

Dirk K. Morr

curriculum vitae

Work Address:

Department of Physics
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Home Address:

6751 N. Ionia Ave.
Chicago, IL 60646, USA
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DOB: 03/10/1967
Citizenships: German, US

Education:

- Ph.D. University of Wisconsin - Madison, August 1997.
Dissertation title: *Electronic and magnetic properties of underdoped and slightly doped high- T_c materials*
Advisor: Prof. A. Chubukov
- Diploma Freie Universität, Berlin, Germany, December 1993.
Diploma thesis title: *The temperature dependence of the magnetization and its direction in thin ferromagnetic films*
Advisor: Prof. K.-H. Bennemann
- Vordiplom (B.S.) Universität Heidelberg, Germany, June 1989.

Academic Appointments:

- 2011 - present Professor, University of Illinois at Chicago.
2006 - 2011 Associate Professor, University of Illinois at Chicago.
2001 - 2006 Assistant Professor, University of Illinois at Chicago.
1999 - 2001 Director's Fellow, Los Alamos National Laboratory.
1997 - 1999 Postdoctoral Research Associate, University of Illinois at Urbana-Champaign.

General Research Interests:

- **Nanoscopic systems**
 - Emerging complexity in nanoscopic Kondo systems
 - Non-equilibrium transport in quantum networks
- **Strongly correlated electron systems**
 - Unconventional superconductivity, quantum critical points and competing phases in high-temperature superconductors and heavy fermion materials
 - Defects and disorder

Visiting Professorships/Academic Appointments:

- 2011 Leibniz Chair, Universität Leipzig, Germany
- 2010 - present Associate of the *James Franck Institute*,
The University of Chicago
- 2008 - 2010 Visiting professor at the *James Franck Institute*,
The University of Chicago
- 05 - 08/2011 Visiting scientist at the Max Planck Institut für Physik
06 - 08/2010 Komplexer Systeme, Dresden, Germany.
06 - 07/2009
- 2004 - 2007 Alexander von Humboldt Fellow and visiting professor at the
Department of Physics, Freie Universität Berlin, Germany.
- 06 - 07/2003 Visiting professor at the Department of Physics,
Freie Universität Berlin, Germany.
- 2001 - 2005 Consultant for the Theoretical Division, Los Alamos National Laboratory.

Academic Honors, Awards and Fellowships:

- 2011 Leibniz Chair, Universität Leipzig, Germany
- 2006 Distinguished Member of the National Society of Collegiate Scholars
- 2005 Teaching Award from the Council for Excellence in Teaching and Learning at
the University of Illinois at Chicago.
- 2004 - 2007 Alexander von Humboldt Research Fellowship.
- 2001 Slansky Fellowship, Los Alamos National Laboratory
(declined due to acceptance of professorship at UIC).
- 1999-2001 Director's Fellowship, Los Alamos National Laboratory.
- 1990-1991 Fellowship of the DAAD (German Academic Exchange Service)
Research at the Department of Physics, Leningrad State University,
Leningrad, Russia.
- 1988 - 1993 Fellowship of the *Studienstiftung des deutschen Volkes*.

Grants:

- 2011 - 2014 U.S. Department of Energy
Non-Equilibrium Physics at the Nanoscale.
Grant amount: \$210,000.
- 2008 - 2011 U.S. Department of Energy
Non-Equilibrium Physics at the Nanoscale.
Grant amount: \$210,000.
- 2005 - 2008 National Science Foundation
Nanoscale Structures and Novel Quantum Phenomena in Correlated Electron Systems.
Grant amount: \$120,000.
- 2005 - 2008 U.S. Department of Energy
Nanoscale Structures and Novel Quantum Phenomena in Correlated Electron Systems.
Grant amount: \$120,000.
- 2003 Campus Research Board at the University of Illinois at Chicago
Quantum Interference in Strongly Correlated Electron Systems
Grant amount: \$15,000.

