

CURRICULUM VITAE

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3 Personal

Born: April 9, 1952 in Dzerzhinsk, Nizhegorodskii region, USSR.
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Married, one daughter (1986).

4 Education

- 1969-1975: Moscow Institute of Physics and Technology, Department of Theoretical Physics and Astrophysics (head : V.L. Ginzburg)

- June.1975: Diploma:” On the Superconductivity in White Dwarfs” (the superwiser: D.A. Kirzhnits)
- 1975-1978: Ph.D. student, Moscow Institute of Physics and Technology, Department of Theoretical Physics and Astrophysics (head : V.L. Ginzburg)
- December 1978: Ph. D. in theoretical physics, Thesis: ” Superconductivity of Anisotropic and Nonuniform Matter”.
- September 1996: Doctor of Physical and Mathematical Sciences, P.N. Lebedev Physical Institute.

5 Employment

1978-now: Staff member, leading researcher , the I.E. Tamm Theoretical Department, the P.N. Lebedev Physical Institute, Russian Academy of Sciences.

6 Visiting Scientist

- 1991-Forschungszentrum Jülich (KFA), Jülich, Germany,
- 1992- Max-Planck -Arbeitsgruppe ”Elektronensysteme”, Dresden, Germany,
- 1993-University of Groningen, Groningen, The Netherlands,
- 1994- Max-Planck -Arbeitsgruppe ”Elektronensysteme”, Dresden, Germany,
- 1994- High Magnetic Field Laboratory, MPI-Grenoble, France,
- 1995- University of Cambridge, Cambridge, UK,
- 1995-The Lawrence Berkeley Laboratory, University of California, Berkeley, USA,
- 1997-1999 -Institut für Theoretische Physik, Universität Tübingen, Germany,
- 1999-2002- Max-Planck-Institut für Festkörperforschung, Stuttgart, Germany,
- 2002-2003 -Institut für Theoretische Physik, Universität Tübingen, Germany,

- 2003–now- Max-Planck-Institut für Festkörperforschung, Stuttgart, Germany,

7 Grants, Awards

- 1993: INTAS grant No 932154
- 1995: P.L. Kapitsa Award (The British Royal Society)
- 1996-1998: grant No 96-02-16661-a of Russian Foundation for Basic Research
- 1998: Medal of the President of the Russian Federation: ” 850 Years of Moscow”
- 1999: Honorary Diploma of P.N. Lebedev Physical Institute of the Russian Academy of Sciences.

8 Teaching experience

- 1975: Advanced course in pedagogics for high-school students.
- 1978-1999: Supervision on Diploma (5) and Ph.D. (3) students (Moscow Institute of Physics and Technology and P.N. Lebedev Physical Institute).
- 1997-1999, 2002-2003: Consulting of graduate and postgraduate students (Physical Department, University of Tübingen).

9 Service

- 1981-1991: Secretary of the seminar on superconductivity at the Lebedev Physical Institute (head V.L. Ginzburg).
- 1991-1994: Scientific secretary of the I.E.Tamm Theoretical Department of the Lebedev Physical Institute of the RAS.
- 1993-now: Referee for Physical Review/Physical Review Letters and for other journals.

10 RESEARCH AREAS

- Theory of response functions of condensed matter [1-5, 9, 10, 13-18, 28, 42, 49]
- Dielectric permeability and magnetic permittivity in solids [1-5, 11-12,16,18, 31]
- Theory of superconductivity [2, 6-8, 11, 19-23, 25-27, 29-34, 36-43, 49, 51, 54-69, 71-87, 89 , 92-99, 100-106]
- Electron-phonon interaction in superconductors [2, 6-8, 12, 21, 23-27, 29-41, 43-53, 55, 57, 59, 62- 69, 71–82, 84-87, 91-92, 94-100, 105-106]
- High-temperature superconductors: optical properties [31, 33-36, 41, 43, 46-49, 53, 57, 76, 86, 88, 94]
- High-temperature superconductors: thermodynamical and transport and tunneling properties [8, 21, 23-26, 29-32, 36-38, 44, 45, 51, 54, 55, 59, 70, 79-85, 89, 82, 93-97]
- Heavy-fermion systems [19, 20, 22, 31, 70, 91]
- Superconducting properties of fullerenes [45, 47]
- Electromagnetic properties of Abrikosov vortices [61, 90]
- MgB_2 and related systems [63-69, 73-75, 77, 78-80, 98–100]
- Superconducting pnictides [107-108, 110]
- Astrophysics [31]

