

Wei Hong

Assistant Professor
Department of Aerospace Engineering
Iowa State University, Ames, IA 50011

Education

Ph. D. Engineering Sciences	Harvard University, Cambridge, MA	May 2006
M. S. Solid Mechanics	Tsinghua University, Beijing, China	June 2002
B. S. Engineering Mechanics	Tsinghua University, Beijing, China	June 2000
B. S. Computer Science	Tsinghua University, Beijing, China	June 2000

Employment

- July 2008 – Present, Assistant Professor, Department of Aerospace Engineering, Iowa State University
- July 2008 – Present, Assistant Professor, courtesy Department of Materials Science and Engineering, Iowa State University
- June 2006 – June 2008, Postdoctoral Research Fellow, Harvard University.

Research Interests

- Mechanics of biomimic and biomedical materials, such as polymeric gels and dielectric active materials.
- Fracture, deformation and mass transport.
- Evolving microstructures of materials.
- Continuum mechanics and computational methods.
- Biomechanics.

Awards and Honors

Award of Distinction in Teaching, Harvard University, 2006
Chinese Government Award for Outstanding Students Abroad, 2005
Summa Cum Laude, Tsinghua University, 2000
Excellent Student of Beijing, 1999

Selected Publications

- [1] W. Hong, Z. Liu, and Z. Suo, "[Inhomogeneous swelling of a gel in equilibrium with a solvent and mechanical load](#)". Submitted for publication.
- [2] W. Hong, X. Zhao, Z. Suo, "[Drying-induced bifurcation in a hydrogel-actuated nanostructure](#)", submitted for publication.
- [3] X. Zhao, W. Hong, Z. Suo [Inhomogeneous and anisotropic equilibrium state of a swollen hydrogel containing a hard core](#). *App. Phy. Lett.*, **92**, 051904 (2008).
- [4] W. Hong, X. Zhao, J. Zhou, and Z. Suo, "[A theory of coupled diffusion and large deformation in polymeric gels](#)", *J. Mech. Phy. Solids*, **56**, 1779-1793 (2008).
- [5] X. Zhao, W. Hong and Z. Suo, "[Stretching and polarizing a dielectric gel immersed in a solvent](#)", *Int. J. Solids Struct.* **45**, 4021-4031 (2008).
- [6] J. Zhou, W. Hong, X. Zhao, Z. Zhang, and Z. Suo, "[Propagation of instability in dielectric elastomers](#)", *Int. J. Solids Struct.* **45**, 3739-3750 (2008).
- [7] X. Zhao, W. Hong and Z. Suo, "[Electromechanical coexistent states and hysteresis in dielectric elastomers](#)", *Phy. Rev. B*, **76**,134113 (2007).
- [8] W. Hong, Z. Suo and Z.-Y. Zhang, "[Dynamics of terraces on a silicon surface due to combined action of strain and electric current](#)". *J. Mech. Phy. Solids*, **56**, 267-278 (2008).
- [9] M. Yoon, H. N. Lee, W. Hong, H. M. Christen, Z.-Y. Zhang, Z. Suo, "[Dynamics of step bunching in heteroepitaxial growth on vicinal substrates](#)", *Phys. Rev. Lett.* **99**, 055503 (2007).
- [10] W. Hong, Z.-Y. Zhang, and Z. Suo, "[Interplay between elastic interactions and kinetic processes in stepped Si \(001\) homoepitaxy](#)". *Phy. Rev. B*, **74**, 235318 (2006).
- [11] W. Hong, H. N. Lee, M. Yoon, H. M. Christen, D. H. Lowndes, Z. Suo, and Z.-Y. Zhang, "[Persistent step-flow growth of strained films on vicinal substrates](#)". *Phy. Rev. Lett.* **95**, 095501 (2005).
- [12] Z.Y. Huang, W. Hong, Z. Suo, "[Nonlinear analyses of wrinkles in films on soft elastic substrates](#)". *J. Mech. Phy. Solids* **53**, 2101-2118 (2005).
- [13] Z.Y. Huang, W. Hong, Z. Suo, "[Evolution of wrinkles in hard films on soft substrates](#)". *Phy. Rev. E* **70**, 030601(R), (2004).
- [14] W. Hong and Z. Suo, "[Molecular assembly on cylindrical surfaces](#)". *Int. J. Solids Struct.* **41**, 6895-6903 (2004).
- [15] Z. Suo, W. Hong. "[Programmable motion and assembly of molecules on solid surfaces](#)." *Proc. Natl. Acad. Sci. USA* **101**, 7874-7879 (2004).
- [16] W. Yang, W. Hong, "[Numerical simulation for deformation of nano-grained metals](#)", *Acta Mechanica Sinica*, **18** (5): 506-515 (2002).