Patents:

- *Diode from Dissipative Quantum Dots*, Appl. Number: 61/334,679 (provisional)

Organization of Workshops and Conferences :

- July 2012 Co-organizer of the workshop *Quantum Matter from the Nano- to the Macroscale*
Max Planck Institut für Physik Komplexer Systeme, Dresden, Germany.
- July 2008 Co-organizer of the workshop *Competing Orders, Pairing Fluctuations, and Spin-Orbit Coupling Effects in Unconventional Superconductors*,
Max Planck Institut für Physik Komplexer Systeme, Dresden, Germany.
- August 2007 Co-organizer of the workshop *Novel Aspects of Superconductivity*,
Aspen Center for Physics.
- January-April 2005 Co-organizer of the workshop *Quantum Phase Transitions*,
Kavli Institute for Theoretical Physics,
University of California - Santa Barbara.
- May 2004 Co-organizer of the ICAM workshop *Evolution of Quantum Effects from the Nano- to the Macroscale*,
Institut d'Études Scientifiques de Cargèse, France.
- March 2003 Co-organizer of the ICAM workshop *Quantum Criticality*,
Columbia University, New York City.
- July 2002 Co-Organizer of the working Group *Quantum Criticality*,
Aspen Center for Physics.

Supervised Students and Postdoctoral Research Associates:

- Damaris Kröber, Ph.D. student, UIC, 2011 - present.
- John van Dyke, Ph.D. student, UIC, 2011 - present.
- Martin Winslow, Ph.D. student, UIC, 2011 - present.
- Tankut Can, Ph.D. student, University of Chicago, 2009 - present.
- Hui Dai, Ph.D. student, University of Chicago, 2008 - 2011.
- Dan Wulin, Ph.D. student, University of Chicago, 2008 - 2009.
- Ting Yuan, Ph.D. student, UIC, 2009 - present.
- Bo Ling, Ph.D. student, UIC, 2009 - present.
- Jeremy Figgins, Ph.D. student, UIC, 2006 - present.
- Alejandro Rebola, Ph.D. student, UIC, 2006 - present.
- Enrico Rossi, Postdoctoral Research Associates, UIC, 2005 - 2007.
- Roy Nyberg, Ph.D. student (graduation 2007), UIC, 2001 - 2007.
- Jaesung Yoon, Ph.D. student, UIC, 2003 - 2004.
- Adam Khan, undergraduate student, UIC, 2003-2006.
- Catherine Rastovski, Master student (graduation: August 2003), UIC, 2001-2003.
- Nikolaos Stavropoulos, Master student (graduation: August 2003), UIC, 2001-2003.
- Utpal Chatterjee, Ph.D. student, UIC, 2001-2002.
- Peter Trautman, undergraduate student, Baylor University and Los Alamos Nations Laboratory, 2000.

Teaching Experience:

Fall 2011	Physics 533, Many-Body Theory I, graduate course.
Spring 2011	Physics 532, Solid State Physics II, graduate course.
Fall 2010	Physics 561, Thermodynamics and Statistical Physics, graduate course.
Fall 2010	Physics 531, Solid State Physics I, graduate course.
Spring 2010	Physics 534, Many-Body Theory II, graduate course.
Fall 2009	Physics 533, Many-Body Theory I, graduate course.
Spring 2008	Physics 561, Thermodynamics and Statistical Physics, graduate course.
Spring 2008	Physics 534, Many-Body Theory II, graduate course.
Fall 2007	Physics 533, Many-Body Theory I, graduate course.
Spring 2007	Physics 502 Classical Electrodynamics II, graduate course.
Fall 2006	Physics 501 Classical Electrodynamics I, graduate course.
Spring 2006	Physics 534, Many-Body Theory II, graduate course.
Fall 2005	Physics 533, Many-Body Theory I, graduate course.
Fall 2004	Physics 107/108, General Physics II: Electricity and Magnetism.
Spring 2004	Physics 142, General Physics II: Electricity and Magnetism (honors course).
Fall 2003	Physics 142, General Physics II: Electricity and Magnetism.
Summer 2003	Lecture Series on <i>Superconductivity near Quantum Critical Points</i> at the Department of Physics, Freie Universität Berlin, Germany.

