

CURRICULUM VITAE

JORGE BERGER

June 2020

WORK ADDRESS: ORT Braude College, Department of Physics and Optical
Engineering
P.O. Box 78, 2161002 Karmiel, ISRAEL
Tel: 972-4-9901991, Fax: 972-4-9901989

HOME ADDRESS: Kibbutz Evron, 2280800 D.N. Galil Maaravi
Tel: 972-4-9857998

ID No.: 012653796

Date of birth: August 9, 1948

Place of birth: Chile

Immigrated to Israel: 1970

Marital status: Married + 5

ACADEMIC EDUCATION

DSc, 1973-1980 (including half year military service): Physics, Technion (Haifa)

Dissertation: Time Evolution of Quasistationary States

MSc, 1970-1973: Physics, Weizmann Institute of Science (Rehovot)

Dissertation: Phase Transitions in Weak Ferromagnets

Licencia, 1966-1970: Physics, Universidad de Chile (Santiago)

ACADEMIC APPOINTMENTS

2013, Professor, Ort-Braude College

2005, Associate Professor, Ort-Braude College

2001, Senior Researcher A (Parallel to Associate Professor), Technion (R&D)

2000, Senior Lecturer, Ort-Braude College

2000, Senior Researcher B (Parallel to Senior Lecturer), Technion (R&D)

1997, Senior Teaching Associate (Parallel to Senior Lecturer), Technion

1993, Senior Research Associate, Technion (R&D)

1983, Lecturer, University of Haifa

1980, Research Associate with teaching option, Technion

ACADEMIC EXPERIENCE

1993-present: Ort Braude College, Karmiel, Israel; Lecturer, Senior Lecturer, Associate Professor and Professor.

1995-1999: Dep. of Physics and Institute of Theoretical Physics, Technion, Haifa, Israel; work on Fullerenes and Quantum Transport; Senior Research Associate, Senior Teaching Associate, Senior Researcher B and Senior Researcher A.

2004 (1 month): Institute of Mathematics and its Applications, University of Minnesota; Visiting Professor.

1995-2001: Dep. of Mathematics, Technion, Haifa, Israel; work on Superconductivity; Senior Research Associate (During 1999-2001, ad honorem).

1993-1995: School of Physics, Tel Aviv University, Tel Aviv, Israel; work on Statistical Models; Senior Research Associate.

1990-1991: Dep. of Science Teaching, Dep. of Electronics and Dep. of Physics, Weizmann Institute of Science, Rehovot, Israel; Visiting Scientist.

1983-1991: Dep. of Science Teaching (Oranim), University of Haifa, Haifa, Israel; work on Statistical Mechanics and Science Teaching; Lecturer.

1980-1983: Foundation for Research and Development at the Technion; work on high-temperature fuel-cells; Research Associate.

TEACHING EXPERIENCE

A. THE ORT BRAUDE COLLEGE

Undergraduate Courses

Physics for Biotechnologists (new course)

Modern Physics for Biotechnologists (new course)

Physics for Software Engineers (new course)

Mechanics

Mechanics, Extended Level

Mechanics, Extended Level - Active Learning

Electromagnetism

Electromagnetism, Extended Level

Modern Physics, Extended Level

Electromagnetic Phenomena in Solids (new course)

Introduction to Solid State and Semiconductors

Development of Laboratories at Ort Braude College

Experiments in Modern Physics and Optics (Physics 3)

Experiments in Mechanics (Physics 1)

B. OTHER UNIVERSITIES

1997-1998 Dep. of Physics, Technion. Mechanics.

1996-1997 Dep. of Education in Tech. & Science, Technion. Enrichment course for intermediate-school teachers.

1992-1993 Oranim (College). Basic Concepts in Science.

1991 Weizmann Institute. Adaptation course for new immigrant high-school teachers.

1990 Feinberg Graduate School, Weizmann Institute. Assistant teacher in Statistical Mechanics.

1983-1993 Oranim (University of Haifa). Statistical Mechanics (new course), Thermodynamics, Electromagnetism, Laboratories (mainly in modern physics), Selected Topics in Physics.

1980 Center for Pre-Academic Studies, Technion. General Physics.

Educational Booklets

Exercises in Mechanics (242 pages), Ort Braude. (O. Eyal, E. Raz, and J. Berger).