11 Scientific biography

I started my scientific life as a graduate student at Moscow Institute of Physics and Technology, (Department of Theoretical Physics and Astrophysics headed by Prof. V.L. Ginzburg). My diploma thesis (under the supervision of Prof. D.A. Kirzhnits) was devoted to the superconductivity of the matter with the very high density and its application to white dwarfs. After graduation in 1975 I continued my education as a Ph. D. student at the same Department and at I.E. Tamm Theoretical Department of P.N. Lebedev Physical Institute of the Academy of Sciences of the USSR. Here my works were related to the problem of high temperature superconductivity. On the basis of the dielectric approach to the superconductors (developed earlier by D.A. Kirzhnits, E.G. Maksimov and D.I. Khomskii) it was shown that high values of T_c can exist only in systems with a negative sign of the static dielectric function $\varepsilon(\mathbf{q}, \omega = 0) < 0$. There was proved a possibility of the existence of this property and was shown that in the

real metals this inequality takes place. This removed upper restrictions on the critical temperature of superconducting transitions.

From September, 1978 I am a staff member of the Lebedev Physical Institute. My work there was covering several different areas, including the theory of electromagnetic response functions and the theory of superconductivity (three reviews were published in the *Reviews of Modern Physics* and the *Soviet Physics-Uspeski*). In the former I should like to mention general restrictions on static values of electrodynamic response functions (with D.A. Kirzhnits and V.V. Losyakov). It was shown from the requirements of causality and stability that in contrast to the dielectric response the static magnetic permeability $\mu(\mathbf{q}, \omega = 0)$ is always positive. This leads to the absence of systems with spontaneous diamagnetic currents. The latter was mainly devoted to the theory of the superconductivity in the systems with strong electron-phonon interaction (with E.G. Maksimov) and with heavy fermions (with D.I. Khomskii).

After the discovery of high- T_c superconductivity in 1986 my main interest was in the investigation of the dynamical and thermodynamical properties of these compounds. The main attention was attached to the model of the strong electron-phonon (or, generally, retarded electron-boson) interaction. It was shown that this model leads to the new effects in superconductors, e.g. to the positive curvature of an upper magnetic field (with L.N. Bulaevskii) and to the absence of the Hebel-Slichter peak in the NMR relaxation rate just below T_c (with A.A. Golubov). This allow to explain some experimental data for superconducting cuprates. The large number of publications was devoted to the investigation of the optical properties of high- T_c superconductors. It was found that, in contrast to the standard Fermi-liquid theory, the optical scattering rate in normal state systems with the strong retarded interaction has quasilinear frequency dependence in a broad frequency interval (with E.G. Maksimov and S.V. Shulga), what was observed experimentally in cuprates. Is was propose a method for the analysis of the intermediate boson spectra from the optical experimental data. This approach was applied to the high- T_c superconductors and systems with heavy fermions. An optical conductivity of the superconductors with extremely strong electron-boson interaction (with R. Combescot and D. Rainer) was investigated.

Another activity (with N. Schopohl) concerns the macroscopic response of superconductors on the electromagnetic influence. In particular it was shown that the wide spread statement about the linear temperature dependence of the magnetic penetration depth in anisotropic superconductors contradicts to the third law of thermodynamics. The new source of a microwave radiation based on a transition radiation of moving Abrikosov vortices was proposed also.

Some papers (including the review in the special issue of the *Physica Status Solidi B*) were published in which the model with predominantly forward inter-electron scattering (due to strong interelectronic correlations) was investigated (with M.L. Kulić). This model allows to describe some unusual properties of high-temperature superconductors, e.g., a suppression of the density of states in the normal state and some features of photoemission data.

In the beginning of the century the main my activity was in the investigation

of properties of the discovered in 2001 superconductors MgB_2 with $T_c \simeq 40K$. On the base of a multi-band model with intermediate electron-phonon coupling thermodynamic and electrodynamic properties of this compound have been described. There were published 16 papers in this field (with I.I. Mazin, A.A. Golubov, J. Kortus, Y. Kong, O. Jepsen , R. Kremer, and O.K. Andersen, 4 in *Phys. Rev. Letters*, and 7 in *Phys. Rev. B*).