Teaching Experience cont'd:

- Spring 2003 Physics 533, Many-Body Physics I, graduate course.
 Fall 2002 Physics 561, Thermodynamics and Statistical Physics, graduate course.
 Spring 2002 Physics 532, Solid State Physics II, graduate course.
 Fall 2001 Physics 501, Classical Electrodynamics I, graduate course.

Outreach Activities:

- 2009 - present Member of the *Museum Advisory Council*,
 Museum of Science and Industry, Chicago
- September 2011 Public Tours of the *Science Storms* exhibit at the
 September 2010 Museum of Science and Industry, Chicago
- April 2009 *Fun and Physics*, University of Chicago Laboratory Schools
 May 2010
- April 2008 Public Lecture entitled *The Mysteries of the Quantum World*
 Skokie Public Library, Skokie
- 2005 - 2009 Member of the *Science Storms Advisory Board*,
 Museum of Science and Industry, Chicago
- November 2006 Public Lecture entitled *The Mysteries of the Quantum World*
 Museum of Science and Industry, Chicago
- May 2005 Presentation entitled *Superconductivity or How electrons learned to dance in unison*
 at the Museum of Science and Industry, Chicago.
- 2003 - 2004 Member of the *21st Century Initiative Program*,
 Museum of Science and Industry, Chicago
- February 2004 Presentation entitled *Emergent Behavior on the Nanoscale II* at the
 Museum of Science and Industry, Chicago.
- September 2003 Presentation entitled *Emergent Behavior on the Nanoscale* at the
 Museum of Science and Industry, Chicago.
- 2002, 2003, 2006 Co-organizer of the *Physics Fest* at UIC.
- 2002, 2003 Participation in the Undergraduate Research Symposium at UIC
 and UIContest, a scholarship competition for high-school students.

Membership in Professional Societies :

- 2006 - present National Society of Collegiate Scholars
- 1994 - present American Physical Society.
- 1988 - present Studienstiftung des deutschen Volkes.

Administrative Committees and Service:

- member of the Campus Research Board at UIC 2010 - 2012
- member of the Physics dept. advisory committee 2009/2010, 2007/2008
- member of the graduate admissions committee 2009 - 2011, 2005 - 2007
- chair of the colloquium committee 2009 - 2012, 2007/2008, 2001 - 2003
- member of the qualifying exam committee 2011/2012, 2006 - 2008
- member of the educational policy committee 2002 - 2004
- member of the *Physics Fest* committee 2002 - 2004
- co-chair of the search committees for Theoretical High-Energy Physics and Experimental Condensed Matter Physics 2002 - 2003
- member of the search committee for Theoretical High-Energy Physics 2001 - 2002

Reviewer for:

- National Science Foundation (NSF), USA
- Research Grants Council of Hong Kong, China
- Science
- Physical Review Letters
- Europhysics Letters
- Journal of Physical Chemistry
- Journal of Superconductivity
- U.S. Department of Energy
- Nature, Nature Physics
- Physical Review B
- European Journal of Physics B
- Physica C
- Applied Physics Letters

Invited Talks at International Conferences and Workshops:

1. “*Defects in Heavy Fermion Materials: Unveiling Strong Correlations in Real Space*, workshop on *Developments and Prospects in Quantum Impurity Physics*, Max-Planck-Institut-PKS, Dresden, Germany, June 2011.
2. “*Non-equilibrium Transport in Dissipative Nanostructures*, workshop on *Electronic Transport in Nanoengineered Materials*, The University of Chicago, September 2010.
3. “*Multiband Superconductivity in Spin Density Wave Metals*, conference on *Recent Advances of Broad Band Solid-State NMR of Correlated Electron Systems*, Trogir, Croatia, September 2010.
4. “*Defects, Density of States and Differential Conductance in Heavy Fermion Systems*, workshop on *Principles and Design of Strongly Correlated Electronic Systems*, ICTP Trieste, Italy, August 2010.
5. “*Non-Equilibrium Transport in Dissipative Nanostructures*, workshop on *Correlated Phenomena in Low-Dimensional Systems*, Max-Planck-Institut-PKS, Dresden, Germany, July 2010.
6. “*Quasiparticle Interference as a Probe of Superconducting Coherence*,” 9th International Conference on Materials and Mechanism of Superconductivity (M²S - IX), Tokyo, Japan, September 2009.
7. “*Kondo Physics at the Nanoscale: From Kondo droplets to Kondo holes*,” workshop on *Correlated Behavior and Quantum Criticality in Heavy Fermion and Related System* Aspen Center for Physics, August 2009.
8. “*Unconventional Josephson Effect in Triplet Superconductor - Ferromagnet Triplet Superconductor Junctions*,” conference on *Spin Helicity and Chirality in Superconductor and Semiconductor Nanostructures*, Karlsruhe University, Germany, July 2008.
9. “*Kondo Physics at the Nanoscale*,” March Meeting of the American Physical Society, New Orleans, March 2008.
10. “*Impurities, Collective Modes and Magnetic Droplets in the Cuprate Superconductors*,” workshop on *Novel Aspects of Superconductivity*, Aspen Center for Physics, August 2007.
11. “*Novel Quantum Phenomena in Nanoscale Structures*,” Winter Conference on *Spins in Nanostructures*, Aspen Center for Physics, January 2007.
12. “*Spatially varying Quantum Phenomena in Nanoscale Structures*,” International Argonne Fall Workshop on *Nanophysics VI: Nanoscale Superconductivity and Magnetism*, Argonne National Laboratory, November 2006.
13. “*Dynamic Response Functions from ARPES Spectra in the Cuprate Superconductors*,” Workshop on *Superfluidity, Superconductivity, and BEC*, Freie Universität Berlin, Germany, June 2006.
14. “*Superconductivity near Ferromagnetic Quantum Critical Points*,” Workshop on *Physics of Strongly Correlated Electron Systems*, Yukawa Institute for Theoretical Physics, Kyoto University, Japan, November 2004.
15. “*First Order Superconducting Transition near a Ferromagnetic Quantum Critical Point*,” Workshop on *Novel Superconductors*, Freie Universität Berlin, Germany, June 2004.

