Сергей Евгеньевич Коршунов

2 января 2016 после тяжелой болезни скончался ведущий научный сотрудник Сектора квантовой мезоскопики ИТФ Коршунов Сергей Евгеньевич.

Сергей Евгеньевич окончил МФТИ в 1982 г. Работал в ИТФ с 1985 г.

Кандидат физико-математических наук (1985), диссертация: Физические свойства поверхности квантового кристалла (научный руководитель: С.В. Иорданский).

Доктор физико-математических наук (2005), диссертация: Фазовые переходы в двумерных и слоистых системах с непрерывным вырождением.

Область научных интересов последних лет: фазовые переходы в двумерных системах, решётки джозефсоновских контактов, неколлинеарные магнетики, пиннинг в случайном потенциале, границы раздела фаз в гелии.

Публикации по тематике (с полнотекстовыми ссылками):

QUANTUM LIQUIDS (1982-1991, 2002)

- S.E. Korshunov
  Surface spin waves in ^{3}He-B
  Zh. Eksp. Teor. Fiz. 83, 1788 (1982) [Sov. Phys. JETP 56, 1034 (1982)]
- S.E. Korshunov
  Two-dimensional superfluid Fermi-liquid with p-pairing
  Zh. Eksp. Teor. Fiz. 89, 531 (1985) [Sov. Phys. JETP 62, 301 (1985)]
- S.E. Korshunov
  Boundary conditions and acoustic coefficients for an HeII - vapor interface
  Zh. Eksp. Teor. Fiz. 92, 1322 (1987) [Sov. Phys. JETP 65, 741 (1987)]
- S.E. Korshunov
  Instability of superfluid Helium free surface in the presence of heat flow
  Europhys. Lett. 16, 673 (1991)
- S.E. Korshunov
  Analog of Kelvin-Helmholz instability on superfluid liquid free surface
  75, 496 (2002) [JETP Lett. 75, 423 (2002); arXiv:cond-mat/0203374]

QUANTUM CRYSTALS (1982-1989, 2009)

- S.E. Korshunov and A.V. Smirnov
  Damping of crystallization waves in ^{3}He-B at low temperatures
  Zh. Eksp. Teor. Fiz. 83, 2128 (1982) [Sov. Phys. JETP 56, 1234 (1982)]
- S.V. Iordansky, S.E. Korshunov and I.A. Larkin
  Phenomenological derivation of the boundary conditions at the interface between superfluid liquid and solid body
  Zh. Eksp. Teor. Fiz. 83, 2110 (1982) [Sov. Phys. JETP 56, 1224 (1982)]
- S.V. Iordansky and S.E. Korshunov
  Quantum effects in roughening transition
  Pis'ma ZhETF 38, 542 (1983) [JETP Lett. 38, 655 (1983)]
- S.V. Iordansky and S.E. Korshunov
  Quantum models of crystal surface
  Zh. Eksp. Teor. Fiz. 87, 927 (1984) [Sov. Phys. JETP 60, 528 (1984)]
- S.V. Iordansky and S.E. Korshunov
  Phase transitions on quantum crystal surface
  Pis'ma ZhETF 39, 466 (1984) [JETP Lett. 39, 567 (1984)]
- S.V. Iordansky and S.E. Korshunov
  Phase transitions on quantum crystal interfaces
  J. Low Temp. Phys. 58, 425 (1985)
- S.E. Korshunov
  Collisionless friction mechanism for linear defects in quantum crystals
  Zh. Eksp. Teor. Fiz. 90, 2118 (1986) [Sov. Phys. - JETP 63, 1242 (1986)]
- S.E. Korshunov
  On dynamics of quantum crystal growth
  Zh. Eksp. Teor. Fiz. 91, 1466 (1986) [Sov. Phys. JETP 64, 864 (1986)]
- S.E. Korshunov
  Transition to the superfluid state of a step on a quantum crystal free surface
  Zh. Eksp. Teor. Fiz. 95, 2163 (1989) [Sov. Phys. JETP 68, 1250 (1989)]
- S.E. Korshunov
  Two-level systems and mass deficit in quantum solids
  Pis'ma ZhETF 90, 167 (2009) [JETP Letters 90, 156 (2009); arXiv:0906.4627]

