

# ASHKAN VAZIRI

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Associate of The School of Engineering and Applied Science  
Harvard University

## Education

Institution	Degree	year
Sharif University of Technology (Tehran, Iran)	B. Sc.	1999
Sharif University of Technology (Tehran, Iran)	M. Sc.	2000
Northeastern University (Advisor: Prof. Hamid Nayeb-Hashemi)	Ph. D.	2004
Harvard University (Academic Mentor: Prof. John W. Hutchinson)	Post-Doc	2004-2006

## A. Positions and Employment

<b>07/2013-present</b>	<b>Associate Professor, Department of Mechanical and Industrial Engineering, Northeastern University</b>
09/2008-present	Assistant Professor, Department of Mechanical and Industrial Engineering, Northeastern University
12/2007-present	Adjunct Scholar, School of Engineering and Applied Sciences, Harvard
08/2006-08/2011	Adjunct Scholar, Department of Bioengineering, University of California at Berkeley
12/2007-09/2008	Senior Research Scientist, FM Global Research
10/2006-09/2008	Research Affiliate, Biological Engineering Division, MIT
04/2006-11/2007	Research Associate, School of Engineering and Applied Sciences, Harvard
09/2004-02/2006	Lecturer on Engineering, School of Engineering and Applied Sciences, Harvard
04/2004-04/2006	Post-Doctoral Fellow, Division of Engineering and Applied Sciences, Harvard
2003-2004	Instructor, Department of Mechanical, Industrial and Manufacturing Engineering, Northeastern University
2001-2003	Teaching Assistant, Department of Mechanical, Industrial and Manufacturing Engineering, Northeastern University

## Honors and Awards

2012	Soren Buus Outstanding Research Award, College of Engineering, Northeastern
2012	ICTAM 2012 Fellowship grant Award
2012	USNCTAM Travel Grant
<b>2012</b>	<b>NSF CAREER Award</b>
<b>2010</b>	<b>AFOSR Young Investigator Award</b>
2008	FM Global Directorate Award
2008	USACM Young Investigator Fellowship
2007	USACM Young Investigator Fellowship
2006	USACM Post-Doctoral Award, 7 <sup>th</sup> World Congress on Computational Mechanics
2005	USACM Travel Grant, 8 <sup>th</sup> U.S. National Congress on Computational Mechanics

2004	Outstanding Teaching Assistant Award of College of Engineering, College of Engineering, Northeastern University
2003 & 2004	Yamamura Fellow, Department of Mechanical and Industrial Engineering, Northeastern University
2003	The Honor Society of Phi Kappa Phi, College of Engineering, Northeastern University
2001-2003	Teaching Scholarship, College of Engineering, Northeastern University
2000	Graduated with 2 <sup>nd</sup> top GPA in class of 2000 (MSc), Sharif University of Technology
1999	Graduated with 2 <sup>nd</sup> top GPA in class of 1999 (BSc.), Sharif University of Technology
1999	2 <sup>nd</sup> place in the Third Olympiad of Civil and Structural Engineering
1999	3 <sup>rd</sup> place in Nationwide University Entrance Exam toward MSc. degree

### Grants while at Northeastern

**Total grant funding to Northeastern = \$2,472,862**

**Funding amount and percentage attributed to Vaziri = \$2,151,659 (87.0%)**

- [1] NSF-CMMI- 1149750: *CAREER: Functional Biomimetic Materials with Extreme Topology*, PI: A. Vaziri (Northeastern), 03/2012 – 02/2017,  
Total Funding: **\$400,000**, Vaziri's percent effort attributed (100%): **\$400,000**.
- [2] U.S. Air Force Office of Scientific Research, #FA 9550-10-1-0145, *AFOSR YIP: Bioinspired surfaces and interfaces for hybrid multifunctional structures*, PI: A. Vaziri (Northeastern), 01/2010-04/2013.  
Total Funding: **\$359,931**, Vaziri's percent effort attributed (100%): **\$359,931**.
- [3] U.S. Department of Homeland Security - 2008-ST-061-ED0001 (Sub-award from ALERT), *ALERT F4 Initiative*, Sub-award PI: A. Vaziri: 07/2008-6/2014  
Total Funding: **\$187,500**, Vaziri's percent effort attributed (100%): **\$187,500**.
- [4] FM Global: *Mechanics of carbon nanotube surface decontamination*, PI: A. Vaziri (Northeastern), 06/2010-2/2013.  
Total Funding: **\$165,000**, Vaziri's percent effort attributed (100%): **\$165,000**  
  
*Note: Renewed annually. Has verbally committed to additional funding of \$38,000 for 2013 efforts (in addition to the budget above).*
- [5] NSF-CMMI- 0736019: *SGER: Formation and Evolution of Localized Structures*, PI: J. W. Hutchinson (Harvard), Co-PI: A. Vaziri (Northeastern), 7/2007 – 12/2008,  
Total Funding: **\$100,000**, Vaziri's percent effort attributed (transferred to NU after joining NU, 64.4%): **\$64,427**.
- [6] NSF-CMMI- 1065759: *EAGER: Cross-Disciplinary Applications of Shell Mechanics*, PI: A. Vaziri (Northeastern), 10/2010 – 04/2012,  
Total Funding: **\$74,995**, Vaziri's percent effort attributed (100%): **\$74,995**.
- [7] Brooks Automation: *Development of novel high friction, low adhesion materials*, PI: N. Jalili (Northeastern), Co-PI: A. Vaziri, 10/2011 – 10/2012,  
Total Funding: **\$140,002**, Vaziri's percent effort attributed (25%): **\$35,000**.
- [8] Qatar Foundation - NPRP 09 - 145 - 2 - 061: *New approaches for structural protection in oil and gas industry*, Lead PI: A. Vaziri (Northeastern), Co-Lead PI: A. Hamouda (Qatar University), co-PI: H. Nayeb-Hashemi, 09/2010-08/2013,

Total Funding (sub-award from Qatar University): **\$304,712**, Vaziri's percent effort attributed (80%): **\$243,770**.

*Note:* The total grant funding is \$909,122. The amount of sub-award to Northeastern is \$304,712 and the balance went to Qatar University. Vaziri is the Lead PI for the project.

- [9] Qatar Foundation - NPRP 5 - 086 - 2 - 031 : *Knee injury prevention and osteoarthritis risk in obesity*, Lead PI: A. Vaziri (Northeastern), Co-Lead PI: R. Goebel (Qatar University), co-PI: H. Nayeb-Hashemi

Total Funding (sub-award from Qatar University): **\$326,295**, Vaziri's percent effort attributed (80%): **\$261,036**.

*Note:* The total grant funding was \$997,511. The amount of sub-award to Northeastern was \$326,295 and the balance went to Qatar University. Vaziri is the Lead PI for the project.

- [10] Qatar Foundation - NPRP 5 - 1298 - 2 - 560: *Novel multi functional composite sandwich panel*, Lead PI: E. Ahmed (Qatar University), Pls: A. Vaziri, H. Nayeb-Hashemi

Total Funding (sub-award from Qatar University): **\$340,000**, Vaziri's percent effort attributed (80%): **\$272,000**. 1/2013 – 10/2016.

- [11] Qatar Foundation - NPRP 5 - 068 - 2 - 024: High-performance biodegradable composites from Qatari date palm waste, Lead PI: E. Ahmed (Qatar University), Pls: A. Vaziri, H. Nayeb-Hashemi, M. Farag

Total Funding (sub-award from Qatar University): **\$110,000**, Vaziri's percent effort attributed (80%): **\$88,000**.

- [12] Qatar Foundation - NPRP 7 - 882 - 2 - 326: Energy harvesting material systems with integrated topology, Lead PI: A.M.S. Hamouda (Qatar University), Pls: A. Vaziri, H. Nayeb-Hashemi, Total Funding (sub-award from Qatar University): **\$304,186**, Vaziri's percent effort attributed (80%): **\$88,000**. 5/2015 – 5/2018.

## B. Teaching Experience

### 1. Courses taught since joining Northeastern in September 2008:

Course Number/Title	#Times Taught	Average of Course Evaluations	
		Instructor Effectiveness	Student Learning
- ME 3455 Dynamics and Vibrations (formerly MIM U455)	3	4.70	4.47
- ME 4508 Mechanical Engineering Computation and Design	4	4.55	4.35
<b>Overall Averages</b>		<b>4.61</b>	<b>4.40</b>

- 2013 (Spring) ME4508 (Mechanical Engineering Computation and Design), Department of Mechanical, Industrial and Manufacturing Engineering, Northeastern University. (Overall rating of instructor=4.85/5.0)
- 2012 (Spring) ME4508 (Mechanical Engineering Computation and Design), Department of Mechanical, Industrial and Manufacturing Engineering, Northeastern University. (Overall rating of instructor=4.8/5.0)
- 2011 (Fall) ME4508 (Mechanical Engineering Computation and Design), Department of Mechanical, Industrial and Manufacturing Engineering, Northeastern University. (Overall rating of instructor=4.4/5.0)
- 2011 (Spring) ME4509 (Dynamics and Vibrations), Department of Mechanical, Industrial and Manufacturing Engineering, Northeastern University. (Overall rating of instructor=4.8/5.0)
- 2010 (Fall) ME4508 (Mechanical Engineering Computation and Design), Department of Mechanical, Industrial and Manufacturing Engineering, Northeastern University. (Overall rating of instructor=4.6/5.0)
- 2010 (Spring) ME4508 (Mechanical Engineering Computation and Design), Department of Mechanical, Industrial and Manufacturing Engineering, Northeastern University (Overall rating of instructor=4.6/5.0)
- 2009 (Spring) MIMU455 (Dynamics and Vibrations), Department of Mechanical, Industrial and Manufacturing Engineering, Northeastern University (Overall rating of instructor=4.6/5.0)