16. “*From Quantum Drums to Quantum Copying Machines: Nanoscale Atomic Structures in Correlated Electron Systems*,” ICAM conference on *Evolution of Quantum Effects from the Nano- to the Macroscale*, Institut d’Études Scientifiques de Cargèse, France, May 2004.
17. “*First Order Superconducting Transition near a Ferromagnetic Quantum Critical Point*,” NATO Advanced Research Workshop on *New Challenges in Superconductivity: Experimental Advances and Emerging Theories*, University of Miami, Miami, January 2004.
18. “*First Order Superconducting Transition near a Ferromagnetic Quantum Critical Point*,” workshop on *Quantum Phase Transitions*, Max Planck Institut Dresden, Germany, July 2003.
19. “*First Order Superconducting Transition near a Ferromagnetic Quantum Critical Point*,” ICAM workshop on *Quantum Criticality*, Columbia University, March 2003.
20. “*The D-Density-Wave: A new phase of the high-temperature superconductors*,” workshop on *Emergent Materials and Highly Correlated Electrons*, International Center for Theoretical Physics, Trieste, Italy, August 2002.
21. “*D-density-wave: A Hidden Order in the Cuprates*,” International Conference on Superconductivity, CMR and related Materials, Giens, France, June 2002.
22. “*Defects, Disorder and Griffith Behavior in Metallic Quantum Critical Systems*,” workshop on *Quantum Criticality*, University of Chicago, April 2002.
23. “*Local Defects in Metallic Quantum Critical Systems*,” March Meeting of the American Physical Society, Indianapolis, March 2002.
24. “*Quantum Interference and Impurities in Strongly Correlated Electron Systems*,” Conference on *Strongly Correlated Electron Systems*, Lorentz Center, Universiteit Leiden, The Netherlands, November 2001.
25. “*Local Defects in Metallic Quantum Critical Systems*,” Conference on *Disorder in Correlated Electron Systems (DICES)*, Max Planck Institut Dresden, Germany, July 2001.
26. “*Spin Dynamics and Magnetic Coherence in the Superconducting State of High-Temperature Superconductors*,” March Meeting of the American Physical Society, Minneapolis, March 2000.
27. “*The Resonance Peak in the High- T_c Cuprates*,” 22nd International Conference on Low Temperature Physics, Helsinki, Finland, August 1999.
28. “*Theory of NMR as a local probe for the electronic structure in the mixed state of the high- T_c cuprates*,” workshop on “*Unconventional Order in Metals*,” Aspen Center for Physics, July 1999.
29. “*The Resonance Peak in the High-Temperature Superconductors*,” workshop on “*High-Temperature Superconductivity*,” Aspen Center for Physics, July 1998.

Invited Colloquia:

1. “*The Discovery of Superconductivity*,” The University of Illinois at Chicago, September 2011.
2. “*Everything Nano*,” College of William and Mary, September 2011.
3. “*Strongly Correlated Systems from the Nano- to the Macroscale*,” Universität Göttingen, Germany, October 2010.
4. “*Of Kondo droplets and lattices: Strong Correlations from the Nano to the Macroscale*,” Northern Illinois University, April 2010.

5. “*Strongly Correlated Systems from the Nano- to the Macroscale,*” Technische Universität Dresden, Germany, September 2009.
6. “*Emerging Phenomena at the Nanoscale,*” University of Colorado at Boulder, April 2009.
7. “*Collective Modes in Unconventional Superconductors,*” Illinois Institute of Technology, February 2009.
8. “*Collective Modes in Unconventional Superconductors,*” University of Tennessee - Knoxville, August 2008.
9. “*Kondo Physics at the Nanoscale,*” Leibniz Institute for Solid State and Materials Research (IFW) Dresden, December 2007.
10. “*Identifying Collective Modes in Unconventional Superconductors,*” Leibniz Institute for Solid State and Materials Research (IFW) Dresden, June 2007.
11. “*Identifying Collective Modes in Unconventional Superconductors,*” Freie Universität Berlin, Germany, December 2006.
12. “*Interplay between spin and charge excitations in the cuprate superconductors: the case of the resonance peak,*” Hahn-Meitner Institut Berlin, December 2006.
13. “*Nanoscale Structures and Novel Quantum Phenomena in Correlated Electron Systems,*” Max-Planck Institut für Physik Komplexer Systeme, Dresden, Germany, December 2005.
14. “*Quantum Photography and Quantum Sound or How to take pictures and make music in the quantum world,*” Universität zu Köln, Germany, May 2005.
15. “*Quantum Photography and Quantum Sound or How to take pictures and make music in the quantum world,*” Kavli Institute for Theoretical Physics, University of California Santa Barbara, March 2005.
16. “*From Quantum Drums to Quantum Copying Machines: Nanoscale Atomic Structures in Correlated Electron Systems ,*” Freie Universität Berlin, Germany, July 2004.
17. “*From Quantum Drums to Quantum Copying Machines: Nanoscale Atomic Structures in Correlated Electron Systems ,*” Universität Würzburg, Germany, May 2004.
18. “*Defects, Disorder and Quantum Griffiths Behavior in Quantum Critical Systems,*” Los Alamos National Laboratory, February 2004.
19. “*First Order Superconducting Transition near a Ferromagnetic Quantum Critical Point,*” University of Groningen, The Netherlands, November 2003.
20. “*Quantum Interference in Artificial Atomic Structures: Impurities and Quantum Corals in Superconductors,*” Freie Universität Berlin, Germany, June 2003.
21. “*More than Just Schmutz : Impurities and Disorder in Strongly Correlated Electron Systems,*” Boston College, September 2002.
22. “*Impurities and Disorder in Strongly Correlated Electron Systems: More than Just Schmutz,*” University of Illinois at Chicago, September 2001.
23. “*Fingerprints of Exotic Phases: From Resonance Peak to Impurity States,*” Freie Universität Berlin, Germany, May 2001.
24. “*Exotic Phases and the Hunt for the Symmetry of the Order Parameter,*” University of Missouri-Rolla, February 2001; University of Illinois at Chicago, February 2001; University of Nebraska at Lincoln, March 2001.
25. “*Superconductivity: More than a (historical) review,*” University of Notre Dame, January 2000; Los Alamos Summer School, University of New Mexico, June 2000.