MACROSCOPIC QUANTUM TUNNELLING (1987-1989)

- S.E. Korshunov
  Quantum-mechanical tunnelling with dissipation in a tilted cosine potential
  Zh. Eksp.Teor. Fiz. 92, 1828 (1987) [Sov. Phys. JETP 65, 1025 (1987)]
- S.E. Korshunov
  Mobility of a dissipative quantum system in a periodic potential
  Zh. Eksp. Teor. Fiz. 93, 1526 (1987) [Sov. Phys. JETP 66, 872 (1987)]
- S.E. Korshunov
  Coherent and incoherent tunnelling in a Josephson junction with a "periodic" dissipation
  Pis'ma ZhETF 45, 342 (1987) [JETP Lett. 45, 434 (1987)]
- S.E. Korshunov
  Quantum diffusion of vortices in 2D lattice systems
  Pis'ma ZhETF 46, 385 (1987) [JETP Lett. 46, 485 (1987)]
- S.E. Korshunov
  Intersite vortex tunnelling in 2D lattice systems
  Physica B 152, 261 (1988)
- S.E. Korshunov
  Compressibility influence on quantum decay of metastable phase at low temperatures
  Fiz. Nizk. Temp. 14, 575-79 (1988) [Sov. J. Low Temp. Phys. 14, 316 (1988)]

- S.E. Korshunov
  Effect of dissipation on the low-temperature properties of a tunnel-junction chain
  Zh. Eksp. Teor. Fiz. 95, 1058 (1989) [Sov. Phys. JETP 68, 609 (1989)]
- S.E. Korshunov
  Phase diagram of a chain of dissipative Josephson junctions
  Europhys. Lett. 9, 107 & 839E (1989)

2D QUANTUM ISING AND DIMER MODELS (2011-2012)

- T.Coletta, J.-D. Picon, S.E. Korshunov and F. Mila
  Phase diagram of the fully frustrated transverse-field Ising model on the honeycomb lattice
  Phys. Rev. B 83, 054402 (2011) [arXiv:1006.5287]
- D.A. Ivanov and S.E. Korshunov
  Continuous interpolation between the fully frustrated Ising and quantum dimer models
  Phys. Rev. B 83, 235129 (2011) [arXiv:1102.1912]
- S.E. Korshunov
  Finite-temperature phase transitions in the quantum fully frustrated transverse-field Ising models
  Phys. Rev. B 86, 014429 (2012) [arXiv:1207.1657]
- S. Wenzel, T. Coletta, S.E. Korshunov, and F. Mila
  Evidence of columnar order in the fully frustrated transverse field Ising model on the square lattice
  Phys. Rev. Lett. 109, 187202 (2012) [arXiv:1207.1618]

2D STATISTICAL MECHANICS

review article (2006)

- S.E. Korshunov
  Phase transitions in two-dimensional systems with continuous degeneracy
  Physics - Uspekhi 49, 225 (2006) [Usp. Fiz. Nauk 176, 233 (2006)]

a) XY models without frustration (1985-1991, 2007)

- S.E. Korshunov
  Possible splitting of a phase transition in a 2D XY-model
  Pis'ma ZhETF 41, 216 (1985) [JETP Lett. 41, 263 (1985)]
- S.E. Korshunov
  Phase diagram of the modified XY-model
  J. Phys. C 19, 4427 (1986)
- A. Vallat, S.E. Korshunov and H. Beck
  XY model on a Sierpinski gasket
  Phys. Rev. B 43, 8482 (1991)
- S.E. Korshunov
  Comment on "Probing vortex unbinding via dipole fluctuations"
  Phys.Rev. B 76, 087401 (2007)

b) uniformly frustrated XY models (1986, 1995-2005, 2012)

- S.E. Korshunov
  Phase transitions in 2D uniformly frustrated XY-models. II. General scheme
  J. Stat. Phys. 43, 17 (1986)
- S.E. Korshunov, A. Vallat and H. Beck
  Frustrated XY-models with accidental degeneracy of the ground state
  Phys. Rev. B 51, 3071 (1995)
- V. Cataudella, G. Franzese, S.E. Korshunov and R. Fazio
  How the next-nearest-neighbor interactions change the phase diagram of a fully frustrated XY

model?
Physica B 284-288, 431 (2000)