**2. Courses taught prior to September 2008:**

- 2006 (Fall) ES128 (Computational Solid and Structural Mechanics), Division of Engineering and Applied Sciences, Harvard University (Overall rating of instructor=4.75/5.0)
- 2005 (Fall) ES125 (Mechanical Systems), Division of Engineering and Applied Sciences, Harvard University (Overall rating of instructor=4.31/5.0)
- 2004 (Fall) ES125 (Mechanical Systems), Division of Engineering and Applied Sciences, Harvard University (Overall rating of instructor=4.93/5.0)
- 2004 (Spring) MIMU355 and MIMU356, (Mechanics of Materials) and (Mechanics of Materials Laboratory), Department of Mechanical, Industrial and Manufacturing Engineering, Northeastern University (Overall rating of instructor=4.2/5.0)
- 2003 (Fall) MIMU355 (Dynamics and Vibrations), Department of Mechanical, Industrial and Manufacturing Engineering, Northeastern University (Overall rating of instructor=4.6/5.0)
- 2003 (Summer) MIM1360 (Dynamics), Department of Mechanical, Industrial and Manufacturing Engineering, Northeastern University (Overall rating of instructor=4.7/5.0)

**3. Advisory Courses:**

- 2008 - present Independent study (both undergraduate and graduate levels), Northeastern University
- 2007 Independent Study, School of Engineering and Applied Sciences, Harvard University
- 2006-2007 Independent Study, Division of Engineering and Applied Sciences, Harvard University
- 2005-2006 Senior Design Project, Division of Engineering and Applied Sciences, Harvard University
- 2005 Independent Study, Division of Engineering and Applied Sciences, Harvard University
- 2004 Independent Study, Northeastern University

#### 4. Other Professional Activities

2008-present Consultant, FM Global Research  
2007-2010 Consultant, Bosch Research and Technology Center  
2005-2006 Consultant, McGovern Institute for Brain Research, MIT  
2004-2005 Consultant, RWE Schott Solars, Billerica, MA  
2004-2005 Consultant, Beth Israel Hospital, Harvard Medical School

#### 5. Invited Presentations

2003 Mechanical Engineering Department, North Dakota State University.  
2003 Simpson Gumpertz & Heger Inc., Boston.  
2004 Department of Mechanical, Industrial, and Manufacturing Engineering, Northeastern University.  
2004 Department of Mechanical Engineering, University of Massachusetts, Lowell.  
2004 College of Engineering, Northeastern University.  
2006 Department of Civil and Environmental Engineering, Massachusetts Institute of Technology.  
2006 Division of Engineering and Applied Sciences, Harvard University.  
2007 Keynote Speaker, ICCES07  
2007 Keynote Speaker, *9<sup>th</sup> US Congress in Computational Mechanics*  
2007 Mechanical and Aerospace Engineering Department, University of California, Irvine.  
2007 Department of Mechanical Science and Engineering, University of Illinois, Urbana-Champaign.  
2007 Department of Civil Engineering, John Hopkins University.  
2007 Department of Civil and Environmental Engineering, Princeton University  
2007 Division of Engineering, Brown University.  
2007 Department of Mechanical Engineering, Northwestern University  
2007 Department of Aerospace and Mechanical Engineering, Boston University  
2007 Bosch Research and Technology Center, Paolo Alto, CA  
2007 Department of Mechanics, École Polytechnique  
2007 FM Global Research  
2008 Department of Mechanics and Industrial Engineering, Northeastern University.  
2008 Keynote Speaker, ICCES08  
2008 Department of Civil Engineering, Sharif University of Technology  
2008 Department of Mechanical Engineering, Tehran University  
2009 Department of Mechanical and Aerospace Engineering, UCSD  
2010 **Invited talk, APS March meeting**  
2010 KaZaK Composites Inc.  
2010 Physical Mathematics Seminar, MIT  
2010 Physics Department, Harvard University  
2010 SAMPE (The Society for the Advancement of Materials and Process Engineering)  
2011 Department of Mechanical and Aerospace Engineering, UCLA  
2011 College of Engineering, Texas A&M - Qatar  
2012 Department of Physics, Clark University  
2012 Center for Composite Materials and Structures, Harbin Institute of Technology - China  
2013 Department of Mechanical and Industrial Engineering, Qatar University - Qatar

## **Graduate Students/Post-Docs and Visiting Students and Scholars**

**PhD Students:** Babak Haghpanah (Expected graduation date: Dec. 2012), Hamid Ebrahimi (Expected graduation date: Sep. 2014), Davood Mousanezhad (Started: Jan. 2012), Ramin Oftadeh (Started Jan. 2012), Hamed Abdi (Started Sep. 2011)

**Masters Students:** Syed Hassan (Expected graduation date: Sep. 2012)

## **Graduated students and Recent Visiting Scholars**

**PhD Students:** Amin Ajdari (December 2011), Babak Haghpanah (December 2013)

**Masters Students:** Jonathan M Erickson Hammel (August 2011), Ghanim Al Qassim (August 2011), Sahab Babae (August 2011), Mahdi Ashrafi (August 2011), Yoontae Kim (July 2011), Shih-Hung Chiu (June 2011), Hamid Ebrahimi (June 2012)

**Post-Doc:** Dr. Amin Ajdari, Dr. Babak Haghpanah, Dr. Ranajay Ghosh

**Visiting Students and Scholars:** Jian Xiong (visiting PhD student, Harbin Institute Technology), Gulbahar Wahap (Visiting PhD student, Tokyo University), Dr. Ghazal Alipour (Visiting Research Associate), Dr. Joseph Gwin (Visiting Research Associate).

## **C. Publications**

**(124 Published Journal Articles, >200 Conference Proceedings/Abstracts)**

Google scholar Citations > 3310, h- index = 33

<http://scholar.google.com/citations?user=a11lyJoAAAAJ&hl=en>

## **Book Chapters**

**A. Vaziri** and R. Ghosh “Numerical analysis of the response of biomimetic cellular materials under static and dynamic loadings”, Blast Mitigation. Springer, Edited by A. Shukla, Y. D. S. Rajapakse, M. E. Hynes, 2013.

M. W. Moon, C. Kim and **A. Vaziri** “Ion beam-induced self-assembled wrinkles”, Mechanical Self-Assembly: Science and Application. Springer, Edited by X. Chen, 2013.

## **Journal Articles:**

\*correspondence author. †graduate/undergraduate students, post-doctoral fellows in Vaziri’s group. †† Visiting PhD students in Vaziri’s group.

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## **2017**

124. H. Ebrahimi, D. Mousanezhad, B. Haghpanah, R. Ghosh, and A. Vaziri, “Lattice materials with reversible foldability “, Advanced Engineering Materials, 2017, in press.

123. S. Hong, T. Lundstrom, Troy, R. Ghosh, H. Abdi, J. Hao, S. Jeoung, K. Sun, P. Su, J. Suhr, A. Vaziri, N. Jalili, and Y. J. Jung, "Highly anisotropic adhesive film made from upside-down, flat and uniform vertically aligned CNTs", *ACS Applied Materials & Interfaces*, 2017, in press.
122. H. Abdi, J. Papadopoulos, H. Nayeb-Hashemi, & **A. Vaziri**, "Enhanced elastic-foundation analysis of balanced single lap adhesive joints ", *International Journal of Adhesion and Adhesives*, 2017, 72, P.80-91.
121. C. Rosso, M. Nasr, K. C. Walley; B. Haghpanah, **A. Vaziri**, A. J. Ramappa, J. P. DeAngelis, & A. Nazarian, "Glenohumeral joint kinematics following clavicular fracture and repairs ", *PLOS ONE*, 2017, 12(1).

## **2016**

120. K. C. Walley, B. Haghpanah, A. Hingsammer, E. R. Harlow, **A. Vaziri**, J. P. DeAngelis, A. Nazarian, and A. J. Ramappa, " Influence of disruption of the acromioclavicular and coracoclavicular ligaments on glenohumeral motion: a kinematic evaluation ", *BMC Musculoskeletal Disorders*, 2016, 17(1), P.480.
119. Y. Zheng, H. Bahaloo, D. Mousanezhad, E. Mahdi, **A. Vaziri**, and H. Nayeb-Hashemi, "Stress analysis in functionally graded rotating disks with non-uniform thickness and variable angular velocity", *International Journal of Mechanical Sciences*, 2016, 119, P.283-293.
118. R. Oftadeh, Z. Karimi, J. Villa-Camacho, E. Tanck, N. Verdonshot, R. Goebel, B. Snyder, H. Nayeb-Hashemi, **A. Vaziri**, & A. Nazarian, "Curved Beam Computed Tomography based Structural Rigidity Analysis of Bones with Simulated Lytic Defect: A Comparative Study with Finite Element Analysis ", *Scientific Reports*, 2016, 6:32397.
117. Z. Karimi, P. Su, R. Oftadeh, H. Ebrahimi, R. Ghosh, & **A. Vaziri**, "Decontamination of Surfaces Exposed to Single Wall Carbon Nanohorns", *Journal of Environmental Chemical Engineering*, 2016, Vol. 4, pp. 3409-3414.
116. H. Ebrahimi, R. Ghosh, E. Mahdi, H. Nayeb-Hashemi, & **A. Vaziri**, "Honeycomb Sandwich Panels Subjected to Combined Shock and Projectile Impact", *International Journal of Impact Engineering*, 2016, 95, pp.1-11.
115. Y. Song, P. C. Dohm, B. Haghpanah†, **A. Vaziri** & J. B. Hopkins\*, "An active microarchitected material that utilizes piezo actuators to achieve programmable properties", *Advanced Engineering Materials*, 2016, 18(7), pp.1113-1117.
114. H. Bahaloo-Horeh, J. Papadopoulos, R. Ghosh†, E. Mahdi, **A. Vaziri** & H. Nayeb-Hashemi\*, "Transverse vibration and stability of a functionally graded rotating annular disk with a circumferential crack", *Int. J. Mechanical Sciences*, 2016, 113, pp.26-35.
113. D. Mousanezhad†, B. Haghpanah†, R. Ghosh†, A. S. Hamouda, H. Nayeb-Hashemi & **A. Vaziri**\*, "Elastic properties of chiral, anti-chiral, and hierarchical honeycombs: a simple energy-based approach", *Theoretical and Applied Mechanics Letters*, 2016, 6(2), pp.81-96.
112. R. Ghosh†, H. Ebrahimi† & **A. Vaziri**\*, "Frictional effects in biomimetic scales engagement", *Europhysics Letters*, 2016, 113(3), p.34003.
111. J. Xiong††\*, **A. Vaziri**, R. Ghosh†, H. Hu, L. Ma & L. Wu, "Compression behavior and energy absorption of carbon fiber reinforced composite sandwich panels made of three -dimensional honeycomb grid cores", *Extreme Mechanics Letters*, 2016, 7, pp.114-120.

