

Curriculum Vitae

I certify that this Curriculum Vitae is accurate and complete.

Signature: _____ February 23, 2009

1 Personal Information

Victor M. Yakovenko

Department of Physics, University of Maryland, College Park, MD 20742-4111, USA

Professor, promoted July 1, 2004

<http://www2.physics.umd.edu/~yakovenk/>

Born March 24, 1961 in Donetsk, Ukraine

Education

- 1984 – 1987 : Landau Institute for Theoretical Physics, Moscow
Ph. D. in theoretical physics, advisor: L. P. Gor'kov
1978 – 1984 : Moscow Physical-Technical Institute
M. S. in physics, advisor: S. A. Brazovskii

Employment

- 7/1/2004 – present : Full Professor, Department of Physics, University of Maryland
7/1/1999 – 6/30/2004 : Associate Professor, Department of Physics, University of Maryland
8/17/1993 – 6/30/1999 : Assistant Professor, Department of Physics, University of Maryland
1991 – 1993 : Research Associate, Department of Physics and Astronomy,
Rutgers University, advisor: E. Abrahams
1987 – 1991 : Research Scientist, Landau Institute for Theoretical Physics, Moscow,
department of I. E. Dzyaloshinskii

Visiting Positions

- 1–2/2009 : Santa Fe Institute and Los Alamos National Laboratory, Santa Fe, New Mexico
8–11/2008 : Laboratoire de Physique Théorique et Modèles Statistiques, Université Paris-Sud, Orsay
8/1991 : Interdisciplinary Research Center in Superconductivity, Cambridge University, Britain
4–8/1990 : Institute for Scientific Interchange, Turin, Italy
5–7/1989 : Laboratoire de Physique des Solides, Université Paris-Sud, Orsay, France

Participation in long-term workshops at the Kavli Institute for Theoretical Physics, Santa Barbara, California

- 8/2009 : “The Physics of Higher Temperature Superconductivity”
4–5/2009 : “Low Dimensional Electron Systems”
12/2007 : “ Sr_2RuO_4 and Chiral p -wave Superconductivity”
3–4/2005 : “Quantum Phase Transitions”
5–6/2004 : “Exotic Order and Criticality in Quantum Matter”
10–12/2002 : “Realistic Theories of Correlated Electron Materials”

2 Research, Scholarly, and Creative Activities

The name of **V. M. Yakovenko** is printed in **bold** for the books and articles where he is the senior author.

2.a Books

1. **V. M. Yakovenko**, “Theory of the quantum Hall effect in quasi-one-dimensional conductors”, invited chapter in the book *The Physics of Organic Superconductors and Conductors*, Springer series in Material Sciences, vol. 110, edited by A. G. Lebed, ISBN 978-3-540-76667-4, Springer (2008), pages 529–550.
2. **V. M. Yakovenko**, “Econophysics, Statistical Mechanics Approach to”, an invited review article in the book *Encyclopedia of Complexity and System Science*, edited by R. A. Meyers, ISBN 978-0-387-75888-6, Springer (2009).
3. A. F. Cottrell, P. Cockshott, G. J. Michaelson, I. P. Wright, and **V. M. Yakovenko**, “Classical Econophysics”, Routledge series Advances in Experimental and Computable Economics, ISBN 978-0-415-47848-9, Routledge (2009).

2.b Articles in Refereed Journals

1. S. A. Brazovskii, N. N. Kirova, and V. M. Yakovenko, “Electronic excitations in quasi-one-dimensional conductors”, *Journal de Physique Colloque C3* **44**, 1525–1530 (1983).
2. S. A. Brazovskii, N. N. Kirova, and V. M. Yakovenko, “On the possible superfluidity of bipolarons on the junction surface”, *Solid State Communications* **55**, 187–191 (1985).
3. S. A. Brazovskii and V. M. Yakovenko, “On the theory of phase transitions in organic superconductors”, *Journal de Physique Lettres* **46**, L111–L116 (1985).
4. S. A. Brazovskii and V. M. Yakovenko, “On the theory of organic superconducting materials”, *Soviet Physics-JETP* **62**, 1340–1352 (1985).
5. S. A. Brazovskii and V. M. Yakovenko, “On the theory of superconducting phase in organic conductors”, *Journal de Physique* **47**, 175–180 (1986).
6. S. A. Brazovskii and V. M. Yakovenko, “Magnetic oscillations in organic superconductors (theory)”, *JETP Letters* **43**, 134–137 (1986).
7. **V. M. Yakovenko**, “A theory of magnetic-field-induced phase transitions in quasi-one-dimensional conductors”, *Europhysics Letters* **3**, 1041–1047 (1987).
8. **V. M. Yakovenko**, “A theory of magnetic-field-induced phase transitions in quasi-one-dimensional conductors”, *Soviet Physics-JETP* **66**, 355–365 (1987).
9. I. E. Dzyaloshinskii and V. M. Yakovenko, “A weak coupling theory for La_2CuO_4 ”, *Soviet Physics-JETP* **67**, 844–849 (1988).
10. I. E. Dzyaloshinskii and V. M. Yakovenko, “A weak coupling theory for La_2CuO_4 : \ln^2 -parquet approach”, *Journal of Molecular Electronics* **4**, 193–198 (1988).
11. I. E. Dzyaloshinskii and V. M. Yakovenko, “A weak coupling theory for La_2CuO_4 : \ln^2 -parquet approach”, *International Journal of Modern Physics B* **2**, 667–677 (1988).
12. S. A. Brazovskii and V. M. Yakovenko, “Possible superconductivity at the surface of a contact of insulating La_2CuO_4 ”, *JETP Letters* **48**, 172–175 (1988).

13. S. A. Brazovskii and V. M. Yakovenko, “Possible superconductivity on the junction surface of dielectric La_2CuO_4 ”, *Physics Letters A* **132**, 290–292 (1988).
14. S. A. Brazovskii and V. M. Yakovenko, “Possible superconductivity on the junction surface of dielectric La_2CuO_4 ”, *International Journal of Modern Physics B* **2**, 1073–1077 (1988).
15. **V. M. Yakovenko**, Comment on “Extreme quantum limit in a quasi-two-dimensional organic conductor”, *Physical Review Letters* **61**, 2276 (1988).
16. G. E. Volovik, A. Soloviyov, and V. M. Yakovenko, “Spin and statistics of soliton in a superfluid $^3\text{He-A}$ film”, *JETP Letters* **49**, 65–67 (1989).
17. G. E. Volovik and V. M. Yakovenko, “Fractional charge, spin and statistics of solitons in superfluid $^3\text{He-A}$ film”, *Journal of Physics: Condensed Matter* **1**, 5263–5274 (1989).
18. **V. M. Yakovenko**, “Spin, statistics and charge of solitons in (2+1)-dimensional theories”, *Fizika (Zagreb)* **21**, suppl. 3, 231–233 (1989).
19. **V. M. Yakovenko**, “Quasi-one-dimensional conductors in magnetic field: Physical consequences of “non-standard” theoretical approach”, *Fizika (Zagreb)* **21**, suppl. 3, 44–47 (1989).
20. **V. M. Yakovenko**, “Chern–Simons terms and \mathbf{n} -field in Haldane’s model for quantum Hall effect without Landau levels”, *Physical Review Letters* **65**, 251–254 (1990).
21. **V. M. Yakovenko**, “Quantum Hall effect in quasi-one-dimensional conductors”, *Physical Review B* **43**, 11353–11366 (1991).
22. **V. M. Yakovenko**, “Theory of the quantum Hall effect in quasi-one-dimensional conductors”, *Synthetic Metals* **43**, 3389–3390 (1991).
23. M. V. Kartsovnik, V. N. Laukhin, S. I. Pesotskii, I. F. Schegolev, and V. M. Yakovenko, “Angular magnetoresistance oscillations and the shape of the Fermi surface in $\beta\text{-(ET)}_2\text{IBr}_2$ ”, *Journal de Physique I* **2**, 89–99 (1992).
24. **V. M. Yakovenko**, “Theory of thermodynamic magnetic oscillations in quasi-one-dimensional conductors”, *Physical Review Letters* **68**, 3607–3610 (1992); Erratum **70**, 519 (1993).
25. **V. M. Yakovenko**, “Once again about interchain hopping”, *JETP Letters* **56**, 510–513 (1992).
26. **V. M. Yakovenko**, “Metals in a high magnetic field: A universality class of marginal Fermi liquids”, *Physical Review B* **47**, 8851–8857 (1993).
27. **V. M. Yakovenko**, “Magnetic oscillations and crystal superstructure”, *Physical Review Letters* **70**, 2657 (1993).
28. **V. M. Yakovenko**, “Hall conductivity of the moving FISDW”, *Journal de Physique IV, Colloque C2*, **3**, 307–310 (1993).
29. **V. M. Yakovenko**, “Hall conductivity of a moving magnetic-field-induced spin-density-wave”, *Journal of Superconductivity* **7**, 683–685 (1994).
30. Y. Hasegawa, K. Machida, M. Kohmoto, and V. M. Yakovenko, “Quantum Hall effect in the field-induced spin density wave states”, *Journal of Superconductivity* **7**, 757–762 (1994).
31. K. Machida, Y. Hasegawa, M. Kohmoto, V. M. Yakovenko, Y. Hori, and K. Kishigi, “Quantized Hall conductance and its sign reversal in field-induced spin-density waves”, *Physical Review B* **50**, 921–931 (1994).
32. A. T. Zheleznyak and **V. M. Yakovenko**, “‘Hot spots’ in quasi-one-dimensional organic

