

Lingyin Zhu

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Date of Birth: March 20, 1977

Citizenship: P.R. China

Education:

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| Ph. D. (Physics), <i>University of Florida, Gainesville, FL, USA</i> | 2005 |
| B. S. (Physics), <i>Nankai University, Tianjin, 300071, P.R. China</i> | 1999 |

Honor and Awards:

- University Scholarship, *Nankai University, Tianjin, China* 1995-1998
- Honor of Outstanding Students, *Nankai University, China* 1995-1998
- Fellowship of National Science Foundation of China, *Nankai University China* 1998 - 1999
- Honor Prize of Mathematical contest in Modeling, *National Security Agency, USA* 1999

Research Experience:

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| Graduate Research Assistant, <i>University of Florida, Gainesville, FL, USA</i>
Supervisor and Thesis Advisor: Prof. Peter Joseph Hirschfeld. | 2001 - pres. |
| • Investigated the intrinsic microscopic inhomogeneities and the electronic structure due to disorder in unconventional superconductors | |
| Guest Graduate Research Assistant, <i>University of Augsburg, Augsburg, Germany</i>
Supervisor: Prof. Peter Joseph Hirschfeld. | Jan-Jun, 2002 |
| • Investigated quantum interference between impurities in unconventional superconductors. | |
| Student Trainee, <i>Institute of Fundamental Theory, Nankai University, Tianjin China</i>
Supervisors: Prof. Wenzhuang Zhou | 1998 - 1999 |
| • Performed basic studies on the optical properties of the various photoelectrical materials. | |

Teaching Experience:

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| Graduate Teaching Assistant, <i>University of Florida, Gainesville, FL, USA</i> | 2000 - 2004 |
| • Supervised undergraduate laboratory sessions for college physics; graded laboratory reports and tutored undergraduate discussion sessions on college physics. | |
| Graduate Teaching Assistant, <i>University of Florida, Gainesville, FL, USA</i> | 1999 - 2000 |
| • Graded reports and homeworks on classical dynamics at graduate level. | |

Academic Background:

Strong background in theoretical physics, particularly in condensed-matter theory. Experience of research work in cuprates superconductivity. Knowledge of

methods of quantum many body theory, especially with applications to superconductivity and strongly correlated electron systems. Knowledge of numerical methods. Versatileness at both analytic theory and numerical calculations.

Relevant Skills:

Computer skills: 5 years of programming experience in *Fortran*, *C* and Java; 6 years of training in Matlab with numerical simulations; also familiarity with Mathematica, Maple, Gnuplot etc.; experience with GNU-based programming; limited acquaintance with DMFT, Monte Carlo simulations (but I am strongly interested in and looking forward to performing related researches by means of them) .

Professional activities: Coordinated graduate students' condensed matter seminars in Department of Physics, University of Florida; Member of the *American Physical Society*; Contributed talks to APS March meetings.

Publications and Preprints:

1. "Two impurities in a *d*-wave superconductor: local density of states",
Lingyin Zhu, W.A. Atkinson, P.J. Hirschfeld
Phys. Rev. B, **67**, 094508, (2003)
2. "Quantum interference in a nested *d*-wave superconductor: a real space perspective",
W.A. Atkinson, P.J. Hirschfeld, Lingyin Zhu,
Phys. Rev. B, **68**, 054501, (2003).
3. "Power spectrum of many impurities in a *d*-wave superconductor",
Lingyin Zhu, W.A. Atkinson, P.J. Hirschfeld ,
Phys. Rev. B, **69**, 060503, (2004).
4. "Electronic structure of *d*-wave superconducting quantum wires",
A.M. Bobkov, L.-Y. Zhu, S.-W. Tsai, T.S. Nunner, Yu.S. Barash, P.J. Hirschfeld
Phys. Rev. B, **70**, 144502, (2004);
5. "Elastic forward scattering in the cuprate superconducting state",
Lingyin Zhu, P.J. Hirschfeld, D.J. Scalapino Phys. Rev. B, **70**, 031441, (2004).
6. "Anomaly at Δ_k in the ARPES spectrum of dirty superconductors",
T.Dahm, P.J. Hirschfeld, Lingyin Zhu, D.J. Scalapino, in preparation, submitted to PRL

Talks Given:

1. " Two impurities in a *d*-wave superconductor: Local density of states ",
American Physical Society Annual March Meeting, Austin, Texas, 2003.
2. " Electronic structure in *d*-wave superconducting quantum wires ",
American Physical Society Annual March Meeting, Montreal, 2004.

References:

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