110. B. Haghpanah†, K. C. Walley, A. Hingsammer, E. R. Harlow, R. Oftadeh†, **A. Vaziri**, A. J. Ramappa, J. P. deAngelis & A. Nazarian\*, “The effect of the rotator interval on Glenohumeral kinematics during abduction”, *BMC Musculoskeletal Disorders*, 2016, **17.1**, 1.
109. Z. Karimi†, P. Su, S. Hassant†, B. Haghpanah†, W. Doerr & **A. Vaziri\***, “Removal of multi-Walled carbon nanotube contaminants from surfaces with microscale topological features”, *Environmental Progress & Sustainable Energy*, 2016, **35.1**, pp. 161-168.
108. B. Haghpanah†, H. Ebrahimi†, D. Mousanezhad†, J. Hopkins & **A. Vaziri\***, “Programmable elastic metamaterials”, *Advanced Engineering Materials*, 2016, 18(4), pp.643-649.
- 2015**
107. A. Orsi†, S. Chakravarthy, P. Canavan, E. Peña, R. Goebel, **A. Vaziri** & H. Nayeb-Hashemi\*, “The effects of knee joint kinematics on anterior cruciate ligament injury and articular cartilage damage”, *Computer Methods in Biomechanics and Biomedical Engineering*, 2015, pp. 1-14.
106. D. Mousanezhad†, S. Babaei, H. Ebrahimi†, R. Ghosh†, A.M.S. Hamouda, K. Bertoldi & **A. Vaziri\***, “Hierarchical honeycomb auxetic metamaterials”, *Scientific Reports*, 2015, **5**:8306.
105. D. Vella\*, H. Ebrahimi†, **A. Vaziri** & B. Davidovitch, “Wrinkling reveals a new isometry of pressurized elastic shells”, *Europhysics Letters*, 2015, **112**, pp. 24007.
104. M. Ashrafi, C. Woodsome, J. Papadopoloust†, A.M.S. Hamouda, H. Nayeb-Hashemi & **A. Vaziri**, “In-situ strengthening of thin-wall structures using pressurized foam”, *Construction & Building Materials*, 2015, **100**, pp. 298-304.
103. J. Xiong††\*, L. Feng, R. Ghosh†, H. Wu, L. Wu, L. Ma & **A. Vaziri\***, “Fabrication and mechanical behavior of carbon fiber composite sandwich cylindrical shells with corrugated cores”, *Composite Structures*, 2015, in press.
102. D. Mousanezhad†, S. Babaei, R. Ghosh†, E. Mahdi, K. Bertoldi & **A. Vaziri\***, “Honeycomb phononic crystals with self-similar hierarchy”, *Physical Review B*, 2015, **92**, 104304.
101. J. P. DeAngelis, B. Hertz, M. T. Wexler, N. Patel†, K. C. Walley, E. R. Harlow, O. S. Manoukian, A. Masoudi, **A. Vaziri**, A. J. Ramappa & A. Nazarian\*, “Posterior capsular plication constrains the glenohumeral joint by drawing the humeral head closer to the glenoid and resisting abduction”, *The Orthopaedic Journal of Sports Medicine*, 2015, **3**, no. 8: 2325967115599347.
100. D. Mousanezhad†, H. Ebrahimi†, B. Haghpanah†, R. Ghosh†, A. Ajdari†, A. M. S. Hamouda & **A. Vaziri\***, “Spiderweb honeycombs”, *Int. J. Solids and Structures*, 2015, **66**, pp. 218–227.
99. R. Oftadeh†, V. Entezari, G. Spörri, J. C. Villa-Camacho, H. Krigbaum, E. Strawich, L. Graham, Ch. Rey, H. Chiu, R. Muller, **A. Vaziri** & A. Nazarian\*, “Hierarchical analysis and multi-scale modeling of rat
98. J. Xiong††, R. Mines, R. Ghosh†, **A. Vaziri**, L. Ma, A. Ohrndorf, J. H. Christ & L. Wu\*, “Advanced micro-lattice materials”, *Advanced Engineering Materials*, 2015, **17**, pp. 1253-1264.
97. R. Oftadeh†, M. Perez-Viloria, J. Villa-Camacho, **A. Vaziri** & Ara Nazarian\*, “Biomechanics and mechanobiology of trabecular bone: A review”, *J. Biomechanical Engineering*, 2015, **137.1**, 010802



96. S. M. Banijamali, R. Oftadeh†, A. Nazarian, R. Goebel, **A. Vaziri** & H. Nayeb-Hashemi\*, “Effects of different loading patterns on the trabecular bone morphology of the proximal femur using adaptive bone remodeling”, *J. Biomechanical Engineering*, 2015, **137.1**, 011011.

95. S. Nagashima, H. Ebrahimi†, K. Lee, **A. Vaziri\*** & M. W. Moon\*, “Tunable nanochannels fabricated by mechanical wrinkling/folding of a stiff skin on a soft polymer”, *Advanced Materials Interfaces*, 2015, **2**, 1400493.

94. A. Marzban, H. Nayeb-Hashemi\* & **A. Vaziri**, “Numerical simulation of load-induced bone structural remodeling using stress-limit criterion”, *Computer Methods in Biomechanics and Biomedical Engineering*, 2015, **18**, pp.259-68.

## **2014**

93. H. Abdi†, H. Nayeb-Hashemi, A. M. S. Hamouda & **A. Vaziri\***, “Torsional dynamic response of a shaft with longitudinal and circumferential cracks”, *Journal of Vibration and Acoustic*, 2014, **136**, pp. 61011-1, 61011-8.

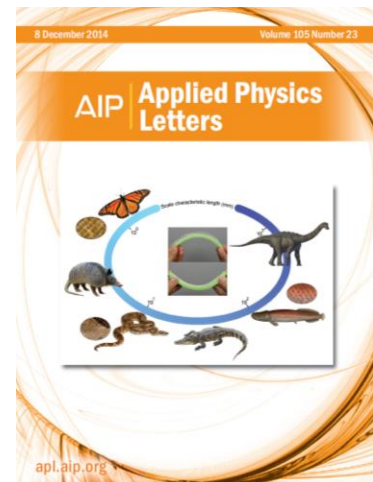
92. R. Ghosh†, A. Kumar & **A. Vaziri\***, “Type-IV Pilus Deformation Can Explain Retraction Behavior”, *PLOS ONE*, 2015, 2014, **9**, pp. e114613.

91. R. Ghosh†, H. Ebrahimi†, **A. Vaziri\***, “Contact kinematics of biomimetic scales”, *Applied Physics Letters*, 2014, **105.23**, 233701.

**Cover of *Applied Physics Letters***, *Northeastern College of Engineering news*.

90. D. Mousanezhad†, R. Ghosh†, A. Ajdari†, A.M.S. Hamouda, H. Nayeb-Hashemi, **A. Vaziri\***, “Impact resistance and energy absorption of regular and functionally graded hexagonal honeycombs with cell wall material strain hardening”, *Int. J. Mechanical Sciences*, 2014, **89**, pp. 413-422.

89. R. Oftadeh†, B. Haghpanah†, D. Vella, A. Boudaoud & **A. Vaziri\***, “Optimal fractal-like hierarchical honeycombs”, *Physical Review Letters*, 2014, **113**, 104301.



**Commentaries and press reports:** *Synopsis writeup in Physics, Featured on Physicsworld.com, PRL Editors' suggestion, Northeastern College of Engineering news.*

88. J Xiong††, R. Ghosh†, L. Ma., H. Ebrahimi†, A. M Hamouda, **A. Vaziri\***, and L. Wu, “Bending behavior of lightweight sandwich-walled shells with pyramidal truss cores”, *Composite Structures*, 2014, **116**, pp. 793-804.

87. B. Haghpanah†, D. Mousanezhad†, J. Papadopoulos†, H. Nayeb-hashemi & **A. Vaziri\***, “Buckling of regular, chiral, and hierarchical honeycombs under a general macroscopic stress state”, *Proceedings of the Royal Society A*, 2014, **470** (2167), 20130856.

**Cover of *Applied Proceedings of the Royal Society A***, *Northeastern College of Engineering news*.

86. J. Y. Lee, W. K. Seong, I. Choi, R. Ghosh†, **A. Vaziri**, C. Yang, K. R. Lee, M. W. Moon\*, “In-situ measurement of the adhesion strength and



effective elastic stiffness of single soft micropillar”, *The Journal of Adhesion*, 2014, **91**, pp. 369-380.2014.

85. R. Oftadeh†, B. Haghpanah†, J. Papadopoulos†, A.M. S. Hamouda, H. Nayeb-Hashemi & **A. Vaziri\***, “Mechanics of anisotropic hierarchical honeycombs”, *Int. J. Mechanical Sciences*, 2014, **81**, pp. 126-136.

84. H. Ebrahimi†, A. Ajdari†, D. Vella, A. Boudaoud & **A. Vaziri\***, “Directional delamination of highly ellipsoidal shells”, *Physical Review Letters*, 2014, **112**, 094302.