- conductors”, *Synthetic Metals* **70**, 1005–1008 (1995).
33. I. I. Mazin and V. M. Yakovenko, “Neutron scattering and superconducting order parameter in $\text{YBa}_2\text{Cu}_3\text{O}_7$ ”, *Physical Review Letters* **75**, 4134–4137 (1995); Erratum **76**, 1984 (1996).
 34. V. M. Yakovenko and I. I. Mazin, “On the interpretation of neutron scattering in superconducting $\text{YBa}_2\text{Cu}_3\text{O}_7$ ”, *Journal of Physics and Chemistry of Solids* **56**, 1777–1778 (1995).
 35. R. J. Radtke, A. I. Liechtenstein, V. M. Yakovenko, and S. Das Sarma, “Antiferromagnetic interactions and the superconducting gap function: Where are the nodes?”, *Physical Review B* **53**, 5137–5140 (1996).
 36. **V. M. Yakovenko** and H.-S. Goan, “Quantum Hall effect in quasi-one-dimensional conductors: The roles of moving FISDW, finite temperature, and edge states”, *Journal de Physique I (France)* **6**, 1917–1937 (1996). **Invited review** for the I. F. Schegolev Memorial Volume *Common Trends in Synthetic Metals and High- T_c Superconductors*.
 37. A. T. Zheleznyak, V. M. Yakovenko, and I. E. Dzyaloshinskii, “Parquet solution for a flat Fermi surface”, *Physical Review B* **55**, 3200–3215 (1997).
 38. H.-S. Goan and **V. M. Yakovenko**, “Temperature evolution of the quantum Hall effect in quasi-one-dimensional organic conductors”, *Synthetic Metals* **85**, 1609–1612 (1997).
 39. G. E. Volovik and V. M. Yakovenko, “Hopf term for a two-dimensional electron gas”, *Physical Review Letters* **79**, 3791 (1997).
 40. A. T. Zheleznyak, V. M. Yakovenko, H. D. Drew, and I. I. Mazin, “Phenomenological interpretations of the ac Hall effect in the normal state of $\text{YBa}_2\text{Cu}_3\text{O}_7$ ”, *Physical Review B* **57**, 3089–3098 (1998).
 41. N. Dupuis and **V. M. Yakovenko**, “Sign reversals of the quantum Hall effect and helicoidal magnetic-field-induced spin-density waves in quasi-one-dimensional organic conductors”, *Physical Review Letters* **80**, 3618–3621 (1998).
 42. **V. M. Yakovenko** and H.-S. Goan, “Edge and bulk electron states in a quasi-one-dimensional metal in a magnetic field: Semi-infinite Wannier-Stark ladder”, *Physical Review B* **58**, 8002–8008 (1998).
 43. N. Dupuis and **V. M. Yakovenko**, “Effect of umklapp scattering on the magnetic-field-induced spin-density waves in quasi-one-dimensional organic conductors”, *Physical Review B* **58**, 8773–8792 (1998).
 44. **V. M. Yakovenko** and H.-S. Goan, “The influence of magnetic-field-induced spin-density-wave motion and finite temperature on the quantum Hall effect in quasi-one-dimensional conductors: A quantum field theory”, *Physical Review B* **58**, 10648–10664 (1998).
 45. A. T. Zheleznyak, V. M. Yakovenko, and H. D. Drew, “Magnetoresistance of $\text{YBa}_2\text{Cu}_3\text{O}_7$ in the ‘cold spots’ model”, *Physical Review B* **59**, 207–210 (1999).
 46. N. Dupuis and **V. M. Yakovenko**, “Quantum Hall effect anomaly and collective modes in the magnetic-field-induced spin-density-wave phases of quasi-one-dimensional conductors”, *Europhysics Letters* **45**, 361–367 (1999).
 47. N. Dupuis and **V. M. Yakovenko**, “Sign reversals of the quantum Hall effect and helicoidal magnetic-field-induced spin-density waves in organic conductors”, *Physica B*, **259–261**, 1013–1014 (1999).
 48. **V. M. Yakovenko** and A. T. Zheleznyak, “Temperature dependence of the normal-state

- Hall coefficient of a quasi-one-dimensional metal”, *Synthetic Metals* **103**, 2202–2205 (1999).
49. **V. M. Yakovenko** and A. T. Zheleznyak, “Magnetic-field-induced Luttinger insulator state in quasi-one-dimensional conductors”, *Synthetic Metals* **103**, 2028–2029 (1999).
 50. A. T. Zheleznyak and **V. M. Yakovenko**, “Temperature dependence of resistivity in quasi-one-dimensional conductors in a strong magnetic field”, *European Physical Journal B* **11**, 385–399 (1999).
 51. A. Drăgulescu, V. M. Yakovenko, and D. J. Singh, “Theory of angular magnetoresistance oscillations in $Tl_2Ba_2CuO_6$ ”, *Physical Review B* **60**, 6312–6315 (1999).
 52. **V. M. Yakovenko**, H.-S. Goan, J. Eom, and W. Kang, “Temperature evolution of the quantum Hall effect in the FISDW state: Theory vs. experiment”, *Journal de Physique IV (France)* **9**, Pr10-195 (1999).
 53. N. Dupuis and **V. M. Yakovenko**, “Sign reversal of the quantum Hall effect and helicoidal magnetic-field-induced spin-density waves in organic conductors”, *Journal de Physique IV (France)* **9**, Pr10-199 (1999).
 54. N. Dupuis and **V. M. Yakovenko**, “Collective modes in a system with two spin-density waves: The Ribault phase of quasi-one-dimensional organic conductors”, *Physical Review B* **61**, 12888–12908 (2000).
 55. K. Sengupta and **V. M. Yakovenko**, “Hopf invariant for long-wavelength Skyrmions in quantum Hall systems for integer and fractional fillings”, *Physical Review B* **62**, 4586–4604 (2000).
 56. A. Drăgulescu and **V. M. Yakovenko**, “Statistical mechanics of money”, *European Physical Journal B* **17**, 723–729 (2000).
 57. **V. M. Yakovenko** and A. T. Zheleznyak, “Comparison of experimental data and theoretical calculations for electrical resistivity and Hall coefficient in quasi-one-dimensional organic conductor $(TMTSF)_2PF_6$ ”, *Synthetic Metals* **120**, 1083–1084 (2001).
 58. K. Sengupta, H.-J. Kwon, and **V. M. Yakovenko**, “Edge electron states for quasi-one-dimensional organic conductors in the magnetic-field-induced spin-density-wave phases”, *Physical Review Letters* **86**, 1094–1097 (2001).
 59. K. Sengupta, I. Žutić, H.-J. Kwon, V. M. Yakovenko, and S. Das Sarma, “Midgap edge states and pairing symmetry of quasi-one-dimensional organic superconductors”, *Physical Review B* **63**, 144531 (2001) [6 pages].
 60. A. Drăgulescu and **V. M. Yakovenko**, “Evidence for the exponential distribution of income in the USA”, *European Physical Journal B* **20**, 585–589 (2001).
 61. A. Drăgulescu and **V. M. Yakovenko**, “Exponential and power-law probability distributions of wealth and income in the United Kingdom and the United States”, *Physica A* **299**, 213–221 (2001).
 62. K. Sengupta, H.-J. Kwon, and **V. M. Yakovenko**, “Edge states and determination of pairing symmetry in superconducting Sr_2RuO_4 ”, *Physical Review B* **65**, 104504 (2002) [6 pages].
 63. H.-J. Kwon and **V. M. Yakovenko**, “Spontaneous formation of a π soliton in a superconducting wire with an odd number of electrons”, *Physical Review Letters* **89**, 017002 (2002) [4 pages]. This paper was also selected to appear in *Virtual Journal of Quantum Information*, *Virtual Journal of Nanoscale Science & Technology*, and *Virtual Journal of Applications of Superconductivity*, online compilation journals published by the American Institute of Physics.

64. A. A. Dragulescu and **V. M. Yakovenko**, “Probability distribution of returns in the Heston model with stochastic volatility”, *Quantitative Finance* **2**, 443–453 (2002); Erratum **3**, C15 (2003).
65. H.-J. Kwon, **V. M. Yakovenko**, and K. Sengupta, “How to detect edge electron states in (TMTSF)₂X and Sr₂RuO₄ experimentally”, *Synthetic Metals* **133–134**, 27–31 (2003).
66. A. C. Silva and **V. M. Yakovenko**, “Comparison between the probability distribution of returns in the Heston model and empirical data for stock indexes”, *Physica A* **324**, 303–310 (2003).
67. V. A. Khodel and V. M. Yakovenko, “Unconventional superconductivity in two-dimensional electron systems with long-range correlations”, *JETP Letters* **77**, 420–423 (2003).
68. V. M. Yakovenko and V. A. Khodel, “Physics of the insulating phase in the dilute two-dimensional electron gas”, *JETP Letters* **78**, 398–401 (2003).
69. H.-J. Kwon, K. Sengupta, and **V. M. Yakovenko**, “Theoretical prediction of the fractional ac Josephson effect in *p*- and *d*-wave superconductors”, *Brazilian Journal of Physics* **33**, 653–658 (2003).
70. J. W. Clark, V. A. Khodel, M. V. Zverev, and V. M. Yakovenko, “Unconventional superconductivity in two-dimensional electron systems with long-range correlations”, *Physics Reports* **391**, 123–156 (2004).
71. H.-J. Kwon, K. Sengupta, and **V. M. Yakovenko**, “Fractional ac Josephson effect in *p*- and *d*-wave superconductors”, *European Physical Journal B* **37**, 349–361 (2004).
72. V. A. Khodel, V. M. Yakovenko, M. V. Zverev, and H. Kang, “Hot spots and transition from *d*-wave to another pairing symmetry in the electron-doped cuprate superconductors”, *Physical Review B* **69**, 144501 (2004) [6 pages].
73. A. C. Silva, R. E. Prange, and V. M. Yakovenko, “Exponential distribution of financial returns at mesoscopic time lags: a new stylized fact”, *Physica A* **344**, 227–235 (2004).
74. H.-J. Kwon, K. Sengupta, and **V. M. Yakovenko**, “Fractional ac Josephson effect in unconventional superconductors”, *Low Temperature Physics* **30**, 613–619 (2004). This paper was also selected to appear in *Virtual Journal of Applications of Superconductivity*, an online compilation journal published by the American Institute of Physics.
75. A. C. Silva and **V. M. Yakovenko**, “Temporal evolution of the ‘thermal’ and ‘superthermal’ income classes in the USA during 1983-2001”, *Europhysics Letters* **69**, 304–310 (2005).
76. A. V. Chubukov, V. M. Galitski, and **V. M. Yakovenko**, “Quantum critical behavior near a density-wave instability in an isotropic Fermi liquid”, *Physical Review Letters* **94**, 046404 (2005) [4 pages].
77. Y. Zhang, V. M. Yakovenko, and S. Das Sarma, “Dispersion instability in strongly interacting electron liquids”, *Physical Review B* **71**, 115105 (2005) [10 pages].
78. V. A. Khodel, M. V. Zverev, and V. M. Yakovenko, “Curie law, entropy excess, and superconductivity in heavy fermion metals and other strongly interacting Fermi liquids”, *Physical Review Letters* **95**, 236402 (2005) [4 pages].
79. B. K. Cooper and **V. M. Yakovenko**, “Interlayer Aharonov-Bohm interference in tilted magnetic fields in quasi-one-dimensional organic conductors”, *Physical Review Letters* **96**, 037001 (2006) [4 pages].

