

**CURRICULUM VITAE**

**Alex Kamenev**  
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**Minneapolis, MN 55455**  
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**IDENTIFYING INFORMATION**

**Academic Rank**

Professor in the School of Physics and Astronomy, University of Minnesota  
 Member of the Fine Theoretical Physics Institute, University of Minnesota

**Education**

<b>Degree</b>	<b>Institution</b>	<b>Date Degree Granted</b>
M. Sc.	Moscow State University, Moscow, Russia	1987
Ph. D.	Weizmann Institute of Science Rehovot, Israel Advisor for Ph.D. Professor Yuval Gefen	1996

**Positions/Employment**

University of Minnesota, Campus Twin Cities	2001– Present
Professor of Physics, Fine Theoretical Physics Institute	2008 – Present
Tenured Associate Professor of Physics	2006 – 2008
Associate Professor of Physics	2001 – 2006
Techinon, Israel Institute of Technology, Haifa, Israel	1999 - 2001
Assistant Professor	
Post Doctoral researcher, Physics Department and the Institute for Theoretical Physics, University of California Santa Barbara; under the supervision of Prof. Walter Kohn	1996 – 1999
Junior researcher at the Institute of Radio Engineering & Electronics, Academy of Science USSR	1987 – 1991

## HONORS AND AWARDS FOR RESEARCH/CREATIVE WORK, TEACHING, PUBLIC ENGAGEMENT, AND SERVICE

### *University of Minnesota*

McKnight Land-Grant Professorship 2005 – 2007

### *External Sources*

Fellow of American Physics Society	2013
EPL Distinguished Referee Award	2009
APS Outstanding Referee Award	2008
Alfred P. Sloan Fellowship	2004 – 2006
Career Development Chair at the Technion	2000 - 2001
Young faculty Allon Fellowship	1999 – 2001
Rothschild Post Doctoral Fellowship	1996 – 1997
Fulbright Post Doctoral award (U.S. Informational Agency)	1996
John F. Kennedy Memorial prize of the Weizmann Institute of Science	1995
Annual Award of the Israel Physical Society for the best Ph. D. student	1994

## RESEARCH, SCHOLARSHIP, AND CREATIVE WORK

### **Grants**

#### *Received at the University of Minnesota:*

Co-Principal investigator  
Binational Science Foundation (BSF)

*"The deep quantum limit of dissipation induced states of matter: memory effects and fractional phases"*, pending.

Principal investigator  
National Science Foundation (NSF)  
*"REU/RET Site: Physics and Astronomy University of Minnesota"*, pending.

Principal investigator  
National Science Foundation (NSF)  
*"Kinetics and entanglement in quantum devices"* 2016 – 2019  
\$363K

Co-Principal investigator  
Department of Energy (DOE)

*"Non-equilibrium effects in conventional and topological superconducting nanostructures"*  
2016 – 2019 \$140K

Principal investigator  
National Science Foundation (NSF)  
*"Kinetics of Fluctuations in Nano-Devices"* 2013 – 2016  
\$300K

Principal investigator  
Department of Energy (DOE)  
*"Non-Equilibrium Effects in Quantum Coherent Superconducting Nanostructures"* 2013 – 2015  
\$137K

Principal investigator  
National Science Foundation (NSF)  
*"REU grant"* 2012-2016

Principal investigator  
Department of Energy (DOE)  
*"Electron Coherence and Interactions in Nanostructures"*, 2010 – 2013  
\$360K

Principal investigator  
US-Israel Binational Science Foundation  
*"Large fluctuations in population dynamics in noisy environments"*, 2009 – 2013  
\$104K

Principal investigator  
National Science Foundation (NSF) single investigator grant  
*"Nonequilibrium superconductivity in disordered, granular and hybrid systems"* 2008-2012  
\$285K

Co-Principal investigator (Co-PI Leoned Glazman, Yale)  
Department of Energy (DOE)  
*"Electron Coherence in Mesoscopic Structures"* 2006 – 2009  
\$480K

Principal Investigator  
3M Corporation  
Non-tenured faculty award, 2006  
\$15K

Principal investigator  
McKnight Land-Grant Award 2005-2007  
\$60K

Principal investigator  
National Science Foundation (NSF) single investigator grant  
"Non-perturbative dynamics of interacting electronic systems" 2004-2008  
\$231K

Principal investigator  
Sloan Fellowship 2004-2007  
\$40K

***Received at another institution:***

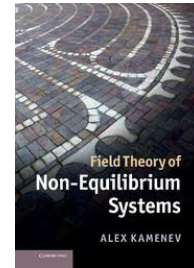
Co-Principal Investigator (Co-PI with M. Mezard, Orsay)  
French - Israel Science Foundation  
"Quantum Field Theory Approach to Non-Equilibrium  
Classical Lattice Models", 2001 – 2002  
Arc-en-ciel  
\$45K.

Co-Principal Investigator (Co-PI with B. Altshuler (Princeton), A. Andreev (Boulder),  
and Y. Gefen(Weizmann))  
"Anomalies in Disordered Interacting Systems: A Non-Perturbative  
Approach ", 1999 – 2002  
\$102K.

