David G. Stroud

Education

Stanford University	Physics	B. S., 1964
Harvard University	Solid State Physics	M. A., 1966
Harvard University	Solid State Physics	Ph. D., 1969
Cornell University	Physics	Postdoc, 1969-71

Appointments

1981-present: Professor of Physics, Ohio State University

1976-1981: Associate Professor of Physics, Ohio State University

1971-1976: Assistant Professor of Physics, Ohio State University.

1996: Visiting Scientist, Dep't of Applied Physics, Stanford University

1985: Visiting Professor, Université de Paris VI, Paris, France

1978: Visiting Associate Professor, Tel Aviv University

1977: Visiting Fellow, Division of Applied Sciences, Harvard University

Research Interests:

Optical, electrical, superconducting, and magnetic properties of nanoscale inhomogeneous media; spin transport in nanoscale materials; Josephson junction arrays; high-T_c superconductors; superconducting qubits; *ab initio* computation of materials properties.

Honors and Awards:

Outstanding Referee, American Physical Society, 2008

Fellow, American Physical Society, 1991

Distinguished Scholar Award, Ohio State University, 1996

Excellence in Graduate Teaching Award, Ohio State University, 1997, 1999, 2005, and 2007 (from physics graduate students)

NASA Commendation, Contributions to Microgravity Experiment "Diffusion Processes in Molten Semiconductors," 1997

Phi Beta Kappa, with distinction in physics and honors in humanities, Stanford, 1964

Professional Activities

Divisional Associate Editor, Physical Review Letters, 1998-2001

Member, NSF panel to review proposed Illinois Science and Technology Center in High-Temperature Superconductivity (1988).

Member, External Review Panel, Austrian NSF NANO Initiative, 2005

International Advisory Committee, International ETOPIM Conferences (Electrical Transport and Optical Properties of Inhomogeneous Materials) I-VI, 1977-2002

Co-organizer, Materials Research Society Symposium on Microscopic Simulations of Interfacial Properties of Solids and Liquids, 1997

Director, Summer School on Physics of Porous Media, International Centre for Theoretical Physics, Trieste, Italy (1987).

Member, NASA advisory panel on colloidal suspensions (1992) and quantum well composites (1992)

Graduate and Postdoctoral Advisors: H. Ehrenreich; N. W. Ashcroft.

Ph. D. Students and Postdoctoral Advisees: 30 (incl. 3 current) students and 16 postdocs.

Number of publications: >250; h-index: 44; total citations: >7500.

Selected Publications

- "Tunable Band Gap in Graphene with a Non-Centrosymmetric Superlattice Potential," Rakesh P. Tiwari and D. Stroud, Phys. Rev. **B79**, 205435 (2009).
- "Model for the Magnetoresistance and Hall Coefficient of Inhomogeneous Graphene," Rakesh P. Tiwari and D. Stroud, Phys. Rev. **B79**, 165408 (2009).
- "Quantum Monte Carlo Study of a Magnetic-Field-Driven 2D Superconductor Insulator Transition," Kwangmoo Kim and David Stroud, Phys. Rev. **B 78**, 174517 (2008).
- "Single-Particle Density of States of a Superconductor with a Spatially Varying Gap and Phase Fluctuations," Daniel Valdez-Balderas and D. Stroud, Phys. Rev. **B74**, 127506 (2006).
- "Surface-Enhanced Plasmon Splitting in a Liquid-Crystal-Coated Gold Nanoparticle," Sung Yong Park and D. Stroud, Phys. Rev. Lett. **94**, 217401 (2005)
- "Surface Plasmon Dispersion Relations in Chains of Metallic nanoparticles: An Exact Quasistatic Calculation," Sung Yong Park and David Stroud, Phys. Rev. **B69**, 125418 (2004).
- "Theory of Melting and the Optical Properties of Gold/DNA Nanocomposites," S. Y. Park and D. Stroud, Phys. Rev. **B67**, 212202 (2003).
- "Theory of Two-Dimensional Josephson Junction Arrays in a Resonant Cavity," E. Almaas and D. Stroud, Phys. Rev. B **67**, 064511 (2003).
- "Dynamic Structure Factor of Liquid and Amorphous Ge from Ab Initio Simulations," Jeng-Da Chai, D. Stroud, J. Hafner, and J. Kresse, Phys. Rev. B **67**, 104205 (2003).
- "The Physical Properties of Macroscopically Inhomogeneous Media," D. J. Bergman and D. Stroud, Solid State Physics **46**, pp. 147-270 (1992).
- "Diamagnetic Susceptibility of Superconducting Clusters: Spin-glass Behavior," C. Ebner and D. Stroud, Phys. Rev. B**31**, 165 (1985).

Invited Talks: > 120.