80. **V. M. Yakovenko** and B. K. Cooper, “Angular magnetoresistance oscillations in bilayers in tilted magnetic fields”, *Physica E* **34**, 128–131 (2006).
81. **V. M. Yakovenko** and B. K. Cooper, “Angular magnetoresistance oscillations in Q1D as interlayer Aharonov-Bohm interference”, *Journal of Low Temperature Physics* **142**, 491–494 (2006).
82. A. Banerjee, **V. M. Yakovenko**, and T. Di Matteo, “A study of the personal income distribution in Australia”, *Physica A* **370**, 54–59 (2006).
83. **V. M. Yakovenko**, “Theory of the high-frequency chiral optical response in a $p_x + ip_y$ superconductor”, *Physical Review Letters* **98**, 087003 (2007) [4 pages].
84. A. C. Silva and **V. M. Yakovenko**, “Stochastic volatility of financial markets as the fluctuating rate of trading: an empirical study”, *Physica A* **382**, 278–285 (2007).
85. V. A. Khodel, J. W. Clark, V. M. Yakovenko, and M. V. Zverev, “Non-Fermi-liquid behavior from the Fermi-liquid approach”, *International Journal of Modern Physics B* **21**, 2077–2090 (2007).
86. V. A. Khodel, V. M. Yakovenko, and M. V. Zverev, “Flattening of single-particle spectra in strongly correlated electron systems and the violation of the Wiedemann-Franz law”, *JETP Letters* **86**, 772–778 (2007).
87. V. A. Khodel, J. W. Clark, V. M. Yakovenko, and M. V. Zverev, “Non-Fermi-liquid behavior of strongly correlated Fermi systems explained by the Fermi-liquid approach”, *Physica B* **403**, 1227–1229 (2008).
88. R. M. Lutchyn, P. Nagornykh, and **V. M. Yakovenko**, “Gauge-invariant electromagnetic response of a chiral $p_x + ip_y$ superconductor”, *Physical Review B* **77**, 144516 (2008), marked as a PRB Editors Suggestion.
89. S. Tewari, C. Zhang, V. M. Yakovenko, and S. Das Sarma, “Time-reversal symmetry breaking by a $(d + id)$ density-wave state in underdoped cuprate superconductors”, *Physical Review Letters* **100**, 217004 (2008).
90. A. Banerjee and **V. M. Yakovenko**, “Angular magnetoresistance oscillations in quasi-one-dimensional organic conductors in the presence of a crystal superstructure”, *Physical Review B* **78**, 125404 (2008).
91. K. Sengupta and **V. M. Yakovenko**, “Spontaneous spin accumulation in singlet-triplet Josephson junctions”, *Physical Review Letters* **101**, 187003 (2008).
92. C. Zhang, S. Tewari, V. M. Yakovenko, and S. Das Sarma, “Anomalous Nernst effect from a chiral d -density-wave state in underdoped cuprate superconductors”, *Physical Review B* **78**, 174508 (2008). An image from this paper was selected by the editors for the Kaleidoscope of PRB Images.
93. V. M. Yakovenko and J. B. Rosser, “Colloquium: Statistical Mechanics of Money, Wealth, and Income”, review paper submitted to *Reviews of Modern Physics*.

2.c Monographs, Reports, and Extension Publications

1. **V. M. Yakovenko**, “Research in Econophysics”, *The Photon*, Issue 24, January-February 2003 (review of econophysics research in the group of Victor Yakovenko, written for the online newspaper published by the Department of Physics, University of Maryland).

2.e Talks, Abstracts, and Other Professional Papers Presented

2.e.i Invited talks

Invited seminars and colloquia

I did not keep track of precise titles and dates of my seminars prior to coming to the University of Maryland in 1993. Thus, only years and places are indicated for the period of 1985–1992. I gave numerous seminars at various research institutes of the Soviet Academy of Sciences starting from 1985.

1. Landau Institute for Theoretical Physics, Moscow
2. Kapitza Institute for Physical Problems, Moscow
3. Lebedev Physical Institute, Moscow
4. Institute for Solid State Physics, Chernogolovka
5. Institute for Chemical Physics, Moscow
6. Ioffe Physical–Technical Institute, Leningrad
7. Institute for Nuclear Physics, Gatchina
8. Laboratoire de Physique des Solides, Orsay, France (1989)
9. Laue-Langevin Institute, Grenoble, France (1989)
10. Laboratoire de Physique des Solides, Orsay, France (1990)
11. Institute for Scientific Interchange, Turin, Italy (1990)
12. Princeton University (1991)
13. Rutgers University (1991)
14. Massachusetts Institute of Technology (1991)
15. Boston University (1991)
16. State University of New York, Buffalo, colloquium (1991)
17. Cambridge University, Britain (1991)
18. Harvard University (1992)
19. Massachusetts Institute of Technology (1992)
20. Boston University (1992)
21. Bell Laboratories, Murray Hill, New Jersey (1992)
22. State University of New York, Buffalo (1992)
23. University of Illinois, Urbana-Champaign (1992)
24. Johns Hopkins University (1992)
25. Rutgers University (1992)
26. Los Alamos National Laboratory (1992)
27. University of California, Irvine (1992)
28. University of Florida, Gainesville (1992)
29. Aspen Center for Physics, Colorado (1992)

30. "Metals in a high magnetic field: A new universality class of marginal Fermi liquids", Princeton University (January 1993)
31. "Quasi-one-dimensional conductors in high magnetic field", University of Maryland, condensed matter seminar (February 1993)
32. "Quasi-one-dimensional conductors in high magnetic field", Boston University (February 1993)
33. "Quasi-one-dimensional conductors in high magnetic field", State University of New York at Stony Brook (February 1993)
34. "Metals in a high magnetic field: A new universality class of marginal Fermi liquids", Laboratoire de Physique des Solides, Orsay, France (May 1993)
35. "Metals in a high magnetic field: A new universality class of marginal Fermi liquids", Laue-Langevin Institute, Grenoble, France (May 1993)
36. "Metals in a high magnetic field: A new universality class of marginal Fermi liquids", Service des Champs Magnetiques Intenses, Toulouse, France (May 1993)
37. "Metals in a high magnetic field: A new universality class of marginal Fermi liquids", Oxford University, Britain (June 1993)
38. "Angular magnetic oscillations in layered organic conductors", Oxford University, Britain (June 1993)
39. "Metals in a high magnetic field: A new universality class of marginal Fermi liquids", Cambridge University, Britain (June 1993)
40. "Metals in a high magnetic field: A new universality class of marginal Fermi liquids", University of British Columbia, Vancouver, Canada (July 1993)
41. "Metals in a high magnetic field: A new universality class of marginal Fermi liquids", University of Maryland, condensed matter seminar (November 1993)
42. "Parquet solution for a flat Fermi surface", Aspen Center for Physics, Colorado (August 1994)
43. "Quantum Hall effect in quasi-one-dimensional organic conductors", University of Wisconsin at Madison (August 1994)
44. "Metals in a strong magnetic field: A new universality class of marginal Fermi liquids", Argonne National Laboratory, Illinois (August 1994)
45. "Quantum Hall effect and moving density wave in quasi-one-dimensional conductors", Bell Laboratories, Murray Hill, New Jersey (May 1995)
46. "Neutron scattering and superconducting order parameter in $\text{YBa}_2\text{Cu}_3\text{O}_7$ ", Rutgers University, New Jersey (May 1995)
47. "Quantum Hall effect and magnetic-field-induced spin-density wave in quasi-one-dimensional organic conductors", Institute for Advanced Study, Princeton, New Jersey (January 1996)
48. "Quantum Hall effect in quasi-one-dimensional conductors", Indiana University, Bloomington (October 1996)
49. "Marginal Fermi-liquid in a strong magnetic field", University of Maryland, statistical physics seminar (November 1996)
50. "Quantum Hall effect in quasi-one-dimensional conductors", National High Magnetic Field Laboratory, Tallahassee, Florida (February 1997)

51. “Quantum Hall effect in quasi-one-dimensional organic conductors”, University of Virginia, Charlottesville (September 1997)
52. “Angular magnetoresistance oscillations in layered metals: Applications to organic conductors, high- T_c superconductors, and ruthenates”, Naval Research Laboratory, Washington DC (October 1997)
53. “Theory of the quantum Hall effect in quasi-one-dimensional organic conductors”, University of Chicago (January 1998)
54. “Normal-state transport in high- T_c superconductors and organic metals: ‘Cold spots’ vs ‘hot spots’”, University of Maryland, condensed matter seminar (February 1998)
55. “Renormalization group for a flat Fermi surface”, University of Maryland, statistical physics seminar (April 1998)
56. “Quasi-one-dimensional conductors in strong magnetic fields”, University of Maryland, physics colloquium (September 1998)
57. “Statistical mechanics of money”, University of Maryland, condensed matter physics seminar (September 1999)
58. “Temperature evolution of the quantum Hall effect in quasi-one-dimensional conductors”, Oxford University, theoretical condensed matter seminar (September 1999)
59. “Statistical mechanics of money”, Oxford University, theoretical condensed matter seminar (September 1999)
60. “Electrons on the edge”, Rutgers University, condensed matter physics seminar (April 2000)
61. “Electrons on the edge”, NEC Research Institute, Princeton, condensed matter physics seminar (April 2000)
62. “Statistical mechanics of money”, Princeton University, condensed matter seminar (April 2000)
63. “Electrons on the edge”, University of Maryland, condensed matter physics seminar (April 2000)
64. “Electrons on the edge”, Utrecht University, The Netherlands, condensed matter physics seminar (June 2000)
65. “Electrons on the edge”, Helsinki University of Technology, Finland, condensed matter physics seminar (June 2000)
66. “Statistical mechanics of money and income”, seminar on interdisciplinary problems in chemistry and physics, University of Maryland (October 2000)
67. “Electron edge states in triplet superconductors $(TMTSF)_2X$ and Sr_2RuO_4 ”, University of Geneva, Switzerland, condensed matter physics seminar (29 January 2001)
68. “Electrons on the edge”, ETH, Zurich, Switzerland, condensed matter physics seminar (30 January 2001)
69. “Electrons on the edge”, University of Fribourg, Switzerland, condensed matter physics seminar (31 January 2001)
70. “Electrons on the edge”, Laboratoire de Physique des Solides, Orsay, France, condensed matter physics seminar (1 February 2001)
71. “Statistical mechanics of money and income”, Laboratoire de Physique Theorique et Modeles

