

**E.B.SONIN**  
**LIST OF RECENT PUBLICATIONS (2000-2004)**

1. Phase diagram of superconductor-insulator transition in a single Josephson junction, J. S. Penttilä, P. J. Hakonen, M. A. Paalanen, Ü. Parts, and E. B. Sonin, in: *Quantum Physics at Mesoscopic Scale*. Proceedings of the XXXIVth RECONTRES DE MORIOND (Les Acres, France 1999), eds. C. Glattli, M. Sanquer, and J. Trân Thanh Vân (EDP Sciences, 2000) pp. 345-349.
2. Microwave properties of  $\text{YBa}_2\text{Cu}_3\text{O}_7$  thin films in linear and nonlinear regime in a dc magnetic field, M.I. Tsindlekht, E.B. Sonin, M. A. Golosovsky, D. Davidov, X. Castel, M. Guilloux-Viry, and A. Perrin, *Phys. Rev. B* **61**, 1596-1604 (2000).
3. Effect of quantum noise on Coulomb blockade in normal tunnel junctions at high voltages, J. S. Penttilä, Ü. Parts, P. J. Hakonen, M. A. Paalanen, and E. B. Sonin, *Phys. Rev. B* **61**, 10890-10897 (2000).
4. Asymptotic behavior of a normal tunnel junction at large voltages Jari S. Penttilä, Pertti J. Hakonen, Mikko A. Paalanen, Ülo Parts, and Edouard B. Sonin, *Physica B* **280**, 399-400 (2000).
5. Ultrasound as a Probe of Vortex Matter in Layered Superconductors, Edouard B. Sonin, *Physica B* bf 284-288, 799-800 (2000).
6. Dissipative phase transition in a mesoscopic Josephson junction in a weak magnetic field, Jari S. Penttilä, Pertti Hakonen, Ülo Parts, Mikko Paalanen, and Edouard B. Sonin, *Physica B* **284-288**, 1832-1833 (2000).
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8. Josephson-plasma and vortex modes in layered superconductors, E.B. Sonin, *Phys. Rev. B* **63**, 054527 (2001).
9. Tunneling into 1D and quasi-1D conductors and Luttinger-liquid behavior, E.B. Sonin, *J. Low Temp. Phys.* **124**, 321-334 (2001).

10. Experiments on dissipative dynamics of single Josephson junctions, J. R. Penttilä, P. J. Hakonen, E. B. Sonin, and M. A. Paalanen, *J. Low Temp. Phys.* **125**, 89-114 (2001).
11. Magnus Force, Aharonov-Bohm Effect and Berry Phase in Superfluids, E.B. Sonin, in: *Quantized Vortex Dynamics and Superfluid Turbulence*, edited by C.F. Barenghi, R.J. Donnelly and W.F. Vinen, Lecture Notes in Physics, volume 571, (Springer-Verlag, 2001), pp. 131–137.
12. Multiwalled carbon nanotube: Luttinger versus Fermi liquid, R. Tarkiainen, M. Ahlskog, J. Penttilä, L. Roschier, P. Hakonen, M. Paalanen, and E. Sonin, *Phys. Rev. B* **64**, 195412 (2001).
13. Magnus Force and Aharonov-Bohm Effect in Superfluids, E.B. Sonin, in: *Vortices in Unconventional Superconductors and Superfluids*, edited by R.P. Huebener, N. Schopol, and G.E. Volovik, (Springer-Verlag, Berlin, 2002), pp. 119-145.
14. Interlayer Josephson coupling for a gas of pancake vortices, Ernst Helmut Brandt and Edouard B. Sonin, *Phys. Rev. B* **66**, 064505 (2002).
15. Domain structure of superconducting ferromagnets, E.B. Sonin, *Phys. Rev. B* **66**, 100504(R) (2002).
16. Comment on "Ferromagnetic film on a superconducting substrate", E.B. Sonin, *Phys. Rev. B* **66**, 136501 (2002).
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18. Penetration of vortices into the ferromagnet/type-II superconductor bilayer, R. Laiho, E. Lähderanta, E. B. Sonin, and K. B. Traito, *Phys. Rev. B* **67**, 144522 (2003).
19. Tunneling into 1D and quasi-1D conductors: Luttinger-liquid behavior and effects of environment, Edouard B. Sonin, *Physica E* **18**, 331-332 (2003).

20. Vortex structures in the ferromagnet–superconductor bilayer, K. B. Traito, R. Laiho, E. Lähderanta, and E. B. Sonin, *Physica C* **388-389**, 641-642 (2003).
21. Interlayer Josephson coupling in layered superconductors, Ernst Helmut Brandt and Edouard B. Sonin, *Physica C* **388-389**, 647-648 (2003).
22. Interplay of ferromagnetism and superconductivity: domain structure, Edouard B. Sonin, *Physica B* **329-333**, 1473-1474 (2003).
23. Ultrasensitive noise measurement scheme for mesoscopic circuits using a Coulomb blockaded Josephson junction, J. Delahaye, T. Heikkilä, R. Lindell, M. Sillanpää, T. Yamaguchi, P. Hakonen, and E. Sonin, in: *Noise and Fluctuations, Proceedings of the 17th International Conference, Prague, Czech Republic, August 2003*, edited by J. Sikula, pp 455–460.
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26. Excitation of Spin Waves in Superconducting Ferromagnets, V. Braude and E.B. Sonin, *Phys. Rev. Lett.* **93**, 117001 (2004).
27. Effect of the shot-noise on a Coulomb blockaded single Josephson junction, E.B. Sonin, *Phys. Rev. B* **70**, 140506(R) (2004).
28. Observation of shot-noise-induced asymmetry in the Coulomb blockaded Josephson junction R.K. Lindell, J. Delahaye, M.S. Sillanpää, T.T. Heikkilä, M.A. Paalanen, E.B. Sonin, and P.J. Hakonen, *Phys. Rev. Lett.* **93**, 197002 (2004).

29. The internal magnetic field in superconducting ferromagnets, Grigory I. Leviev, Menachem I. Tsindlekht, Edouard B. Sonin, and Israel Felner, Phys. Rev. B **70**, 212503 (2004).
30. Continuum Theory of Tkachenko Modes in Rotating Bose-Einstein Condensate, E.B. Sonin, Phys. Rev. A **71**, 011603(R) (2005).

### PREPRINTS

1. Ground State and Tkachenko Modes of a Rapidly Rotating Bose-Einstein Condensate in the Lowest Landau Level State, E.B. Sonin, cond-mat/0411641.
2. Surface spin waves in superconducting and insulating ferromagnets, V. Braude and E.B. Sonin, cond-mat/0503340.