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EDUCATION

Summer school in **Geophysical and Environmental Fluid Dynamics** Sep. 2000
DAMTP, University of Cambridge, Cambridge, U.K

Ph.D., Aeronautics (with minor in physics) Jun. 1992
California Institute of Technology

M.S., Aeronautics Jun. 1987
California Institute of Technology

Bachelor of Technology, Aeronautics Jun. 1986
Indian Institute of Technology, Madras, India

ACADEMIC AWARDS

William F. Ballhaus Prize for outstanding doctoral dissertation in Aeronautics Jun. 1992
California Institute of Technology

Darryl G. Greenamyre fellowship Sep. 1986 – Aug. 1987
California Institute of Technology

Hindustan Aeronautics Ltd award for academic excellence Jun. 1986
Indian Institute of Technology, Madras, India

National Merit Scholarship, India Jun. 1982 – Jun. 1986

PRESENT AND PREVIOUS EMPLOYMENT

Adjunct Assoc. Professor, Department of Mathematics Apr. 1998 – Present
University of New Mexico, Albuquerque, NM

Technical Staff Member, Los Alamos Natl. Lab. Apr. 1996 – Present

Post-doctoral Fellow, Los Alamos Natl. Lab. May 1993 – Apr. 1996

CNRS Research Fellow, University of Paris VI, FRANCE Aug. 1992 – Apr. 1993

Research Fellow in Aeronautics, GALCIT, Caltech Jun. 1992 – Aug. 1992

Collaborator, Los Alamos Natl. Lab. Sep. 1989 – Sep. 1991

Research Assistant, GALCIT, Caltech Jun. 1987 – Jun. 1992

Research Assistant, Indian Institute of Science, Bangalore, INDIA Apr. 1985 – Jun. 1985

SELECTED PUBLICATIONS

- Modeling Subgrid Scales in the Turbulent Barotropic Double Gyre Circulation, D.D. Holm and B.T. Nadiga. *Journal of Physical Oceanography*, **33** (2003), (to appear)
- The role of MPDATA in OGCMs, B.T. Nadiga (preprint)
- The Thermohaline Circulation in an Isopycnal Ocean Model With Bulk Surface Forcing, *Eos, Transactions, American Geophysical Union*, **52** (2002)
- Global Bifurcation in a Simple Ocean Model, B.T. Nadiga & B. Luce. *Journal of Physical Oceanography*, **31** (2001), 2669–2690
- Dispersive Eddy Parameterization in a Barotropic Ocean Model, B.T. Nadiga & L.G. Margolin. *Journal of Physical Oceanography*, **31** (2001), 2525–2531
- Enhancement of the inverse-cascade of energy in the two-dimensional averaged Euler equations, B.T. Nadiga & S. Shkoller. *Physics of Fluids*, **13** (2001), 1528–1531
- Four gyre circulation in a barotropic model with double gyre wind forcing R.J. Greatbatch & B.T. Nadiga. *Journal of Physical Oceanography*, **30** (2000), 1461–1471.
- Scaling Properties of an Inviscid Mean-Motion Fluid Model, B.T. Nadiga. *Journal of Statistical Physics*, **98** (2000), 935–948.
- Discrete-Velocity Models of the Boltzmann Equations: Navier-Stokes Approximations and Shock Profiles, C.D. Levermore & B.T. Nadiga. (preprint).
- Nonhydrostatic Effects in Long Term Shallow Fluid Flow, D. D. Holm, L.G. Margolin, & B.T. Nadiga. (preprint)
- Moment Realizability and the Validity of the Navier-Stokes Equations for Rarefied Gas Dynamics, C.D. Levermore, W.J. Morokoff, & B.T. Nadiga. *Physics of Fluids*, **10** (1998), 3214–3226.
- On Simulating Flows with Multiple Time Scales Using a Method of Averages, B. T. Nadiga, M. W. Hecht, L. G. Margolin & P. K. Smolarkiewicz. *Theoretical and Computational Fluid Dynamics*, **9** (1997), 281–293.
- Different Approximations of Shallow Fluid Flow over an Obstacle, B.T. Nadiga, L.G. Margolin, & P.K. Smolarkiewicz. *Physics of Fluids*, **8** (1996), 1–12.
- Investigations of a two-phase fluid model, B.T. Nadiga & S. Zaleski. *European Journal of Mechanics B: Fluids*, **15** (1996), 885–896.
- Semi-Lagrangian Shallow Water Modeling on the CM-5, B.T. Nadiga, L.G. Margolin, & P.K. Smolarkiewicz. *Parallel Computational Fluid Dynamics: Implementation and Results Using Parallel Computers Proceedings of Parallel CFD'95* (1996), 529–536.
- An Euler Solver Based on Locally Adaptive Discrete-Velocities, B.T. Nadiga. *Journal of Statistical Physics*, **81** (1995), 129–146.
- An Adaptive Discrete Velocity Model for the Shallow Water Equations, B.T. Nadiga. *Journal of Computational Physics*, **121** (1995), 271–280.
- An Exact Shock-Solution in the Nine-Velocity Gas, B. T. Nadiga & B. Sturtevant. *Physica D*, **73** (1994), 205–216.
- A Method for Near-Equilibrium Discrete-Velocity Gas Flows, B. T. Nadiga & D. I. Pullin. *Journal of Computational Physics*, **112** (1994), 162–172.
- Plane Waves in a Multi-Speed Discrete-Velocity Gas, B. T. Nadiga. *Rarefied Gas Dynamics: Theory and Simulations, Progress in Astronautics and Aeronautics*, **159**, AIAA, 1994, 313–327.

