

Huidi Ji

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EDUCATION

- ◇ **Duke University**, Durham, NC.
Ph.D. in Computational Mechanics, expected graduation: 2004.
- ◇ **Shanghai Jiaotong University**, Shanghai, China.
M.S. in Structural Mechanics, April, 2000
Thesis: "Analysis of Ultimate Strength of Corrugated Bulkhead on Bulk Carriers"
- ◇ **Shanghai Jiaotong University**, Shanghai, China.
B.S. in Naval Architecture, June, 1997
Thesis: "Dynamic Buckling of Composite Laminated Columns under Impact Loading"
- ◇ **Related Courses**

Adaptive Structure	Experimental Systems
Program Design/Analysis I	Program Design/Analysis II
Advanced Mechanics of Solids	Design/Analysis of Algorithms
Introduction to Finite Element Method	Nonlinear Finite Element Method
Computational Geometry	Numerical Analysis
Advanced Topics in Computational Mechanics	Asymptotics and Perturbation Methods
Mechanics of Multiphasic Biological Tissues	High Performance Cluster Computing

RESEARCH INTERESTS

Computational methods for evolving discontinuities and interfaces, phase transformation, dendrite growth, crack growth, behavior of biphasic hyperelastic material with a sharp interface, modeling the swelling behavior of Stimulus Responsive Hydrogels (SRHs).

EXPERIENCE

- ◇ Duke University, Computational Mechanics Laboratory
Research Assistant, September 2000 - present.
- ◇ Shanghai Jiaotong University, Department of Naval Architecture and Ocean Engineering
Classification Software development for ABS (American Bureau of Shipping), May 2000 - August 2000.
- ◇ Shanghai Jiaotong University, Department of Naval Architecture and Ocean Engineering
Research Assistant, September 1997 - April 2000.

PUBLICATION

J.E. Dolbow, E. Fried and H. Ji, "Chemically Induced Swelling of Hydrogels", Journal of the Mechanics and Physics of Solids, in press

H. Ji, D.Chopp, and J.E. Dolbow, "A Hybrid Extended Finite Element / Level Set Method for Modeling Phase Transformations", International Journal for Numerical Methods in Engineering, Volume 54, Number 8, pp. 1209-1233, (2002)

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D. Wang and H.Ji, "Dynamic Buckling of Composite Laminated Columns under Impact Loading", *Journal of Vibration and Shock Contents, China*, Volume 17, Number 4, pp. 45-48, (1998)

SKILLS

Programming

C/C++, FORTRAN, Matlab, HTML, LaTeX, 8088 Assembly

Systems

Unix, Linux, MS-DOS, MS-Windows

Software

MS Office, NASTRAN, PATRAN, AutoCAD, Maple, TECPLOT

MEMBERSHIP

Student Member of ASCE (American Society of Civil Engineering)

REFERENCE

Available upon request.