

ROSCOE C. GILES: Boston University

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Professional Employment

1985-Present	Professor, Department of Electrical, Computer and Systems Engineering, College of Engineering, Boston University.
1979-1985	Assistant Professor, Department of Physics and Center for Theoretical Physics, Massachusetts Institute of Technology
1976-1978	Post-Doctoral Fellow, Center for Theoretical Physics, Massachusetts Institute of Technology.
1975-1976	Post-Doctoral Fellow, Theoretical Physics Group, Stanford Linear Accelerator Center (SLAC)

Education

Ph.D.,	Physics	Stanford University, 1975
M.S.,	Physics	Stanford University, 1973
B.A. Honors,	Physics	University of Chicago, 1970

Honors and Fellowships

Faculty Service Award, Boston University College of Engineering, 1996
DOE Undergraduate Computational Science Award, DOE, 1995
DOE Undergraduate Computational Science Award for "Introduction to Parallel Computing Course," 1994
Boston University Scholar-Teacher of the Year 1992-93.

Professional and Research Interests

My research focuses on the application of high performance and parallel computing to physics and materials problems. I have developed parallel algorithms for large scale micromagnetic modeling and molecular dynamics simulations.

As an outgrowth of these computational science research efforts, I have become committed to prototyping and building computational and educational infrastructure that will enable broad participation of scholars and students in high performance computing. As a co-PI on the NCSA Alliance (an NSF Partnership for Advanced Computational Infrastructure), I head the Education, Outreach, and Training teams of the Alliance and am part of the Leadership Team for the National EOT-PACI effort.

5 Selected Publications

- Daniel Reed, Roscoe Giles, Charles Catlett. "Distributed Data and Immersive Collaboration", *Comm. ACM.* **40**, p 39, 1997.
- Beazley, Lomhdal, Gronbech-Jensen, Giles, and Tamayo, "Parallel Algorithms for Short Range Molecular Dynamics," *Annual Reviews in Computational Physics*, **3**, 1995.
- H. Fu, R. Giles, M. Mansuripur, "Coercivity Mechanisms in Magneto-Optical Recording Media," *Computers in Physics*, **8**, 80 (1994).
- R. Giles and M. Mansuripur, "Computer Simulations of Magnetization Reversal Dynamics," *Journal of the Magnetic Society of Japan* **17** (Supplement S1), 255 (1993).
- R. Giles, P.S. Alexopoulos, and M. Mansuripur, "Micromagnetics of Thin Film Cobalt-Based Media for Magnetic Recording," *Computers in Physics*, **6**, 53 (1992).