INVITED TALKS

Dynamical Systems and Differential Equations 2002, University of North Carolina, Wilmington, May 2002

Reduced Descriptions of Coupled GFD systems, Institute for Mathematics and its Applications, University of Minnesota, Feb 2002

Geophysical Fluid Mechanics Symposium in MATH 2000, McMaster University, Hamilton, Ontario, Canada, June 2000

Caltech Fluid Mechanics Seminar, Pasadena, CA, Feb 2000

Coarse-grained hydrodynamics Mechanical Engineering Seminar, Dept. of Mech. Engg., UNM, 1999

Fifth SIAM Conference on Applications of Dynamical Systems, Snowbird, Utah, May 1999

Institute for Applied Mathematics, Italian National Research Council, Rome, July 1998

Lab. of Dynamic Meteorology, Ecole Normal Supérieur, Paris, July 1998

4th International Conf. on Discrete Models of Fluid Dynamics, Univ. of Oxford, UK, July 1998

SHOM, Oceanographic and Hydrologic Institute, Brest, France, July 1998

Institute for Geophysics and Planetary Physics, LANL, Los Alamos, NM, 2 March 1995

Fluid Mechanics Colloquim at the Indian Institute of Science, Bangalore, India, 6 Sep 1994.

Laboratoire d'Hydrodynamique, Ecole Polytechnique, Palaiseau, France, Feb. 1993

Laboratoire de Modélisation en Mécanique, CNRS, Univ. Paris VI, Paris, France, Nov. 1992.

Laboratoire de Physique Statistique, Ecole Normale Supérieure, Paris, France, Nov. 1992.

2nd International Conference on Industrial and Applied Mathematics (ICIAM), Society for Industrial and Applied Mathematics, Washington, D.C, July 1991.

Fluid Mechanics Seminar, Indian Institute of Science, Bangalore, India, Dec 1987.

REFEREE ACTIVITY

Refereed articles for Journal of Physical Oceanography, Monthly Weather Review, Journal of Fluid Mechanics, Physics of Fluids, Computers and Fluids, Transport Theory and Statistical Physics, Journal of Waterway, Port, Coastal and Ocean Engineering, Journal of Statistical Physics, International Journal of Modern Physics C, Physics Letters A, Journal of Computational Physics, and Siam Journal on Scientific Computing.

PERSONAL INFORMATION

Born 26 Dec. '65 in India. Married; two sons (a 6 yr. old and an 8 mth. old); wife is a physician. Permanent residency in U.S (as "Alien of Extraordinary Ability".)