

ALAN M. ROSENWINKEL

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EDUCATION

UNIVERSITY OF PENNSYLVANIA

Doctor of Philosophy in Mechanical Engineering

Philadelphia, PA

Expected August, 2007

- Distinguished Teaching Assistant Award, Department of Mechanical Engineering
- Graduate Associate, Spruce College House: Provided emotional support, academic help and social guidance to undergraduate residents. Coordinated social and academic events for undergraduate dorm residents.

UNIVERSITY OF PENNSYLVANIA

Master of Science in Mechanical Engineering

Philadelphia, PA

2002

- Fluid Mechanics Concentration

CALIFORNIA INSTITUTE OF TECHNOLOGY

Bachelor of Science in Mechanical Engineering

Pasadena, CA

2000

- Student Body Vice President/Student Disciplinary Board Chairman: Investigated and presided over adjudication of all undergraduate Honor Code violations including academic dishonesty and social misbehavior. Coordinated educational programs related to the Caltech Honor System.
- Frederic W. Hinrichs, Jr. Memorial Award: Awarded at commencement to “the senior who throughout his or her undergraduate years made the greatest contribution to the student body and whose qualities of character, leadership and responsibility have been outstanding”.
- Doris Everhart Service Award
- NCAA Division III Baseball Four Year Varsity Letterman

RESEARCH/EMPLOYMENT EXPERIENCE

UNIVERSITY OF PENNSYLVANIA

Graduate Research

2002-2007

- Performed theoretical and numerical research on the nature of mechanical stress in nano-scale materials.
- Designed and implemented Molecular Dynamics and Monte Carlo software packages to study atomistic systems using both C++ and Fortran.
- Utilized sophisticated statistical techniques to interpret experimental data.
- Developed COMSOL multi-physics models of continuum level systems.

CALIFORNIA INSTITUTE OF TECHNOLOGY

Senior Thesis and Summer Undergraduate Research Fellowship

1997-2000

- Investigated the dynamics of particle-wall collisions in viscous fluids.
- Designed and implemented effective, repeatable experiments utilizing state-of-the-art computer based data acquisition system.

MONELL CHEMICAL SENSES CENTER

Microbiology Laboratory Intern

Philadelphia, PA

Summer 1996

PUBLICATIONS

- A.M. Rosenwinkel, J.L. Bassani, Understanding Stress at the Atomic Scale, *in preparation*
- G.G. Joseph, R. Zenit, M.L. Hunt & A.M. Rosenwinkel, Particle-Wall Collisions in a Viscous Fluid, *Journal of Fluid Mechanics*, 433, 329-346 (2001)

ADDITIONAL INFORMATION

- Computer Programming: Extensive experience in computer programming using C/C++, Java, Fortran, Perl, Visual Basic, PHP, HTML, JavaScript.
- Statistical Modeling of Major League Baseball: Developed and continue to refine a unique, proprietary statistical model which predicts the outcome of Major League Baseball games.
- Technical Writing and Communication: Significant experience in oral and written communication with particular attention to technical communication with a non-technical audience.