## Publications

### ***Books***

**A. Kamenev**, [\*Field Theory of Non-Equilibrium Systems\*](#),  
(Cambridge University Press, 2011).  
[Reviewed In Physics Today 65, Issue 11, p 57 \(2012\).](#)



### ***Book Chapters***

1. T. Dunn, A. L. Chudnovskiy, and **A. Kamenev**, [\*Dynamics of nano-magnetic oscillators\*](#), in "[\*Fluctuating Nonlinear Oscillators\*](#)", M. Dykman editor, Oxford Press 2012.
2. A. Chudnovskiy, J. Swiebodzinski, **A. Kamenev**, T. Dunn, and D. [\*Pfannkuche\*](#) [\*Charge and Spin Noise in Magnetic Tunnel Junctions\*](#), in [\*Springer Series of Nanoscience and Technology: Quantum Materials\*](#), Ed. D. Heitmann, Springer, 2010.
3. **A. Kamenev**, [\*Many-body theory of non-equilibrium systems\*](#), in [\*Nanophysics: Coherence and Transport\*](#), [\*H. Bouchiat, et al. \(editors\)\*](#); pp. 177-246, Elsevier, Amsterdam, 2005.

4. **A. Kamenev**, [\*Keldysh and Doi-Peliti Techniques for out-of-Equilibrium Systems, in "Strongly Correlated Fermions and Bosons in Low-Dimensional Disordered Systems"\*](#) I. V. Lerner, et. al. editors, pp. 313-340, Kluwer Academic Publishers, Dordrecht, Boston, London, 2002.
5. D. Braun, G. Montambaux, and **A. Kamenev**, [\*Motion of Energy Levels in Diffusive Electronic Systems, in D. C. Glattli et al. \(editors\), Coulomb and Interference Effects in Small Electronic Structures\*](#), Editions Frontiers, France-press, pp. 131-141 (1994).
6. Y. Gefen and **A. Kamenev**, [\*On the Role of the Statistical Ensemble in the Dynamics and Thermodynamics of Finite Disordered Systems in H. A. Cerdeira et al. \(editors\), Quantum Dynamics of Submicron Structures\*](#), Kluwer Academic Publ., Netherlands, pp. 81-92 (1995).

*Articles in Refereed Journal*

1. D. Bagrets, A. Altland, and **A. Kamenev**, [\*Power-law out of time order correlation functions in the SYK model\*](#), submitted to Nucl. Phys. B.
2. Y. Wang, T. Gulden, and **A. Kamenev**, [\*Finite-size scaling of entanglement entropy in one-dimensional topological models\*](#), Phys. Rev. B **95**, 075401 (2017).
3. A. Altland, D. Bagrets, and **A. Kamenev**, [\*Sinai Diffusion at Quasi-1D Topological Phase Transitions\*](#), Phys. Rev. Lett., **117**, 196801 (2016).
4. D. Bagrets, A. Altland, and **A. Kamenev**, [\*Sachdev-Ye-Kitaev Model as Liouville Quantum Mechanics\*](#), Nucl. Phys. B **911**, 191-205 (2016).
5. M. Janas, **A. Kamenev**, and B. Meerson, [\*Dynamical phase transition in large deviation statistics of the KPZ equation\*](#), Phys. Rev. E. **94**, 032133 (2016).
6. T. A. Sedrakyan, V. M. Galitski, and **A. Kamenev**, [\*Topological spin ordering via Chern-Simons superconductivity\*](#), Phys. Rev. B **95**, 094511 (2017).
7. A. Skvortsov, B. Ristic, and **A. Kamenev**, *Early estimation of population extinction from the Lotka-Volterra model*, submitted to Proceedings of Royal Society.
8. **A. Kamenev**, B. Meerson, and P. Sasorov [\*Short-time height distribution in 1d KPZ equation: starting from a parabola\*](#), Phys. Rev. E. **94**, 032108 (2016).
9. M. Schecter, D. M. Gangardt, and **A. Kamenev**, [\*Quantum impurities: from mobile Josephson junctions to depletion\*](#), Focus Issue "Strongly Interacting Quantum Gases in One Dimension", New Journal of Physics **18**, 065002, (2016).