83. P. Su\*, B. Haghpanah†, W. Doerr, Z. Karimi†, S. Hassan†, L. Gritzo, A. Busnaina and **A. Vaziri**, “Decontamination of surfaces exposed to carbon-based nanotubes and nanomaterials”, *Journal of Nanomaterials*, 2014, Article ID 249603.

82. A. Twohig\*, A. Ajdari††, F. Tamanini, H. Ali, **A. Vaziri**, “Thermal analysis of reinforced concrete chimneys with fiberglass plastic liners in uncontrolled fires”, *Engineering Structures*, 2014, **75**: pp. 87-98.

81. J. Xiong††, R. Ghosh†, L. Ma, **A. Vaziri**, Y. Wang and L. Wu\*, “Sandwich-walled cylindrical shells with lightweight metallic lattice truss cores and carbon fiber-reinforced composite face sheets”, *Composites Part A.*, 2014, **56**: pp.226-238.

80. B. Haghpanah†, Sh. Chiu†, **A. Vaziri\***, “Adhesively bonded lap joints with extreme interface geometry”, *International Journal of Adhesion and Adhesives*, 2014, **48**: pp. 130-138.

79. B. Haghpanah†, J. Papadopolous†, **A. Vaziri\***, “Plastic collapse of lattice structures under a general stress state”, *Mechanics of Materials*, 2014, **68**: pp. 267-274.

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## **2013**

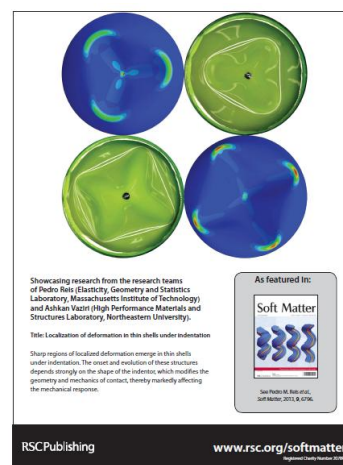
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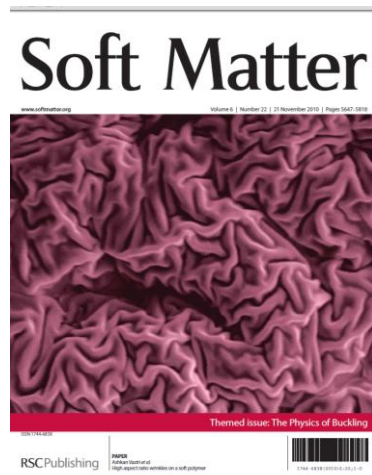
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19. **A. Vaziri**, H. Lee, R. D. Kamm & M. R. Kaazempur-Mofrad, "A viscoelastic model for nucleus deformation and mechanics in Atomic Force Microscopy indentation", *Summer Bioengineering Conference*, 2005.
20. M. Das, **A. Vaziri**, A. Kudrolli & L. Mahadevan, "Global and local modes of deformation in elastic shells", *Frontier in Soft Condensed Matter*, 2005.
21. **A. Vaziri**, Z. Xue, & J. W. Hutchinson, "Structural performance of foam-filled metal sandwich plates under quasi-static and dynamic loadings", *Third M.I.T. Conference on Computational Fluid and Solid Mechanics*, 2005.

22. Z. Xue, **A. Vaziri** & J. W. Hutchinson, "A continuum core model for metal sandwich plates", *Third M.I.T. Conference on Computational Fluid and Solid Mechanics*, 2005.
23. **A. Vaziri**, N. Orenstein, Z. Xue & L. Mahadevan, "Dynamic transition between developable states of elastic sheets", *8<sup>th</sup> US National Congress on Computational Mechanics*, 2005.
24. **A. Vaziri**, H. Lee, R. D. Kamm & M. R. Kaazempur-Mofrad, "A computational model for nucleus mechanics", *8<sup>th</sup> US National Congress on Computational Mechanics*, 2005.
25. **A. Vaziri**, Z. Xue, & J. W. Hutchinson, "Blast resistance of metal sandwich plates with polymeric foam-filled cores", *8<sup>th</sup> US National Congress on Computational Mechanics*, 2005.
26. Z. Xue, **A. Vaziri** & J. W. Hutchinson, "Constitutive model for anisotropic elastic-plastic solid with multi-axial hardening", *8<sup>th</sup> US National Congress on Computational Mechanics*, 2005.
27. Z. Xue, **A. Vaziri** & J. W. Hutchinson, "Dynamic buckling of square honeycombs", *8<sup>th</sup> US National Congress on Computational Mechanics*, 2005.
28. Xue, **A. Vaziri** & J. W. Hutchinson, "Constitutive model for anisotropic elastic-plastic material and its application to sandwich plate with folded plate core", *2005 ASME IMECE*, 2005. (Invited)
29. **Vaziri**, Z. Xue & J. W. Hutchinson, "Impulse-resistance of metal sandwich plates with graded square honeycomb core", *2005 ASME IMECE*, 2005. (Invited)
30. **Vaziri**, H. Lee, R. D. Kamm & M. R. Kaazempur-Mofrad, "Probing the nucleus", *BMES Annual Fall Meeting*, 2005.
31. H. Lee, **A. Vaziri**, R. D. Kamm & M. R. Kaazempur-Mofrad, "The effect of Lamin A/C deficiency on the structural integrity of nucleus", *2005 MRS Fall Meeting*, 2005.
32. **Vaziri**, Ch. Riera & L. Mahadevan, "Localized structures in elastic shells", *Thin Film & Small Scale Mechanical Behavior*, 2006.
33. **A. Vaziri**, M. W. Moon, L. Mahadevan & J. W. Hutchinson, "Hierarchical wrinkling patterns in skin-soft substrate systems", *Thin Film & Small Scale Mechanical Behavior*, 2006.
34. M.W. Moon, S.H. Lee, J.Y. Sun, K.H. Oh, **A. Vaziri** & J. W. Hutchinson, "Self-assembled wrinkling on polymer substrates induced by Focused Ion Beam irradiation", *Thin Film & Small Scale Mechanical Behavior*, 2006.
35. **Vaziri** & M. R. Kaazempur-Mofrad, "Nuclear mechanics and deformation in micropipette aspiration", *Biophysical Society's 50th Annual Meeting*, 2006. (Invited)
36. **Vaziri**, Z. Xue & M. R. Kaazempur-Mofrad, "A computational model for the nucleus with power-law rheology", *Biophysical Society's 50th Annual Meeting*, 2006.
37. **Vaziri**, H. Lee, R. D. Kamm & M. R. Kaazempur-Mofrad, "Nuclear deformation under mechanical stimuli", *5<sup>th</sup> World Congress of Biomechanics*, 2006.

38. M. Das, **A. Vaziri**, A. Kudrolli & L. Mahadevan, "Curvature condensation and twinning in an indented elastic shell", *March APS Meeting*, 2006.
39. L. Mahadevan, **A. Vaziri** & M. Das, "Anomalous persistence of a pinch in a pipe", *March APS Meeting*, 2006.
40. L. Courbin, A. Marchand, A. Vaziri & H. A. Stone, "On the bouncing of rigid spheres on thin polymer films", *March APS Meeting*, 2006.
41. Xue, **A. Vaziri** & J. W. Hutchinson, "Neck retardation and enhanced fracture resistance in metal-elastomer bilayers", *7<sup>th</sup> World Congress on Computational Mechanics*, 2006.
42. **A. Vaziri**, Z. Xue & J. W. Hutchinson, "The role of fluid-structure interaction in the deformation of metal sandwich plates subject to intense air shocks", *7<sup>th</sup> World Congress on Computational Mechanics*, 2006.
43. R. A. Jenks, **A. Vaziri**, A. R. Bolori & G. Stanley, "Representation of objects and surfaces by the whisker system in awake behaving rats", *36<sup>th</sup> annual meeting of The Society for Neuroscience*, 2006.
44. **A. Vaziri**, D. Shreter, D. Brownfield, B.A. Tafti & M. R. Kaazempur-Mofrad, "Mechanics of the nuclear envelope in health and disease", *US National Congress of Theoretical and Applied Mechanics*, 2006. (Invited)
45. **A. Vaziri**, Z. Xue & J. W. Hutchinson, "Constitutive modeling of metal sandwich cores", *US National Congress of Theoretical and Applied Mechanics*, 2006. (Invited)
46. M.W. Moon, S.H. Lee, J.Y. Sun, K.H. Oh, **A. Vaziri** & J. W. Hutchinson, "Self-assembled wrinkling on polymer substrates induced by Focused Ion Beam irradiation", *MRS Fall Meeting*, 2006.
47. **A. Vaziri** & L. Mahadevan, "Formation and evolution of buckling patterns in elastic shells", *MRS Fall Meeting*, 2006.
48. **A. Vaziri**, Z. Xue & J. W. Hutchinson, "Metal sandwich plates subject to shock loading: Response, Failure and Design Optimization", *International Conference on Computational & Experimental Engineering and Sciences*, 2007.
49. **A. Vaziri**, A. Gopinath, Z. Xue & M. R. K. Mofrad, "Cell and nuclear mechanics: Insight from numerical simulations", *International Conference on Computational & Experimental Engineering and Sciences*, 2007 (Keynote).
50. Z. Xue, **A. Vaziri** & J. W. Hutchinson, "Neck retardation and enhanced energy absorption in metal-elastomer bilayers", *International Conference on Computational & Experimental Engineering and Sciences*, 2007. (Keynote)
51. B. Rajalingam, M. W. Moon, **A. Vaziri** & A. Khadenmohessieni, "Cell behavior on nanscale hierarchical patterned surfaces", *MRS Spring Meeting*, 2007.
52. **A. Vaziri**, Z. Xue, & J. W. Hutchinson, "Metal sandwich plates subject to shock loading: Response, Failure and Design Optimization", *9<sup>th</sup> US Congress in Computational Mechanics*, 2007. (Keynote)

