**HANEESH KESARI** Brown University

School of Engineering

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1. **Professional Preparation**

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| Indian Institute of Technology Guwahati | Guwahati, India | Mechanical Engineering | B.Tech. 2005 |
| Stanford University | Stanford, CA, USA | Mechanical Engineering | M.S. 2007 |
| Stanford University | Stanford, CA, USA | Mechanical Engineering | Ph.D. 2011 |
| Brown University | Providence, RI, USA | Theoretical & Computational Solid Mechanics | 2011–2012 |

1. **Appointments**

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| January 2013-present | Asst. Professor of Engineering | Brown University |

1. **Publications**

*Publications Most Closely Related*

1. Michael A. Monn, James C. Weaver, Tianyang Zhang, Joanna Aizenberg, and Haneesh Kesari, “New functional insights into the internal architecture of the laminated anchor spicules of *Euplectella aspergillum*,” *Proceedings of the National Academy of Sciences,* 112(16) 4976­­–4981 (2015), DOI: 10.1073/pnas.1415502112
2. David A. Stout, Eyal Bar-Kochba, Jonathan B. Estrada, Jennet Toyjanova, Haneesh Kesari, Jonathan S. Reichner, and Christian Franck, “Mean deformation metrics for quantifying 3D cell–matrix interactions without requiring information about matrix material properties.” *Proceedings of the National Academy of Sciences,* 113(11) 2898­–2903 (2016), DOI: 10.1073/pnas.1510935113
3. Haneesh Kesari and Adrian J. Lew, “Adhesive frictionless contact between an elastic isotropic halfspace and a rigid axi-symmetric punch,” *Journal of Elasticity*, 106(2) 203–224 (2012), DOI: 10.1007/s10659-011-9323-8
4. Haneesh Kesari, and Adrian J. Lew, “Effective macroscopic adhesive contact behavior induced by small surface roughness,” *Journal of the Mechanics and Physics of Solids*, 59(12) 2488–2510 (2011), DOI: 10.1016/j.jmps.2011.07.009
5. Haneesh Kesari, Joseph C. Doll, Beth L. Pruitt, Wei Cai, and Adrian J. Lew, “Role of surface roughness in hysteresis during adhesive elastic contact,” *Philosophical Magazine Letters*, 90(12) 891–902 (2010), DOI: 10.1080/09500839.2010.521204

*Other Significant Publications*

1. Sohan Dharmaraja, Haneesh Kesari, Eric Darve, and Adrian J. Lew, “Time integrators based on approximate discontinuous hamiltonians,” *International Journal for Numerical Methods in Engineering*, 89(1) 71–104 (2012), DOI: 10.1002/nme.3236
2. Eric Chason, Fei Pei, Cylde L. Briant, Haneesh Kesari, and Allan F. Bower, “Significance of Nucleation Kinetics in Sn Whisker Formation,” *Journal of Electronic Materials,* 43(12) 4435–4441 (2014), DOI: 10.1007/s11664-014-3379-8
3. Lampros C. Kourtis, Haneesh Kesari, Dennis R. Carter, and Gary S. Beaupré, “Transverse and torsional shear stresses in prismatic bodies having inhomogeneous material properties using a new 2D stress function,” *Journal of Mechanics of Materials and Structures*, 4(4) 659–674 (2009), DOI: 10.2140/jomms.2009.4.659
4. Lampros C. Kourtis, Dennis R. Carter, Haneesh Kesari, and Gary S. Beaupré, “A new software tool (VA-BATTS) to calculate bending, axial, torsional, and transverse shear stresses within bone cross sections having inhomogeneous material properties,” *Computer Methods in Biomechanics* *and Biomedical Engineering*, 11(5) 463–476 (2008), DOI: 10.1080/10255840801930728
5. Suhas S. Mohite, Haneesh Kesari, Venkata R. Sonti, and Rudra Pratap, “Analytical solutions for the stiffness and damping coefficients of squeeze films in MEMS devices having perforated back plates,” *Journal of Micromechanics and Microengineering*, 15(11) 2083–92 (2005), DOI: 10.1088/0960-1317/15/11/013
6. **Synergistic Activities**
   1. Journal article reviewer for
      1. Journal of the Mechanics and Physics of Solids
      2. Thin Film Solid Films
      3. Journal of Biomechanics
      4. ACS Applied Materials & Interfaces
      5. Scientific Reports
      6. Journal of Applied Mechanics
      7. Mechanics Research Communications
      8. Annals of Biomedical Engineering
      9. International Journal of Fracture
      10. Scripta Materialia
   2. Faculty research mentor/advisor of students who belong to underrepresented groups in STEM fields (African American (Brian Williams, Summer 2015), Hispanic (Horacio Ferrandiz, Fall 2014)). Specifically, the PI has participated in the following activities:
      1. Faculty advisor for the Undergraduate Teaching and Research Awards program at Brown (2013–16).
      2. SPIRA, annual four-week summer camp on STEM topics hosted at Brown for high school age girls (2015–16).
      3. Faculty observer for the Reginald D. Archambault Award for Teaching Excellence at Brown (2015). This award program aims to train graduate students in teaching high school age students in STEM subjects.
   3. Extracurricular teaching activities
      1. Faculty instructor for the course: *Material Science and Engineering: where would the world be without it, (2015).* This course is aimed at high school age students.
      2. Instructor for Summer Institute for Middle School Teachers, Stanford, 2007, 2008.
      3. Instructor for National Hispanic University Workshop, Stanford, 2007.
   4. Organization of the Society of Engineering Science, Annual Technical Conference, 2013
      1. Judge for the student paper competition in the Structures/Solids track that was organized as part of the SES Annual Technical Meeting 2013.
      2. Member of local organizing committee, SES Annual Technical Meeting 2013.
7. **Collaborators & Other Affiliations**

*Collaborators and & Co-Editors**(over the past 48 months)*

Joanna Aizenberg (Harvard University), Gary S. Beaupré (VA Palo Alto Health Care System & Stanford University), Dennis R. Carter (Stanford University), Eric Darve (Stanford University), Sohan Dharmaraja (Neotenicity LLC), Joseph Doll (SiTime Corporation), Jae-Hyun Kim (KIMM, Korea), Kwan-Seop Kim (KIMM, Korea), Kristie Koski (Brown University), Beth Pruitt (Stanford University), James Weaver (Harvard University)

*Graduate Advisors and Postdoctoral Sponsors (all, Total: 3)*

Wei Cai (PhD advisor; Stanford University), Adrian Lew (PhD advisor; Stanford University), and Huajian Gao (Postdoctoral sponsor; Brown University)

*Graduate Thesis Advisees (all, Total: 2)*

Tianyang Zhang (M.S.; University of California, Los Angeles)

Jarod Ferreira (M.S.)