Another activity was devoted to understanding of the so called 'optical sum rule' in the high- T_c superconductors . There were publishes a few papers with the theoretical point of view (with E.G. Maksimov and A.E. Karakozov) as well as in collaboration with the optical experimental group from Max-Planck-Institute. It was shown that the charge carrier spectral weight decreases in the superconducting state (published in the *Science*).

At present the main interest lies in the superconductivity of recently discovered Fe - based pnictides. It was shown that the standard electron-phonon interaction is too weak to explain properties of these compounds (with L. Boeri and A.A. Golubov, published in *Phys. Rev. Letters (2008)*).

12 Publications

Collective monographs

1. O.V. Dolgov, E.G.Maksimov, "Electron-phonon interaction and superconductivity", Chapter 1 in: "*Thermodynamics and Electrodynamics of Superconductors*", ed. by V.L.Ginzburg, Nova Science Publ., N.Y.(1987)
2. O.V. Dolgov, D.A. Kirzhnits, E.G. Maksimov, "Dielectric function and superconductivity", Chapter 2 in: "*Superconductivity, Superdiamagnetism and Superfluidity*", ed. by V.L.Ginzburg, MIR Publ., Moscow (1987) (in English)
3. O.V. Dolgov, E.G.Maksimov, "Dielectric function of crystalline systems", Chapter 4 in: "*Dielectric Function of Condensed Systems*", eds. L.V.Keldysh, D.A.Kirzhnits, A.A.Maradudin, Elsevier Publ., Amsterdam (1989)

Reviews

4. O.V. Dolgov, D.A. Kirzhnits, E.G. Maksimov, "On a admissible sign of the static dielectric function of matter" - Rev. Mod. Phys., **53**, 81 (1981)
5. O.V. Dolgov, E.G. Maksimov, "The local field effects and the violation of Kramers-Kronig relations for the microscopic dielectric functions", Uspekhi Fizicheskikh Nauk , (Sov. Phys.-Uspekhi), **135**, 441 (1981)
6. O.V. Dolgov, E.G. Maksimov, "The critical temperature of strong-coupled superconductors", Uspekhi Fizicheskikh Nauk, **138**, 95 (1982) (Sov. Phys.-Uspekhi, **25**, 9 (1982))
7. L.N. Bulaevskii, O.V. Dolgov, A.A. Golubov, M.O. Ptitsyn, S.I. Vedenev, "Phonon mechanism of pairing and high temperature superconducting oxides" Modern Physics Letters, **B3**, 101 (1989)
8. M.L. Kulić and O.V. Dolgov, "Forward scattering peak in the electron-phonon interaction and impurity scattering of cuprate superconductors", Physica Status Solidi (b), **242**, 151 (2005)
9. E.G. Maksimov, O.V. Dolgov, "About possible mechanisms of high-temperature superconductors", Uspekhi Fizicheskikh Nauk, **177**, 983 (2007) (Phys.-Uspekhi, **50**, 933 (2007))
10. E. G. Maksimov, M. L. Kulić, O. V. Dolgov, "Bosonic Spectral Function in HTSC Cuprates: Part I - Experimental Evidence for Strong Electron-Phonon Interaction", cond-mat arXiv:0810.3789

Physical Encyclopedia

11. O.V. Dolgov, D.A. Kirzhnits, E.G. Maksimov, "The dielectric function" in: "*Physical Encyclopedia*", v. 1, p. 698, Sovietskaya Encyclopedia, Moscow 1988

12. O.V. Dolgov, "Generalized susceptibility" in: " *Physical Encyclopedia*", v. 3, p. 374, Rossiskaya Encyclopedia, Moscow 1992

