

CURRICULUM VITAE

Dr. A. Elizabeth Griffith

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EDUCATION:

1990-1994 B.A., Physics with Departmental Honors Wellesley College
Minors in Math and Anthropology

1992-1994 Engineering Coursework and Honors Thesis MIT
Studied fluid mechanics, thermodynamics, internal combustion engines, differential equations, complex variables with applications and solid mechanics at MIT.
Thesis: An Analysis of Fluid Dynamic Sphere Interaction Using Particle Image Velocimetry Techniques

1994-2000 Ph.D., Mechanical Engineering Cornell University
Heat Transfer and Multiphase Flow, Minor in Electrical Engineering
Thesis: Convective Heat Transfer Scaling at the Wall of Circulating Fluidized Bed Risers

ACADEMIC APPOINTMENTS:

1997-1998 Teaching Assistant Cornell University
Heat Transfer and Thermodynamics
Sibley School of Mechanical and Aerospace Engineering

1998 Instructor Cornell University
Thermodynamics
Sibley School of Mechanical and Aerospace Engineering

2005-2008 Lecturer California Polytechnic State University
Fundamental Mechanics; Vibrations, Optics and Thermodynamics
Physics Department

2008-present Assistant Professor California Polytechnic State University
Introduction to Oceanography; Vibrations, Optics and Thermodynamics
Physics Department

PROFESSIONAL EXPERIENCE:

1989 summer	Chemical Engineering Intern Inner Layers Dept.	Tektronix, Inc. Forest Grove, OR
1990 summer	Mechanical Engineering Intern Long Range Research Department	ElectroScientific Associates Bedford, MA
1991 summer	Neurology Dept. Intern	Massachusetts General Hospital Boston, MA
1992 summer and fall	Undergraduate Research Assistant Fluid Mechanics Laboratory Mechanical Engineering Department	MIT Cambridge, MA
1993 spring	Undergraduate Research Asst. Physics Department	Wellesley College Wellesley, MA
1993 summer	Hughes Research Fellow Physics Department	Wellesley College Wellesley, MA
Feb. 2000 - Sep. 2001	Senior Process Engineer, Manager and Team Leader Assembly Technology Development Integrated Heat Spreader Attach Module	Intel Corporation Chandler, AZ
Sep. 2001 - Nov. 2002	Senior Thermal Design Engineer Assembly Technology Development Design Process Development Group	Intel Corporation Chandler, AZ
March 2003 - July 2005	Senior Thermal Engineer Thermal Analysis Group Mechanical Engineering Department	Orbital Sciences Corporation Chandler, AZ

RESEARCH:**FUNDED RESEARCH GRANTS**

- A. E. Griffith, Measuring ocean surface velocity and improving estimates of coastal surface currents in San Luis Bay, with application to other bays and coastlines, California Coastal Commission (C3RP) from Office of Naval Research (ONR), 2006-2007. \$27,000
- A. E. Griffith, Revealing coastal currents: using ocean drifters to measure surface velocity in San Luis Obispo Bay with techniques to extract velocity fields, turbulence statistics and water residence time, California Coastal Commission (C3RP) from Office of Naval Research (ONR), 2007-2008. \$33,000

HONORS AND AWARDS:

- 1988 "Sandhog" True Grit Award for Outstanding Cave Exploration
Oregon Summer Science Experience
University of Oregon
- 1993 Hughes Summer Research Fellowship
Wellesley College
- 1994 B.A. Physics, Cum Laude
- 1994 Sigma Xi, Honors in Physics (Experimental Thesis at MIT)
- 1994-1998 National Science Foundation Graduate Engineering Fellowship
- 1998 Ralph Bolgiano Outstanding Teaching Assistant Award
(Thermodynamics and Heat Transfer)
Sibley School of Mechanical and Aerospace Engineering
Cornell University
- 2001 Excellence Award for On-Time Development and Ramp of Industry
Leading Olga2/Int2 Packaging Technology Enabling Pentium III Xeon
and Pentium 4 Ramp, Q1 2001, Intel Corporation
- 2001 ATD Divisional Recognition Award for Development of Breakthrough
Integrated Thermal Solution for X60 Package Extending Process, Material
and Metrology Capability Limits, Q3 2001, Intel Corporation

