- Best Paper Award, 10th Copper Mountain Conference on Iterative Methods, Copper Mountain, CO, Apr 2006
- Best Paper Award, 12th Copper Mountain Conference on Multigrid Methods, Copper Mountain, CO, Apr 2005

Gutwirth Fellowship Award, Technion-Israel Institute of Technology, 2000-2001

Service Activities (within and outside of the institution)

Department representative to Committee on Instruction (COI) at the SEAS, 2012-2016.

Member of the department Graduate Committee (2009-present).

Departmental faculty search committees (2010, 2013, 2016).

Associate Editor, ASCE-Journal of Engineering Mechanics, Jan 2017-present

Chair of the technical committee, the 13th World Congress on Computational Mechanics, NYC, Jul 2018.

Elected chair of the Computational Mechanics committee at the ASCE-Engineering Mechanics Institute (EMI), Sep 2017-present

Selected to serve on a Technical Thrust Area for Manufacturing and Materials Processing at the United States Association for Computational Mechanics (2016-present)

Scientific exhibitor, Science Expo at the School at Columbia (K-8), Feb 2014, Feb 2016, Apr 2018

Important Publications and Presentations from the Past Five Years

- M. Mobasher, L. Berger-Vergiat and H. Waisman, Non-local formulation for transport and damage in porous media, *Computer Methods in Applied Mechanics and Engineering*, 324: 654-688, 2017.

- M. Arriaga and H. Waisman, Combined stability analysis of phase-field dynamic fracture and shear band localization, *International Journal of Plasticity*, 96:81-119, 2017.

-Y. Wang and H. Waisman, Material dependent crack-tip enrichment functions in XFEM for modeling interfacial cracks in bimetals, *International Journal for Numerical Methods in Engineering*, 12(11):1495-1518, 2017.

- L. Berger-Vergiat and H. Waisman, Domain Decomposition based preconditioners for monolithic solution of Shearbands, *Computer Methods in Applied Mechanics and Engineering*, 318:33-60, 2017.

- J. Wu, C. McAuliffe, H. Waisman and G. Deodatis, Stochastic analysis of polymer composites rupture at large deformations modeled by a phase field method, *Computer Methods in Applied Mechanics and Engineering*, 312:596-634, 2016.

- J. Londono, L. Berger-Vergiat and H. Waisman, A Prony-series type viscoelastic solid coupled with a continuum damage law for polar ice modeling, *Mechanics of Materials* 98(81-97), 2016.

- B. Sun, H. Waisman, Optimization of Carbon Black Polymer Composite Microstructure for Rupture Resistance, *Journal of Applied Mechanics* 84(2), 021005 (2016).

- M. Mobasher, R. Duddu, J. Bassis and H. Waisman, Modeling hydraulic fracture of glaciers using continuum damage mechanics, *Journal of Glaciology* 62(234), 794-804 (2016).

- K. James and H. Waisman, Layout design of a bi-stable cardiovascular stent using topology optimization, *Computer Methods in Applied Mechanics and Engineering* 305, 869-890 (2016).

-Y. Wang and H. Waisman, From diffuse damage to sharp cohesive cracks: a coupled XFEM framework for failure analysis of quasi-brittle materials, *Computer Methods in Applied Mechanics and Engineering*, 299, 57-89 (2016).

Recent Professional Development Activities

Chair of the Technical Committee 13th World Congress of Computational Mechanics (WCCM), to be held in New York City, Jul 2018.

Co-Chair of the Workshop for High-Fidelity Simulation Based Virtual Testing of Composite Materials and Structures, Coral Gables, FL, Apr 2016.