Journal Publications

13. O.V. Dolgov, "Superconductivity of multivalley semiconductors"- Bulletin of the Lebedev Physics Institute, **12**, 6 (1977)
14. O.V. Dolgov, I.I. Mazin, "Electron-phonon coupling constant of monovalent metals" - Sov. Phys. Solid State, **20**, 2149 (1978)
15. O.V. Dolgov, E.G. Maksimov, " On the sign of the static dielectric function of simple metals", JETP Letters, **28**, 1 (1978)
16. O.V. Dolgov, D.A. Kirzhnits, V.V. Losyakov, "On permissible values of the permittivity and magnetic-permeability of matter", Sov. Phys.-JETP, **56**, 1095 (1982)
17. O.V. Dolgov, E.G. Maksimov, S.N. Rashkeev, " The dielectric screening and magnetic instabilities in an interacting electron gas", Solid State Comm., **46**, 151 (1983)
18. O.V. Dolgov, D.A. Kirzhnits, V.V. Losyakov, " On the admissible values of the static magnetic-permeability", Solid State Comm., **46**, 147 (1983)
19. A.I. Buzdin, O.V. Dolgov, Y.E. Lozovik, " Anomalous magnetism of small metallic clusters in a weak magnetic-field", Physics Lett., **A 100**, 261 (1984)
20. A.I. Buzdin, O.V. Dolgov, Y.E. Lozovik, " Anomalous magnetism of small metallic clusters in weak fields", Sov. Phys. -Solid State, **26**, 708 (1984)
21. O.V. Dolgov, E.P. Fetisov, D.I. Khomskii, "Interband pairing and properties of heavy-fermion systems", JETP Letters, **44**, 442 (1986)
22. O.V. Dolgov, E.P. Fetisov, D.I. Khomskii, K. Svozil, "Model of interband pairing in mixed-valence and heavy-fermion systems", Z. für Physik, **B 67**, 63 (1987)
23. L.N. Bulaevskii, O.V. Dolgov, "Properties of superconductors with a strong electron-phonon interaction", JETP Letters, **45**, 526 (1987)
24. O.V. Dolgov, E.P. Fetisov, D.I. Khomskii, " Superconductivity of heavy-fermions in the 2- band model", JETP, **94**, 314 (1988)
25. L. N. Bulaevskii, O. V. Dolgov, " Fluctuations in strong coupled superconductors", Physica, **C 153**, 241 (1988)
26. L. N. Bulaevskii, O. V. Dolgov, I.P. Kazakov, S.N. Maksimovskii, M.O. Ptitsyn, V.A. Stepanov, S.I. Vedeneev, " Tunneling study of the oxide superconductors $La_{2-x}Sr_xCuO_4$ and $EuBa_2Cu_3O_7$ ", Supercond. Science & Technology, **1**, 205 (1988)

27. L. N. Bulaevskii, O.V.Dolgov, M.O.Ptitsyn, "Properties of strong coupled superconductors" , Phys. Rev., **B 38**, 11290 (1988)
28. L. N. Bulaevskii, O. V. Dolgov, "The fluctuations in strong coupled superconductors", Solid State Commun., **67**, 63 (1988)
29. O.V. Dolgov, A.A. Golubov, "Energy gap in *s*-and *d*-wave pairing superconductors", Int. J. Mod. Phys., **B 2**, 1089 (1988)
30. L.N. Bulaevskii, O.V. Dolgov, A.A. Golubov, M.O. Ptitsyn, "Energy-gap in strong coupled superconductors" in: "*High Temperature Superconductivity*" ed by K.B. Garg *et al.*, 1989, Jaipur, India, 1989, Ch.44, p.13,
31. E.I. Avdeev, V.A. Dogiel, O.V. Dolgov, "Diamagnetism of turbulent plasma", JETP, **96**, 885 (1989)
32. O.V. Dolgov, E.G. Maksimov, I.I. Mazin, D.Y. Savrasov, " Microscopic calculations of the NMR relaxation rate for high temperature superconductors", Physica, **C 162**, 1529 (1989)
33. L. N. Bulaevskii, O. V. Dolgov, A.A. Golubov, "Electron-phonon coupling model and high-temperature superconductors", Physica, **C 162**, 1527 (1989)
34. L. N. Bulaevskii, O. V. Dolgov, M.O. Ptitsyn, V.A. Stepanov, S.I. Vedenev, "Tunneling measurements and electron-phonon interaction in high T_c superconductors" in "*High Temperature Superconductivity and Other Related Topics*", eds. B.E. Baaquie et al., World Scient, 1989, p. 18
35. O.V. Dolgov, S.V. Shulga, "Tunneling and optical properties of anisotropic superconductors", Physica, **C 162**, 1233 (1989)
36. O.V. Dolgov, A.A. Golubov, A.E. Koshelev, "Influence of electron-phonon scattering on the properties of high T_c superconductors" - Solid State Comm., **72**, 81 (1989)
37. O.V. Dolgov, A.A. Golubov, S.V. Shulga, "Far-infrared properties of high- T_c superconductors" - Phys. Letters, **A 147**, 317 (1990)
38. O.V. Dolgov, E.G. Maksimov, S.V. Shulga, "Electron-phonon interaction and infrared spectra of high temperature superconductors" in "*Electron-Phonon Interaction in Oxide Superconductors*", ed. R. Baquero, World Scient., 1991, p.30
39. S.V. Shulga, O.V.Dolgov, E.G.Maksimov, "Electronic states and optical spectra of HTSC with electron-phonon interaction" - Physica **C 178**, 266 (1991)
40. E. V. Abel', V. S. Bagaev, D. N. Basov, O. V. Dolgov, A. F. Plotnikov, A. G. Poiarkov, W. Sadovsky, "Infrared spectroscopy of $Nd_{2-y}Ce_yCuO_4$ ($y=0-0.2$) single crystals", Solid State Comm., **79**, 931 (1991)