- Statistiques, Orsay, France, statistical physics seminar (1 February 2001)
72. “Theory of the electron edge states in the quasi-one-dimensional organic conductors of the $(\text{TMTSF})_2\text{X}$ family”, Delft Technical University, The Netherlands, condensed matter physics seminar (5 February 2001)
 73. “Electron edge states in quasi-one-dimensional organic conductors”, Massachusetts Institute of Technology, condensed matter physics seminar (20 March 2001)
 74. “Electrons on the edge”, Boston College, physics colloquium (21 March 2001)
 75. “Electron edge states in quasi-one-dimensional organic conductors”, Harvard University, condensed matter physics seminar (22 March 2001)
 76. “Statistical mechanics of money and income”, Boston University, condensed matter physics seminar (23 March 2001)
 77. “Electron edge states in quasi-one-dimensional organic conductors”, University of Chicago, condensed matter physics seminar (16 April 2001)
 78. “Statistical mechanics of money, wealth, and income”, University of Maryland, “Foundations and Frontiers of Physics” seminar for graduate students (30 April 2001)
 79. “Edge states and determination of pairing symmetry in superconducting Sr_2RuO_4 ”, Yukawa Institute for Theoretical Physics, Kyoto University, Japan, condensed matter physics seminar (5 September 2001)
 80. “Electron edge states in quasi-one-dimensional organic conductors”, Department of Physics, Kyoto University, Japan, condensed matter physics seminar (6 September 2001)
 81. “Statistical mechanics of money, wealth, and income”, University of Maryland, Mathematics Department, statistics seminar (20 September 2001)
 82. “Andreev edge states and determination of pairing symmetry in superconducting Sr_2RuO_4 ”, Department of Physics, Pennsylvania State University, University Park, condensed matter physics seminar (25 September 2001)
 83. “Statistical mechanics of money, wealth, and income”, Santa Fe Institute, SFI seminar (17 October 2001)
 84. “Statistical mechanics of money, income and wealth”, University of Maryland, physics colloquium (29 January 2002)
 85. “Quantum computation with ultimate nano-SQUIDS”, Laboratory for Physical Sciences of the University of Maryland, quantum computing seminar (21 May 2002)
 86. “Andreev bound states in superconductors: Fractional Josephson effect and spontaneous soliton formation”, University of California at Santa Barbara, condensed matter theory seminar (7 November 2002)
 87. “Fractional ac Josephson effect in p - and d -wave superconductors”, University of Southern California, condensed matter physics seminar (15 November 2002)
 88. “Andreev bound states in superconductors: Fractional Josephson effect and spontaneous soliton formation”, University of California at Santa Barbara, condensed matter/applied physics seminar (21 November 2002)
 89. “Andreev bound states in superconductors: Fractional Josephson effect and spontaneous soliton formation”, University of California at Los Angeles, condensed matter physics seminar (4

December 2002)

90. “Statistical mechanics of money, income and wealth”, Applied Physics Laboratory of the Johns Hopkins University, colloquium (10 January 2003)
91. “Andreev bound states in superconductors: Spontaneous soliton formation and fractional Josephson effect”, University of Maryland, condensed matter physics seminar (27 February 2003)
92. “Andreev bound states in superconductors: Spontaneous soliton formation and fractional Josephson effect”, Johns Hopkins University, condensed matter physics seminar (19 March 2003)
93. “Andreev bound states in superconductors: Spontaneous soliton formation and fractional Josephson effect”, State University of New York at Stony Brook, solid state seminar (28 March 2003)
94. “Andreev bound states in superconductors: Spontaneous soliton formation and fractional Josephson effect”, Massachusetts Institute of Technology, condensed matter physics seminar (10 June 2003)
95. “Andreev bound states in superconductors: Spontaneous soliton formation and fractional Josephson effect”, Harvard University, condensed matter physics seminar (10 June 2003)
96. “The hot spots and transition from d -wave to another pairing symmetry in the electron-doped cuprate superconductors”, University of Maryland, condensed matter physics seminar (2 October 2003)
97. “Andreev bound states in superconductors: Spontaneous soliton formation and fractional Josephson effect”, University of Maryland, physics colloquium (7 October 2003)
98. “Statistical mechanics of money, income, and wealth”, George Mason University, School of Computational Sciences, general colloquium (16 October 2003)
99. “Andreev bound states in superconductors: Spontaneous soliton formation and fractional Josephson effect”, Yale University, condensed matter physics seminar (30 October 2003)
100. “Statistical mechanics of money, income, and wealth”, Naval Research Laboratory, Sigma Xi colloquium (7 January 2004)
101. “Hot spots and transition from d -wave to another pairing symmetry in the electron-doped cuprate superconductors”, ETH, Zurich, Switzerland, condensed matter physics seminar (22 January 2004)
102. “Hot spots and transition from d -wave to another pairing symmetry in the electron-doped cuprate superconductors”, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland, condensed matter physics seminar (23 January 2004)
103. “Statistical mechanics of money, wealth, and income”, University of Maryland, “Foundations and Frontiers of Physics” seminar for graduate students (9 February 2004)
104. “Hot spots and transition from d -wave to another pairing symmetry in the electron-doped cuprate superconductors”, University of California at Los Angeles (UCLA), condensed matter physics seminar (19 May 2004)
105. “Statistical Mechanics of Money, Income, and Wealth”, Kavli Institute for Theoretical Physics, University of California at Santa Barbara, colloquium (2 June 2004)
106. “Statistical Mechanics of Money, Income, and Wealth”, Instituto de Fisica Teorica, Universi-

- dade Estadual Paulista (UNESP), Sao Paulo, Brasil, colloquium (6 August 2004)
107. “Conflicting stories of the divergent effective electron mass”, Saha Institute of Nuclear Physics, Kolkata, India, condensed matter physics seminar (14 March 2005)
 108. “Theory of angular magnetoresistance oscillations in tilted magnetic fields in bilayers”, California Institute of Technology, condensed matter physics seminar (15 April 2005)
 109. “Andreev Bound States in Superconductors: Spontaneous Soliton Formation and Fractional Josephson Effect”, Department of Physics, University of Illinois at Urbana-Champaign, condensed matter physics seminar (26 May 2005)
 110. “Statistics of stock-price fluctuations and turbulence”, NASA’s Goddard Space Flight Center, Greenbelt, Maryland, seminar of the Laboratory for Solar and Space Physics (16 December 2005).
 111. “Angular magnetoresistance oscillations in quasi-1D and quasi-2D materials and bilayers as an Aharonov-Bohm interference effect”, Department of Physics, University of Florida, Gainesville, condensed matter physics seminar (9 January 2006)
 112. “Curie law, entropy excess, and superconductivity in heavy fermion metals and other strongly interacting Fermi liquids”, Department of Physics, University of Florida, Gainesville, condensed matter physics seminar (10 January 2006)
 113. “Curie law, entropy excess, and superconductivity in heavy fermion metals and other strongly interacting Fermi liquids”, National High Magnetic Field Laboratory, Tallahassee, Florida, condensed matter physics seminar (12 January 2006)
 114. “Angular magnetoresistance oscillations in quasi-1D and quasi-2D materials and bilayers as an Aharonov-Bohm interference effect”, National High Magnetic Field Laboratory, Tallahassee, Florida, condensed matter physics seminar (13 January 2006)
 115. “Two-class structure of the personal income distribution in the USA in 1983-2001”, The Brookings Institution, Washington, DC, joint seminar of the Center on Social and Economic Dynamics and the Globalization and Inequality Group (17 January 2006)
 116. “Interlayer Aharonov-Bohm interference in a tilted magnetic field in low-dimensional lattices”, University of Maryland, joint quantum seminar UMD – NIST (27 March 2006)
 117. “Curie law, entropy excess, and superconductivity in heavy fermion metals and other strongly interacting Fermi liquids”, University of Maryland, condensed matter physics seminar (30 March 2006)
 118. “Two-class structure of the personal income distribution in the USA, 1983–2001”, The New School for Social Research, New York, Economics Department seminar (17 April 2006)
 119. “Statistical mechanics of money, wealth, and income”, University of Maryland, “Foundations and Frontiers of Physics” seminar for graduate students (24 April 2006)
 120. “Statistical mechanics of money, income, and wealth”, Georgetown University, Physics Department colloquium (19 September 2006)
 121. “Theory of the high-frequency chiral optical response in a $p_x + ip_y$ superconductor”, Stanford University, condensed matter physics seminar (2 November 2006)
 122. “Theory of angular magnetic oscillations in bilayer graphene”, University of Maryland, condensed matter physics seminar (30 November 2006)
 123. “Statistical mechanics of money, income, and wealth”, University of Maryland, School of

Public Policy, environmental policy roundtable seminar (8 December 2006)

124. “Statistical mechanics of money, income, and wealth”, George Mason University, Fairfax, VA, seminar at the Center for Social Complexity (23 March 2007)
125. “The non-Fermi-liquid behavior of strongly correlated Fermi systems within the Fermi-liquid approach”, Brookhaven National Laboratory, Upton, NY, condensed matter physics seminar (7 June 2007)
126. “Statistical Mechanics of Money, Income, and Wealth”, a lecture for physics majors, Department of Physics, University of Maryland (16 January 2008)
127. “Statistical Mechanics of Money, Income, and Wealth”, physics and astronomy seminar, Department of Physics, George Mason University, Fairfax, Virginia (20 March 2008)
128. “Review of econophysics models of money, wealth, and income distributions”, Department of Economics, New School for Social Research, New York, NY (5 May 2008)
129. “Theoretical models of spontaneous time-reversal symmetry breaking in Sr_2RuO_4 and in underdoped cuprates: $p + ip$ superconductivity and $d + id$ density wave”, condensed matter seminar, École Normale Supérieure, Paris, France (7 October 2008)
130. “Interlayer Aharonov-Bohm interference in a tilted magnetic field in organic conductors, semi-conducting and graphene bilayers, and superconducting qubits”, seminar *Théorie de la Matière Condensée sur le Plateau: Orsay-Palaiseau-Saclay*, Laboratoire de Physique des Solides, Orsay, France (16 October 2008)
131. “New developments in statistical mechanics of money, income, and wealth”, statistical physics seminar of LPT and LPTMS, Laboratoire de Physique Théorique et Modèles Statistiques, Orsay, France (16 October 2008)
132. “Theoretical models of spontaneous time-reversal symmetry breaking in Sr_2RuO_4 and in underdoped cuprates: $p + ip$ superconductivity and $d + id$ density wave”, seminar on magnetism and superconductivity, Laboratoire de Physique des Solides, Orsay, France (20 October 2008)
133. “Interlayer Aharonov-Bohm interference in a tilted magnetic field in organic conductors, semi-conducting and graphene bilayers, and superconducting qubits”, condensed matter seminar, Laboratoire National des Champs Magnétiques Pulsés, Toulouse, France (22 October 2008)
134. “Income Inequality and Statistical Mechanics”, keynote talk at the workshop celebrating the 60th anniversary of the Economics Department of the Università Cattolica del Sacro Cuore, Milan, Italy (3 November 2008)

