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Education

- B.A. in Physics, University of California, San Diego, Magna Cum Laude 1977.
- Ph.D. in Physics, Cornell University 1984,
Thesis topic: "Magnetic Coupling Across the Liquid ^3He -Substrate Interface,"
Advisor: Prof. R.C. Richardson.

Employment and Appointments

- **Professor** of Physics and **Ohio Eminent Scholar**, The Ohio State University, July 2002 to present
- **Professor** of Electrical and Computer Engineering
- **Director**, Center for Electronic/Magnetic Nanoscale Composite Multifunctional Materials (ENCOMM)
- **Co-leader**, IRG-1 of the NSF funded Materials Research Science and Engineering Center (MRSEC) at OSU
- **Fellow**, Los Alamos National Laboratory, July 2000 to August 2004
- **Staff Member**, Condensed Matter and Thermal Physics Group, Los Alamos National Laboratory, October 1989 to June 2002
- **Visiting Associate in Physics**, California Institute of Technology, 1996-2000
- **Oppenheimer Fellow**, Los Alamos National Laboratory, October 1986 to October 1989.
- **Postdoctoral Fellow**, MIT with Prof. John S. Waugh, January 1984 to October 1986.
- **Research Assistant**, Cornell University, Ithaca, NY, June 1979-January 1984.

Research Interests

- Magnetic resonance force microscopy
- Spin Electronics and Quantum Information with Spins
- High Resolution Magnetic Resonance Microscopy
- NMR studies of highly correlated electronic materials
- Ultra-low temperature magnetic resonance

Invited Talks (total of 83)

- 5 at Gordon Research Conferences
- 8 at meetings of the American Physical Society
- 27 at International Conferences and Workshops.

Awards and Honors

- Oppenheimer Fellow, Los Alamos National Laboratory, October 1986
- Los Alamos National Laboratory Fellows Prize, February 1995.
- Fellow, The American Physical Society, 1998.
- Fellow, Los Alamos National Laboratory, July 2000
- Fellow, The American Association for the Advancement of Science, elected 2005

Professional Activities

- Co-organizer, *International Conference on Experimental Implementation of Quantum Computation*, January 16–19, 2001, Sydney, Australia
- Co-organizer, Workshop on *Scanned Probe Microscopy in Biology, Chemistry and Physics*, December 9–12, 2001 Santa Fe, NM.
- Member, Quantum Information Science and Technology Expert Panel, tasked with developing a national quantum information roadmap (2000-present)
- Member, International Advisory Committee, Australian Research Council Special Research Centre for Quantum Computer Technology(2000-2002)
- Member, American Physical Society and the American Association for the Advancement of Science
- Member, Executive Committee of the *Instrumentation and Measurement Sciences Topical Group* of the American Physical Society (2001-2005)
- Member, Los Alamos National Laboratory Postdoctoral Committee (2000-2002)
- Leader, Complex Functional Nanomaterials Thrust of the LANL/Sandia Center for Integrated Nanomaterials (2001-2002)
- Proposal referee, National Science Foundation, the Department of Energy, The Research Foundation and the Petroleum Research Foundation
- Manuscript referee, *Physical Review Letters*, *Science*, *Nature*, *Physical Review B*, *Applied Physics Letters*, *Journal of Applied Physics* and *Physica C*

Selected Publications

h-index: 27

Four publications with more than 100 citations, one with more than 500

- “Nanoscale MRI,” *Nature* **458**, 844 (2009).
- “Local Ferromagnetic Resonance Imaging with Magnetic Resonance Force Microscopy,” Yu. Obukhov, D.V. Pelekhov, J. Kim, P. Banerjee, I. Martin, E. Nazaretski, R. Movshovich, S. An, T.J. Gramila, S. Batra and P.C. Hammel, *Phys. Rev. Lett.*, **100** 197601 (2008)
- “Spatial characterization of the magnetic field profile of a probe tip used in magnetic resonance force microscopy,” E. Nazaretski, E.A. Akhadov, I. Martin, D.V. Pelekhov, P.C. Hammel and R. Movshovich, *Applied Physics Letters* **92** 214104 (2008)
- “The Magnetic Resonance Force Microscope,” P.C. Hammel and D.V. Pelekhov, **Book Chapter**, *Handbook of Magnetism and Advanced Magnetic Materials*, Helmut Kronmüller and Stuart Parkin, eds., Volume 5: Spintronics and Magnetoelectronics, John Wiley & Sons, Ltd. ISBN: 978-0-470-02217-7
- “Seeing Single Spins,” P.C. Hammel, *Nature* **430**, 300 (2004).
- “Theory of spin relaxation in magnetic resonance force microscopy,” D. Mozyrsky, I. Martin, D. Pelekhov and P. C. Hammel, *Appl. Phys. Lett.* **82**, 1278 (2003).
- “Probe-Sample Coupling in the Magnetic Resonance Force Microscope,” A. Suter, D.V. Pelekhov, M.L. Roukes and P.C. Hammel, *Journal of Magnetic Resonance* **154**, 210 (2002).
- “Magnetic resonance force microscopy quantum computer with tellurium,” G.P. Berman, G.D. Doolen, P.C. Hammel, V.I. Tsifrinovich, *Phys. Rev. Lett.* **86**, 2894 (2001).
- “Inhomogeneous Low Frequency Spin Dynamics in $\text{La}_{1.65}\text{Eu}_{0.2}\text{Sr}_{0.15}\text{CuO}_4$,” N.J. Curro, P.C. Hammel, B.J. Suh, M. Hücker, B. Büchner, U. Ammerahl, and A. Revcolevschi, *Phys. Rev. Lett.* **85**, 642 (2000).
- “Magnetism of Stripe-Ordered $\text{La}_{5/3}\text{Sr}_{1/3}\text{NiO}_4$,” Y. Yoshinari, P. C. Hammel and S-W. Cheong, *Phys. Rev. Lett.* **82**, 3536 (1999).
- “Observation of Ferromagnetic Resonance in a Microscopic Sample Using Magnetic Resonance Force Microscopy,” Z. Zhang, P.E. Wigen and P.C. Hammel, *Appl. Phys. Lett.* **68**, 2005 (1996).