10. T. Gulden, M. Janas, Yuting Wang, and **A. Kamenev**, [Universal Finite-Size Scaling around Topological Quantum Phase Transitions](#), Phys. Rev. Lett. **116**, 026402 (2016).
11. T. A. Sedrakyan, V. M. Galitski, and **A. Kamenev**, [Statistical transmutation in Floquet driven optical lattices](#), Phys. Rev. Lett. **115**, 195301 (2015).
12. T. A. Sedrakyan, L. I. Glazman, and **A. Kamenev**, [Spontaneous formation of a non-uniform chiral spin liquid in a "moat" lattice](#), Phys. Rev. Lett, **114**, 037203 (2015).
13. Y. Gefen and **A. Kamenev**, [Coulomb blockade with neutral modes](#), Phys. Rev. Lett., **114**, 156401 (2015).
14. T. Gulden, M. Janas, and **A. Kamenev**, [Instanton calculus without equations of motion: semiclassicals from monodromies of a Riemann surface](#), J. Phys. A. **48**, 075304 (2015).
15. A. Altland, D. Bagrets, and **A. Kamenev**, [Topology vs. Anderson localization: non-perturbative solutions in one dimension](#), Phys. Rev. B. **91**, 085429 (2015).
16. M. Schecter, D. M. Gangardt and **A. Kamenev**, [Comment on "Kinetic theory for a mobile impurity in a degenerate Tonks-Girardeau gas"](#), Phys. Rev. E **92**, 016101 (2015).
17. A. Altland, D. Bagrets, L. Fritz, **A. Kamenev**, and H. Schmiedt, [Quantum criticality of quasi one-dimensional topological Anderson insulators](#), Phys. Rev. Lett. **112**, 206602 (2014).
18. Yu Chen, Yen-Hsiang Lin, Stephen Snyder, Allen Goldman, and **Alex Kamenev**, [Dissipative superconductivity: a universal non-equilibrium state of nanowires](#), Nature Physics, **10**, 567571 (2014).
19. T. A. Sedrakyan, L. I. Glazman, and **A. Kamenev**, [Absence of Bose Condensation on Lattices with Moat Bands](#), Phys. Rev. B (Rapid Communication), **89**, 201112(R) (2014).
20. T. Gulden, M. Janas, and **A. Kamenev**, [Riemann surface dynamics of periodic non-Hermitian Hamiltonians](#), J. Phys. A: Math. Theor. **47**, 085001 (2014).
21. M. Schecter and **A. Kamenev**, [Phonon-mediated Casimir interaction between mobile impurities in quantum liquids](#), Phys. Rev. Lett. **112**, 155301 (2014). (Editor's Suggestion).
22. T. Dunn and **A. Kamenev**, [Optimization of spin-torque switching using AC and DC Pulses](#),  
a. J. Appl. Phys, **115**, 233906 (2014).
23. T. Gulden, M. Janas, P. Koroteev, and **A. Kamenev**, [Statistical mechanics of Coulomb gases as quantum theory on Riemann surfaces](#), Sov. Phys. JETP **144** (3) 595 (2013).
24. T. A. Sedrakyan, **A. Kamenev**, and L. I. Glazman, [Composite fermion state of spin-orbit coupled bosons](#), Phys. Rev. A **86**, 063639 (2012).
25. T. Dunn and **A. Kamenev**, [Swing switching of spin-torque valves](#), J. Appl. Phys. **112**, 103906 (2012).
26. M. Schecter and **A. Kamenev**, [Forming doublons by a quantum quench](#), Phys. Rev. A **85**, 043623 (2012).

27. M. Schechter, **A. Kamenev**, D. M. Gangardt, and A. Lamacraft, [\*Critical velocity of a mobile impurity in one-dimensional quantum liquids\*](#), Phys. Rev. Lett. **108**, 207001 (2012).
28. M. Schechter, D.M. Gangardt, and **A. Kamenev**, [\*Dynamics and Bloch oscillations of mobile impurities in one-dimensional quantum liquids\*](#), Annals of Physics **327**, pp. 639-670 (2012).
29. A. L. Chudnovskiy, D. M. Gangardt and **A. Kamenev**, [\*Doublon relaxation in the Bose Hubbard model\*](#), Phys. Rev. Lett. **108**, 085302 (2012).
30. M. Parker, **A. Kamenev**, and B. Meerson, [\*Noise induced stabilization in population dynamics\*](#), Phys. Rev. Lett. **107**, 180603 (2011).
31. T. Dunn and **A. Kamenev**, [\*Optimization of the current pulse for spin-torque switches\*](#), Appl. Phys. Lett. **98**, 143109 (2011), selected for the April 25, 2011 issue of Virtual Journal of Nanoscale Science & Technology.
32. D. M. Gangardt and **A. Kamenev**, [\*Quantum decay of dark solitons in one dimensional Bose systems\*](#), Phys. Rev. Lett. **104**, 190402 (2010).
33. M. Parker, **A. Kamenev**, [\*Mean Extinction Time in Predator-Prey Model\*](#), J. Stat. Physics **141**, 201 (2010).
34. J. Swiebodzinski, A. Chudnovskiy, T. Dunn, and **A. Kamenev**, [\*Spin Torque Dynamics with Noise in Magnetic Nano-Systems\*](#), Phys. Rev. B **82**, 144404 (2010).
35. M. Parker and **A. Kamenev**, [\*Extinction in Lotka-Volterra model\*](#), Phys. Rev. E **80**, 021129 (2009).
36. **A. Kamenev** and A. Levchenko, [\*Keldysh technique and nonlinear sigma model: systematics and applications, an invited review\*](#), Advances of Physics, **58**, 197-319 (2009).
37. M. Assaf, **A. Kamenev**, and B. Meerson, [\*On population extinction risk in the aftermath of a catastrophic event\*](#), Phys. Rev. E **79**, 011127 (2009).
38. D.M. Gangardt and **A. Kamenev**, [\*Bloch oscillations in one-dimensional spinor gas\*](#), Phys. Rev. Lett. **102**, 070402 (2009).
39. C. Escudero and **A. Kamenev**, [\*Switching rates of multi-step reactions\*](#), Phys. Rev. E **79**, 041149 (2009).
40. **A. Kamenev** and L. I. Glazman, [\*Dynamics of a one-dimensional spinor Bose liquid: a phenomenological approach\*](#), Phys. Rev. A **80**, 011603 (2009).
41. **A. Kamenev**, B. Meerson, and B. Shklovskii, [\*How colored environmental noise affects population extinction\*](#), Phys. Rev. Lett. **101**, 268103 (2008).
42. A. Levchenko and **A. Kamenev**, [\*Coulomb drag in quantum circuits\*](#), Phys. Rev. Lett. **101**, 216806 (2008).