Invited talks at conferences

1. “Quasi-one-dimensional conductors in magnetic field: Physical consequences of ‘non-standard’ theoretical approach”, *Third European Conference on Low Dimensional Conductors and Superconductors*, Dubrovnik, Croatia (September 1989)
2. “Theory of the quantum Hall effect in quasi-one-dimensional conductors”, *Gordon Research Conference on Organic Superconductors*, Irsee, Germany (September 1991)
3. “Hall conductivity of the moving magnetic-field-induced spin-density wave”, *International Workshop on Electronic Crystals*, Carry-le-Rouet, France (June 1993)
4. “Quantum Hall effect in quasi-one-dimensional organic conductors”, *Workshop on the Quantum Hall Effect*, Turin, Italy (June 1994)

5. “Parquet approach to abnormal Fermi liquids”, two lectures, *Workshop on Strong Correlations and Quantum Critical Phenomena*, Trieste, Italy (June 1994)
6. “Are there any ‘hot spots’ in quasi-one-dimensional metals?”, *International Conference on Synthetic Metals*, Seoul, Korea (July 1994)
7. “Are there any ‘hot spots’ in quasi-one-dimensional metals?”, *International Symposium on Molecular Conductors*, Tokyo, Japan (August 1994)
8. “Magnetic-field-induced Luttinger liquid in quasi-one-dimensional organic conductors”, *Correlated Fermions and Transport in Mesoscopic Systems*, Les Arcs, France (January 1996)
9. “Quantum Hall effect in the Bechgaard salts”, *Electronic and Structural Properties of Low-Dimensional Conductors*, Sherbrooke, Canada (May 1996)
10. “Temperature dependence of the umklapp resistivity of a quasi-one-dimensional metal in a strong magnetic field”, *International Conference on Synthetic Metals*, Montpellier, France (July 1998)
11. “Integer quantum Hall effect in quasi-1D organics”. *Disorder and Interactions in Quantum Hall and Mesoscopic Systems*, Institute for Theoretical Physics, Santa Barbara, California (August 1998)
12. “Temperature evolution of the quantum Hall effect in the FISDW state: Theory vs Experiment”, *International Workshop on Electronic Crystals — ECRYS-99*, La Colle sur Loup, France (June 1999).
13. “Fermiology in cuprates”, *XI Workshop on Strongly Correlated Electron Systems*, Abdus Salam International Center for Theoretical Physics, Trieste, Italy (July 1999)
14. “Theory of the edge electron states in the FISDW and superconducting states of $(\text{TMTSF})_2\text{X}$ ”, *Third International Symposium on Crystalline Organic Metals, Superconductors, and Ferromagnets*, Oxford, England (September 1999)
15. “Coherence of electron tunneling between one-dimensional Luttinger liquids”, *Conference on Mechanisms of Decoherence*, Spinoza Institute, Utrecht University, The Netherlands (June 2000)
16. “Electrons on the edge”, *International Conference on Mesoscopic and Strongly Correlated Electron Systems*, Chernogolovka, Russia (July 2000)
17. “Overview of transport models in cuprates”, *XII Workshop on Strongly Correlated Electron Systems*, Abdus Salam International Center for Theoretical Physics, Trieste, Italy (July 2000)
18. “Electron edge states in quasi-1D and quasi-2D systems”, *XII Workshop on Strongly Correlated Electron Systems*, Abdus Salam International Center for Theoretical Physics, Trieste, Italy (July 2000)
19. “Statistical mechanics of money”, *Packard Fellows Meeting*, Monterey, California (September 2000)
20. “Electron edge states in quasi-one-dimensional conductors”, *Summer School on Low-Dimensional Quantum Systems: Theory and Experiment*, Abdus Salam International Center for Theoretical Physics, Trieste, Italy (23 July 2001)
21. “Theory of electron edge states in $(\text{TMTTF})_2\text{X}$ and determination of pairing symmetry in superconducting $(\text{TMTSF})_2\text{X}$ ”, *4th International Symposium on Crystalline Organic Metals, Superconductors, and Ferromagnets (ISCOM-2001)*, Rusutsu, Hokkaido, Japan (12 September 2001)

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22. “The quantum Hall effect in quasi-one-dimensional organic conductors”, *Conference on Physical Phenomena in High Magnetic Fields-IV (PPHMF-IV)*, Santa Fe (25 October 2001)
 23. “Statistical mechanics of money, wealth, and income”, *Horizons in Complex Systems*, Messina, Italy (8 December 2001)
 24. “Theoretical overview of transport in cuprates”, *Workshop on Emergent Materials and Highly Correlated Electrons*, Abdus Salam International Center for Theoretical Physics, Trieste, Italy (14 August 2002)
 25. “Probability distribution of returns for a model with stochastic volatility”, *International Econophysics Conference*, Bali, Indonesia (31 August 2002)
 26. “Hot and cold spots of the electron relaxation time in Q1D organic conductors and in cuprates”, *Realistic Theories of Correlated Electron Materials*, Kavli Institute for Theoretical Physics, University of California at Santa Barbara (19 November 2002)
 27. “Spontaneous formation of a π soliton in a superconducting wire with an odd number of electrons”, *March Meeting of the American Physical Society*, Austin (5 March 2003)
 28. “Statistical mechanics of money, income, and wealth”, *6th International Symposium of Physics*, Monterrey Institute of Technology, Mexico (26 February 2004)
 29. Invited talk, *Fifth International Conference on New Theories, Discoveries and Applications of Superconductors and Related Materials (New3SC-5)*, Chongqing, China (10-15 June 2004), declined
 30. “‘Thermal’ and ‘superthermal’ two-class structure of the personal income distribution”, *North American Association for Computational Social and Organizational Science, NAACSOS Conference 2004*, Carnegie Mellon University, Pittsburgh (28 June 2004)
 31. “Self-energy near a quantum critical point”, *Workshop on Novel States and Phase Transitions in Highly Correlated Matter*, Abdus Salam International Center for Theoretical Physics, Trieste, Italy (22 July 2004)
 32. “Parquet method for a flat 2D Fermi surface”, a series of 3 lectures at the *School on Renormalization Group Methods for Interacting Electrons*, Brasília, Brazil (3–5 August 2004)
 33. “‘Thermal’ and ‘superthermal’ two-class structure of personal income distribution”, *Workshop on Volatility of Financial Markets: Theoretical Models, Forecasting and Trading*, Lorentz Center, Leiden University, The Netherlands (21 October 2004)
 34. “Two-class structure of income distribution in the USA: exponential bulk and power-law tail”, workshop on *Econophysics of Wealth Distributions*, Saha Institute of Nuclear Physics, Kolkata, India (15 March 2005)
 35. “Statistical mechanics of money, income, and wealth: foundations and applications”, workshop on *Econophysics of Wealth Distributions*, Saha Institute of Nuclear Physics, Kolkata, India (19 March 2005)
 36. “Can ‘non-Fermi-liquid’ behavior be found in the Landau theory of Fermi liquids?”, program on *Quantum Phase Transitions*, Kavli Institute for Theoretical Physics, University of California at Santa Barbara (25 April 2005)
 37. “Statistical mechanics of money”, workshop on *Emergence*, Pacific Institute of Theoretical Physics, University of British Columbia, Vancouver (17 May 2005)

38. “Statistical mechanics of money, income, and wealth”, symposium *Understanding Complex Systems*, Department of Physics, University of Illinois at Urbana-Champaign (18 May 2005)
39. “Two-class structure of income distribution in the USA: exponential bulk and power-law tail”, *Econophysics Conference*, Australian National University, Canberra, Australia (17 November 2005)
40. “Statistical mechanics of money, income, and wealth”, *Topological Aspects of Critical Systems and Networks*, Hokkaido University, Sapporo, Japan (14 February 2006).
41. “Statistical mechanics of money, income, and wealth”, *March Meeting of the American Physical Society*, Baltimore (13 March 2006).
42. “Distribution of log-returns in the Heston model obtained by subordination to the fluctuating number of trades”, *Applications of Physics in Financial Analysis 5*, Turin, Italy (29 June 2006).
43. “Statistical mechanics of money, income, and wealth”, *Third Feynman Festival*, University of Maryland (29 August 2006).
44. “The Econophysics Perspective”, *Fat Tails from Finance to Fluids*, University College Dublin and the Royal Irish Academy, Dublin, Ireland (23 May 2007).
45. “Time-reversal-symmetry breaking and the Kerr effect in Sr_2RuO_4 ”, Miniprogram *Sr_2RuO_4 and Chiral p -wave Superconductivity*, Kavli Institute for Theoretical Physics, University of California at Santa Barbara (11 December 2007)
46. “Evidence for the horizontal lines of nodes from the tunneling spectrum of Sr_2RuO_4 ”, Miniprogram *Sr_2RuO_4 and Chiral p -wave Superconductivity*, Kavli Institute for Theoretical Physics, University of California at Santa Barbara (19 December 2007)
47. “Statistical Mechanics of Money, Income, and Wealth”, *Winter Meeting on Statistical Physics*, Taxco, Guerrero, Mexico (11 January 2008)
48. “Distributions of money, income, and wealth: the social inequality data”, *Data in Complex Systems* conference, Università degli Studi di Palermo, Sicily, Italy (7 April 2008)
49. “Statistical mechanics of money, income, and wealth”, conference on *Probabilistic Political Economy*, Kingston University, UK (15 July 2008)
50. “ $d + id$ density-wave as the origin of the time-reversal symmetry breaking in underdoped cuprates”, *Workshop on Electronic Crystals (ECRYS)*, Cargèse, Corsica, France (26 August 2008)
51. “Spontaneous formation of a π -soliton in a superconducting wire with an odd number of electrons and other unusual Josephson effects”, mini-conference *Low Dimensional Conductors*, Laboratoire de Physique Théorique et Modèles Statistiques (LPTMS), Orsay, France (23 September 2008)

2.e.ii Refereed conference proceedings

1. **V. M. Yakovenko** and H.-S. Goan, “What happens to the quantum Hall effect when magnetic-field-induced spin-density wave moves”, *Proceedings of the Physical Phenomena at High Magnetic Fields – II Conference*, World Scientific Publishing Co., pp. 116–121 (1996).
2. A. Drăgulescu, V. M. Yakovenko, and D. J. Singh, “Angular oscillations of the c -axis magnetoresistance in $\text{Tl}_2\text{Ba}_2\text{CuO}_6$ ”, *Proceedings of the Physical Phenomena at High Magnetic*

Fields – III Conference, World Scientific Publishing Co., pp. 365–368 (1999).