Exercises in Electricity and Magnetism (203 pages), Ort Braude. (E. Raz, O. Eyal and J. Berger).

Exercises in Waves and Modern Physics (70 pages), Ort Braude. (J. Berger, O. Eyal, S. Mahajne and N. Netzer).

Laboratory Guide 1 (109 pages) + Instructor's Guide (17 pages), Technion.

Problem Solving in Thermodynamics and Statistical Mechanics (88 pages), Technion and Oranim.

Exercises in Electromagnetism (40 pages), Oranim.

Experiments in Physical Optics and in Modern Physics (60 pages), Oranim.

RESEARCH GRANTS

1. Israel Science Foundation, Dynamic Phenomena in Mesoscopic Superconductors, Oct 2010 – Sept 2014; 195,000 NIS per year. Principal investigators: Jacob Rubinstein and Jorge Berger.

2. Israel Science Foundation, Broken Symmetry and Spontaneous Topological Charges in Multi-Connected Superconductors, Oct 2003 – Sept 2006; 191,000 NIS per year. Principal investigators: Jorge Berger and Boris Shapiro.
3. Israel Science Foundation, Patterns in the Ginzburg-Landau Equation, Oct 1998 – Sept 2001; 108,000 NIS per year. Principal investigators: Jacob Rubinstein and Jorge Berger.
4. Israel Science Foundation, Geometrical and Spectral Aspects of Quantum Mechanics, Sept 1996 - Sept 1999; US\$28,420 +VAT per year. Principal investigator: Joseph Avron. I was a cooperating investigator.
5. US-Israel BSF, Mathematical Problems in Superconductivity, Aug 1995 - Aug 1998; US\$19,000 per year. Principal investigators: Jacob Rubinstein and Peter Sternberg. I was the initiator of the project.

PROFESSIONAL ACTIVITIES

Head of the Physics Department at ORT Braude College during Oct. 2006 – Sept. 2010 and again during Oct. 2015 – March 2018.

Reviewing for professional journals on a regular basis: Physical Review (84 entries in Physical Review Referee Homepage).

Reviewing for professional journals (sporadic): Science, Mathematical Reviews, Europhysics Letters, Physica A, Physica C, American Journal of Physics, Journal of Mathematical Physics, Journal of Chemical Information and Modeling, Computational Materials Science, Journal of Physics: Condensed Matter, International Journal of Theoretical Physics, Physics Letters A, European Physical Journal B, Scientific Reports, Superconductor Science and Technology, SN Applied Sciences, Results in Physics.

Scientific supervision of the Hebrew-adaptation of the first volume of the textbook "Understanding Physics," directed by David Pundak, based on the book by K. Cummings, P. Laws, E. Redish and P. Cooney, with permission from J. Wiley.

Member of the Editorial Board of the virtual journal "Entropy" (www.mdpi.org/entropy/editors.htm) during the years 2003-2006.

Reviewing for the Israel Science Foundation.

Evaluator for the Romanian National Council for Scientific Research.

Chairman of the Organizing Committee of the Workshop "Fluctuations and Phase Transitions in Superconductors", Nazareth Illit, June 10-14, 2007.

Member of the Organizing Committee of the 2005 annual meeting of the Israel Physical Society.

Member of the ORT Braude Academic Council.

Member of the board of trustees of ORT Braude College since 2015.

Member of the Committee for Evaluation of Academic Quality, ORT Braude College, 2004-2005.

Member of the Committee for Long Term Training of Academic Staff, ORT Braude College, 2004-2007.

Member of the Appointing Committee of ORT Braude College since 2015.

Member of the team that developed the program for BSc in Optical Engineering, approved by the Council for Higher Education.

Member of the Committee for Studies in Nanotechnology, ORT Braude College.

Member of the forum for strategic planning, ORT Braude College, 2004.

Advisor of several student final projects at ORT Braude College, Technion, and Manor-Kabri high school.

Chairman of the Organizing Committee of the 10th Interdisciplinary Research Conference of ORT Braude College, 2014.

Representative of the Department of Physics and Optical Engineering in the preparation of courses objectives and outcomes for ABET.