43. M. Assaf, **A. Kamenev**, and B. Meerson, [Population extinction in a time-modulated environment](#), Phys. Rev. E **78**, 041123 (2008).
44. M. Khodas, **A. Kamenev**, and L. I. Glazman, [Photosoliton Effect](#), Phys. Rev. A **78**, 053630 (2008).
45. **A. Kamenev** and B. Meerson, [Extinction of an infectious disease: a large fluctuation in a non-equilibrium system](#), Phys. Rev. E **77**, 061107 (2008).
46. M. Khodas, **A. Kamenev**, L.I. Glazman, [Generating dark solitons by single photons](#), arXiv:0710.2910.
47. A. L. Chudnovskiy, J. Swiebodzinski, and **A. Kamenev**, [Spin-torque shot noise in magnetic tunnel junctions](#), Phys. Rev. Lett. **101**, 066601 (2008).
48. A. Levchenko and **A. Kamenev**, [Coulomb drag at zero temperature](#), Phys. Rev. Lett. **100**, 026805 (2008).
49. A. Levchenko and **A. Kamenev**, [Keldysh Ginsburg-Landau action of fluctuating superconductors](#), Phys. Rev. B **76**, 094518 (2007).
50. M. Khodas, M. Pustilnik, A. Kamenev, and L.I. Glazman, [Dynamics of excitations in a one-dimensional Bose liquid](#), Phys. Rev. Lett. **99**, 110405 (2007).
51. M. Khodas, M. Pustilnik, **A. Kamenev**, and L.I. Glazman, [One-dimensional Fermi-Luttinger Liquid](#), Phys. Rev. B **76**, 155402 (2007).
52. E. Mariani, L. I. Glazman, **A. Kamenev**, and F. von Oppen, [Zero-bias anomaly in the tunneling density of states of graphene](#), Phys. Rev. B **76**, 165402 (2007).
53. A. Levchenko, **A. Kamenev**, and L. I. Glazman, [Singular length dependence of critical current in SNS bridges](#), Phys. Rev. B **74**, 212509 (2006).
54. V. Elgart and **A. Kamenev**, [Classification of phase transitions in reaction-diffusion systems](#), Phys. Rev. E **74**, 041101 (2006).
55. M. Pustilnik, M. Khodas, A. Kamenev, and L.I. Glazman, [Dynamic response of one-dimensional interacting fermions](#), Phys. Rev. Lett. **96**, 196405 (2006).
56. J. Zhang, **A. Kamenev**, and B. I. Shklovskii, [Ion-exchange phase transitions in doped ion channels with charged walls](#), Phys. Rev. E. **73**, 051205 (2006).
57. A. Altland, L. I. Glazman, **A. Kamenev**, and J. S. Meyer. [Inelastic electron transport in granular arrays](#), Annals of Physics **321**, 2566-2603 (2006).
58. **A. Kamenev**, J. Zhang, A. I. Larkin, and B. I. Shklovskii, [Transport in one dimensional Coulomb gases: From ion channels to nanopores](#), Physica A **359**, 129 (2006).
59. A. Altland, **A. Kamenev**, and C. Tian, [Anderson Localization from the Replica Formalism](#), Phys. Rev. Lett. **95**, 206601 (2005).