Invited Seminar Talks:

1. “*Non-Equilibrium Transport in Nanoscopic Quantum Networks*,” Leibniz Institute for Solid State and Materials Research (IFW) Dresden, Germany, August 2011.
2. “*A Nanoscopic Approach to Heavy Fermions: From Kondo Droplets to Kondo Holes*,” ETH Zurich, Switzerland, July 2011.
3. “*Quantum Interference, Hidden Order and Defects in Heavy-Fermion Materials*,” Leibniz Institute for Solid State and Materials Research (IFW) Dresden, Germany, July 2011.
4. “*A Nanoscopic Approach to Heavy Fermions: From Kondo Droplets to Kondo Holes*,” Freie Universität Berlin, Germany, June 2011.
5. “*Quantum Interference, Hidden Order and Defects in Heavy-Fermion Materials*,” Max Planck Institut für Chemische Physik fester Stoffe, Dresden, Germany, June 2011.
6. “*Quantum Interference, Hidden Order and Defects in Heavy-Fermion Materials*,” Universität Leipzig, Germany, July 2010.
7. “*A Nanoscopic Approach to Heavy Fermions: From Kondo Droplets to Kondo Holes*,” Stanford University, April 2011.
8. “*Quantum Interference, Hidden Order and Defects in Heavy-Fermion Materials*,” University of California - Davis, April 2011.
9. “*Quantum Interference, Hidden Order and Defects in Heavy-Fermion Materials*,” Northwestern University, February 2011.
10. “*Defects in Heavy-Fermion Materials: Unveiling Strong Correlations in Real Space*,” University of Florida - Gainesville, November 2010.
11. “*Defects in Heavy-Fermion Materials: Unveiling Strong Correlations in Real Space*,” Universität Leipzig, Germany, July 2010.
12. “*Kondo Physics at the Nanoscale: From Kondo Droplets to Kondo Holes*,” University of Wisconsin - Madison, May 2010.
13. “*Kondo Physics at the Nanoscale: From Kondo Droplets to Kondo Holes*,” Center for Nanoscale Materials, Argonne National Laboratory, April 2010.
14. “*Kondo Physics at the Nanoscale from Kondo Droplets to Kondo Holes*,” joint seminar of the Max Planck Institut für Physik Komplexer Systeme and the MPI Chemische Physik fester Stoffe, Dresden, Germany, July 2009.
15. “*Coexistence of Superconductivity and Antiferromagnetism: the case of the electron-doped cuprates*,” Universität Leipzig, Germany, July 2009.
16. “*Pseudogap, Coherence, and Coexisting Phases in the Cuprate Superconductors*,” Leibniz Institute for Solid State and Materials Research (IFW) Dresden, Germany, July 2009.
17. “*Strongly Correlated Systems from the Nano- to the Macroscale*,” Universität Karlsruhe, Germany, June 2009.
18. “*Transport Phenomena in Nanoscopic Systems: Interplay between Confinement, Interactions, and Disorder*,” Computation in Science Seminar, The University of Chicago, June 2009.
19. “*Of Holes and Droplets: A Tale of Kondo*,” MRSEC seminar, The James Franck Institute, The University of Chicago, April 2009.
20. “*Kondo Physics at the Nanoscale: From Kondo droplets to Kondo holes*,” University of Colorado at Boulder, April 2009.