- G. Franzese, V. Cataudella, S.E. Korshunov and R. Fazio
  Fully frustrated XY model with next-nearest neighbor interaction
  Phys. Rev. B 62, R9287 (2000) [arXiv:cond-mat/0004495]
- S.E. Korshunov
  Vortex ordering in fully frustrated superconducting systems with a dice lattice
  Phys. Rev. B 63, 134503 (2001) [arXiv:cond-mat/0007415]
- S.E. Korshunov
  Kink pairs unbinding on domain walls and the sequence of phase transitions in fully frustrated XY models
  Phys. Rev. Lett. 88, 167007 (2002) [arXiv:cond-mat/0106151]
- S.E. Korshunov and B. Doucot
  Fluctuations and vortex-pattern ordering in the fully frustrated XY model on a honeycomb lattice
  Phys. Rev. Lett. 93, 097003 (2004) [arXiv:cond-mat/0310536]
- S.E. Korshunov and B. Doucot
  Structure of the superconducting state in a fully frustrated wire network with dice lattice geometry
  Phys. Rev. B 70, 134507 (2004) [arXiv:cond-mat/0404388]
- S.E. Korshunov
  Fluctuation induced vortex pattern and its disordering in the fully frustrated XY model on a dice lattice
  Phys. Rev. B 71, 174501 (2005) [arXiv:cond-mat/0410705]
- S.E. Korshunov
  Uniformly frustrated XY model without a vortex-pattern ordering
  Phys. Rev. Lett. 94, 087001 (2005) [arXiv:cond-mat/0409575]
- S.E. Korshunov
  Ordered phases and phase transitions in the fully frustrated XY model on a honeycomb lattice
  Phys. Rev. B 85, 134526 (2012) [arXiv:1112.3723]

c) antiferromagnets with triangular and kagome lattices (1985-1993, 2005-2013)

- S.E. Korshunov
  Antiferromagnetic XY-model on a triangular lattice: ordered states in the magnetic field
  Pis'ma ZhETF 41, 525 (1985) [JETP Lett. 41, 641 (1985)]
- S.E. Korshunov
  Phase diagram of the antiferromagnetic XY-model with a triangular lattice in an external magnetic field
  J. Phys. C. 19, 5927 (1986)
- S.E. Korshunov and G.V. Uimin
  Phase transitions in 2D uniformly frustrated XY-models. I. Antiferromagnetic model on a triangular lattice
  J. Stat. Phys. 43, 1 (1986)
- S.E. Korshunov
  Chiral phase of the Heisenberg antiferromagnet with triangular lattice
  Phys. Rev. B 47, 6165 (1993)
- S.E. Korshunov
  Phase transitions in the antiferromagnetic XY model with a kagome lattice
  Phys. Rev. B 65, 054416 (2002) & 77, 149902(E) (2008) [arXiv:cond-mat/0106463]
- S.E. Korshunov
  Nature of phase transition(s) in the striped phase of a triangular-lattice Ising antiferromagnet
  Phys. Rev. B 72, 144417 (2005) [arXiv:cond-mat/0506722]
- S.E. Korshunov, F. Mila, and K. Penc
  Degeneracy and ordering of the noncoplanar phase of the classical bilinear-biquadratic Heisenberg model on the triangular lattice
  Phys. Rev. B 85, 174420 (2012) [arXiv:1202.3214]

- S. Wenzel, S.E. Korshunov, F. Mila, and K. Penc
  Zero-temperature Monte Carlo study of the noncoplanar phase of the classical bilinear-biquadratic Heisenberg model on the triangular lattice
  Phys. Rev. B 88, 094404 (2013) [arXiv:1305.6418]

LAYERED SUPERCONDUCTORS (1990-1992)

- S.E. Korshunov
  Vortex rings and phase transition in layered lattice superconductor
  Europhys. Lett. 11, 757 (1990)
- S.E. Korshunov
  Fluctuations and melting of the uniaxial vortex crystal in a layered superconductor
  Europhys. Lett. 15, 771 (1991)
- S.E. Korshunov and A.I. Larkin
  Problem of Josephson-vortex-lattice melting in layered superconductors
  Phys. Rev. B 46, 6395 (1992)