MEMBERSHIP IN PROFESSIONAL SOCIETIES

Israeli Physical Society

American Physical Society

LIST OF PUBLICATIONS

A. Refereed Papers

1. J. Berger and R.M. Hornreich, Temperature dependence of the field induced magnetization reorientation in Dzialoshinsky-Moriya type weak ferromagnets, *Journal of Physics and Chemistry of Solids* **34** (1973), pp. 2011-2020.
2. J. Berger, Ordered motion of a plasma under appropriate geometry and external magnetic field, *Collective Phenomena* **2** (1977), pp. 171-174.
3. J. Berger and S.G. Eckstein, Criterion for nonexponential decay, *Physical Review A* **26** (1982) pp. 1226-1227.

4. J. Berger and S.G. Eckstein, Quasiparticle properties for a dense electron gas within the random-phase approximation, *Physical Review B* **26** (1982) pp. 4305-4311.
5. M. Privman, J. Berger and D.S. Tannhauser, Structure of ITO electrodes on zirconia, *Thin Solid Films* **102** (1983) pp. 117-122.
6. J. Berger and D.S. Tannhauser, Personal computer as an inexpensive lock-in analyzer operating at very low frequencies, *Review of Scientific Instruments* **54** (1983) pp. 1781-1783.
7. J. Berger, Drift of excitons induced by static electromagnetic field, *Solid State Communication* **53** (1985), pp. 387-389.
8. J. Berger, Relationship between angular distribution of reflected particles and the second principle of thermodynamics in the presence of a magnetic field, *American Journal of Physics* **53** (1985) pp. 899-902.
9. J. Berger, I. Riess and D.S. Tannhauser, Dynamic measurement of oxygen diffusion in indium-tin oxide, *Solid State Ionics* **15** (1985) pp. 225-231.
10. J. Berger, Comment on "Gas concentration nonuniformity and kinetic anisotropy in high vacuum", *Journal of Vacuum Science and Technology A* **5** (1987) p. 382.
11. J. Berger, On potential energy, its force field and their measurement along an air track, *European Journal of Physics* **9** (1988), pp. 47-50.
12. J. Berger, Kinetic illustration for thermalization, *American Journal of Physics* **56** (1988) pp. 923-928.*
13. J. Adler, J. Berger, J.A.M.S. Duarte and Y. Meir, Directed percolation in 3+1 dimensions, *Physical Review B* **37** (1988) pp. 7529-7533.
14. J. Berger, Do heavy gases fall? *European Journal of Physics* **9** (1988) p. 335
15. J. Berger, Szilard's demon revisited, *International Journal of Theoretical Physics* **29** (1990) pp. 985-995.
16. J. Berger, An almost simple counterexample to "microscopic irreversibility", *European Journal of Physics* **11** (1990) pp. 155-159.
17. E. Berger and J. Berger, A game with a non-obvious symmetry, *European Journal of Physics* **11** (1990) pp. 245-247.

* This is one of the five articles on kinetic theory recommended by the Instructor's Manual of the book "Fundamentals of Physics", by Halliday, Resnick & Walker.

18. T. Tlusty and J. Berger, A simple maximization technique for statistical mechanics expressions, *American Journal of Physics* **60** (1992) pp. 379-380.
19. J. Berger and A. Aharony, Field-dependent magnetic phases in La_2CuO_4 at zero temperature, *Physical Review B* **46** (1992) pp. 6477-6487.
20. J. Berger and A. Aharony, Temperature dependence of the field-induced magnetic phases in La_2CuO_4 , *Physical Review B* **47** (1993) pp. 1016-1023.
21. J. Berger, R.M. Hornreich and M. Warner, Instabilities and melting in a two-dimensional magnetic dipolar system, *Physica A* **194** (1993) pp. 199-208.
22. J. Berger, The fight against the second law of thermodynamics, *Physics Essays* **7** (1994) pp. 281-296.
23. J. E. Avron and J. Berger, Tiling rules for toroidal molecules, *Physical Review A* **51** (1995) pp. 1146-1149.
24. J. Berger and J. Rubinstein, Topology of the order parameter in the Little-Parks experiment, *Physical Review Letters* **75** (1995) pp. 320-322.
25. J. Berger and J.E. Avron, A classification scheme for toroidal molecules, *Journal of the Chemical Society - Faraday Transactions* **91** (1995) pp. 4037-4045.
26. J. E. Avron, J. Berger and Y. Last, Piezoelectricity: quantized charge transport driven by adiabatic deformations, *Physical Review Letters* **78** (1997) pp. 511-514.
27. J. Berger and J. Rubinstein, Signatures for the second critical point in the phase diagram of a superconducting ring, *Physical Review B* **56** (1997) pp. 5124-5127.
28. J. Berger and J. Rubinstein, Formation of topological defects in thin superconducting rings, *Philosophical Transactions of the Royal Society A* **355** (1997) pp. 1969-1978.
29. J. Berger and J. Rubinstein, Design for the detection of the singly-connected superconducting state, *Physica C* **288** (1997) pp. 105-114.
30. J. Avron and J. Berger, Toroidal graphitic molecules, *Fullerene Science and Technology* **6** (1998) pp. 31-37.
31. J. Berger and J. Rubinstein, Bifurcation analysis for phase transitions in superconducting rings with nonuniform thickness, *SIAM Journal of Applied Mathematics* **58** (1998) pp. 103-121.
32. J. Avron and J. Berger, The Longuet-Higgins phase and charge transport in molecular rings, *Chemical Physics Letters* **294** (1998) pp. 13-18.