21. “*Kondo Physics at the Nanoscale*,” The James Franck Institute, The University of Chicago, October 2008.
22. “*Kondo Physics at the Nanoscale*,” Freie Universität Berlin, Germany, December 2007.
23. “*Novel Quantum Phenomena in Correlated Nanoscale Structures*,” University of Illinois at Urbana-Champaign, October 2007.
24. “*Identifying Collective Modes in Unconventional Superconductors*,” National High Magnetic Field Laboratory, Tallahassee, April 2007; University of Florida at Gainesville, February 2007.
25. “*Exploring Correlation Effects with Nanoscale Structures*,” Stanford University, February 2007, IBM - Almaden, January 2007.
26. “*Quantum Phase Transitions and Current Switches in Josephson Junctions*,” Argonne National Laboratory, October 2006.
27. “*Vertex Corrections for Impurity scattering near a Ferromagnetic Quantum Critical Point*,” working group on *Quantum Phase Transitions*, Aspen Center for Physics, August 2006.
28. “*Nanoscale Structures and Novel Quantum Phenomena in Correlated Electron Systems*,” Universität zu Hamburg, Germany, July 2006; Los Alamos National Laboratory, April 2006.
29. “*Quantum Photography and Quantum Sound or How to take pictures and make music in the quantum world*,” Ohio State University, May 2005; University of Southern California, April 2005; University of California - Los Angeles, April 2005.
30. “*First Order Superconducting Transition near a Ferromagnetic Quantum Critical Point*,” Max Planck Institut Stuttgart, Germany, July 2004; Universität Würzburg, May 2004.
31. “*Quantum Interference and Nanoscale Structures: Quantum Corrals and Quantum Images in Superconductors*,” Princeton University, April 2004; Rutgers University, April 2004.
32. “*First Order Superconducting Transition near a Ferromagnetic Quantum Critical Point*,” University of Illinois at Urbana-Champaign, February 2004; Los Alamos National Laboratory, February 2004; Utrecht University, The Netherlands, January 2004.
33. “*Defects, Disorder and Quantum Griffiths Behavior in Quantum Critical Systems*,” CEA-Saclay, France, October 2003.
34. “*First Order Superconducting Transition near a Ferromagnetic Quantum Critical Point*,” Universität Karlsruhe, Germany, July 2003; Freie Universität Berlin, Germany, June 2003.
35. “*Quantum Interference in Artificial Atomic Structures: Impurities and Quantum Corrals in Superconductors*,” Universität Hamburg, Germany, July 2003.
36. “*Quantum Interference and Quantum Mirages in Superconductors*,” Northwestern University, February 2003.
37. “*Impurities and Quantum Interference in Superconductors: Creating Novel Many-Body States*,” Boston University, September 2002.
38. “*Defects, Disorder and Quantum Griffiths Behavior in Quantum Critical Systems*,” Brown University, September 2002.
39. “*Quantum Interference between Impurities in Correlated Electron Systems*,” Los Alamos National Laboratory, June 2002.
40. “*D-density-wave: A Hidden Order in the High-Temperature Superconductors*,” Université Paris-Sud XI, June 2002.