QUENCHED DISORDER

a) superconducting arrays and films (1992-1996)

- S.E. Korshunov
  Disorder-induced first-order transition in superconducting films
  Phys. Rev. B 46, 6615 (1992)
- S.E. Korshunov
  Destruction of superconductivity in Josephson junction arrays by positional disorder
  Helv. Phys. Acta 65, 492 (1992)
- S.E. Korshunov
  Possible destruction of the ordered phase in Josephson junction arrays with positional disorder
  Phys. Rev. B 48, 1124 (1993)
- T. Nattermann, S. Scheidl, S.E. Korshunov and M.S. Li
  Absence of reentrance in two-dimensional XY-model with random phase shift
  J. Physique I 5, 565 (1995) [arXiv:cond-mat/9501120]
- S.E. Korshunov and T. Nattermann
  Absence of reentrance in superconducting arrays with positional disorder
  Phys. Rev. B 53, 2746 (1996)
- S.E. Korshunov and T. Nattermann
  Phase diagram of a Josephson junction array with positional disorder
  Physica B 222, 280 (1996)
- A.-L. Eichenberger, J. Affolter, M. Willemin, M. Mombelli, H. Beck, P. Martinoli and S.E. Korshunov
  Dynamic measurement of percolative critical exponents in disordered Josephson junction arrays
  Phys. Rev. Lett. 77, 3905 (1996)

b) vortex glass (1993-2001)

- S.E. Korshunov
  Replica symmetry breaking in vortex glasses
  Phys. Rev. B 48, 3969 (1993)
- S.E. Korshunov
  Stability analysis of a two-dimensional uniaxial vortex glass
  Phys. Rev. B 53, 14513 (1996)
- S.E. Korshunov
  Low frequency response of a collectively pinned vortex manifold
  Phys. Rev. B 63, 174514 (2001) [arXiv:cond-mat/0007387]

- M. Calame, S.E. Korshunov, Ch. Leemann and P. Martinoli
  Collective pinning of a frozen vortex liquid in ultrathin superconducting YBCO films
  Phys. Rev. Lett. 86, 3630 (2001) [arXiv:cond-mat/0009308]

c) directed polymer problem (elastic string in a random medium) (1998, 2007-2013)

- S.E. Korshunov and Vik.S. Dotsenko
  Fluctuations of a one-dimensional directed polymer in a random potential with finite correlation radius
  J. Phys. A: Math. Gen. 31, 2591 (1998) [arXiv:cond-mat/9709258]
- I.V. Kolokolov and S.E. Korshunov
  Optimal fluctuation approach to a directed polymer in random medium
  Phys. Rev. B 75, 141201(R) (2007) [arXiv:0704.1705]
- I.V. Kolokolov and S.E. Korshunov
  Universal and non-universal tails of distribution functions in the directed polymer and KPZ problems
  Phys. Rev. B 78, 024206 (2008) [arXiv:0805.0402]
- V.S. Dotsenko, L.B.Ioffe, V.B. Geshkenbein, S.E. Korshunov and G. Blatter
  Joint free-energy distribution in the random directed polymer problem
  Phys. Rev. Lett. 100, 050601 (2008) [arXiv:0705.0220]
- I.V. Kolokolov and S.E. Korshunov
  Explicit solution of the optimal fluctuation problem for an elastic string in a random potential
  Phys. Rev. E 80, 031107 (2009) [arXiv:0904.1673]
- S.E. Korshunov, V.B. Geshkenbein, and G. Blatter
  Finite-temperature perturbation theory for the random directed polymer problem
  Zh. Eksp. Teor. Fiz. 144, 653-661 (2013) [JETP 117, 571-579 (2013)]

JOSEPHSON-JUNCTION ARRAYS and CHAINS (1989-2003, 2010)