60. J. Zhang, **A. Kamenev**, and B. I. Shklovskii, [\*Conductance of ion channels and water filled nanopores with charged walls: A Toy Model\*](#), Phys. Rev. Lett. **95**, 148101 (2005).
61. C. Tian, **A. Kamenev**, and A. Larkin, [\*Ehrenfest time in the weak dynamical localization\*](#), Phys. Rev. B. **72**, 045108-33 (2005).
62. S. T.Wang, X. F. Han, A. Cady, Z. Q. Liu, **A. Kamenev**, L. Glazman, B. K. Sadashiva, R. A. Reddy, and C. C. Huang, [\*Optical investigations on the biaxial smectic- A phase of a bent-core compound\*](#), Phys. Rev. E **70** , 061705-9 (2004).
63. V. Elgart and **A. Kamenev**, [\*Rare Events Statistics in Reaction-Diffusion Systems\*](#), Phys. Rev. E. **70** 041106-17 (2004).
64. C. Tian, **A. Kamenev**, and A. Larkin, [\*Weak dynamical localization in periodically kicked cold atomic gases\*](#), Phys. Rev. Lett. **93**, 124101-4 (2004).
65. J. S. Meyer, **A. Kamenev**, and L. I. Glazman, [\*Electron transport in two-dimensional arrays\*](#), Phys. Rev. B **70**, 045310-20 (2004).
66. A. Altland, L. I. Glazman, and **A. Kamenev**, [\*Transport in 1D granular metals\*](#), Phys. Rev. Lett. **92**, 026801-4 (2004).
67. S. M. Nishigaki, D. M. Gangardt, and **A. Kamenev**, [\*Correlation functions of the BC Calogero-Sutherland model\*](#), J. Phys. A: Math. Gen. **36**, No 12 3137-3151 (2003), (special issue on Random Matrix Theory).
68. **A. Kamenev** and A. I. Larkin, [\*Coulomb Blockade with Dispersive Interfaces\*](#), Phys. Rev. Lett. **89**, 236801 (2002).
69. M. V. Feigelman, **A. Kamenev**, A. I. Larkin, and M. A. Skvortsov, [\*Weak Charge Quantization on Superconducting Islands\*](#), Phys. Rev. B **66**, 054502 (2002).
70. Alejandro M. F. Rivas, Eduardo R. Mucciolo, and **Alex Kamenev**, [\*Numerical study of quasiparticle lifetime in quantum dots\*](#), Phys. Rev. B. **65**, 155309 (2002).
71. S. M. Nishigaki and **A. Kamenev**, [\*Replica treatment of non-Hermitian disordered Hamiltonians\*](#), J. Phys. A. Math. Gen. **35**, 4571-4590 (2002).
72. **A. Kamenev** and W. Kohn, [\*Landauer Conductance without Two Chemical Potentials\*](#), Phys. Rev. B. **63**, 155304 (2001).
73. D. M. Gangardt and **A. Kamenev**, [\*Replica Treatment of the Calogero-Sutherland Model\*](#), Nucl. Phys. B. **610**, 578-594 (2001).
74. A. Altland and **A. Kamenev**, [\*Wigner-Dyson Statistics from the Keldysh  \$\sigma\$ -Model\*](#), Phys. Rev. Lett., **85**, 5615-18 (2000).
75. **A. Kamenev**, [\*Weak Coulomb Blockade as an Instanton of Interacting  \$\sigma\$ -model\*](#), Phys. Rev. Lett., **85**, 4160-63 (2000).

76. I. L. Aleiner, B. L. Altshuler, and **A. Kamenev**, [Quantum Pumping in the Magnetic Field: Role of Discrete Symmetries](#), Phys. Rev. B, **62** 10373-76 (2000).
77. A. V. Andreev and **A. Kamenev**, [Counting statistics of an Adiabatic Pump](#), Phys. Rev. Lett. **85**, 1294-1297 (2000).
78. **A. Kamenev** and M. Mezard, [Level Correlations in Disordered Metals: the Replica  \$\sigma\$ -Model](#), Phys. Rev. B **60**, 3944-3954 (1999).
79. **A. Kamenev** and M. Mezard, [Wigner-Dyson Statistics from the Replica Method](#), J. Phys. A **32**, 4373-4388 (1999).
80. **A. Kamenev** and A. V. Andreev, [Electron-electron Interactions in Disordered Metals: Keldysh Formalism](#), Phys. Rev. B **60**, 2218-2238 (1999).
81. A. V. Andreev and **A. Kamenev**, [Itinerant Ferromagnetism in Disordered Metals: A Mean-Field Theory](#). Phys. Rev. Lett. **81**, 3199, (1998).
82. Y. Oreg and **A. Kamenev**, [Coulomb Drag in Systems with Tunneling Bridges](#), Phys. Rev. Lett. **80**, 2421, (1998).
83. A. V. Andreev and **A. Kamenev**, [Infrared Singularities in  \$d < 2\$  Interacting Disordered Systems](#), Phys. Rev. B **58**, 5149-5152, (1998).
84. B. L. Altshuler, Y. Gefen, **A. Kamenev**, and L. S. Levitov, [Quasiparticle Lifetime in a Finite System: A Non-Perturbative Approach](#), Phys. Rev. Lett. **78**, 2803-2806 (1997).
85. **A. Kamenev** and Y. Gefen, [Charge Fluctuations in a Quantum Dot with a Dissipative Environment](#), cond-mat/9708109.
86. **A. Kamenev** and Y. Gefen, [Statistical Ensembles and Spectral Correlations in Mesoscopic Physics, Chaos, Solutions & Fractals](#), **8**, pp. 1229-1247 (1997).
87. **A. Kamenev** and Y. Gefen, [Differences between Statistical Mechanics and Thermodynamics on the Mesoscopic Scale](#), Phys. Rev. B **56**, 1025-1028 (1997).
88. Y. Berk, **A. Kamenev**, A. Palevski, H. Shtrikman, and M. Slutzky, [Single Particle and electron-electron Scattering Rates in Coupled Quantum Wells](#), Surf. Sci., **361-362**, 126-129 (1996).
89. **A. Kamenev** and Y. Gefen, [Zero-Bias Anomaly in Finite Size Systems](#), Phys. Rev. B **54**, 5428-5437 (1996).
90. **A. Kamenev** and Y. Oreg, [Coulomb Drag in Normal Metals and Superconductors: Diagrammatic Approach](#), Phys. Rev. B **52**, 7516-7527, (1995).
91. **A. Kamenev** and Y. Gefen, [\(Almost\) Everything you Always Wanted to Know about the Conductance of Mesoscopic Systems](#), Int. J. of Modern. Phys. B **9**, 751-802 (1995).
92. Y. Berk, **A. Kamenev**, A. Palevski, L. N. Pfeiffer, and K. W. West, [Resonance Magnetoresistance of Coupled Quantum Wells](#), Phys. Rev. B **51**, 2604-2607 (1995).