41. “*Defects in Quantum Critical Systems and Broken Symmetry States*,” University of Iowa, February 2002.
42. “*Quantum Dissipation, Impurities and Quantum Interference in one-dimensional Systems*,” Los Alamos National Laboratory, February 2002.
43. “*Defects in Quantum Critical Systems and Broken Symmetry States*,” Argonne National Laboratory, February 2002; University of Iowa, February 2002.
44. “*Proximity Coupling, Quantum Dissipation and Impurities in the Chains of $YBa_2Cu_3O_{6+x}$* ,” University of Texas-Austin, December 2001.
45. “*Local Defects in Metallic Quantum Critical Systems*,” University of Wisconsin-Madison, September 2001.
46. “*Resonant Impurity States in the D-Density-wave Phase*,” ICAM workshop, Los Alamos National Laboratory, August 2001.
47. “*Fingerprints of Exotic Phases: From Resonance Peak to Impurity States*,” Universität Augsburg, Germany, April 2001; RWTH Aachen, Germany, April 2001; Universität Karlsruhe, Germany, April 2001; Universität Würzburg, Germany, May 2001.
48. “*Fingerprints of Exotic Phases: From Resonance Peak to Impurity States*,” University of Minnesota-Minneapolis, February 2001; Pennsylvania State University, February 2001.
49. “*The resonance peak in Sr_2RuO_4 : signature of spin-triplet pairing*,” Iowa State University, November 2000.
50. “*Pairing symmetry and the resonance peak in the superconducting state of Sr_2RuO_4* ,” ICAM conference on Superconductivity, Los Alamos, September 2000.
51. “*A one-dimensional metal coupled to a superconductor: What is the ground state of the chains in $YBa_2Cu_3O_{6+x}$?*,” Harvard University, May 2000; UC Berkeley, May 2000, UC Santa Barbara, May 2000; Center for Non-Linear Studies, Los Alamos National Laboratory, July 2000.
52. “*Magnetic coherence as a universal feature in high- T_c cuprates*,” NEC Research Institute, May 2000.
53. “*Theory for spin-lattice relaxation in the superconducting and pseudo-gap region of the high- T_c cuprates*,” Center for Material Research, Los Alamos National Laboratory, March 2000.
54. “*Neutron scattering in high- T_c cuprates*,” UC Los Angeles, February 2000; UC San Diego, February 2000; University of Southern California, February 2000; University of Notre Dame, January 2000; MIT, October 1999; Lucent Technologies, October 1999; Rutgers University, October 1999; Los Alamos Neutron Scattering Center (LANSCE), September 1999.
55. “*Neutron scattering in high- T_c cuprates*,” University of Oxford, UK, April 1999; University of Cambridge, UK, April 1999; University of Bristol, UK, April 1999; Rutherford Appleton Laboratory, UK, April 1999; UC Riverside, February, 1999.
56. “*Effect of superconductivity on the magnetic response in cuprate superconductors*,” Oak Ridge National Laboratory, November 1998; University of Cologne, Germany, December 1998.
57. “*The resonance peak in cuprate superconductors*,” Los Alamos National Laboratory, July 1998; National High-Magnetic Field Laboratory, Tallahassee, April 1998; University of Toronto, Canada, May 1998; McMaster University, Canada, May 1998.
58. “*Electronic and magnetic excitations in the insulating parent compounds of high- T_c materials*,” University of Illinois at Urbana-Champaign, October 1997.

59. “*Theory of magnetic Raman scattering in the normal state of high- T_c superconductors,*” Universität Hamburg, Germany, August 1997; Northwestern University, February 1997; Freie Universität Berlin, Germany, June 1996.
60. “*The dispersion of a single hole in an antiferromagnet,*” ETH Zurich, Switzerland, June 1997.
61. “*Theory of magnetic Raman scattering in the normal state of high- T_c superconductors,*” workshop on “*Strongly Correlated Electron Systems,*” International Center for Theoretical Physics, Trieste, Italy, July 1996.
62. “*Reorientation transition of the magnetization in thin ferromagnetic films,*” University of Wisconsin-Madison, December 1994.