- S.E. Korshunov
  Effect of dissipation on the low-temperature properties of a tunnel-junction chain
  Zh. Eksp. Teor. Fiz. 95, 1058 (1989) [Sov. Phys. JETP 68, 609 (1989)]
- S.E. Korshunov
  Phase diagram of a chain of dissipative Josephson junctions
  Europhys. Lett. 9, 107 & 839E (1989)
- S.E. Korshunov
  Anomalous vortex diffusion in proximity junction arrays
  Phys. Rev. B 50, 13616 (1994)
- R. Théron, S.E. Korshunov, J.B. Simond, Ch. Leemann, and P. Martinoli
  Observation of domain-wall superlattice states in a frustrated triangular array of Josephson junctions
  Phys. Rev. Lett. 72, 562 (1994)
- R. Meyer, B. Jeanneret, S.E. Korshunov, and P. Martinoli
  Observation of dilational symmetry breaking in a superconducting array of Sierpinski gaskets
  Physica B 194-196, 1725 (1994)
- S.E. Korshunov, R. Meyer and P. Martinoli
  Magnetoinductance of superconducting Sierpinski gasket
  Phys. Rev. B 51, 5914 (1995)
- A.-L. Eichenberger, J. Affolter, M. Willemin, M. Mombelli, H. Beck, P. Martinoli and S.E. Korshunov
  Dynamic measurement of percolative critical exponents in disordered Josephson junction arrays
  Phys. Rev. Lett. 77, 3905 (1996)
- M.V. Feigel'man, S.E. Korshunov and A.B. Pugachev
  Parity effect and charge binding transition in submicron Josephson junction arrays
  Pis'ma v ZhETF 65, 541 (1997) [JETP Lett. 65, 566 (1997); cond-mat/9703174]
- R. Meyer, S.E. Korshunov, Ch. Leemann and P. Martinoli
  Dimensional crossover and hidden incommensurability in Josephson junction arrays of periodically

repeated Sierpinski gaskets
Phys. Rev. B 66, 104503 (2002) [arXiv:cond-mat/0205105]

- S.E. Korshunov
  Fluctuation-dissipation theorem and flux noise in overdamped Josephson-junction arrays
  Phys. Rev. B 66, 104513 (2002) [arXiv:cond-mat/0203531]
- S.E. Korshunov
  Magnetoinductance of Josephson junction arrays with frozen vortex diffusion
  Phys. Rev. B 68, 094512 (2003) [arXiv:cond-mat/0303581]
- S.E. Korshunov
  Sequence of phase transitions induced in an array of Josephson junctions by their crossover to pi-state
  EPL 89, 17004 (2010) [arXiv:0909.5114]

MISCELLANEOUS (1982, 1988)

- S.E. Korshunov
  On stability of shock waves with finite relaxation zone
  Izv. Akad. Nauk - Mekh. Zhidk. i Gaza No.5, p.176-179 (1982) [Fluid Dyn. {\bf 17}, 802-806 (1982)]
- S.E. Korshunov and G.V. Uimin
  Exact solutions in the two-dimensional wetting problem
  Zh. Eksp. Teor. Fiz. 94, No. 6, 270 (1988) [Sov. Phys. JETP 67, 1242 (1988)]
- S.E. Korshunov
  Multipartite exchange processes and the phase transition of an electron crystal in a magnetic field
  Zh. Eksp. Teor. Fiz. 94, No. 11, 328 (1988) [Sov. Phys. JETP 67, 2360 (1988)]

Полный список публикаций (в хронологическом порядке):

1. B. Gränz, S.E. Korshunov, V.B. Geshkenbein, G. Blatter, Competing structures in two dimensions: Square-to-hexagonal transition, Phys. Rev. B 94, 054110 (2016), WoS: 000381475300001, Scopus: 2-s2.0-84985937186.

2. A. Smerald, S. Korshunov, F. Mila, Topological Aspects of Symmetry Breaking in Triangular-Lattice Ising Antiferromagnets, Phys. Rev. Lett. 116, 197201 (2016); arXiv:1602.01747, WoS: 000376011400006, Scopus: 2-s2.0-84969244139.

3. S.E. Korshunov, Physical realization of the generalized fully frustrated XY model in an array of SFS junctions, Phys. Rev. B 92, 064506 (2015); arXiv:1507.06485, WoS: 000359343800006, Scopus: 2-s2.0-84939838918.

