

Curriculum Vitae

WILLIAM O. PUTIKKA

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Education

Ph. D. (Physics), 1988: University of Wisconsin, Madison, Wisconsin, USA

Dissertation: Heavy Fermion Superconductivity in UPt_3 , thesis advisor: R. J. Joynt.

Bachelor of Physics with High Distinction, 1981: Institute of Technology, University of Minnesota, Minneapolis, Minnesota, USA.

Employment

Professor, Physics Department, The Ohio State University, Mansfield, Ohio, USA, 2008-present.

Associate Professor, Physics Department, The Ohio State University, Mansfield, Ohio, USA, 2001-2008.

Assistant Professor, Physics Department, The Ohio State University, Mansfield, Ohio, USA, 1996-2001.

Research Assistant Professor, Physics Department, University of Cincinnati, Cincinnati, Ohio, USA, 1995-1996.

Postdoctoral Research Associate, National High Magnetic Field Laboratory, Florida State University, Tallahassee, Florida, USA, 1992-1995.

Postdoctoral Research Associate, Institut für Theoretische Physik, ETH, Zürich, Switzerland, 1989-1992.

Postdoctoral Research Associate, Physics Department, University of Florida, Gainesville, Florida, USA, 1988-1989.

Teaching Assistant; Research Assistant, Physics Department, University of Wisconsin, Madison, Wisconsin, USA, 1982-1988.

Current Research Interests

Two dimensional strongly correlated electrons; High temperature superconductors; Heavy fermion superconductors; Phenomenology of unconventional superconductors; High temperature expansions for models of strongly correlated electrons; Spin lifetimes in semiconductors; Spintronics; Quantum Computers.

Honors

Invited talk, "Enhanced d-wave Superconducting Fluctuations in the 2D t - J Model", APS March meeting, 13-17 March, 2006.

KITP Scholar, Kavli Institute for Theoretical Physics at the University of California at Santa Barbara, 2005-2007.

Award for Excellence in Scholarship, Ohio State University Mansfield Campus, 2002.

ITP Scholar, Institute for Theoretical Physics at the University of California at Santa Barbara, 1999-2001

Invited talk, “High Temperature Series for the t - J Model in Two Dimensions,” APS March meeting, 21-25 March, 1994.

North Atlantic Treaty Organization Postdoctoral Fellowship, National Science Foundation, on tenure at the ETH - Zürich, 1989-1990.

Wisconsin Alumni Research Foundation Graduate Fellowship, University of Wisconsin-Madison, 1981-1982

Alworth Memorial Foundation Undergraduate Scholarship, on tenure at St. John’s University and the University of Minnesota, 1977-1981.

Selected Publications

1. *Aspects of the Phase Diagram of the Two-Dimensional t - J Model*, W. O. Putikka, M. U. Luchini and T. M. Rice, Phys. Rev. Lett. **68**, 538 (1992).
2. *Electromagnetic Power Absorption by Collective Modes in Unconventional Superconductors*, P. J. Hirschfeld, W. O. Putikka and P. Wölfle, Phys. Rev. Lett. **69**, 1447 (1992).
3. *Ferromagnetism in the Two-Dimensional t - J Model*, W. O. Putikka, M. U. Luchini and M. Ogata, Phys. Rev. Lett. **69**, 2288 (1992).
4. *Microwave Conductivity of d -wave Superconductors*, P. J. Hirschfeld, W. O. Putikka and D. J. Scalapino, Phys. Rev. Lett. **71**, 3705 (1993).
5. *Indications of Spin-Charge Separation in the Two-Dimensional t - J Model*, W. O. Putikka, R. L. Glenister, R. R. P. Singh and H. Tsunetsugu, Phys. Rev. Lett. **73**, 170 (1994).
6. *d -wave Model for Microwave Response of High- T_c Superconductors*, P. J. Hirschfeld, W. O. Putikka and D. J. Scalapino, Phys. Rev. **B50**, 10250 (1994).
7. *Theory of Thermal Conductivity in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$* , P. J. Hirschfeld and W. O. Putikka, Phys. Rev. Lett. **77**, 3909 (1996).
8. *Violation of Luttinger’s Theorem in the Two-Dimensional t - J Model*, W. O. Putikka, M. U. Luchini and R. R. P. Singh, Phys. Rev. Lett. **81**, 2966 (1998).
9. *Theory of Optical Orientation in n -type Semiconductors*, W. O. Putikka and R. Joynt, Phys. Rev. **B70**, 113201 (2004).
10. *Broad Peak in the $d_{x^2-y^2}$ Superconducting Correlation Length as a Function of Hole Concentration in the Two-Dimensional t - J Model*, W. O. Putikka and M. U. Luchini, Phys. Rev. Lett. **96**, 247001 (2006).
11. *Theory of Electron Spin Relaxation in ZnO* , N. J. Harmon, W. O. Putikka and R. Joynt, Phys. Rev. **B79**, 115204 (2009).