41. A.A. Mikhailovskii, S.V. Shulga, A.E. Karakozov, O.V. Dolgov, E.G. Maksimov, "Thermal pair-breaking in superconductors with strong electron-phonon interaction" - Solid State Comm., **80**, 511 (1991)
42. R.S. Gonnelli, L.N. Bulaevskii, O.V. Dolgov, S.I. Vedenev, "A method for the determination of the density of states from tunneling measurements in high T_c superconductors", in "Advances in high temperature superconductivity", eds. D. Andreone, R.S. Gonnelli, E. Mezzetti, World Scient., 1992, p. 331
43. I.I. Mazin, O.V. Dolgov, "On the estimation of the electron-phonon coupling from the resistivity" - Phys. Rev., **B 45**, 2509 (1992)
44. S.V. Shulga, O.V. Dolgov, I.I. Mazin, "Electron-phonon coupling and specific heat in $YBa_2Cu_3O_7$ " - Physica, **C 192**, 41 (1992)
45. O.V. Dolgov, I.I. Mazin, "Ginzburg-Landau analysis of superconducting K_3C_{60} " - Solid State Comm., **81**, 935 (1992)
46. E. V. Abel', V. S. Bagaev, D. N. Basov, O. V. Dolgov, A.K. Kazakov, S.R. Okt'yabrskii, A. F. Plotnikov, A. G. Poiarkov, W. Sadovsky, "Optical properties of $Nd_{2-y}Ce_yCuO_4$ single crystals in dielectric, superconducting and metallic phases" in "High temperature superconductivity and localization phenomena", eds. A.A. Aronov, A.I. Larkin, V.S. Lutovinov, World. Scient., 1992, p. 643
47. I.I. Mazin, O.V. Dolgov, A.A. Golubov, S.V. Shulga, "Strong-coupling effects in alkaline-doped C_{60} " - Phys. Rev., **B 47**, 538 (1993)
48. O.V. Dolgov, E.G. Maksimov, A.E. Karakozov, A.A. Mikhailovsky, "Microwave conductivity of superconductors with a strong electron-phonon interaction" - Solid State Comm., **89**, 827 (1994)
49. O.V. Dolgov, V.V. Losyakov, "Renormalization factor and odd- ω gap singlet superconductivity", Physics Letters , **A 190**, 189 (1994)
50. O.V. Dolgov, A.E. Karakozov, A.A. Mikhailovsky, B.J. Feenstra, D. van der Marel, "Observation of the Holstein shift in high- T_c superconductors with thermal-modulation reflectometry" - Physica, **C 229**, 396 (1994)
51. R.S. Gonnelli, S.I. Vedenev, O.V. Dolgov, G.I. Ummarino, "Influence of lifetime broadening in the determination of the Eliashberg function from breake-junction tunneling data in $Bi_2Sr_2CaCu_2O_{8+x}$ single-crystals", Physica, **C 235-240**, 1861 (1994)
52. A. A. Golubov, O. V. Dolgov, E. G. Maksimov, I. I. Mazin, S. V. Shulga, "Strong-coupling effects in s -wave two-band superconductors", Proc. of the M² S-III Conference , Grenoble, France, 1994, Physica , **C 235-240**, 2383 (1994)