4. B. Gränz, S.E. Korshunov, V.B. Geshkenbein, G. Blatter, Competing structures in two-dimensional trapped dipolar gases, Phys. Rev. B 90, 060101(R) (2014); arXiv:1502.03214, WoS: 000339994200001, Scopus: 2-s2.0-84940289957.

5. T. Coletta, S.E. Korshunov, F. Mila, Semiclassical evidence of columnar order in the fully frustrated transverse-field Ising model on the square lattice, Phys. Rev. B 90, 205109 (2014); arXiv:1408.3515, WoS: 000345171300005, Scopus: 2-s2.0-84911092204.

6. S. Wenzel, S.E. Korshunov, K. Penc, F. Mila, Zero-temperature Monte Carlo study of the non-coplanar phase of the classical bilinear-biquadratic Heisenberg model on the triangular lattice, Phys. Rev. B 88, 094404 (2013) [14 pages]; arXiv:1305.6418, WoS: 000323942400002, Scopus: 2-s2.0-84884886266.

7. S.E. Korshunov, V.B. Geshkenbein, G. Blatter, Finite-temperature perturbation theory for the random directed polymer problem, ЖЭТФ, 144(3), 653-661 (2013) [JETP 117(3), 570-578 (2013)], WoS: 000325709500015, Scopus: 2-s2.0-84886415987.

8. А.Ф. Андреев, И.Р. Габитов, В.Е. Захаров, С.В. Иорданский, Е.И. Кац, И.В. Колоколов, С.Е. Коршунов, М.Р. Трунин, Г.Е. Фалькович, М.В. Фейгельман, Д.Е. Хмельницкий, Г.М. Элиашберг, Владимир Валентинович Лебедев (к 60-летию со дня рождения), Успехи физ. наук, 183 (6), 669-670 (2013) [A.F. Andreev, I.R. Gabitov, V.E. Zakharov, S.V. Iordanskii, E.I. Kats, I.V. Kolokolov, S.E. Korshunov, M.R. Trunin, G.E. Falkovich, M.V. Feigel'man, D.E. Khmel'nitskii, G.M. Eliashberg, Vladimir Valentinovich Lebedev (on his 60th birthday), Phys. Usp. 56(6), 637-638 (2013)], WoS: 000324296600010.

9. S.E. Korshunov, Ordered phases and phase transitions in the fully frustrated XY model on a honeycomb lattice, Phys. Rev. B 85, 134526 (2012) [17 pages]; arXiv:1112.3723, WoS: 000303235000001, Scopus: 2-s2.0-84860430103.

10. S.E. Korshunov, F. Mila, K. Penc, Degeneracy and ordering of the noncoplanar phase of the classical bilinear-biquadratic Heisenberg model on the triangular lattice, Phys. Rev. B 85, 174420 (2012) [9 pages]; arXiv:1202.3214, WoS: 000304081100007, Scopus: 2-s2.0-84861674457.

11. S.E. Korshunov, Finite-temperature phase transitions in the quantum fully frustrated transverse-field Ising models, Phys. Rev. B 86, 014429 (2012) [4 pages]; arXiv:1207.1657, WoS: 2-s2.0-84864449621.

12. S. Wenzel, T. Coletta, S.E. Korshunov, F. Mila, Evidence for Columnar Order in the Fully Frustrated Transverse Field Ising Model on the Square Lattice, Phys. Rev. Lett. 109, 187202 (2012) [5 pages]; arXiv:1207.1618, WoS: 000310612000036, Scopus: 2-s2.0-84868330604.

13. T. Coletta, J. -D. Picon, S.E. Korshunov, F. Mila, Phase diagram of the fully frustrated transverse-field Ising model on the honeycomb lattice, Phys. Rev. B 83, 054402 (2011) [14 pages]; arXiv:1006.5287, WoS: 000286981400002, Scopus: 2-s2.0-79953214421.

14. D.A. Ivanov, S.E. Korshunov, Continuous interpolation between the fully frustrated Ising and quantum dimer models, Phys. Rev. B 83, 235129 (2011) [9 pages]; arXiv:1102.1912, WoS: 000291697600001, Scopus: 2-s2.0-79961203081.