33. J. Berger and J. Rubinstein, Flux-induced vortex in mesoscopic superconducting loops, *Physical Review B* **59** (1999) pp. 8896-8901.*
34. J. Avron and J. Berger, Quantum transport in molecular rings and chains, *Proceedings of the Royal Society A* **455** (1999) pp. 2729-2750.
35. J. Berger and J. Rubinstein, On the zero set of the wave function in superconductivity, *Communications in Mathematical Physics* **202** (1999) pp. 621-628.
36. J. Berger, Position of a vortex in mesoscopic samples, *Physica C* **332** (2000) pp. 281-284.
37. J. Berger, Order of the normal-superconducting transition in mesoscopic rings, *Physica B* **284-288** (2000) pp. 1886-1887.
38. J. Berger, Spontaneous breaking of axial symmetry for the Schrödinger equation in the presence of a magnetic field, *Physical Review B* **63** (2001) pp. 172507(1-3).
39. J. Berger and J. Rubinstein, Continuous phase transitions in mesoscopic systems, *Zeitschrift für angewandte Mathematik und Physik* **52** (2001) pp. 347-355.
40. J. Berger, Flux transitions in a superconducting ring, *Physical Review B* **67** (2003) pp. 014531(1-7).
41. J. Berger, Extension of the de Broglie-Bohm theory to the Ginzburg-Landau equation, *Foundations of Physics Letters* **17** (2004) pp. 287-294.
42. J. Berger, Noise rectification by a superconducting loop with two weak links, *Physical Review B* **70** (2004) pp. 024524(1-6).
43. J. Berger, Nonlinearity of the field induced by a rotating superconducting shell, *Physical Review B* **70** (2004) pp. 212502(1-3).
44. J. Berger, The Chernogolovka Experiment, *Physica E* **29** (2005) pp. 100-103.
45. J. Berger, Time-dependent Ginzburg-Landau equations with charged boundaries, *Journal of Mathematical Physics* **46** (2005) pp. 095106 (1-14).
46. J. Berger, Spontaneous superconducting islands and Hall voltage in superconductors with large electric penetration depth, *Physical Review B* **71** (2005) pp. 174504 (1-11).
47. J. Berger, Ginzburg-Landau equations with consistent Langevin terms for nonuniform wires, *Physical Review B* **75** (2007) pp. 184522 (1-18).

* The predictions of this article were experimentally confirmed in article 48.