PROFESSIONAL AFFILIATIONS:

Member, American Physical Society
Member, American Society of Mechanical Engineers
Associate Member, American Institute of Aeronautics and Astronautics

SECURITY CLEARANCE

2003-07 U. S. Department of Defense (DoD) Secret Clearance

ORIGINAL PUBLICATIONS:

Y. Hu, J. L. Glass, A. E. Griffith and S. Fraden "Observation and simulation of electrohydrodynamic instabilities in aqueous colloidal suspensions" *The Journal of Chemical Physics*, v. 100, n. 6, 1994.

Griffith and Louge, "The Scaling of Cluster Velocity at the Wall of Circulating Fluidized Bed Risers" *Chemical Engineering Science*, v. 53, n. 13, 1998.

Griffith, Louge and Mohd-Yusof "Simultaneous, Non-invasive Measurements of Convective Heat Transfer and Solid Volume Fraction at the Wall of an Entrained Gas-Solid Suspension" *The Review of Scientific Instruments*, 71, 2922-2977 (2000).

Pope, Griffith, Gasparek, Stover, Zhang "Integrated Heat Spreader Attach Process Optimization for thermal performance, Pin True Position, and Elimination of Lid Delamination" Intel Manufacturing Excellence Conference, 2002.

A. E. Griffith, T. Baker and R. Reil, manuscript in preparation for *The Journal of Physical Oceanography* "Design, Test and Deployment of Lagrangian Ocean Drifters with GPS Tracking for the Characterization of Ocean Surface Currents near Coastlines"

CONFERENCES:

A. Elizabeth Griffith and Michel Y. Louge: "Convective heat transfer scaling at the wall of circulating fluidized bed risers," 2000 Los Angeles Annual Meeting of the AIChE, session T1b03 "Circulating Fluidized Beds".

OUTREACH:

Society of Women Engineers graduate representative and technical development coordinator. Cornell University, 1997-98

Table Tennis Club Chair and Technology Cup Coordinator. Intel Chandler Site, 2002

Volunteer for "Space Explorers" teaching grade schoolers about gravity, space exploration and engineering. Jacobson Elementary School, Chandler, AZ 2004-05

TEACHING AT CORNELL UNIVERSITY:

- 1997 Teaching Assistant for Thermodynamics, M&AE 221
Sibley School of Mechanical and Aerospace Engineering
Conducted special tutoring sessions for women and minorities.
- 1998 Teaching Assistant for Heat Transfer, M&AE 324
Sibley School of Mechanical and Aerospace Engineering
- 1998 Instructor for Engineering Thermodynamics, ENGRD 221
Cornell University Summer Session
Duties: lectures, recitations, office hours, creating exams and grading.

TEACHING AT CALIFORNIA POLYTECHNIC STATE UNIVERSITY, SAN LUIS OBISPO:

- 2005-07 Lecturer for Vibrations, Optics and Thermodynamics, Physics 132
and Lecturer for Fundamental Mechanics, Physics 141
Typically taught three lectures and two labs per quarter
Physics Department
- 2007 Instructor in Charge for Physics 141 and Physics 132
Physics Department

INVITED LECTURES:

“Matlab Workshop: Basic skills and programming for scientists and engineers” for Society of Women Engineers, Cornell University, 1997.

“Study Skills Workshop” for Society of Women Engineers, Cornell University, 1997.

Chemical Engineering Department Lecture, “Heat transfer by particle convection at the wall of Circulating Fluidized Bed risers,” Cornell University, 1998.

Instructor for Professional Engineering Exam Thermodynamics Review for Civil Engineering Department, Cornell University, 1998.

“Matlab: A Powerful Tool” for Mechanical Engineering Department, Launch Systems Group, Orbital Sciences Corporation, 2003.

HOBBIES / LANGUAGES:

Sketching, playing the flute, hiking, writing fiction; basics of Russian, Spanish and Portuguese.