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54. R.S. Gonnelli, O.V. Dolgov, G.I. Ummarino, S.I. Vedenev, "Comparison of the Eliashberg function determined from point-contact and breake-junction tunneling experiments in $Bi_2Sr_2CaCu_2O_{8+x}$ ", Nuovo Cimento, **D 16**, 1903 (1994)
55. O.V. Dolgov, S.V.Shulga, " Analysis of intermediate boson spectra from FIR data for *HTSC* and heavy-fermion systems", , J. Superconductivity, **8**, 611 (1995)
56. A. A. Golubov, M. R. Trunin, A. A. Zhukov, O. V. Dolgov, S. V. Shulga, " Effect of impurity scattering on the magnetic field penetration depth in $YBa_2Cu_3O_{7-y}$: comparison with experiments", JETP Lett., **62** ,496 (1995)
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60. O. V. Danylenko, O. V. Dolgov, V. V. Losyakov, "Nonadiabatic corrections to the quasiparticle self-energy", Bulletin of Lebedev Physics Institute, No. **12** (1996)
61. O.V. Danylenko, O.V. Dolgov, V.V. Losyakov , " Nonadiabatic corrections to the quasi-particle self-energy", Czechoslovak J. of Phys., **46**, No. S2, 925 (1996)
62. V. Kresin, S. Wolf, Y. Ovchinnikov, A. Bill, S. Adrian, O. Dolgov, S. Shulga " Magnetic scattering, "recovery" of superconductivity and tunneling in the cuprates", J. of Low Temp. Phys., **106**, 159 (1997)
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110. O.V. Dolgov, I.I. Mazin, D. Parker, A.A. Golubov, "Interband superconductivity: contrasts between BCS and Eliashberg theory", *Phys. Rev. B* (submitted), cond-mat arXiv:0810.1476

Invited and oral talks :

- " Strong Electron-Phonon Interacion in Superconductors", All-Union Conference on Low Temperature Physics, Kharkov, USSR, 1980
- " Anomalous magnetism of small metallic clusters in weak fields", All-Union Conference on Low Temperature Physics, Tallinn, USSR, 1984
- " Dielectric function and superconductiviy", East-European Conference on Low Temperature Physics, Berlin, DDR, 1985
- "Interband pairing in heavy-fermion systems", All-Union Conference on Low Temperature Physics, Tbilisi, USSR, 1986

- "Tunneling measurements and electron-phonon interaction in high T_c superconductors", First Asia-Pacific Conference on High-Temperature Superconductivity, Singapore, 1988
- "Electron-phonon interaction in high T_c superconductors", International Symposium on High-Temperature Superconductivity, Jaipur, India, 1988
- "Electromagnetic response functions and superconductivity", International Workshop on High-Temperature Superconductivity, Torino, Italy, 1989
- "Dielectric function and superconductivity", Miniworkshop on High-Temperature Superconductivity, ICTP, Trieste, Italy, 1989
- "Electron-phonon interaction and infrared spectra of high temperature superconductors", International Workshop on Electron-Phonon Interaction in High-Temperature Superconductors, Oaxtepec, Mexico, 1990
- "Electronic states and optical spectra of HTSC with electron-phonon interaction", German-Soviet Bilateral Conference on Optical properties of Solids, Bad-Honef, Germany, 1991
- "Observation of the Holstein shift in high- T_c superconductors with thermal-modulation reflectometry", Annual Meeting of Dutch Solid State Physicists, Veldhoven, The Netherlands, 1993
- "Strong electron-phonon interaction and optical properties of high temperature superconductors", International Workshop on Correlated Electron Systems, Torino, Italy, 1994
- "Analysis of intermediate boson spectra from FIR data for *HTSC* and heavy-fermion systems", II-nd Miami Workshop on High-Temperature Superconductors, USA, 1995
- "Characteristics of isolated vortices at arbitrary temperatures", International Workshop on High-Temperature Superconductivity, Torino, Italy, 1996
- "Forward electron-phonon scattering in normal and superconducting states", The First International Conference New³ SC-1, Baton Rouge, USA, 1998
- "Transition radiation of the moving Abrikosov vortices", The First International Conference New³ SC-1, Baton Rouge, USA, 1998
- "The third law of thermodynamics and the low temperature dependence of the magnetic penetration depth in unconventional superconductors", The First Euroconference Anomalous and Complex Superconductors, Crete, Greece, 1998.
- "Forward electron-phonon interaction in HTS oxides", Conference on High-Temperature Superconductivity and Related Topics (HTS99), Miami, USA, 1999.