48. A. Kanda, B. J. Baelus, D. Y. Vodolazov, J. Berger, R. Furugen, Y. Ootuka, and F. M. Peeters, Evidence for a different type of vortex that mediates a continuous fluxoid-state transition in a mesoscopic superconducting ring, *Physical Review B* **76** (2007) pp. 094519 (1-8).
49. J. Berger, Consistent Langevin terms in the numeric treatment of superconducting wires, *Physica C* **468** (2008) pp 268-271.
50. J. Berger, Confinement into a metastable state with persistent current by thermal quenching of loop of Josephson junctions, *Physica C* **468** (2008) pp 294-298.
51. J. Berger, A. Kanda, R. Furugen, and Y. Ootuka, Location of flux-induced vortex, *Physica C* **468** (2008) pp 848–851.
52. J. Berger, Derivation of the Langevin equation from the principle of detailed balance, *The Journal of Statistical Mechanics: Theory and Experiment* (2010) P07022 (11 pages).
53. J. Berger, The influence of thermal fluctuations on uniform and nonuniform superconducting rings according to the Ginzburg--Landau and the Kramer--Watts-Tobin models, *Journal of Physics: Condensed Matter* **23** (2011) pp. 225701(1-13).
54. J. Berger, Thermal fluctuations in superconducting rings with general shape, *Physical Review B* **83** (2011) pp. 172504 (1-3).*
55. J. Berger and M. Milosevic, Fluctuations in superconducting rings with two order parameters, *Physical Review B* **84** (2011) pp. 214515 (1-9).
56. J. Berger, Supercurrent fluctuations in filaments, *Physical Review B* **85** (2012) pp. 144507(1-8).
57. G. Drachuck, M. Shay, G. Bazalitsky, J. Berger, and A. Keren, Parallel and perpendicular susceptibility above T_c in $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ single crystals, *Physical Review B* **85** (2012) pp. 184518 (1-7).
58. J. Berger, Characterization of the spontaneous symmetry breaking due to quenching of a one-dimensional superconducting loop, *Journal of Physics: Condensed Matter* **25** (2013) pp. 465702 (1-10).
59. S. Kallush and J. Berger, Qualitative modifications and new dynamic phases in the phase diagram of one-dimensional superconducting wires driven with electric currents, *Physical Review B* **89** (2014) pp. 214509 (1-5).

* This is a synopsis of article 53; it doesn't contain additional results.

60. J. Berger, Thermal fluctuations in 1D superconducting samples, *Physica Scripta T* **165** (2015) 014022.
61. J. Berger, Flux-induced Nernst effect in a superconducting loop, *Superconductor Science and Technology*, **28** (2015) pp. 065008 (1-9).
62. J. Berger, Influence of the boundary conditions on the current flow pattern along a superconducting wire, *Physical Review B* **92** (2015) pp. 064513 (1-9).
63. D. S. Ellis, Y.-B. Huang, P. Olalde-Velasco, M. Dantz, J. Pellicciari, G. Drachuck, R. Ofer, G. Bazalitsky, J. Berger, T. Schmitt, and A. Keren, Correlation of the superconducting critical temperature with spin and orbital excitations in $(\text{Ca}_x\text{La}_{1-x})(\text{Ba}_{1.75-x}\text{La}_{0.25+x})\text{Cu}_3\text{O}_y$ as measured by resonant inelastic x-ray scattering, *Physical Review B* **92** (2015) pp. 104507 (1-11) .¹
64. O. J. Sharon, A. Sharoni, J. Berger, A. Shaulov, and Y. Yeshurun, Current-induced SQUID behavior of superconducting Nb nano-rings, *Scientific Reports* **6** (2016) pp. 28320 (1-5).
65. J. Berger, Flux-induced Nernst effect in low-dimensional superconductors, *Physica C* **533** (2017) pp. 105–108.
66. J. Berger, Stationary nano-SQUID: theoretical investigation and feasibility analysis, *Journal of Physics: Condensed Matter*, **29** (2017) 29LT01 (6pp + supplementary material).
67. J. Berger, The stationary SQUID, *Journal of Low Temperature Physics* **191** (2018) pp. 330-343, <https://doi.org/10.1007/s10909-018-1851-1> .
68. O. Sharon, A. Shaulov, J. Berger, A. Sharoni, R. Berkovits, and Y. Yeshurun, Current-Induced Crossover of Flux Periodicity from $h/2e$ to h/e in Superconducting Nb Nano-Ring, *Nano Letters* **18** (2018) pp. 7851-7855.

B. Books

1. J. Berger and J. Rubinstein (eds.), *Connectivity and Superconductivity*, Springer Verlag, Lecture Notes in Physics, vol. m62 (2000).
2. J. Berger, Y. Oreg, D. Shahar, and B. Shapiro (guest editors), Volume 468/4 of *Physica C* devoted to Fluctuations and Phase Transitions in Superconductors (2008).

¹ My contribution to this work was minor.

3. J. Berger, *Lecture Notes in Mechanics* (a textbook in mechanics at extended level, 200 pages, in Hebrew), Magnes Press (2014).