53. **A. Vaziri**, A. Gopinath, Z. Xue & M. R. K. Mofrad, "Cell and nuclear mechanics *in silico*", *9<sup>th</sup> US Congress in Computational Mechanics*, 2007.
54. Z. Xue, **A. Vaziri** & J. W. Hutchinson, "Dynamic necking in ductile materials", *9<sup>th</sup> US Congress in Computational Mechanics*, 2007. (Keynote)
55. L. Mori, S. Lee, Z. Xue, **A. Vaziri**, D. Queheillalt, H. Wadley, J. W. Hutchinson and H.D. Espinosa, "Sandwich Structures Subjected to Under Water Impulsive Loads" , *9<sup>th</sup> US Congress in Computational Mechanics*, 2007. (Keynote)
56. **A. Vaziri**, "Mechanics of highly-deformed elastic shells: Instability, localization and evolution", *2007 ASME IMECE*, 2007. (Invited)
57. **A. Vaziri** & A. Gopinath, "Computational approaches in cell and biomolecular mechanics", *2007 ASME IMECE*, 2007. (Invited)
58. **A. Vaziri**, Z. Xue & J. W. Hutchinson, "Response and failure of metal sandwich plates under high intensity loading", *2007 ASME IMECE*, 2007.
59. E. Yoo, **A. Vaziri** & A. A. Biewener, "Biomechanics of impact loading of goat skull using CT image based finite element modeling", *2007 American Society of Biomechanics Meeting*, 2007.
60. R. A. Jenks, **A. Vaziri**, A. R. Bolori & G. Stanley, "Texture and self-motion signals in the somatosensory pathway", *37<sup>th</sup> annual meeting of The Society for Neuroscience*, 2006.
61. M.W. Moon, S.H. Lee, K.H. Oh, **A. Vaziri** & J. W. Hutchinson, "Nanoscale wrinkling patterns on polymers induced by focused ion beam", *MRS Fall Meeting*, 2007.
62. M.W. Moon, S.H. Lee, **A. Vaziri** & J. W. Hutchinson, "Ripple formation on polyimide induced by focused ion beam", *MRS Fall Meeting*, 2007.
63. M.W. Moon, S.H. Lee, J. Y. Sun, K. H. oh, K. R. Lee, **A. Vaziri** & J. W. Hutchinson, "Evolution mechanisms of wrinkled hard skins on polymers created by focused ion beam", *The Sixth Asian-European International Conference on Plasma Surface Engineering*, 2007.
64. **A. Vaziri**, H. Nayeb-Hashemi, A. Singh & B. A. Tafti, "Computational mechanics for studying knee mechanics", *ICCES08*.
65. **A. Vaziri**, "Mechanics of highly-deformed elastic shells: Probing localized and extended deformations using computational mechanics", *IACM/ECCOMAS Congress*, 2008.
66. **A. Vaziri**, "Shock-loaded metal sandwich panels: Performance sensitivity to design details", *IACM/ECCOMAS Congress*, 2008.
67. **A. Vaziri**, "Cell Mechanics in silico", *MRS Fall Meeting*, 2008.
68. M.W. Moon, J. H. Han, E. K. Her, K. Lee, K. H. oh & **A. Vaziri**, "Nano-scale sculpting on polymers using focused ion beam", *MRS Fall Meeting*, 2008.
69. M.W. Moon, K. Lee & **A. Vaziri**, "Hierarchical wrinkles on soft polymers created by ion beam/plasma treatment", *First International Conference on Multifunctional, Hybrid and Nanomaterials*, 2009.

70. M.W. Moon, & **A. Vaziri**, "Surface Engineering of Polymers", Smart Structures and Materials (SMART'09), 2009.
71. A. Ajdari, B. Haghpanah, H. Nayeb-Hashemi, & **A. Vaziri**, "Dynamic crushing of regular and functionally graded cellular materials", *10<sup>th</sup> US National Congress on Computational Mechanics*, 2009.
72. B. Haghpanah, H. H. Farahi, A. Ajdari, H. Nayeb-Hashemi, & **A. Vaziri**, "Variable Materials Property method for functionally graded materials", *10<sup>th</sup> US National Congress on Computational Mechanics*, 2009.
73. B. Haghpanah, A. Ajdari & **A. Vaziri**, "A numerical method for predicting elasto-plastic response of functionally graded materials", *10<sup>th</sup> International Conference on Computational Plasticity - Fundamentals and Applications - COMPLAS 2009*.
74. A. Ajdari, B. Haghpanah, H. Nayeb-Hashemi, & **A. Vaziri**, "Energy absorbance and dynamic strength of regular, irregular and functionally graded cellular structures", *IMECE 2009*, 2009.
75. **A. Vaziri** & A. Ajdari, "Mechanics and dynamics of instability and deformation localization in elastic shells", *IMECE 2009*, 2009.
76. M. W. Moon & **A. Vaziri**, "Sculpting on polymers with ion beam/plasma treatment: Mechanics and mechanisms", *IMECE 2009*, 2009.
77. **A. Vaziri** & John W. Hutchinson, "Mechanics of Strongly Deformed Elastic Shells", *NSF CMMI Research and Innovation Conference*, 2009.
78. M. W. Moon, K. R. Lee & **A. Vaziri**, "Nanoscale patterns on soft polymers induced by plasma treatment", *PSE2009*, 2009.
79. S.K.F. Ahmed, G. Nho, M. W. Moon, J. H. Han, K. R. Lee, & **A. Vaziri**, "Frictional behavior of polyimide covered by nanoscale ripples induced by ion beam irradiation", *ICMAP 2009*, 2009.
80. S.K.F. Ahmed, G. Nho, M. W. Moon, J. H. Han, K. R. Lee, & **A. Vaziri**, "Role of ion-induced nanoscale ripples on surface friction behavior of polyimide", *MRS Fall Meeting*, 2009.
81. M. W. Moon, **A. Vaziri**, T. Cha, H. Y. Kim & K. R. Lee, "Nanoscale patterns on soft polymers induced by plasma treatment and ion beam irradiation", *MRS Fall Meeting*, 2009.
82. **A. Vaziri**, "Homogenization and failure of shock-loaded metal sandwich panels", *Plasticity*, 2010.
83. A. Ajdari, B. Haghpanah, & **A. Vaziri**, "Heterogeneous cellular structures for energy absorption and impact applications", *Plasticity*, 2010.
84. **A. Vaziri**, "Mechanics and dynamics of highly deformed elastic shells", *APS March meeting* (invited talk), 2010.
85. **A. Vaziri**, "Impact mechanics of metal sandwich panels", *IV European Conference on Computational Mechanics*, 2010.
86. **A. Vaziri**, A. Ajdari "Sandwich panels subjected to multiple intense shocks", *IMPLAST 2010*.

87. A. Ajdari, S. Babaei & **A. Vaziri**, "In-plane dynamic crushing and energy absorption of cellular structures", *IMPLAST 2010*.
88. R. Liu, H. Nayeb-Hashemi, M. Olia, & **A. Vaziri**, "On transverse vibration of a functionally graded rotating disk", *IMECE 2010*, 2010.
89. B. Haghpanah, A. Ajdari, H. Nayeb-Hashemi, & **A. Vaziri**, "Linear buckling analysis of cracked cylindrical shells under axial compression", *IMECE 2010*, 2010.
90. S. Babaei, B. Haghpanah, A. Ajdari, H. Nayeb-Hashemi, & **A. Vaziri**, "Mechanical properties of three-dimensional open, closed and partially-closed rhombic dodecahedron cellular structure", *IMECE 2010*, 2010.
91. **A. Vaziri**, B. Haghpanah & A. Ajdari, "Failure and fracture of shock-loaded sandwich panels", *IMECE 2010*, 2010.
92. A. Ajdari, L. Mahadevan & **A. Vaziri**, "Localization and curvature-driven wrinkling in elastic shells", *New England Workshop on the Mechanics of Materials and Structures*, 2010.
93. A. Ajdari, S. Babaei & **A. Vaziri**, "Dynamic crushing of heterogeneous and functionally graded cellular structures", *New England Workshop on the Mechanics of Materials and Structures*, 2010.
94. S. Chiu, M. Ashrafi, B. Haghpanah & **A. Vaziri**, "Toughening bonded joints by morphological alterations", *New England Workshop on the Mechanics of Materials and Structures*, 2010.
95. S. K. Faruque Ahmed, G. H. Nho, K. R. Lee, **A. Vaziri** & M. W. Moon, "High aspect ratio wrinkles created by carbon deposition on pre-patterned soft polymers", *MRS Fall Meeting*, 2010.
96. S. M. W. Moon, T. G. Cha, K. R. Lee, **A. Vaziri** & H. Y. Kim, "Tilting polymeric micropillars by ion beam", *MRS Fall Meeting*, 2010.
97. A. Ajdari & **A. Vaziri**, "Curvature-driven instability and wrinkling in elastic shells", *MRS Fall Meeting*, 2010.
98. **A. Vaziri**, S. Babaei, B. Haghpanah, A. Ajdari & H. Nayeb-Hashemi, "Elasto-plastic properties and energy absorption of 3-D tessellated cellular structures", *Plasticity*, 2011.
99. **A. Vaziri**, B. Haghpanah, A. Ajdari & H. Nayeb-Hashemi, "Extended Variable Materials Property (X-VMP) method for elasto-plastic analysis", *Plasticity*, 2011.
100. M. W. Moon & **A. Vaziri**, "From micropillar tilting to optics grating using wrinkles", *2011 SEM Annual Conference and Exposition on Experimental and Applied Mechanics*, 2011.
101. S. Babaei, A. Ajdari & **A. Vaziri**, "Heterogeneous and functionally graded three-dimensional cellular materials", *2011 SEM Annual Conference and Exposition on Experimental and Applied Mechanics*, 2011.
102. B. Haghpanah, A. Ajdari & **A. Vaziri**, "Instability of cracked shells under complex loading", *2011 SEM Annual Conference and Exposition on Experimental and Applied Mechanics*, 2011.