3. A. A. Dragulescu and **V. M. Yakovenko**, “Statistical mechanics of money, income, and wealth: A short survey”, *Modeling of Complex Systems: Seventh Granada Lectures*, AIP Conference Proceedings **661**, pp. 180–183 (2003).
4. **V. M. Yakovenko** and A. C. Silva, “Two-class structure of income distribution in the USA: exponential bulk and power-law tail”, *Econophysics of Wealth Distributions*, edited by A. Chatterjee, S. Yarlagadda, and B. K. Chakrabarti, Springer series “New Economic Windows”, pp. 15–23 (2005).

2.e.iv Contributed talks and posters at conferences

1. “A weak coupling theory for La_2CuO_4 : \ln^2 -parquet approach”, *Electronics of Organic Materials*, Tashkent, USSR (1987), talk
2. “A weak coupling theory for La_2CuO_4 : \ln^2 -parquet approach” and “Possible superconductivity on the junction surface of dielectric La_2CuO_4 ”, *Toward Theoretical Understanding of High- T_c Superconductivity*, Trieste, Italy (1988), talk
3. “A weak coupling theory for La_2CuO_4 : \ln^2 -parquet approach”, *US-SU Symposium in Physics*, Tbilisi, USSR (1988), talk
4. “Spin, statistics and charge of solitons in (2+1)-dimensional theories”, *NORDITA–USSR Workshop in Physics*, Zvenigorod, USSR (1989), talk
5. “Spin, statistics and charge of solitons in (2+1)-dimensional theories”, *NATO School on Strongly Correlated Electron Systems*, Cargese, France (1990), talk
6. “Theory of the quantum Hall effect in quasi-one-dimensional conductors”, *International Conference on Synthetic Metals*, Tubingen, Germany (1990), poster
7. “Hall conductivity of the moving magnetic-field-induced spin-density wave”, *Gordon Research Conference on Organic Superconductors*, Il Ciocco, Italy, (May 1993), talk
8. “Hall conductivity of the moving magnetic-field-induced spin-density wave”, *Physics and Chemistry of Molecular and Oxide Superconductors*, Eugene, Oregon (July 1993), poster
9. “‘Hot spots’ in quasi-one-dimensional organic conductors”, March Meeting of the American Physical Society, Pittsburgh, Pennsylvania (1994), talk
10. “On the interpretation of neutron scattering in superconducting $\text{YBa}_2\text{Cu}_3\text{O}_7$ ”, *Stanford Conference on Spectroscopies in Novel Superconductors* (March 1995), poster
11. “Magnetic-field-induced Luttinger liquid in quasi-one-dimensional conductors”, *Workshop on Non-Fermi Liquid in one dimension*, University of California at Los Angeles (March 1995), talk
12. “Hall conductivity of the moving magnetic-field-induced spin-density wave”, *Physical Phenomena at High Magnetic Fields – II*, National High Magnetic Field Laboratory, Tallahassee, Florida (May 1995), poster
13. “Metals in a strong magnetic field: A new universality class of marginal Fermi liquids”, *Modern Trends in Theoretical Physics*, Landau Institute, Moscow, Russia (June 1995), talk
14. “Magnetic-field-induced Luttinger liquid in quasi-one-dimensional conductors: Temperature dependence of impurity scattering”, *Workshop on Strongly Interacting Electronic Materials*, Princeton University (November 1995), poster

15. “Magnetic-field-induced Luttinger liquid in quasi-one-dimensional organic conductors”, *Non-Fermi-Liquid Physics*, Institute for Theoretical Physics, Santa Barbara, California (June 1996), talk
16. “Magnetic-field-induced Luttinger liquid in quasi-one-dimensional organic conductors”, NATO Advanced Study Institute on *Mesoscopic Electron Transport*, Curaçao (June/July 1996), poster
17. “Recent developments in the theory of the quantum Hall effect in quasi-one-dimensional organic conductors $(\text{TMTSF})_2\text{X}$ ”, *International Conference on Synthetic Metals*, Snowbird, Utah (July/August 1996), talk
18. “Angular oscillations of magnetoresistance in layered metals: A tool for measuring the interplane coherence and the intraplane Fermi surface”, *Spectroscopies in Novel Superconductors*, Cape Cod, Massachusetts (September 1997), talk
19. “Temperature dependence of the Hall resistivity in the metallic state of $(\text{TMTSF})_2\text{X}$ ”, “Edge electron states in a Q1D metal in a magnetic field”, and “Helicoidal FISDWs in $(\text{TMTSF})_2\text{X}$ ”, *International Conference on Synthetic Metals*, Montpellier, France (July 1998), posters
20. “Parquet solution for a flat Fermi surface”, *Statistical Physics 20*, Paris, France (July 1998), talk
21. “Coherence of tunneling between Luttinger liquids” and “Parquet solution for a flat Fermi surface”, *X Trieste Workshop on Open Problems in Strongly Correlated Electron Systems*, Italy (July 1998), talks
22. “Temperature dependence of the Hall resistivity in the metallic state of $(\text{TMTSF})_2\text{X}$ ”, “Edge electron states in a Q1D metal in a magnetic field”, “Helicoidal FISDWs and sign reversals of the quantum Hall effect in $(\text{TMTSF})_2\text{X}$ ”, “Temperature dependence of the umklapp resistivity of a Q1D metal in a strong magnetic field”, “Theory of angular magnetoresistance oscillations in $\text{Tl}_2\text{Ba}_2\text{CuO}_6$ ”, and “Magnetoresistance and the ac Hall effect in the ‘cold spots’ model of the normal-state transport in $\text{YBa}_2\text{Cu}_3\text{O}_7$ ” *Physical Phenomena at High Magnetic Fields – III*, National High Magnetic Field Laboratory, Tallahassee, Florida (October 1998), posters
23. “Gibbs distribution of money: A computer simulation”, *Europhysics Conference on Applications of Physics in Financial Analysis*, Dublin, Ireland (July 1999), poster
24. “Coherence of tunneling between one-dimensional Luttinger liquids”, *Electron Transport in Mesoscopic Systems*, Göteborg, Sweden (August 1999), poster
25. “Theory of electron edge states in the triplet quasi-one-dimensional organic superconductor $(\text{TMTSF})_2\text{PF}_6$ (and inorganic Sr_2RuO_4)”, *Gordon Research Conference on Superconductivity*, Ventura, California (February 2000), poster
26. “Statistical mechanics of money”, *Europhysics conference on Applications of Physics in Financial Analysis*, Liège, Belgium (July 2000), poster
27. “Edge electron states in Q1D systems: theory”, *International Conference on Synthetic Metals*, Bad Gastein, Austria (July 2000), talk
28. “Electrons on edge”, *Electronic Correlations: From Meso- to Nano-Physics*, Les Arcs, France (21 January 2001), talk
29. “Statistical mechanics of money and income”, *NATO Advanced Research Workshop on Application of Physics in Economic Modeling*, Prague, Czech Republic (10 February 2001), talk
30. “Exponential and power-law scaling in the income distribution”, *Scaling Concepts and Com-*

- plex Systems*, Merida, Mexico (12 July 2001), talk
31. “Statistical mechanics of money and income”, *21st International Conference on Statistical Physics*, Cancun, Mexico (19 July 2001), poster
 32. “Andreev edge states and determination of pairing symmetry in superconducting Sr_2RuO_4 ”, *Workshop on Excitations in Unconventionally Ordered Metals*, Santa Fe (27 October 2001), talk
 33. “How to detect edge midgap states in superconducting $(\text{TMTSF})_2\text{X}$ experimentally”, *March Meeting of the American Physical Society*, Indianapolis (19 March 2002), talk
 34. “Probability distribution of returns in a model with stochastic volatility”, *Workshop on Economics with Heterogeneous Interacting Agents (WEHIA 2002)*, Abdus Salam International Center for Theoretical Physics, Trieste, Italy (31 May 2002), talk
 35. “Exponential and power-law probability distributions of wealth and income in the United Kingdom and the United States”, *Computing in Economics and Finance*, Aix-en-Provence, France (29 June 2002), talk
 36. “Probability distribution of returns in the Heston model with stochastic volatility”, *Computing in Economics and Finance*, Aix-en-Provence, France (29 June 2002), talk
 37. “Spontaneous formation of a π soliton in a superconducting wire with an odd number of electrons”, *International Workshop on Electronic crystals (ECRYS-2002)*, St. Flour, France (3 September 2002), talk
 38. “Statistical mechanics of money, income, and wealth”, *7th Granada Seminar on Computational and Statistical Physics*, Granada, Spain (7 September 2002), talk
 39. “Andreev bound states in superconductors: Spontaneous soliton formation and fractional Josephson effect”, *4th International Conference on New Theories, Discoveries, and Applications of Superconductors and Related Materials (New³SC-4)*, San Diego (17 January 2003), talk
 40. “Fractional ac Josephson effect in p - and d -wave superconductors”, *March Meeting of the American Physical Society*, Austin (4 March 2003), talk
 41. “Fractional ac Josephson effect in p - and d -wave superconductors”, *International Workshop on Unconventional Superconductors*, State University of Campinas, Brazil (21 May 2003), talk
 42. “Fractional ac Josephson effect in p - and d -wave superconductors”, *7th International Conference on Materials and Mechanisms of Superconductivity and High Temperature Superconductors*, Rio de Janeiro, Brazil (26 May 2003), poster
 43. “Time evolution of the probability distribution of returns in the Heston model of stochastic volatility compared with the high-frequency stock-market data”, *Applications of Physics in Financial Analysis 4*, Warsaw, Poland (15 November 2003), talk
 44. “Andreev bound states, as coherent many-body objects in superconductors, quantum spin/qubit chains, and 1D optical lattices”, *Workshop of the prospective Joint Institute for Coherent Quantum Processes*, Department of Physics, UMD (5 January 2004), talk
 45. “Andreev bound states in superconductors: Spontaneous soliton formation and fractional Josephson effect”, *6th Rencontres de Moriond in Mesoscopic Physics: Quantum information and Decoherence in Nanosystems*, La Thuile, Italy (29 January 2004), talk
 46. “Lattice-formation scenario of the metal-insulator transition in a two-dimensional electron