C. Chapters in Books

1. J. Berger, The fight against the second law of thermodynamics, in *Horizons of Physics*, Vol. II (New Age, 1996, A.W. Joshi, editor) pp. 62-89.
2. J. Berger, J. Rubinstein and M. Schatzman, Multiply connected mesoscopic superconducting structures in "Calculus of Variations and Differential Equations" (A. Ioffe, S. Reich and I. Shafir, editors), Chapman & Hall/CRC Research Notes in Mathematics Series, Vol. 410, CRC Press, Boca Raton, FL, 2000, pp. 21-40.
3. J. Berger, Zero set of the order parameter, especially in rings in "Connectivity and Superconductivity" (J. Berger and J. Rubinstein, editors), Springer Verlag, Lecture Notes in Physics, vol. m62 (2000), pp. 138-173.

D. Conference Proceedings

- S.G. Eckstein and J. Berger, A superfluid with mixed singlet and triplet pairs, in "Liquid and Solid Helium" (John Wiley, 1975, C. G. Kuper et al., editors), pp. 171-175.
- J. Berger, Objectivity of thermodynamic quantities, in "Quantum Limits to the Second Law" (AIP, 2002, D. P. Sheehan, editor), pp. 456-459.
- J. Berger, Fluctuations in a Superconducting Wire, AIP Conf. Proc. **850** (2006) 773.
- J. Berger, A nonconventional scenario for thermal equilibrium, *Foundations of Physics* **37** (2007) pp. 1738-1743.
- J. Berger, Fluctuation superconductivity in uniform and nonuniform rings, *Journal of Physics: Conference Series* **150** (2009) 052020 (1-4).
- J. Berger, Fluctuation current in superconducting loops, *Journal of Physics: Conference Series*, **400** (2012) 022008 (1-4).

E. Submitted

- J. Berger and J. Rubinstein, A flexible anatomic set of mechanical models for the organ of Corti. <https://www.biorxiv.org/content/10.1101/760835v3>

F. Articles selected by virtual journals

1. J. Berger, Flux transitions in a superconducting ring, *Virtual Journal of Applications of Superconductivity*, Vol. 4, Issue 3 (2003). (Same as A40.)
2. J. Berger, From randomness to order, *Entropy* **6** (2004) pp. 68-75.
3. J. Berger, Noise rectification by a superconducting loop with two weak links, *Virtual Journal of Applications of Superconductivity*, Vol. 7, Issue 3 (2004). (Same as A42.)
4. J. Berger, Nonlinearity of the field induced by a rotating superconducting shell, *Virtual Journal of Applications of Superconductivity*, Vol. 7, Issue 12 (2004). (Same as A43.)
5. J. Berger, Ginzburg-Landau equations with consistent Langevin terms for nonuniform wires, *Virtual Journal of Applications of Superconductivity*, Vol. 12, Issue 11 (2007). (Same as A47.)

G. Chairmanship at conferences and invited talks

1. Summer School for Teaching Improvement, Weizmann Institute, 1991; The Electric Field Outside a Current-Carrying Wire.
2. Summer School for Teaching Improvement, Weizmann Institute, 1991; The Magnetic Field as a Relativistic Manifestation.
3. International Workshop on New Developments in Series Expansions, Technion, 1994; What can still be done with High Dimensionality Expansions?
4. International Workshop on Mathematical Problems of Superfluidity and Nonlinear Optics, Technion, 1996; Bifurcation Analysis for Phase Transitions in Nonuniform Superconducting Rings.
5. Tenth International Colloquium on Differential Equations, Plovdiv, 1999; Features of the Ginzburg-Landau Minimizer for Samples close to Axial Symmetry.
6. First International Conference on Quantum Limits to the Second Law, San Diego, 2002; Objectivity of Thermodynamic Quantities.
7. Frontiers of Quantum and Mesoscopic Thermodynamics, Prague 2004 (<http://www.fzu.cz/activities/conferences/fqmt04/>); The Chernogolovka Experiment.

8. International Conference on Quantum Transport and Fluctuations at Nanoscale, Montenegro, 2008 (<http://www.nanotransport2008.pmf.cg.ac.yu/>); Nonuniform Superconducting Rings.
9. 54th Annual Meeting of the Israel Physical Society, Superconductivity session (chair), 2008.
10. Physics at the Nanoscale, IMDEA, Madrid 2011; Superconducting Nanorings that Operate as Brownian Ratches.