

Akakii Melikidze

CM/T Group, National High Magnetic Field Lab
1800 E. Paul Dirac Dr., Tallahassee FL 32310
Office: (850) 644-6965, Mobile: (718) 730-5817
akakii@magnet.fsu.edu
<http://pupgg.princeton.edu/~melikidze>

Born on October 18, 1977 in Tbilisi, Georgia.
This CV last updated on: August 3, 2005.

Education

1991 - 1993 Tbilisi State University, Tbilisi, Georgia
1993 - 1996 Moscow Institute of Physics and Technology / Landau Institute, BS Summa Cum Laude.
1996 - 2001 Princeton University, Physics, PhD.

Employment

1991 - 1992 Computer science course instructor, Center for Information Technology, Rustavi, Georgia
1997 - 2001 Teaching Assistant, Princeton University.
1999 Visiting Researcher, Institute Curie, Paris, France
2000 - 2001 Consultant/Developer, *CourseInfo* (courseinfo.princeton.edu).
2001 - 2003 Postdoctoral Scientist, Kavli Institute for Theoretical Physics, Santa Barbara, California.
2003 - 2005 Postdoctoral Scientist, National High Magnetic Field Laboratory, Tallahassee, Florida.

Awards and Memberships

1992 1st prize, Georgian National College Physics Olympics.
1995 1st prize, Moscow Institute of Physics and Technology Physics Olympics.
1995 Fellowship of the Fund “Dar”.
1995 Soros Fellowship.
1996 Joseph Henry Prize.
1997 - 2005 Member of the American Physical Society.

Research

1997 Work in the experimental group of P. M. Chaikin (Princeton); topic: the physics of Bechgaard salts — quasi-one dimensional conductors.
1997 Collaboration with D. Huse (Princeton); topic: phase transitions in density wave systems induced by strong electric fields.
1997 - 2001 Ph.D. dissertation work, advisor: F. D. M. Haldane (Princeton); topics: the physics of superconducting and superfluid vortices, dissipative quantum mechanics.

- 2001 - 2002 Collaboration with V. V. Dobrovitski, B. N. Harmon (Ames Lab), H. A. De Raedt (Groningen), and M. I. Katsnelson (Uppsala); topic: decoherence in multi-spin systems.
- 2002 Work on the project: Quantum dynamics of magnetic vortices in d -wave superconductors.
- 2003 - 2005 Collaboration with Kun Yang (National High Magnetic Field Lab); topic: the physics of the edge of the quantum Hall system (semiconductor heterojunctions in high magnetic fields).

Conferences Attended

- 1997 L. D. Landau Institute for Theoretical Physics Summer School
- 1999 Jerusalem Winter School on Condensed Matter Theory
- 1999 Workshop on Strongly Correlated Fermions, Paris, France
- 2000 Boulder School on Condensed Matter and Material Physics
- 2000 Topology of Strongly Correlated Systems, Lisbon School
- 2000 86th Statistical Mechanics Conference, Rutgers University
- 2002 GRC Conference on Correlated Electron Systems
- 2004 Semiconductor Physics and Magnetism, Tallahassee, Florida

Outreach

- 1998 - 2003 Developer, *The Net Advance of Physics* (web.mit.edu/redingtn/www/netadv/).
- 2004 Author, *SLED* — Science Links Exchange Database (magnet.fsu.edu/cgi-bin/cgiwrap/akakii/sled.cgi).
- 2005 Author, *POST* — Processor of Scanned Text (magnet.fsu.edu/~akakii/post/).

Publications

1. A. Melikidze and Kun Yang, *Effects of Quantum Hall Edge Reconstruction on Momentum-Resolved Tunneling*, International Journal of Modern Physics B **18**, 3521 (2004).
2. A. Melikidze and Kun Yang, *Electron Spectral Functions of Reconstructed Quantum Hall Edges*, Physical Review B **70**, 161312 (2004).
3. Akakii Melikidze, *Orthogonality Catastrophe for Vortices in d -Wave Superconductors*, cond-mat/0212640.
4. A. Melikidze, V. V. Dobrovitski, H. A. De Raedt, M. I. Katsnelson, and B. N. Harmon, *Parity Effects in Spin Decoherence*, Physical Review B **70**, 014435 (2004).
5. Akakii Melikidze, *Exactly solvable model of dissipative vortex tunneling*, Physical Review B **64**, 024515 (2001).
6. Akakii Melikidze, *Localization on short-range potentials in dissipative quantum mechanics*, Physical Review Letters **87**, 100401 (2001).
7. Akakii Melikidze, *Vortices in density wave systems subject to transverse electric fields*, Physical Review B **58**, 13534 (1998).