- liquid”, *March Meeting of the American Physical Society*, Montreal (23 March 2004), talk
47. “Hot spots and transition from d -wave to another pairing symmetry in the electron-doped cuprate superconductors”, *March Meeting of the American Physical Society*, Montreal (24 March 2004), talk
 48. “Statistical mechanics of money, income, and wealth: a short survey”, *9th Workshop on Economics and Heterogeneous Interacting Agents (WEHIA 2004)*, Kyoto University, Japan (28 May 2004), talk
 49. “Exponential distribution of financial returns at mesoscopic time lags: a new stylized fact”, *9th Workshop on Economics and Heterogeneous Interacting Agents (WEHIA 2004)*, Kyoto University, Japan (28 May 2004), poster
 50. “Hot spots and transition from d -wave to another pairing symmetry in the electron-doped cuprate superconductors”, *7th International Conference on Spectroscopies in Novel Superconductors (SNS2004)*, Sitges, Spain (12–15 July 2004), poster
 51. “‘Thermal’ and ‘superthermal’ two-class structure of the personal income distribution”, *March Meeting of the American Physical Society*, Los Angeles (21 March 2005), talk
 52. “Probability distribution of financial returns in a model of multiplicative Brownian motion with stochastic diffusion coefficient”, *March Meeting of the American Physical Society*, Los Angeles (22 March 2005), talk
 53. “Two-class structure of the personal income distribution in the USA in 1983–2001”, *11th Conference on Computing in Economics and Finance*, Washington, DC (24 June 2005), poster
 54. “Theory of angular magnetoresistance oscillations in tilted magnetic fields in bilayers”, *Emergent Phenomena in Quantum Hall Systems*, Taos, New Mexico (8 July 2005), poster
 55. “Theory of angular magnetoresistance oscillations in tilted magnetic fields in bilayers”, *16th International Conference on the Electronic Properties of Two-Dimensional Systems (EP2DS-16)*, Albuquerque, New Mexico (11 July 2005), poster
 56. “Angular magnetoresistance oscillations in Q1D, Q2D, and bilayers as the Aharonov-Bohm interference between the real-space orbits”, *6th International Symposium on Crystalline Organic Metals, Superconductors, and Ferromagnets (ISCOM-2005)*, Key West, Florida (13 September 2005), poster
 57. “Curie law, entropy excess, and superconductivity in heavy fermion metals and other strongly interacting Fermi liquids”, *Topological Aspects of Critical Systems and Networks*, Hokkaido University, Sapporo, Japan (13 February 2006), poster
 58. “Curie law, entropy excess, and superconductivity in heavy fermion metals and other strongly interacting Fermi liquids”, *March Meeting of the American Physical Society*, Baltimore (15 March 2006), talk
 59. “Interlayer Aharonov-Bohm interference in tilted magnetic fields in quasi-one-dimensional organic conductors”, *March Meeting of the American Physical Society*, Baltimore (15 March 2006), talk
 60. “Statistical mechanics of money, income, and wealth”, *Annual Meeting of the Institute for Complex Adaptive Matter (ICAM)*, Santa Fe (11 November 2006), talk
 61. “Stochastic volatility of financial markets as the fluctuating rate of trading: an empirical study”, *March Meeting of the American Physical Society*, Denver (5 March 2007), talk

62. “Angular magnetoresistance oscillations in quasi-one-dimensional organic conductors in the presence of a crystal superstructure”, *March Meeting of the American Physical Society*, Denver (6 March 2007), talk
63. “Theory of the high-frequency chiral optical response in a $p_x + ip_y$ superconductor”, *March Meeting of the American Physical Society*, Denver (9 March 2007), talk
64. “Theory of the high-frequency chiral optical response in a $p_x + ip_y$ superconductor”, International Conference on *Strongly Correlated Electron Systems* (SCES), Houston (14 May 2007), poster
65. “Non-Fermi-liquid behavior of strongly correlated Fermi systems within the Fermi-liquid approach”, International Conference on *Strongly Correlated Electron Systems* (SCES), Houston (18 May 2007), poster
66. “Universal and non-universal features in the distribution of income”, International Conference on the *Economic Science with Heterogeneous Interacting Agents* (ESHIA), George Mason University, Fairfax, VA (18 June 2007), talk
67. “Modeling income distribution as a sum of additive and multiplicative stochastic processes”, *March Meeting of the American Physical Society*, New Orleans (10 March 2008), talk
68. “Spontaneous spin accumulation in singlet-triplet Josephson junctions”, *March Meeting of the American Physical Society*, New Orleans (11 March 2008), talk
69. “Time-reversal symmetry breaking by a $(d + id)$ density-wave state in underdoped cuprate superconductors”, *March Meeting of the American Physical Society*, New Orleans (13 March 2008), talk

2.i Contracts and Grants

As a Fellow of the Joint Quantum Institute (JQI), Victor Yakovenko is one of co-PIs on the collective grant for Physics Frontier Center (PFC) awarded by NSF to JQI at UMD in September 2008. The title of the grant is “Processing Quantum Coherence”.

Victor Yakovenko was the sole Principal Investigator on all of the following grants.

Project Title	Theory of Quasi-One-Dimensional Organic Conductors
Source of Support	National Science Foundation, DMR-0137726
Total Award Amount	\$275,000
Total Award Period	June 15, 2002 – May 31, 2006

Project Title	Organic Conductors in High Magnetic Fields: A Theoretical Study
Source of Support	National Science Foundation, DMR-9815094
Total Award Amount	\$203,000
Total Award Period	January 1, 1999 – January 31, 2002

Project Title	Organic Conductors in High Magnetic Fields: A Theoretical Study
Source of Support	National Science Foundation, DMR-9417451
Total Award Amount	\$143,000
Total Award Period	January 1, 1995 – December 31, 1998

2.j Fellowships, Prizes, and Awards

- 2007 : Member of the Center for Nanophysics and Advanced Materials (CNAM), UMD
2006 : Fellow of the Joint Quantum Institute (JQI), UMD–NIST
2004 : Fellow of the American Physical Society
2003 : Richard A. Ferrell Distinguished Faculty Fellowship, Department of Physics, UMD
Total award amount: \$10,000
1995–2001 : David and Lucile Packard Fellowship in Science and Engineering
Total award amount: \$550,000
1994–1996 : Alfred P. Sloan Research Fellowship
Total award amount: \$30,000
1990 : Soviet Youth League Prize in Physics

2.k Editorships, Editorial Boards, and Reviewing Activities for Journals and Other Learned Publications

Refereed more than 210 articles for the following journals and publishers:

- *Nature*
- *Proceedings of the National Academy of Sciences of USA*
- *Physical Review Letters*
- *Physical Review B*
- *Physical Review E*
- *Europhysics Letters*
- *European Physical Journal B*
- *Physica A*
- *Physica B*
- *Physica E*
- *Journal de Physique*
- *JETP Letters*
- *Soviet Physics-JETP*
- *Journal of Physics and Chemistry of Solids*
- *Journal of Low Temperature Physics*
- *Solid State Sciences*
- *Synthetic Metals*
- *Chemical Reviews*
- *American Journal of Physics*
- *Journal of Physics A*
- *Entropy*
- *Quantitative Finance*
- *Annals of Finance*
- *International Journal of Theoretical and Applied Finance*
- *Journal of Economic Dynamics and Control*
- *Proceedings of the Royal Society, Series A*
- *Advances in Complex Systems*
- *Inverse Problems in Science and Engineering*
- *PMC Physics B*
- *Cambridge University Press*

2.1 Other

- Member of the American Physical Society: Division of Condensed Matter Physics (DCMP) and Group on Statistical and Nonlinear Physics (GNSP), since 1993
- Honorary Member of the Institute of Theoretical and Applied Physics, Marmaris, Turkey, since 2006

3 Teaching and Advising

3.a Courses taught in the last five years

3.a.i General

2008 Spring	: Phys603 “Methods of Statistical Physics”	3 credits	40 students
2007 Spring	: Phys603 “Methods of Statistical Physics”	3 credits	25 students
2007 Spring	: Phys272 and 272H “Introductory Physics: Fields”	3 credits	40 students
2006 Fall	: Phys374 “Intermediate Theoretical Methods”	4 credits	37 students
2006 Spring	: Phys272 and 272H “Introductory Physics: Fields”	3 credits	30 students
2005 Fall	: Phys142 “Principles of Physics II”	3 credits	23 students
2004 Fall	: Phys171H “Introductory Physics: Mechanics and Relativity”	3 credits	16 students
2004 Fall	: Phys142 “Principles of Physics II”	4 credits	21 student
2004 Spring	: Phys625 “Nonrelativistic Quantum Mechanics”	3 credits	12 students
2003 Fall	: Phys142 “Principles of Physics II”	4 credits	19 students
2003 Spring	: Phys420 “Principles of Modern Physics”	3 credits	21 students
2002 Spring	: Phys625 “Nonrelativistic Quantum Mechanics”	3 credits	13 students
2000 Fall	: Phys832 “Theory of Solids I”	3 credits	13 students
2000 Spring	: Phys625 “Nonrelativistic Quantum Mechanics”	3 credits	10 students
1999 Spring	: Phys623 “Introduction to Quantum Mechanics II”	3 credits	31 students
1998 Fall	: Phys622 “Introduction to Quantum Mechanics I”	4 credits	50 students
1998 Spring	: Phys623 “Introduction to Quantum Mechanics II”	3 credits	20 students
1997 Fall	: Phys622 “Introduction to Quantum Mechanics I”	4 credits	16 students
1997 Spring	: Phys623 “Introduction to Quantum Mechanics II”	3 credits	25 students
1996 Fall	: Phys623 “Introduction to Quantum Mechanics II”	3 credits	14 students
1996 Spring	: Phys622 “Introduction to Quantum Mechanics I”	4 credits	13 students
1995 Fall	: Phys623 “Introduction to Quantum Mechanics II”	3 credits	10 students
1994 Spring	: Phys832 “Theory of Solids I”	3 credits	7 students

3.a.ii Specialized

2001 Spring	: Phys739 “Seminar in Theoretical Solid State Physics”	1 credit	5 students
2000 Fall	: Phys739 “Seminar in Theoretical Solid State Physics”	1 credit	3 students
2000 Spring	: Phys739 “Seminar in Theoretical Solid State Physics”	1 credit	5 students
1999 Fall	: Phys739 “Seminar in Theoretical Solid State Physics”	1 credit	5 students
1999 Spring	: Phys739 “Seminar in Theoretical Solid State Physics”	1 credit	4 students
1998 Fall	: Phys739 “Seminar in Theoretical Solid State Physics”	1 credit	4 students

3.a.iv Independent Study, Tutorial, Internship Supervision

2008 Spring : Phys398 “Independent Studies Seminar”, 1 student

2008 Spring : Phys499B “Special Problems in Physics”, 1 student
2004 Fall : Phys798 “Special Problems in Advanced Physics”, 1 student
1996 Summer : Phys798 “Special Problems in Advanced Physics”, 1 student

3.c Manuals, Notes, Software, Webpages, and Other Contributions to Teaching

Long-term mentor for the courses Phys141 and Phys142 since 1/2005. Reviewed new lab manual for Phys142 and made suggestions for improvements and correction of errors.