103. M. W. Moon, T. J. Ko, K. H. Oh, **A. Vaziri** & K. R. Lee “Nanostructures formed on polymeric materials by ion beam with glancing angle irradiation”, *MRS Spring Meeting*, 2011.
104. **A. Vaziri** & A. Ajdari, “Multi-scale and cross-disciplinary aspects of shell mechanics”, *NSF CMMI Research and Innovation Conference*, 2011.
105. B. Haghpanah, A. Ajdari & **A. Vaziri**, “Extended Variable Materials Property (X-VMP) method for functionally graded materials and structures”, *NSF CMMI Research and Innovation Conference*, 2011.
106. A. Ajdari, S. Babaei & **A. Vaziri**, “Mechanical properties and energy absorption of heterogeneous and functionally graded cellular structures”, *International Conference on the Mechanical Behavior of Materials*, 2011.
107. M. W. Moon & **A. Vaziri**, “Wrinkling instability and its applications: From biomimetic tilted pillars to optics grating”, *International Conference on the Mechanical Behavior of Materials*, 2011.
108. B. Haghpanah, Yoontae Kim & **A. Vaziri**, “Instability of cracked pipes with and without an elastomeric liner”, *Engineering Mechanics Institute Conference (EMI2011)*, 2011.
109. **A. Vaziri** & A. Ajdari & “Global and localized features of shell deformation and instability”, *Engineering Mechanics Institute Conference (EMI2011)*, 2011.
110. H. Nayeb-Hashemi, & **A. Vaziri**, “Non-destructive evaluation of damaged composites”, *Engineering Mechanics Institute Conference (EMI2011)*, 2011.
111. M. Ashrafi, Sh. Chiu, N. Rahbar, H. Nayeb-Hashemi & **A. Vaziri**, “Strengthening the bonded joints by interface shape alteration”, *Engineering Mechanics Institute Conference (EMI2011)*, 2011.
112. A. Ajdari, S. Babaei, H. Nayeb-Hashemi & **A. Vaziri**, “Cellular structures with irregular structural organization”, *Engineering Mechanics Institute Conference (EMI2011)*, 2011.
113. A. Ajdari, S. Babaei & **A. Vaziri**, “Energy absorption of heterogeneous and functionally graded cellular structures”, *Sixth MIT Conference on Computational Fluid and Solid Mechanics*, 2011.
114. A. Ajdari, B. Haghpanah & **A. Vaziri**, “Structural stiffness of honeycombs with hierarchical organization”, *11<sup>th</sup> US National Congress on Computational Mechanics*, 2011.
115. A. Ajdari & **A. Vaziri**, “Multi-scale mechanics of thick elastic shells upon indentation”, *11<sup>th</sup> US National Congress on Computational Mechanics*, 2011.
116. B. Haghpanah, H. Nayeb-Hashemi & **A. Vaziri**, “Plastic behavior of functionally graded rotating disks”, *11<sup>th</sup> US National Congress on Computational Mechanics*, 2011.
117. B. Haghpanah, H. Nayeb-Hashemi & **A. Vaziri**, “Instability and post-buckling behavior of cracked shells”, *11<sup>th</sup> US National Congress on Computational Mechanics*, 2011.
118. J. Xiong, **A. Vaziri**, L. Ma, L. Wu & J. Yang, “Quasi-static compressive and low velocity impact response of multilayer carbon fiber sandwich panels with pyramidal truss cores”, *5<sup>th</sup> International Conference on Advanced Computational Engineering and Experiments*, 2011.

119. K. Ho, N. Mokarram, N. Hang, **A. Vaziri** & C. M. Powers, "Estimation of patella bone stress: A comparison of homogenous and heterogeneous finite element models", *American Society of Biomechanics Annual Meeting*, 2011.
120. A. Ajdari, B. Haghpanah & **A. Vaziri**, "Fractal and hierarchical honeycombs", *48th Annual Technical meeting of the Society of Engineering Science*, 2011.
121. **A. Vaziri** & A. Ajdari "Localized features and patterns of strongly-deformed elastic shells", *48th Annual Technical meeting of the Society of Engineering Science*, 2011.
122. A. Orsi, N. Yang, P. Canavan, **A. Vaziri** & H. Nayeb-Hashemi, "Development of a failure locus for a 3-dimensional anterior crutiate ligament: A finite element analysis", *IMECE*, 2011.
123. J. A. Rennick, A. Nazarian, A. Entezari, H. Nayeb-Hashemi, **A. Vaziri** & B. D. Snyder, "Finite Element Analysis and Computed Tomography Based Structural Rigidity Analysis of Rat Tibia with Simulated Lytic Defects", *2011 Orthopaedic Research Society*, 2011.
124. A. Ajdari, B. H. Jahromi, A. M. Hamouda, **A. Vaziri**, "Hierarchical cellular structures with tailorable properties", *Qatar Foundation Annual Research Forum*, Doha, Qatar, 2011
125. A. Orsi, N. Yang, **A. Vaziri**, P. Canavan, A. S. Hamouda & H. Nayeb-Hashemi, "Failure locus for a 3-dimensional anterior crutiate ligament", *Qatar Foundation Annual Research Forum*, Doha, Qatar, 2011.
126. A. Ajdari, B. Haghpanah & **A. Vaziri**, "Mechanics of hierarchical honeycombs", *Plasticity*, 2012.
127. **A. Vaziri**, H. Ebrahimi, A. S. Hamouda, "Sandwich panels subjected to multiple shocks and projectile impact", *Plasticity*, 2012.
128. A. Nasto, A. Ajdari, A. Lazarus, **A. Vaziri**, P.M. Reis "S-cones in this shells under indentation", *APS March Meeting*, Boston, MA, 2012.
129. A. Ajdari, B. H. Jahromi, J. Papadopoulos, **A. Vaziri**, "Honeycombs with Hierarchical Organization", *APS March Meeting*, Boston, MA, 2012.
130. A. Ajdari, B. H. Jahromi, **A. Vaziri**, "Stiff honeycombs with structural hierarchy", *European Congress on Computational Methods in Applied Sciences and Engineering*, Vienna, Austria, 2012.
131. H. Ebrahimi, A. S. Hamouda, **A. Vaziri**, "Impact Mechanics of Sandwich Panels", *European Congress on Computational Methods in Applied Sciences and Engineering*, Vienna, Austria, 2012.
132. A. Orsi, H. Nayeb-Hashemi, P. Canavan, **A. Vaziri**, "Failure loci of knee joint ligaments and concomitant injuries: A 3D finite element analysis", *Summer BioEngineering Conference*, 2012.
133. C.Tse, H. Nayeb-Hashemi, P. Canavan, **A. Vaziri**. "An analysis of frontal and sagittal plane knee kinematics during a subject specific single-leg landing," *Summer BioEngineering Conference*, 2012.
134. B. H. Jahromi, A. Ajdari, R. Oftadeh, **A. Vaziri**, "Hierarchical and Fractal Honeycombs with Tailorable Properties", *RISE2012*, Boston, 2012.

135. A. Ajdari, B. H. Jahromi, H. Nayeb-Hashemi, **A. Vaziri**, "Hierarchical honeycombs with enhanced mechanical properties", *XXIII International Congress of Theoretical and Applied Mechanics (ICTAM2012)*, Beijing, China, 2012.
136. A. Ajdari, A. Nasto, A. Lazarus, **A. Vaziri**, P.M. Reis, "Localized deformation and instability of thin elastic shells upon indentation", *ASME IMECE2012*, Houston, TX, 2012.
137. P. Su, B. H. Jahromi, W. W. Doerr, S. Hassan, A.A. Busnaina, **A. Vaziri**, "Decontamination of Surfaces Exposed to Carbon-based Nanotubes and Nanomaterials ", *ASME IMECE2012*, Houston, TX 2012.
138. M. Ashrafi, A. Ajdari, B.H. Jahromi, M. Olia, H. Nayeb-Hashemi, **A. Vaziri**, "Adhesively Bonded Joints with Non-flat Interfaces", *ASME IMECE2012*, Houston, TX, 2012.
139. B. H. Jahromi, A. Ajdari, R. Oftadeh, J. Papadopoulos, H. Nayeb-Hashemi, **A. Vaziri**, "Honeycombs with Structural Hierarchy", *ASME IMECE2012*, Houston, TX, 2012.
140. J. Xiong, B. H. Jahromi, **A. Vaziri**, T. Tang, L. Ma, L. Wu, "Low Density Carbon Fiber Composite Pyramidal Truss Cores: Manufacturing, Experiments, Theory", *ASME IMECE2012*, Houston, TX, 2012.
141. H. Ebrahimi, A. S. Hamouda, H. N. Hashemi, **A. Vaziri**, "Impact Mechanics of Sandwich Panels Subjected to Combined Shock and Projectile Loading", *ASME IMECE2012*, Houston, TX, 2012.
142. A. Orsi, H. Nayeb-Hashemi, P. Canavan, **A. Vaziri**, "Anterior Cruciate Ligament Tear Initiation Locus and the Effect of Partial Tearing on the ACL Failure Locus: A 3D Finite Element Analysis", *ASME IMECE2012*, Houston, TX, 2012.
143. B. H. Jahromi, A. Ajdari, R. Oftadeh, **A. Vaziri**, "Hierarchical and Fractal Honeycombs with Tailorable Properties", Research, Innovation and Scholarship Expo (RISE 2012), Boston, 2012.
144. H. Ebrahimi, A. S. Hamouda, **A. Vaziri**, "Structural Performance of Sandwich Panels under Complex Loading", NSF CMMI Engineering Research and Innovation Conference, Boston, 2012.
145. B. H. Jahromi, A. Ajdari, R. Oftadeh, H. Ebrahimi & **A. Vaziri**, "Mechanics of hierarchical honeycombs", NSF CMMI Research and Innovation Conference, Boston, MA, 2012.
146. B. H. Jahromi, A. Ajdari, **A. Vaziri**, "Intricate mechanics of hierarchical honeycombs", Society of Engineering Sciences (SES2012), Atlanta, GA, 2012.
147. R. Oftadeh, B. H. Jahromi, A. Ajdari, **A. Vaziri**, "Fractal-Appearing hierarchical honeycombs", MRS Fall meeting, Boston, 2012.
148. A. Ajdari, B. H. Jahromi, A. M. Hamouda, **A. Vaziri**, " Hierarchical honeycombs with enhanced mechanical properties", 7th International Conference Supply on the Wings, Frankfurt, Germany, 2012.
149. **A. Vaziri**, H. Ebrahimi, A.S. Hamouda, "Finite Element Study of Honeycomb Sandwich Panels subjected to complex Dynamic Loading", *Plasticity*, Bahamas, 2013.
150. **A. Vaziri**, B. H. Jahromi, A. Ajdari, H. Ebrahimi, P. Papadopoulos, H. Nayeb-Hashemi, "Plastic Limit Analysis of hierarchical honeycombs", *Plasticity*, Bahamas, 2013.