93. **A. Kamenev** and Y. Gefen, [\*Universal Conductance Distribution in the Quantum Size Regime\*](#), Europhys. Lett. **29**, 413-418 (1995).
94. Y. Gefen and **A. Kamenev**, [\*On the Role of the Statistical Ensemble in the Dynamics and Thermodynamics of Finite Disordered Systems in H. A. Cerdeira et al. \(editors\), Quantum Dynamics of Submicron Structures\*](#), Kluwer Academic Publ., Netherlands, pp. 81-92 (1995).
95. Y. Berk, **A. Kamenev**, A. Palevski, L. N. Pfeiffer, and K. W. West, [\*Resonant Transport in Coupled Quantum Wells: a Probe for Scattering Mechanisms\*](#), Phys. Rev. B **50**, 15420-15423 (1994).
96. **A. Kamenev**, B. Reulet, H. Bouchiat, and Y. Gefen, [\*Conductance of Aharonov-Bohm Rings: From the Discrete to the Continuous Spectrum Limit\*](#), Europhys. Lett., **28**, 391-396 (1994).
97. **A. Kamenev** and D. Braun, [\*Single Level Current and Curvature Distributions in Mesoscopic Systems\*](#), J. Phys. (Paris) pt I, **4**, 1049-1062 (1994).
98. **A. Kamenev** and Y. Gefen,  [\*\$\phi\_0\$ -Periodic Aharonov-Bohm Oscillations and Ensemble Averaging\*](#), Phys. Rev. B, **49**, 14474-14477 (1994).
99. **A. Kamenev** and Y. Gefen, [\*Static vs. Adiabatic Response of Mesoscopic Systems: The Role of the Statistical Ensemble\*](#), Phys. Rev. Lett., **70**, 1976-1979 (1993).
100. A. S. Ignat'ev, **A. Kamenev**, V. B. Kopylov, G. Z. Nemtsev, and D. V. Posviansky, *Static current-voltage characteristics of resonant tunnel diodes based on GaAs/AlAs heterostructures, Semiconductors*, **27**, 423-426 (1993); [Translated from Fizika i Tekhnika Poluprovodnikov, **27**, 775-781 (1993)].
101. V. V. Kislov and **A. Kamenev**, [\*High-Frequency Properties of Resonant Tunneling Devices\*](#), Appl. Phys. Lett., **59**, 1500-1502 (1991).
102. **A. Kamenev** and V. V. Kislov, *Stimulated Breakdown of Resonant Tunneling in Heterostructures, Sov. J. Commun. Techn. & Electronics*, **36**, 110-116 (1991); [translated from Radiotekhnika i Elektronika, N 9, 1971-1977 (1990)].
103. **A. Kamenev** and V. V. Kislov, *Quantum Reception of (Sub) millimeter Radiation using the Resonant Tunneling Effect, Sov. Tech. Phys. Lett.*, **15**, 961-963 (1989); [translated from Pis'ma Zh. Tekh. Fiz. **15**, 24-28 (1989)].

## Reviews

1. **A. Kamenev** and A. Levchenko, [\*Keldysh technique and nonlinear sigma model: systematics and applications, an invited review\*](#), Advances of Physics, **58**, 197-319 (2009)
2. J. S. Meyer, **A. Kamenev**, and L. I. Glazman, and A. Altland. [\*Theory of metallic arrays\*](#), Annals of Physics **321**, 2566-2603 (2006)

3. **A. Kamenev** and Y. Gefen, *(Almost) Everything you Always Wanted to Know about the Conductance of Mesoscopic Systems*, Int. J. of Modern. Phys. **B 9**, 751-802 (1995)

## Presentations

### *Invited Presentations (last 3 years)*

**Feb 2013** Colloquium at Stony Brook

[http://www.physics.sunysb.edu/Physics/calendar/current\\_semester/s130225.html](http://www.physics.sunysb.edu/Physics/calendar/current_semester/s130225.html)

**May 2013** Invited talk at "Great Lakes Strings 2013" University of Kentucky in Lexington,

<https://sites.google.com/site/greatlakesstrings2013/>

**June 2013** Invited talk at "XXXIII Dynamics Days Europe", Madrid, [http://dynamics-days-](http://dynamics-days-europe-2013.org/)

[europe-2013.org/](http://dynamics-days-europe-2013.org/)