Uncovered a serious problem in a Phys142 laboratory and suggested ways to fix it. Found that unbalanced magnetic poles in a magnetic damper leak magnetic field, which significantly distorts measurements of Ampère’s force between two currents.

Created and posted online sets of problems for the courses PHYS 374 “Intermediate Theoretical Methods”, PHYS 603 “Methods of Statistical Physics”, and PHYS 622/623 “Introduction to Quantum Mechanics”, see <http://www2.physics.umd.edu/~yakovenk/teaching/>. The problems are typeset in L^AT_EX and are utilized by students and other professors who teach these courses.

3.e Advising: Other Than Research Direction

3.e.i Undergraduate

1997–1999 : Ekaterina Leistner, B.S. 5/1999
1998–2003 : Alexey Topygin, B.S. 5/2003
2000–2001 : Joshua Warfield, switched to Mechanical Engineering
2001–2002 : Brian Ross, B.S. 5/2002
2003–2005 : Yevgeniy Tyurmin, switched to a different major
2005–2007 : Michael Day, switched to a different major
2005–present : Vadim Korotkikh
2005–2007 : Joseph Munson, switched to a different major
2005–present : Christopher Spears
2007 : Philip Isett, switched to a different major
2007–present : Steven Rothenberg

3.e.ii Graduate

2003–present : Emrah Altunkaya
2003–present : Jared Hertzberg
2003–present : William Boggs
2003–present : Mark Burky
2003–present : Paul Hohler
2004–present : Jianhao Chen
2004–present : Shixiong Zhang
2004–present : Kaushik Mitra
2004–present : Rajesh Sathiyarayanan
2004–present : Solomon Granor
2004–present : Brian Christy
2006–present : Konstantin Safronov
2006–present : Alexey Karavaev

2006–present : Oleg Zatsepin
2006–present : Pavel Nagornykh
2006–present : Baladitya Suri

3.f Advising: Research Direction

3.f.i Undergraduate

2003 : Alexandre Rostovtsev
2004–2005 : William Keay
2006–2008 : Roman Przygodzki

3.f.iii Doctoral

1993–1997 : Anatoley T. Zheleznyak, Ph. D. 1997
Thesis: “Theoretical Studies of Phase Transitions and Transport Properties in High- T_c Superconductors and Quasi-One-Dimensional Organic Metals”
Senior Scientist at the System Planning Inc., Northern Virginia

1994–1999 : Hsi-Sheng Goan, Ph. D. 1999
Thesis: “Theoretical Studies in Quasi-One-Dimensional Conductors”
Assistant Professor, Department of Physics, National Taiwan University, Taipei

1996–2001 : Krishnendu Sengupta, Ph. D. 2001
Thesis: “Electronic Properties of Low-Dimensional Systems with Broken Symmetries: A Theoretical Study”
Associate Professor, Saha Institute of Nuclear Physics, Kolkata, India

1997–2002 : Adrian Drăgulescu, Ph. D. 2002
Thesis: “Applications of Physics to Economics and Finance: Money, Income, Wealth, and the Stock Market”
Risk Analyst at Constellation Energy Group, Baltimore

2002–2005 : A. Christian Silva, Ph. D. 2005
Thesis: “Applications of Physics to Finance and Economics: Returns, Trading Activity and Income”
Financial Analyst at the Evnine-Vaughan Associates, San Francisco

6–11/2003 : Haeyong Kang, a visiting student from Ewha Womans University, Seoul, South Korea

2004–2005 : Benjamin Cooper, switched to experiment at the Center for Superconductivity Research, UMD

2005–2008 : Anand Banerjee, Ph. D. 2008
Thesis: “Studies of Complex Systems in Condensed Matter Physics and Economics”

2007–present : Pavel Nagornykh (JQI graduate fellow), co-advised with Victor Galitski, now he does experimental work with Bruce Kane

3.f.iv Postdoctoral

- 1996–1998 : Nicolas Dupuis (now Staff Scientist at Laboratoire de Physique des Solides, Orsay, France)
1999–2003 : Hyok-Jon Kwon (now student at the Anderson School of Management, UCLA)
2000–2001 : Andrei Lopatin (now Research Associate at the Argonne National Laboratory)
2007–present : Roman Lutchyn (postdoc of the Joint Quantum Institute)

4 Service

4.a Professional

4.a.i Offices and committee memberships held in professional organizations

- Member of the organizing committees for the International Workshop on Electronic Crystals ECRYS-2002 and ECRYS-2008, France (2002, 2008)
- Member of the organizing committees for the Conference on Economic Science with Heterogeneous Interacting Agents ESHIA-2007 and ESHIA-2008, George Mason University (2007) and Warsaw, Poland (2008)

4.a.ii Reviewing activities for agencies

- 48 proposals for the National Science Foundation
- 3 proposals for the American Chemical Society
- 1 proposal for the U.S. Civilian Research and Development Foundation (CRDF) (2005)
- 1 proposal for the University of South Carolina NanoCenter (2005)
- 1 proposal for the Louisiana Board of Regents Research Competitiveness Program (2005)
- 1 proposal for the Science-Centers-in-the-Former-Soviet-Union program of the U.S. Department of State (2001)
- Evaluator for the Latsis Prize given to junior scientists of ETH, Zurich, Switzerland (2001)
- Evaluator for a research promotions at the University of Queensland, Australia (2001, 2004)

4.a.iv Other non-University committees, commissions, panels, etc.

- Organized *Focus Session on Econophysics* at the March Meetings of the American Physical Society: Baltimore 2006, Denver 2007, New Orleans 2008
- Sorted abstracts for the March Meetings of the American Physical Society (1993, 2005–2007)
- Chaired sessions at the March Meetings of the American Physical Society (2006–2008) and numerous other conferences

4.a.v International activities not listed above

Served as an external member of the Ph. D. dissertation committees of Guennadi Chitov, University of Sherbrooke, Canada (1998) and Perez Moses, University of New South Wales, Australia (2001)

4.a.vi Paid consultancies

Consulted for Planning Systems Inc., Reston, Virginia (2004)

4.b University

4.b.i Departmental

- Chair and member of the Physics APT Committee (2006–2008)
- Long-term mentor for the junior faculty Victor Galitski (2006–present)
- Long-term mentor for lecture courses PHYS 141, 142 (2005–present)
- Served on Condensed Matter Theory Search Committee (2005–2006)
- Served on Condensed Matter Experiment Search Committee (2005–2008)
- Served on Physics Council (1995–1997, 1998–1999)
- Served on Physics Library Committee (2000–present)
- Served on Faculty Salary Advisory Committee (2002–2004)
- Served on the Expanded Qualifying Examination Committee: contributed, reviewed, and graded problems, as well as proctored at qualifying examinations (1993, 1996–present)
- Served on 26 Ph.D. dissertation committees, 2 oral Qualifying Examinations, and reviewed 1 Master’s non-thesis scholarly paper
- Reviewed applications for graduate admission from Eastern Europe (1993–present) and served on the graduate admission committee (2005–present)
- Responded by e-mail to numerous inquiries from perspective graduate students and postdocs (never stops)
- Met with perspective graduate students and participated in the open house (1994–present)
- Served on the CNAM Graduate Fellowship selection committee (2008)
- Advised incoming graduate students: 5 in 2003, 6 in 2004, 5 in 2006
- Helped to represent Physics Department at the Maryland Day on campus (2006, 2007)
- Coordinated condensed matter physics seminar and maintained its Web page <http://www2.physics.umd.edu/~yakovenk/seminar/> (1998–2001)

4.b.ii College

- Served on the CMPS Programs, Curricula & Courses (PCC) committee (2005–2006)
- Served on the CMPS library committee (2000–present)

4.b.iii University

- Served on the campus committee to select nominations for the David and Lucile Packard Fellowship in Science and Engineering (1998–present)
- Served as Dean’s Representative at Ph. D. dissertation committees for
 - Chemical Physics Program (2)
 - Applied Mathematics and Scientific Computation Program (3)
 - Mathematical Statistics Program
 - Department of Computer Science
 - School of Music
- Attended a faculty dinner with undergraduates at the request of the Provost (2008)
- Attended the UMD Library Summit (2007)

4.b.v Other

Served on several committees of the Joint Quantum Institute between UMD and NIST (National Institute of Standards and Technology)

- Committee on Bylaws (2006)
- Committee on Selection of Graduate Fellows (2006)
- Committee on Building Space (2006)
- Created and maintained the JQI seminar Web page (2006)

4.c Community, State, National, outreach

- Supervised a summer research project of Justin Chen, an undergraduate physics student from Caltech (2007)
- Supervised research project of David Levit, a student of the Thomas Jefferson High School for Science and Technology in Fairfax County, Virginia (2005–2006)
- Answered questions of Eric Gottlieb, a junior at the Park School of Baltimore (2005)
- Judged the Prince George’s County Area Science Fair, Largo (2003)
- Answered questions of high-school students at Physics Olympics organized by the Department of Physics (1998)
- Created and maintained a Web page of Russian-language cultural events in the Washington, DC area (1997–2003)
- Helped to create a Web page of the Calvert Hills residential district of College Park, MD (2007)
- Helped with drums accompaniment for the *Physics Sing-Along* evenings at the March Meetings of the American Physical Society (2006–2008)

Citation Metrics according to ISI, as of February 22, 2009

ResearchID profile <http://www.researcherid.com/rid/A-7559-2008>

Total number of citations: 1444

H-index: 20