15. S.E. Korshunov, Sequence of phase transitions induced in an array of Josephson junctions by their crossover to π-state, Europhys. Lett., 89, 17004 (2010) (5pp); arXiv:0909.5114, Scopus: 2-s2.0-78650882199.

16. I.V. Kolokolov, S.E. Korshunov, Explicit solution of the optimal fluctuation problem for an elastic string in a random medium, Phys. Rev. E 80, 031107 (2009) [9 pages]; arXiv:0904.1673.

17. S.E. Korshunov, Two-level systems and mass deficit in quantum solids, Письма в ЖЭТФ, 90 (2), 167-170 (2009) [JETP Lett. 90(2), 156-159 (2009)]; arXiv:0906.4627.

18. I.V. Kolokolov, S.E. Korshunov, Universal and nonuniversal tails of distribution functions in the directed polymer and Kardar-Parisi-Zhang problems, Phys. Rev. B 78, 024206 (2008); arXiv:0805.0402.

19. V.S. Dotsenko, L.B. Ioffe, V.B. Geshkenbein, S.E. Korshunov, G. Blatter, Joint Free-Energy Distribution in the Random Directed Polymer Problem, Phys. Rev. Lett., 100, 050601 (2008); arXiv:0705.0220.

20. I.V. Kolokolov, S.E. Korshunov, Optimal fluctuation approach to a directed polymer in a random medium, Phys. Rev. B 75, 140201(R) (2007) (4 pages); arXiv:0704.1705.

21. S.E. Korshunov, Comment on "Probing vortex unbinding via dipole fluctuations", Phys. Rev. B 76, 087401 (2007); cond-mat/0607632.

22. С.Е. Коршунов, Фазовые переходы в двумерных системах с непрерывным вырождением, Успехи физ. наук, 176 (3), 233-274 (2006) [S.E. Korshunov, Phase transitions in two-dimensional systems with continuous degeneracy, Phys. Usp. 49 (3), 225-262 (2006)].

23. S.E. Korshunov, Fluctuation-induced vortex pattern and its disordering in the fully frustrated XY model on a dice lattice, Phys. Rev. B 71, 174501 (2005) (20 pages); cond-mat/0410705.

24. S.E. Korshunov, Nature of phase transitions in the striped phase of a triangular-lattice Ising antiferromagnet, Phys. Rev. B 72, 144417 (2005) (10 pages); cond-mat/0506722.

25. S.E. Korshunov, Uniformly frustrated XY model without a vortex-pattern ordering, Phys. Rev. Lett. 94, 087001 (2005); cond-mat/0409575.

26. S.E. Korshunov, B. Douçot, Structure of the superconducting state in a fully frustrated wire network with dice lattice geometry, Phys. Rev. B 70, 134507 (2004) [13 pages]; cond-mat/0404388.

27. S.E. Korshunov, B. Douçot, Fluctuations and vortex-pattern ordering in the fully frustrated XY model on a honeycomb lattice, Phys. Rev. Lett. 93, 097003 (2004); cond-mat/0310536.

28. S.E. Korshunov, Magnetoinductance of Josephson junction array with frozen vortex diffusion, Phys. Rev. B 68, 094512 (2003) [5 pages]; cond-mat/0303581.

29. S.E. Korshunov, Phase transitions in the antiferromagnetic XY model with a kagomé lattice, Phys. Rev. B 65, 054416 (2002) [11 pages]; Erratum - Phys. Rev. B 77, 149902(E) (2008); cond-mat/0106463.

30. R. Meyer, S.E. Korshunov, Ch. Leemann, P. Martinoli, Dimensional crossover and hidden incommensurability in Josephson junction arrays of periodically repeated Sierpinski gaskets, Phys. Rev. B 66, 104503 (2002) [12 pages]; cond-mat/0205105.

31. S.E. Korshunov, Fluctuation-dissipation theorem and flux noise in overdamped Josephson junction arrays, Phys. Rev. B 66, 104513 (2002) [8 pages]; cond-mat/0203531.

