

CURRICULUM VITAE
SONIN, Edouard Benjaminovich

Date and place of birth: November 8, 1936, Leningrad, USSR

Citizenship: Israel, Russia

Marital status: Married, two daughters

Highest degree: Doctor of Physics and Mathematics (Lebedev Physical Institute of the Academy of Sciences of the USSR, Moscow, 1983)

Present position: Professor (Emeritus), Racah Institute of Physics, Hebrew University of Jerusalem, Israel.

AREAS OF SPECIALISATION DURING SCIENTIFIC CARRIER

1. Theory of weakly ionized plasma (1962 - 1973).
2. Theory of ferromagnetism: structure and dynamics of domain walls and magnetic vortices (from 1983 to the present moment).
3. Theory of superfluids: structure and dynamics of vortices in ^4He , ^3He , and atomic Bose-Einstein condensates, vortex nucleation, hydrodynamics of rotating superfluids, spin superfluidity (from 1969 to the present moment).
4. Theory of superconductivity: high- T_c materials, granular and layered superconductors, thin films, magnetic structure and electrodynamics in the mixed state, the Hall effect, thermal and quantum creep, microwave properties (1969–2010).
5. Quantum mechanics of ultrasmall normal and superconducting tunnel junctions (from 1997 to the present moment)

EDUCATION AND DIPLOMA

1953 - 1959 Leningrad Polytechnic Institute, Diploma of mechanical engineer

1959 - 1962 Leningrad State University, Diploma of physicist

1967 Degree of Candidate of Physics and Mathematics, Institute of Semiconductors of the Academy of Sciences of the USSR, Leningrad.

Thesis: “Theory of Low-Voltage Arc in Thermoionic Converters”.

1983 Degree of Doctor of Physics and Mathematics, Lebedev Physical Institute of the Academy of Sciences of the USSR, Moscow.

Thesis: “Persistent Currents of Mass, Electron-Hole Pairs and Spin and Dynamics of Superfluid Vortices”.

SUMMARY OF EMPLOYMENT

1959 - 1961 Mechanical engineer in a state company for microelectronics

1961 - 1973 Postgraduate, junior researcher, Institute for Semiconductors of the Academy of Sciences of the USSR, Leningrad.

1973 - 1997 Junior researcher, leading researcher, chief researcher, Ioffe Physical Technical Institute of the Russian Academy of Sciences, St. Petersburg, Russia.

1997 - present Professor (Emeritus from **2007**), Racah Institute of Physics, Hebrew University of Jerusalem, Israel.

PROFESSIONAL ACTIVITY

1989 - 2005 Visiting scientist in Low Temperature Laboratory, Helsinki University of Technology (about a few months per year)

1994 Visiting Professor in Ecole Normale Supérieure (Paris, France)

1995 Kapitza Fellowship of the Royal Physical Society for Prominent Scientists of FSU (Birmingham, United Kingdom)

1996 - 1997 Forchheimer Professor in the Hebrew University (Jerusalem, Israel)

2003 Visiting professor in the University of Tokyo

Reviewer in the journals: Europhysics Letters (Distinguished Referee 2011), Journal of Low Temperature Physics, Physical Review and Physical Review Letters (APS Outstanding Referee 2011) and some others

PUBLICATIONS

In total over 230 publications. Among them:

1. The book: *Thermoionic converters and low temperature plasma*, F.G. Baksht, G.A. Dyuzhev, A.M. Martsinovskii, B.Ya. Moyzhes, G.Ye. Pikus, E.B. Sonin, and V.G. Yur'yev, (Nauka, Moscow, 1973), 480 pages [Engl. translation: Techn. Inf. Center, U.S. Department of Energy, USA, 1978, 484 pages].
2. The book: *Dynamics of quantised vortices*, E.B. Sonin, (Cambridge University Press, 2016), 400 pages.
3. The review article: *Superflows and superfluidity*, E.B. Sonin, Usp. Fiz. Nauk, **137**, 267–304 (1982) [Sov. Phys.-Usp. **25**, 409–430 (1982)].
4. The review article: *Vortex oscillations and hydrodynamics of rotating superfluids*, E.B. Sonin, Rev. Mod. Phys. **59**, 87–155 (1987).
5. The review article: *Spin currents and spin superfluidity*, E. B. Sonin, Adv. Phys. **59**, 181–255 (2010).