151. B. Haghpanah, D. Mousanezhad, **A. Vaziri**, "Elasto-plastic and bifurcation response of chiral, anti-chiral and hierarchical periodic structures", *Society of Engineering Sciences (SES)*, Providence, RI, 2013.
152. B. Haghpanah, D. Mousanezhad, **A. Vaziri**, "Buckling patterns in chiral, anti-chiral and hierarchical honeycombs", *Research, Innovation and Scholarship Expo (RISE)*, Boston, MA, 2013.
153. D. Mousanezhad, B. Haghpanah, **A. Vaziri**, "Chiral, anti-chiral and hierarchical honeycombs", *Research, Innovation and Scholarship Expo (RISE)*, Boston, MA, 2013.
154. D. Mousanezhad, B. Haghpanah, **A. Vaziri**, "Elasto-plastic and nonlinear elastic response of chiral, anti-chiral and hierarchical lattice structures", *ASME*, San Diego, CA, 2013.
155. D. Mousanezhad, B. Haghpanah, **A. Vaziri**, "Topology vs. properties in cellular structures", *Society for Experimental Mechanics (SEM)*, Lombard, IL, 2013.
156. D. Mousanezhad, B. Haghpanah, R. Ghosh, A.M. S. Hamouda, H. Nayeb-Hashemi, **A. Vaziri**, "Chirality and hierarchy in cellular structures", *Qatar Foundation Annual Research Conference*, Doha, Qatar, 2013.
157. D. Mousanezhad, B. Haghpanah, R. Ghosh, H. Nayeb-Hashemi, **A. Vaziri**, "Elastic properties of chiral, anti-chiral, and hierarchical honeycombs", *NewMech*, Boston, MA, 2013.
158. R. Oftadeh, B. Haghpanah, **A. Vaziri**, "Anisotropic Hierarchical Honeycombs", *NEWMech*, Boston, MA, 2013.
159. Z. Karimi, B. Haghpanah, P. Su, S. Hassan, W. W. Doerr, **A. Vaziri**, "Decontamination of surfaces exposed to carbon-based nanotubes and nanomaterials", *NEWMech*, Boston, MA, 2013.
160. A. Orsi, S. Chakravarthy, P. Canavan, E. Pena, R. Goebel, **A. Vaziri**, H. Nayeb-Hashemi "Uncovering the Mechanisms of Soft Tissue Injuries Associated with ACL Tear", *RISE, Northeastern University, Boston, MA* 2013.
161. P. Su, S. Hassan, B. Haghpanah, W. W. Doerr, A., Z. Karimi, **A. Vaziri**, "Decontamination of Surfaces Exposed to Carbon-based Nanotubes and Nanomaterials ", *ASME*, San Diego, CA, 2013.
162. H. Ebrahimi, A. Ajdari, D. Vella, A. Boudaoud and **A. Vaziri**, "Directional Delamination of Highly Ellipsoidal Shells", *NewMech*, Boston MA, 2013.
163. H. Ebrahimi, A. Ajdari, D. Vella, A. Boudaoud and **A. Vaziri**, "Directional Delamination of Elastic Ellipsoidal Shells", *Society of Engineering Science Annual Technical Meeting*, Providence, RI, 2013.
164. H. Ebrahimi, A.M. S. Hamouda, H. N. Hashemi and **A. Vaziri**, "Finite Element Study of Sandwich Panels Under Complex Dynamic Loading", *Research, Innovation and Scholarship Expo (RISE)*, Boston, MA, 2013
165. A. Orsi, S. Chakravarthy, P. Canavan, E. Pena, R. Goebel, **A. Vaziri**, H. Nayeb-Hashemi "Uncovering the Mechanisms of Soft Tissue Injuries Associated with ACL Tear", *ASME-IMECE, San Diego, CA*, 2013.

166. R. Ghosh and **A. Vaziri** "Mechanics of Biomimetic Fish Scale Surface Modifications", *NewMech*, Boston MA, 2013.
167. R. Oftadeh, **A. Vaziri**, A. Nazarian, "Calculation of the Mechanical Properties of Trabecular Bone: Errors and Artifacts", *RISE, Northeastern University*, Boston, MA, 2013.
168. A. Orsi, S. Chakravarthy, P. Canavan, E. Pena, R. Goebel, **A. Vaziri**, H. Nayeb-Hashemi "Uncovering the Mechanisms of Soft Tissue Injuries Associated with ACL Tear", *NewMECH*, Boston, MA, 2013.
169. R. Ghosh and **A. Vaziri**, "Nonlinear Structural Behavior of Systems with Biomimetic Scales", *ASME IMECE*, San Diego CA, 2013.
170. R. Oftadeh, P. Mcguirk, C. Haselmayer, **A. Vaziri**, A. Nazarian, "Errors and Artifacts Associated with the Calculation of the Intrinsic Properties of Trabecular Bone", *ASME IMECE*, San Diego CA, 2013.
171. H. Abdi, **A. Vaziri**, H. Nayeb-Hashemi, "Torsional Dynamic Response of a shaft with Longitudinal and Circumferential Cracks" *NewMech*, Boston MA, 2013.
172. H. Abdi, J. Papadopoulos, **A. Vaziri**, "Understanding and Reducing Peel Stress in Adhesive Joints", *Society of Engineering Sciences (SES)*, Providence, RI, 2013.
173. H. Ebrahimi, A.M. S. Hamouda and **A. Vaziri**, "Threat-Resistant Sandwich-Walled Structures", *Society of Experimental Mechanics (SEM)*, Lombard, IL, 2013.
174. D. Mousanezhad, B. Haghpanah, H. Ebrahimi, **A. Vaziri**. "Real-time highly tunable elasticity in electromagnet-equipped cellular structures", *NewMech*, Amherst, MA, 2014.
175. B. Haghpanah, H. Ebrahimi, D. Mousanezhad, J. Papadopoulos, A.M.S. Hamouda, H. Nayeb-Hashemi, **A. Vaziri**, "Programmable cellular solids: advanced engineering materials of the future", *Qatar Foundation Annual Research Conference*, Doha, Qatar, 2014.
176. D. Mousanezhad, B. Haghpanah, A. Ajdari, M. Olia, H. Nayeb-Hashemi, **A. Vaziri**, "Mechanics of hierarchical cellular structures with biomimetic architecture", *ASME*, Montreal, Canada, 2014.
177. B. Haghpanah, D. Mousanezhad, **A. Vaziri**, "Nonlinear elastic and plastic response of chiral, anti-chiral and hierarchical periodic structures", *11<sup>th</sup> World Congress on Computational Mechanics (WCCM XI), 5<sup>th</sup> European Conference on Computational Mechanics (ECCM V)*, Barcelona, Spain, 2014
178. D. Mousanezhad, H. Ebrahimi, B. Haghpanah, R. Ghosh, A. Ajdari, A.M.S. Hamouda, **A. Vaziri**, "Spiderweb honeycombs", *Society of Engineering Sciences (SES)*, West Lafayette, IN, 2014.
179. R.T. Goebel, N. Patel, B. Haghpanah, **A. Vaziri**, A. Nazarian, "Viability of Finite Element Analysis for Glenohumeral Contact Analysis in Elite Overhead Athletes", *ECSS*, Amsterdam, Netherlands, 2014.
180. Z. Karimi, P. Su, B. Haghpanah, W. W. Doerr, L. Gritzo, S. Hassan, **A. Vaziri**, "Removal of Multi-Walled Carbon Nanotubes from Contaminated Surfaces with Microscale Topological Features", *ASME*, Montreal, Canada, 2014.