**July 2013** Invited course at "Boulder School 2013: Disorder and Dynamics in Quantum

Systems", <http://boulderschool.yale.edu/2013/boulder-school-2013>

**Sept 2013** Invited talk at "Bose-Einstein Condensation 2013 - Frontiers in Quantum

Gases", Sant Feliu Spain. <http://www.weizmann.ac.il/conferences/BEC2013/home>

**Oct 2013** Invited talk at "Coherent Hybrid Structures on the Mesoscale" - Argonne

National Lab. <http://mti.msd.anl.gov/workshops/CHS2013/>

**Nov 2013** Colloquium at Kapitza Inst. for Physical Problems, Moscow,

<http://www.kapitza.ras.ru/index.php?lang=ru&cont=semt>

**Nov 2013** Seminar at Landau Institute for Theoretical Physics, Chernogolovka.

<http://qmeso.itp.ac.ru/seminar.php?abstract=false>

**Feb 2014** Invited talk at the workshop "Strongly Coupled Systems Away From

Equilibrium", Simons Center for Geometry and Physics <http://scgp.stonybrook.edu/archives/7145>

**May 2014** Seminar at the University of Koln <http://qm2.uni-koeln.de/17104.html?&L=1>

**July 2014** Sommerfeld Theory Colloquium at the University of Munich

[http://www.physik.uni-](http://www.physik.uni-muenchen.de/aus_der_fakultaet/kolloquien/asc_kolloquium/archiv_bose14/kamenev/index.html)

[muenchen.de/aus\\_der\\_fakultaet/kolloquien/asc\\_kolloquium/archiv\\_bose14/kamenev/index.html](http://www.physik.uni-muenchen.de/aus_der_fakultaet/kolloquien/asc_kolloquium/archiv_bose14/kamenev/index.html)

**July 2014** Lecturer at "School on Non-linear Dynamics, Dynamical Transitions and

Instabilities in Classical and Quantum Systems", ICTP Trieste

<http://users.ictp.it/~video/Conferences/2594/2594.htm>

**Aug 2014** Invited talk at workshop on "Population Dynamics and Statistical Physics in Synergy" University Eindhoven  
[http://www.eurandom.nl/events/workshops/2014/Population\\_Dynamics/Population\\_Dynamics.html#PROGRAMME](http://www.eurandom.nl/events/workshops/2014/Population_Dynamics/Population_Dynamics.html#PROGRAMME)

**Sept 2014** Colloquium at Hebrew University Jerusalem  
<http://www.phys.huji.ac.il/content/events-calendar>

**Sept 2014** Seminar at Weizmann Institute of Science

**Jan 2015** Invited lectures and a talk at [International Workshop on Non-equilibrium Dynamics of Low-dimensional Electronic Systems Leipzig, Germany](#).

**Feb 2015** Invited talks at a [March Meeting of American Physics Society](#)

**April 2015** [Seminar at Ohio State U Columbus, OH](#),

**August 2015** Invited talk at a [Conference on Frontiers of Nanoscience ICTP, Trieste](#).

**November 2015** Seminar at the Weizmann Institute of Science.

**December 2015** [Seminar at TAMU](#).

**April 2016** [Seminar at Yale](#).

**May 2016** Lecture series at Institute for Theoretical Physics, University of Koln.

**July 2016** Conference [Disorder, Interactions and Coherence: Warps and Delights](#), Max Planck Institute, Dresden, Germany.

**September 2016** Workshop: [Anderson Localization in Topological Insulators](#), IBS Center for Theoretical Physics of Complex Systems, Daejeon, South Korea.

**September 2016** Seminar at Michigan State University.

**October 2016** Seminar at Harvard

**November 2016** Seminar at Weizmann Institute of Science

**February 2017** Seminar at University Massachusetts, Amherst

**March 2017** [Conference on NUCLEI and MESOSCOPIC Physics](#), MSU, East Lansing

### Lecturing at National and International Schools

School on "[Disorder in Condensed Matter and Ultracold Atoms](#)", Cargèse, **June 2016**

School on “*Non-linear Dynamics, Dynamical Transitions and Instabilities in Classical and Quantum Systems*”, ICTP Trieste, Italy, **July 2014**

Boulder School on “*Disorder and Dynamics in Quantum Systems*”, Boulder CO, **July 2013**

ICTP - A. von Humboldt College on “*Out of Equilibrium Quantum Physics*”, Buenos Aires, Argentina, **May 2011**

MUARC Summer school on “*Advanced Techniques in Atomic Physics*”, Birmingham UK, **August 2010**

The Capri Spring School on “*Transport in Nanostructures*”, Capri, Italy, **March - April 2009**

Les-Houches Ecole de Physique on “*Nanosopic Quantum Physics*”, Les-Houches, France, **July-Aug 2004**

The 2nd Windsor Summer School on “*Strongly Correlated Fermions and Bosons in Low-Dimensional Disordered Systems*”, Windsor UK, **Aug. 2001**

## **ADVISING AND MENTORING**

### ***Graduate students. Current***

2013-present: Michael Janas

2014- present: Yegor Savich

2014- present: Yuting Wang

2015- present: Xuzhe Ying

### **Graduate Students, Past**

2001-2006: Vlad Elgart (Ph. D. Sep. 2006, moved to a post-doc at Stanford).