- "Two-band model and optical properties of MgB_2 ", Artificial and Natural Nanostructures: MgB_2 and Related Systems, Roma, Italy, 2001
- "Dynamical properties of MgB_2 ", International Conference on Superconductivity, CMR & Related Materials, Giens, France, 2002.
- "Multi-band model and dynamical properties of MgB_2 ", International Conference on Frontiers in Condensed Matter Physics: Electronic Structure and Properties, Groningen, The Netherlands, 2002.
- " MgB_2 : Two-band superconductor", 6th European Conference on Applied Superconductivity (EUCAS 2003), Sorrento, Italy, 2003.
- "Thermodynamic and Electrodynamic Properties of the Two-band Superconductor MgB_2 ", 1-st International Conference on Fundamental Problems of High Temperature Superconductivity (FPS'04), Zvenigorod city, Moscow region, Russia, 2004.
- "Thermodynamic and Electrodynamic Properties of the Two-band Superconductor MgB_2 ", Fifth International Conference on New Theories, Discoveries, and Applications of Superconductors and Related Materials (New3SC-5), Chongqing (Chungking), China, 2004
- "Effect of Spin Fluctuations on Electron-Phonon Superconductivity", the Workshop "Phase Separation in Electronic Systems", Crete, Greece, 2006
- "Critical temperature and giant isotope effect in presence of paramagnons", 2-d International Conference on Fundamental Problems of High Temperature Superconductivity (FPS'06), Zvenigorod city, Moscow region, Russia, 2006.
- "Are there limits on T_c ?", "The Road to Room Temperature Superconductivity (RTS2)", Brussels, Belgium, 2008.
- "Superconducting glue: are there limits on T_c ?", The International Conference on Quantum Phenomena in Complex Matter, Stripes and High T_c Superconductivity, Erice, Italy, 2008.
- "Superconducting glue: are there limits on T_c ?", Second CoMePhS Workshop in Controlling Phase Separation in Electronic Systems, Nafplion, Greece, 2008.

13 Talks at seminars

- 1991-in Germany: KFA (Jülich), Max-Planck Institut für Festkörperforschung (Stuttgart), Universities of Bayreuth, Regensburg, Freie-Universität (Berlin);
in the Netherlands: Delft University .

- 1992-in Germany: KFA (Jülich), Max-Planck Institut für Festkörperforschung (Stuttgart), Max-Planck Arbeitsgruppe (Dresden), Universities of Baireuth, Duisburg, Freie-Universität (Berlin);
in Italy : ICTP (Trieste), University of Bologna.
- 1993- in Italy: University of Torino, Politecnico of Torino;
in France: Max-Planck Institut (Grenoble), Ecole Normal Polytechnic (Paris);
In the Netherlands : Universities of Groningen, Leiden.
- 1994- in Italy: Università di Roma "La Sapienza".
- 1995- in UK: Universities of Cambridge, Oxford, Birmingham, South Sussex;
in USA: the Argonne National Laboratory, the Naval Research Laboratory, Rutgers University, State University of New York at Stony Brook.
- 1997-in Germany: University of Tübingen.
- 1998-in USA: The Center of Superconductivity (Houston University), the Naval Research Laboratory (Washington, DC);
in Germany: University of Karlsruhe;
in Italy: ISTP (Trieste), Politecnico di Torino.
- 2000- in Germany: Bayreuth Universität, the University of Tübingen.
- 2001 - in The Netherlands: Univesrity of Twente, Univesity of Groningen.
- 2002- in Austria: The University of Graz.
- 2003- in The Netherlands: University of Twente.
- 2004-in Russia: P.N. Lebedev Physical Institute, Moscow.
in Germany: Freie-Universität (Berlin)
- 2005 - in The Netherlands: Univesrity of Twente.