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Georgia Institute of Technology, Atlanta GA 30332

Born:

February 12, 1958, New York, NY

EDUCATION:

Ph.D. in Physics, UC Berkeley, 1985 (thesis advisor: E. Knobloch)

M.A. in Physics, UC Berkeley, 1982

B.S. in Physics, M.I.T., 1979

PROFESSIONAL EXPERIENCE:

1997-Present Professor of Physics, Georgia Institute of Technology

1992-1997 Associate Professor of Physics, Georgia Institute of Technology

1987-1992 Assistant Professor of Physics, Georgia Institute of Technology

1985-1987 Research Scientist, Physics Department, Brookhaven National Laboratory

1984-1985 Lecturer and Researcher, Physics Board of Studies, UC Santa Cruz

HONORS:

Elected Fellow of the American Physical Society (2001)

Elected, Executive Committee, Division of Biological Physics, American Physical Society (1999)

GRADUATE AND POSTDOCTORAL ADVISING (in past 5 years):

J. Hasty, T. Heath, J. Neff, M. Dhamala

CURRENT RESEARCH SUPPORT:

Office of Naval Research, National Institute of Mental Health (through subcontract with Emory University)

OTHER COLLABORATORS (in past 48 months):

F. Jaramillo, J. Collins, P. Grigg, A. Bulsara, M. Inchiosa, P. Hanggi, L. Gammaitoni, N.F. Pedersen, G. Filatrella, J. Lindner, H. Rockwood, C. Lobb, P. Barbara, A. Cawthorne, E. Conrad, M. Tringales, M. Schatz, R. York

SELECTED PUBLICATIONS:

1. "Self organized criticality" (with P. Bak and C. Tang), *Phys. Rev. A* **38**, 364 (1988)
2. "Theory of stochastic resonance" (with B. McNamara), *Phys. Rev. A* **39**, 4854 (1989)
3. "Stochastic resonance and the benefits of noise: from ice ages to crayfish and SQUIDS" (with F. Moss), *Nature* **373**, 33 (1995)
4. "Frequency locking in Josephson arrays: connection with the Kuramoto model" (with S. Strogatz and P. Colet) *Phys. Rev. E* **57**, 1563 (1998)
5. "Renormalization group for directed sandpile models" (with J. Hasty), *Phys. Rev. Lett.* **81**, 1722 (1998)
6. "Coupled oscillators for fun and profit" *N.Y. Acad. Sci.* **848**, 9 (1998)
7. "Josephson junction arrays: puzzles and prospects" *IMA Math. App.* **115**, 303 (1998)
8. "Mechanoelectrical transduction assisted by Brownian motion: a role for noise in the auditory system" (with F. Jaramillo) *Nature Neuroscience* **1**, 384 (1998)
9. "Manipulated synchronization: beam steering in phased arrays" (with T. Heath and R. York) *Int. J. Bif. Chaos* **10**, 2619 (2000)
10. "Wavelets of excitability in sensory neurons" (with J. Hasty, P. Grigg and J. Collins) *J. Neurophysiology* **86**, (to appear Oct. 2001)