2004 - 2009: Alex Levchenko (Ph.D. May 2009, faculty at UW Madison)

Summer 2006: Xi Chen (Seagate Technology, California)

Summer 2009: Michael Albright

Summer 2010: Rebecca Ruckdashel, REU student

2007-2011: Matthew Parker (Ph. D. May 2011, currently a post-doc at the U of M medical school).

2008-2013: Thomas Dunn (Ph. D. Sept 2013, currently research scientist at Seagate Technology).

2009-2014: Michael Schechter (Ph. D. Aug. 2014, currently a post-doc at Niels Bohr Inst. Copenhagen, Denmark)

2012- 2016: Tobias Gulden (Ph. D. Aug. 2016, currently a post-doc at the Technion)

***Post-docs, Past***

2011- 2016: Tigran Sedrakyan (currently a faculty at the University of Massachusetts, Amherst).

2005- 2008: Maxim Khodas (currently a faculty at Hebrew University Jerusalem).

2002 - 2004: Julia Meyer (currently a faculty at University Joseph Fourier, Grenoble, France).

**SERVICE AND PUBLIC OUTREACH**

***University of Minnesota, Department of Physics***

Experimental Condensed Matter Search Committee (2016-present)

Promotion and Tenure Committee (2015 – 2016)

Chair of the School long-range planning committee (2014 – 2016)

Award Committee (2013-2014)

Experimental Biophysics Search Committee (2013),

GWE committee (2012-13)

Experimental condensed matter Search Committee (2012-13)

FTPI chair Search Committee (2012-2013)

Chair of Promotion and Tenure Committee (2010-11)

Member of Graduate Education Committee and the Library Committee (2010-2011)

Chair of FTPI Search Committee (2009-2011)

Department Head Search Committee (2009)

Graduate Recruitment Committee (2006-2009, chairman since 2008)

Long Range Planning Committee (2007-present)

Search Committee for experimental condensed matter (2005,2006, 2007)

Graduate Written Exam Committee (2005-2007)

Colloquium Committee (2002-2005, Chairman 2004)

***Organization of conferences, workshops, panels, symposia***

2016: FTPI Summer School on "[Advances in strongly correlated electronic systems \(ASCES2016\)](#)", June 13-19, Minneapolis

2015: "Symmetries and Interactions in Topological Matter", May 1-3, Minneapolis  
<http://www.ftpi.umn.edu/workshops/2014-2015/Symmetries2015/index.html>

2014: "Correlated Oxides" May 1-5, Minneapolis  
<http://www.ftpi.umn.edu/workshops/2013-2014/correlatedoxides2014/index.html>

2012: "Low-Dimensional Quantum Gases out of Equilibrium" May 11-13, Minneapolis  
<http://www.ftpi.umn.edu/workshops/2011-2012/disequilibrium2012/index.html>

2011: "Unconventional Superconductivity", April 22-24, Minneapolis  
<http://www.ftpi.umn.edu/workshops/2010-2011/supercon/index.html>

2009: "Superconductivity from collective modes to quantum phase transitions", May 1-3, Minneapolis  
<http://www.ftpi.umn.edu/workshops/2008-2009/supergold09/index.html>

2009: "Random Matrices and Integrability: From Theory to Applications". March 2009, Yad Hashmona, Israel <http://www.aei.mpg.de/~stefan/schools/old.html>

2008: "Quantum magnetism", May 2008, Minneapolis.  
<http://www.ftpi.umn.edu/workshops/2007-2008/quantummag08/index.html>

2006: "Frontiers of Condensed Matter Theory". Symposium dedicated to the memory of A.I. Larkin, Minneapolis, May 4-7, 2006  
[http://www.ftpi.umn.edu/workshops/2005-2006/fcmt/index\\_fcmt.html](http://www.ftpi.umn.edu/workshops/2005-2006/fcmt/index_fcmt.html)

2005: "Non-Equilibrium and Correlation Effects in Low-Dimensional Structures", April 29-May 1, 2005 [http://www.ftpi.umn.edu/workshops/2004-2005/nece/index\\_nece05.html](http://www.ftpi.umn.edu/workshops/2004-2005/nece/index_nece05.html)

2003: "The Correlation Effects in Bose Condensates and Optical Lattices", May 2-4, 2003, in Minneapolis,  
[http://www.ftpi.umn.edu/workshops/2002-2003/CEBC\\_May2003/CEBC03%20Program.pdf](http://www.ftpi.umn.edu/workshops/2002-2003/CEBC_May2003/CEBC03%20Program.pdf)

2002: "Spins and Interactions in Mesoscopic Systems", May 10-12, 2002, in Minneapolis, MN  
[http://www.ftpi.umn.edu/workshops/2001-2002/sims2002/SIMS02\\_Program.pdf](http://www.ftpi.umn.edu/workshops/2001-2002/sims2002/SIMS02_Program.pdf)

***Professional Memberships***

APS member (since 2001) and fellow (since 2013).

Member of the Editorial Board in Journal of Physics A (Math and General)



March 22<sup>nd</sup>, 2017

ISRN Condensed Matter Physics

Best referee of APS and EPL

Referee for National Science Foundation (NSF), Department of Energy (DOE) and  
US-Israel binational foundation