181. P. Su, Z. Karimi, S. Hassan, B. Haghpanah, W. W. Doerr, **A. Vaziri**, "Removal efficiency of carbon nanotubes from the contaminated surfaces", *the 60th Annual Technical Meeting of IEST (ESTECH 2014)*, San Antonio, Texas, 2014.
182. S. Nagashima, H. Ebrahimi, K. Lee, **A. Vaziri**, and M. Moon, "Direct fabrication of nanochannels by mechanical folding of a stiff layer on a soft polymer", ENGE, Jeju, South Korea, 2014
183. A. Orsi, S. Chakravarthy, P. Canavan, E. Pena, R. Goebel, **A. Vaziri**, H. Nayeb-Hashemi "Investigating the Effects of Knee Joint Motion Schemes on Knee Joint Injury", *NEBEC*, Boston, MA, 2014.
184. Z. Karimi, B. Haghpanah, P. Su, S. Hassan, W. W. Doerr, **A. Vaziri**, "Removal of Multi-Walled Carbon Nanotube Contaminants from Surfaces with Microscale Topological Features", *NEWMech*, Boston, MA, 2014.
185. R. Oftadeh, **A. Vaziri**, A. Nazarian, "Multi-Scale Modeling and Hierarchical Analysis of Rat Cortical and Trabecular Bone", *ASME-IMECE*, Montreal, Canada, 2014.
186. R. Ghosh and **A. Vaziri**, "Meso Scale Influence of Biomimetic Scales on Elastic Substrates ", *MRS Fall Meeting*, Boston MA, 2014.
187. R. Oftadeh, **A. Vaziri**, A. Nazarian, "Hierarchical Analysis and Multi-Scale Modeling of Rat Cortical and Trabecular Bone", *R/SE*, Northeastern University, Boston, MA, 2014.
188. R. Ghosh, H. Ebrahimi, **A. Vaziri**, "Mechanical Behavior of Biomimetic Surface Scales", *SES Conference*, West Lafayette, IN, 2014.
189. R. Oftadeh, V. Entezari, G. Spörri, J.C. Villa, H. Krigbaum, E. Strawich, L. Graham, C. Rey, H. Chiu, R. Müller, H.N. Hashemi, **A. Vaziri**, A. Nazarian, "Rat Cortical and Trabecular Bone: Hierarchical Analysis and Multi-Scale Modeling", *ORS*, Las Vegas, Nevada, 2015.
190. H. Ebrahimi, R. Ghosh, **A. Vaziri**, "Contact Kinematics of Biomimetic Scales", *SEM Annual Conference*, Costa Mesa, CA, 2015.
191. D. Mousanezhad, R. Ghosh, **A. Vaziri**, "Phononic properties of self-similar hierarchical honeycombs", *SEM Annual Conference*, Costa Mesa, CA, 2015.
192. D. Mousanezhad, S. Babaei, H. Ebrahimi, R. Ghosh, A.M.S. Hamouda, K. Bertoldi, **A. Vaziri**, "Auxetic metamaterials with self-similar hierarchy", *Society of Engineering Science 52nd Annual Technical Meeting*, College Station, TX, 2015.
193. R. Ghosh, H. Ebrahimi, **A. Vaziri** "Mechanics of Biomimetic Fish Scale Surface Modifications", *Society of Engineering Science 52nd Annual Technical Meeting*, College Station, TX, 2015.
194. R. Ghosh, H. Ebrahimi, **A. Vaziri** "Contact Kinematics of Biomimetic Scales", *ICCES 2015*, Reno, NV, 2015.
195. B. Haghpanah, H. Ebrahimi, D. Mousanezhad, **A. Vaziri**, "Programmable cellular solids", *18th International Conference on Composite Structures (ICCS18)*, Lisbon, Portugal, 2015.

196. D. Mousanezhad, S. Babaei, H. Ebrahimi, R. Ghosh, A.M.S. Hamouda, K. Bertoldi, **A. Vaziri**, "Hierarchical auxetic metamaterials", 2015 MRS Fall Meeting & Exhibit, Boston, MA, 2015.
197. B. Haghpanah, H. Ebrahimi, D. Mousanezhad, J. Hopkins, **A. Vaziri**, "Programmable elastic metamaterials", ECCOMAS Congress 2016, Crete Island, Greece, 2016.
198. H. Ebrahimi, A. Vaziri, "Residual Capacity of Sandwich Panels", ECCOMAS, Crete Island, Greece, 2016.
199. H. Ebrahimi, B. Haghpanah, D. Mousanezhad, R. Ghosh, **A. Vaziri**, "Highly Deployable Multifunctional Cellular Structures with Hierarchy", ICTAM Montreal, Canada, 2016.
200. M. S. Ghiasi, **A. Vaziri**, A. Nazarian, "Effects of Posterior Capsular Contracture on Contact Path of Glenohumeral Joint: A Finite Element Analysis", 38<sup>th</sup> Annual International Conference of the IEEE Engineering in Medicine and Biology Society, FL, 2016.

## D. Other Activities

### Professional Societies

- 2001-present American Society of Mechanical Engineering (ASME)  
 2001-present American Society of Civil Engineering (ASCE)  
 2003-present The Honor Society of Phi Kappa Phi  
 2006-present United States Association for Computational Mechanics (USACM)  
 2006-present Materials Research Society (MRS)  
 2011-present Society of Engineering Science (SES)

### Editorial Activities

- 2008-present **Associate Technical Editor: Experimental Mechanics**
- 2008-present **Member of the Editorial Board: Theoretical Biology Insights**
- 2008-present **Member of the Editorial Board: MCB: Molecular and Cell Biomechanics**
- 2009-present **Member of the Editorial Board: Journal: Biomedical Engineering and Computational Biology**
- 2008-2009 **Associate Editor: International Journal of Engineering**
- 2010, 2011 Reviewer and panelist for NSF
- 2007-present **Guest Editor**  
**Experimental Mechanics** - Special issue: Modeling and Experiments in Cell and Biomolecular Mechanics (2009, Vol. 49).  
**J. of Applied Mechanics** - Special issue: Recent Advances in Impact Engineering (Vol. 76, 2009)  
**J. Mechanics of Materials and Structures** - Special issue: Microscale Mechanics of Biomaterials (2007, Volume 2, issue 10)  
**J. Mechanics of Materials and Structures** - Special issue: Computational Impact Engineering (2007, Volume 2, issue 6)

2004-present Reviewer

Int. J. of Adhesion and Adhesives, Biomechanics and Modeling in Mechanobiology, Biophysical Journal, Journal of Biomechanics, ASME Journal of Biomechanical Engineering, Computer Methods in Applied Mechanics and Engineering, Int. J. of Solids and Structures, Process Safety Progress, J. Mechanics of Materials and Structures, Structural Engineering and Mechanics, J. Engineering Materials and Technology, J. Vibration and Acoustics, J. Applied Mechanics, International J. Applied Mechanics, Fatigue and Fracture of Engineering Materials and Structures, Experimental Mechanics, AIAA Journal, Thin-Walled Structures, Computer Modeling in Engineering and Sciences, Journals of Materials Research, Materials & Design, IEEE Transaction on NanoBioScience, Journal of Materials Science and Engineering A, Journal of Materials Science, Molecular and Cellular Biomechanics, Journal of Diabetes Science and Technology, Journal of Motor Behavior, Surface and Coating Technology, Strain, Composite Structures, Composites Part A. Composites Part B, Composite Science and Technology, European Journal of Mechanics - A/Solids, The Journal of Adhesion, SIAM Journal of Applied Mathematics, Mechanics Research Communications, International Journal of Engineering, International Journal of Damage Mechanics, Langmuir, The Proceedings of Royal Society of London: A, The Proceedings of Royal Society of London: Interface, Engineering Fracture Mechanics, J. Mechanics and Physics of Solids, Mathematics and Mechanics of Solids, Nanotechnology, Applied Physics Letters, Nature Materials.

### **Major Administrative Responsibilities**

2005-present Session Chair and co-Chair for different meeting and conferences, including:

8<sup>th</sup> US National Congress on Computational Mechanics (2005)

7<sup>th</sup> World Congress on Computational Mechanics (2006)

ASME IMECHE (2006)

International Conference on Computational and Experimental Eng. and Sciences (2007)

9<sup>th</sup> US National Conference on Computational Mechanics (2007)

International Symposium on Plasticity (2010)

International Symposium on Plasticity and Its Current Applications (2011)

2006

**Mini-Symposium Primary Organizer**, 7<sup>th</sup> World Congress on Computational Mechanics  
Mini-symposium: *Advances and Application of Computational Methods in Impact Engineering*

2007

**Mini-Symposium Primary Organizer**, 9<sup>th</sup> US National Conference on Computational Mechanics  
Mini-symposium: *Computational Methods in Impact Engineering*

2007

**Mini-Symposium Co-organizer**, 9<sup>th</sup> US National Conference on Computational Mechanics  
Mini-symposium: *Computational Methods in Bioengineering*

2007

**Symposium Primary Organizer**, IMECE2007  
Symposium: *Response of Materials and Structures under High Intensity Loading*



- 2008 **Mini-Symposium Primary Organizer**, The joint VIII World Congress on Computational Mechanics and V European Congress on Computational Methods in Applied Sciences and Engineering  
Mini-symposium: *Advances in Computational Impact Engineering*
- 2008 **Symposium Organizer**, International Conference on Computational and Experimental Engineering and Sciences (ICCES'08)  
Symposium: *Recent Advances in Biomechanics*
- 2008 **Member of the Organizing Committee**, International Conference on Computational and Experimental Engineering and Sciences (ICCES'08)
- 2009 **Mini-Symposium Organizer**, 10<sup>th</sup> US National Congress on Computational Mechanics  
Mini-symposium: *Computational Methods in Impact Engineering*
- 2010 **Mini-Symposium Primary Organizer**, IV European Conference on Computational Mechanics – Paris, France (ECCM 2010)  
Mini-symposium: *Computational Methods in Impact Engineering*
- 2010 **Symposium Organizer**, International Conference on Computational and Experimental Engineering and Sciences (ICCES10)  
Symposium: *Computational and Experimental Methods in Impact and Blast Mechanics*
- 2010 **Workshop co-Organizer**, The New England Workshop on the Mechanics of Materials and Structures (NEW.Mech 2010)
- 2011 **Symposium co-Organizer**, Six MIT Conference on Computational Fluid and Solid Mechanics  
Symposium: *Impact Modeling of Composites*
- 2011 **Workshop co-Organizer**, Second New England Workshop on the Mechanics of Materials and Structures (NEW.Mech 2011)
- 2012 **Mini-Symposium Primary Organizer**, 10th World Congress on Computational Mechanics – Sao Paulo, Brazil (WCMM2012)  
Mini-symposium: *Computational and Experimental Methods in Impact and Blast Mechanics*
- 2012 **Workshop co-Organizer**, Third New England Workshop on the Mechanics of Materials and Structures (NEW.Mech 2012)
- 2013 **Symposium Organizer**, Plasticity 2013  
Mini-symposium: *Mechanics of Cellular Structures*

2013

**Workshop co-Organizer**, Fourth New England Workshop on the Mechanics of Materials and Structures (NEW.Mech 2013)