Jobie M. Gerken

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Education

1998 Master of Science in Mechanical Engineering
Colorado State University

1996 Bachelor of Science in Mechanical Engineering
South Dakota School of Mines and Technology

1993 Freshman/Sophomore study in engineering: no degree awarded
Casper College

Experience

1997 – present
Los Alamos National Laboratory – Graduate Research Assistant/Technical Staff Member

- Develop, implement, and use finite element simulation tools

Fall Semester, 1996 – Spring Semester, 1997
Teaching Assistant, Colorado State University

- *Dynamics of Machines* and *Machine Design and Manufacturing*

Spring Semester, 1996
Research Assistant, South Dakota School of Mines & Technology

- Experimental evaluation of the vibrational characteristics of fiber reinforced concrete

Summer, 1995
NSF – Research experiences for undergraduates, University of Wyoming

- Experimental characterization of flow through a supercritical C02 spray nozzle

Past and ongoing affiliations

- ASME, Section Secretary 2000-2001, Section Treasurer 2001-present
- Pi Tau Sigma, Mechanical Engineering honor society, Chapter President 1995-1996
- Tau Beta Pi, Engineering honor society
- Phi Theta Kappa, Two year college honor society
- Order of the Engineer

Honors and Awards

- ASME Outstanding Graduate Student, 1997
- SDSMT Outstanding Mechanical Engineering Student, 1996
- 6 of 6 semesters on Dean's List, SDSM&T
- 3 of 4 semesters on President's honor roll, Casper College

Publications and Proceedings

- *An Algorithm to Simulate Surface Creation without Element Deletion or Remeshing*, Sixth US National Congress on Computational Mechanics, Dearborn, MI, Aug. 1-3 2001, in review for Int. J. Num. Meth. Engr.
- *Finite Element Simulation of the Mechanically Coupled Cook Off Experiment for High Explosives*, Modern Practice in Stress and Vibration Analysis -IV conference. University of Nottingham, UK, Sept. 5-7, 2000.
- *Numerically Modeling the Mechanical Response of Polymer Bonded Explosives*, 29th Department of Defense Explosives Safety Seminar, New Orleans, LA, July 18-20 2000.
- *Numerical Simulation of the Mechanically Coupled Cookoff Experiment*, accepted for publication in Transactions of the ASME: Journal of Materials and Technology.
- *An Implicit Finite Element Method for Discrete Dynamic Fracture,* Masters Thesis, Colorado State University, Dec. 1998.