

Curriculum Vita – Jeongho Kim

Jeongho Kim

Associate Professor

Department of Civil and Environmental Engineering
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Status: USA Citizen

Education: Ph.D. Department of Civil & Environmental Engineering,
University of Illinois at Urbana-Champaign

M.S. Department of Civil & Environmental Engineering,
University of Illinois at Urbana-Champaign

B. S. Department of Architectural Engineering, College of Architecture
Hanyang University, Seoul, South Korea

Employment: 08/2010-present Associate Professor, Department of Civil & Environmental
Engineering, University of Connecticut
01/2004-08/2010 Assistant Professor, Department of Civil & Environmental
Engineering, University of Connecticut
08/2011-12/2011 Visiting Professor & Instructor, Department of Architectural
Engineering, Hanyang University, Seoul, South Korea
11/2007-present Joint Appointment, Department of Mechanical
Engineering, University of Connecticut
08/1999-10/2003 Graduate Research Assistant, University of Illinois
at Urbana-Champaign

Affiliations: 2004-present Institute of Materials Science, Center for Clean Energy Engineering
2005-present Booth Engineering Center for Advanced Technologies

Research Interests:

- Viscoelastic Analysis of Dental Restorations
- Composites Damage Simulation
- Blast Dynamics of Steel Beams and Columns
- Nonlinear Structural Analysis
- Finite Element Modeling and Simulation
- Computational Fracture Mechanics
- Functionally Graded Materials
- Mechanical Durability Modeling of Solid Oxide Fuel Cells
- Multi-physics Modeling for Piezoelectric Fiber Composites

Teaching Activities:

- Taught undergraduate courses (Fundamentals of Engineering, Statics, Dynamics, Basic Structural Analysis - Truss, Beam, and Steel Frame Structures, Advanced Structural Analysis - Truss, Beam, and Steel Frame Structures)
- Taught graduate courses (Fracture Mechanics: Finite Element Methods in Applied Mechanics I and II)

Professional Societies:

- Member of *American Institute Steel Construction* (AISC)
- Member of *Fracture and Failure Mechanics Technical Committee*, ASME Applied Mechanics Division: 2013-present (ASME-IMECE, San Diego, 2013)
- Member of *International Advisory Committee on Functionally Graded Material* (IACFGM): 2004 - present
- Member of *American Society of Civil Engineers* 2006 – present
- Member of *American Society of Mechanical Engineers* 2006 – present

Honors and Awards:

- ASEE Air Force Summer Faculty Fellowship, Air Force Research Lab. at Wright-Patterson (2010)
- National Science Foundation CAREER Award (2006)
- Inaugural USACM (U.S. Association of Computational Mechanics) & ASME (American Society of Mechanical Engineers) PTC 60 *Student Benchmark Competition Award*, the 7th U.S. National Congress on Computational Mechanics, July 2003
- *Young Researcher Fellowship Award* in the Second M.I.T. Conference, June 2003
- *Ambassadorial Scholar Award*, The Rotary International, 1998-1999

Journals (Full Paper Refereed):

1. S. Vaidya, L. Zhang, D. Maddala, R. Hebert, J. T. Jefferson, A. Shukla, and J.-H. Kim, "Quasi-static Response of Sandwich Steel Beams with Corrugated Cores," *Engineering Structures*, 97:80-89, 2015
2. L. Zhang, R. Hebert, J. T. Jefferson, A. Shukla, and J.-H. Kim, "Dynamic Response of Corrugated Steel Plates with Graded Cores," *International Journal of Impact Engineering*, 65:185-194, 2014
3. S. Vaidya and J.-H. Kim, "Finite Element Thermal Analysis of Solid Oxide Fuel Cell Cathode Microstructures," *Journal of Power Sources*, 225(1):269-276, 2013.
4. N. Li, A. Verma, P. Singh, and J.-H. Kim, "Characterization of La_{0.58}Sr_{0.4}Co_{0.2}Fe_{0.8}O_{3-d}Ce_{0.8}Gd_{0.2}O₂ Composite Cathode for Intermediate Temperature Solid Oxide Fuel Cells," *Ceramics International*, 39:529-538, 2013.
5. S. Vaidya and J.-H. Kim, "Continuum Mechanics of Solid Oxide Fuel Cells Using Three-Dimensional Reconstructed Microstructures," A book chapter in Y. X. Gan (Ed.), *Continuum Mechanics – Progress in Fundamentals and Engineering Applications*, InTech, pp 73-88, 2012.
6. L. Zhang and J.-H. Kim, "Mixed-mode Crack tip Fields in Anisotropic Functionally Graded Materials," *ASME Journal of Applied Mechanics*, 79(5):051011 (10 pages), 2012.

7. C. Liu, J. DeWolf and J.-H. Kim, “Development of a New Cracked Mindlin Plate Element,” *ISRN Civil Engineering*, Research Article ID: 842572, 11pages, 2011.
8. L. Zhang and J.-H. Kim, “Higher-order Terms for the Mode-III Stationary Crack-tip Fields in a Functionally Graded Material,” *ASME Journal of Applied Mechanics*, 78(1):011005 (10 pages), 2011.
9. G. Anandakumar and J.-H. Kim, “A Thermomechanical Fracture Modeling and Simulation for Functionally Graded Solids using a Residual-Strain Formulation,” *International Journal of Fracture*, 164:31-55, 2010.
10. G. Anandakumar and J.-H. Kim, “On the Modal Behavior of a Three-Dimensional Functionally Graded Cantilever Beam: Poisson’s ratio and Material Sampling Effects,” *Composite Structures*, 92:1358-1371, 2010.
11. G. Anandakumar, N. Li, A. Verma, P. Singh, and J.-H. Kim, “Thermal Stress and Probability of Failure Analyses of Functionally Graded Solid Oxide Fuel Cells,” *Journal of Power Sources*, 195(19):6659-6670, 2010.
12. G. Anandakumar and J.-H. Kim, “Dynamic, Modal and Wave Propagation Analyses of 3D Functionally Graded Continua,” *Materials Science Forum*, 631-632:17-22, 2010.
13. C. Liu, J. T. DeWolf and J.-H. Kim, “Development of a Baseline for Structural Health Monitoring and Seismic Evaluation for a Curved Post-tensioned Concrete Box Girder Bridge,” *Engineering Structures*, 31: 3107-3115, 2009
14. L. Zhang and J.-H. Kim, “A Complex Variable Approach for Asymptotic Mode-III Crack-tip Fields in an Anisotropic Functionally Graded Material,” *Engineering Fracture Mechanics*, 76: 2512-2525, 2009.
15. J.-H. Kim and Amit KC, “A Generalized Interaction Integral Method for the Evaluation of the T-stress in Orthotropic Functionally Graded Materials under Thermal Loading,” *ASME, Journal of Applied Mechanics*, 75:051112, pages 8, 2008.
16. Amit KC and J.-H. Kim, “Interaction Integrals for Thermal Fracture of Functionally Graded Materials,” *Engineering Fracture Mechanics*, 75(8):2542-2565, 2008.