32. S.E. Korshunov, Kink pairs unbinding on domain walls and the sequence of phase transitions in fully frustrated XY models, Phys. Rev. Lett. 88, 167007 (2002); cond-mat/0106151.

33. S.E. Korshunov, Analog of Kelvin-Helmholtz instability on a free surface of a superfluid liquid, Письма в ЖЭТФ, 75 (8), 496-498 (2002) [JETP Lett. 75(8), 423-425 (2002)]; cond-mat/0203374.

34. S.E. Korshunov, Vortex ordering in fully frustrated superconducting systems with a dice lattice, Phys. Rev. B 63, 134503 (2001) [5 pages]; cond-mat/0007415.

35. S.E. Korshunov, Low-frequency response of a collectively pinned vortex manifold, Phys. Rev. B 63, 174514 (2001) [8 pages]; cond-mat/0007387.

36. M. Calame, S.E. Korshunov, Ch. Leemann, P. Martinoli, Collective pinning of a frozen vortex liquid in ultrathin superconducting YBa_2Cu_3O_7 films, Phys. Rev. Lett. 86(16), 3630-3633 (2001); cond-mat/0009308.

37. G. Franzese, V. Cataudella, S.E. Korshunov, R. Fazio, Fully frustrated XY model with next-nearest-neighbor interaction, Phys. Rev. B 62(14), R9287-R9290 (2000); cond-mat/0004495.

38. V. Cataudella, G. Franzese, S.E. Korshunov, R. Fazio, How the next-nearest-neighbor interactions change the phase diagram of a fully frustrated XY model?, Physica B 284-288 (Pt.1), 431-432 (2000).

39. S.E. Korshunov, Vik.S. Dotsenko, Fluctuations of a one-dimensional directed polymer in a random potential with finite correlation radius, J. Phys. A 31(11), 2591-2601 (1998); cond-mat/9709258, WoS: 000072801000009, ADS: 1998JPhA...31.2591K.

40. M.V. Feigel'man, S.E. Korshunov, A.B. Pugachev, Parity effect and charge-binding transition in submicron Josephson junction arrays, Письма в ЖЭТФ, 65 (7), 541-546 (1997) [JETP Lett., 65 (7), 566-571 (1997)]; cond-mat/9703174, WoS: A1997WZ43400010, Scopus: 2-s2.0-0007126218, ADS: 1997JETPL..65..566F, РИНЦ: 13271159.

41. S.E. Korshunov, T. Nattermann, Absence of reentrance in superconducting arrays with positional disorder, Phys. Rev. B 53 (5), 2746-2755 (1996), WoS: A1996TV39300089, Scopus: 2-s2.0-0000654650, ADS: 1996PhRvB..53.2746K, РИНЦ: 13243433.

42. S.E. Korshunov, Stability analysis of a two-dimensional uniaxial vortex glass, Phys. Rev. B 53(21), 14513-14529 (1996), WoS: A1996UQ72600075, Scopus: 2-s2.0-0346486457, ADS: 1996PhRvB..5314513K, РИНЦ: 13240820.

43. A.-L. Eichenberger, J. Affolter, M. Willemin, M. Mombelli, H. Beck, P. Martinoli, S.E. Korshunov, Dynamic measurement of percolative critical exponents in disordered Josephson junction

arrays, Phys. Rev. Lett. 77(18), 3905-3908 (1996), WoS: A1996VP22500054, Scopus: 2-s2.0-0030259391, ADS: 1996PhRvL..77.3905E, РИНЦ: 13248724.

44. S.E. Korshunov, T. Nattermann, Phase diagram of a Josephson junction array with positional disorder, Physica B 222 (4), 280-286 (1996), WoS: A1996UW43700006, Scopus: 2-s2.0-0030171651, ADS: 1996PhyB..222..280K, РИНЦ: 13233643.

45. T. Nattermann, S. Scheidl, S.E. Korshunov, M.S. Li, Absence of Reentrance in the Two-Dimensional XY-Model with Random Phase Shift, J. Phys. I France, 5 (5), 565-572 (1995); cond-mat/9501120, WoS: A1995QW50600005, Scopus: -, ADS: 1995JPhy1...5..565N.

46. S.E. Korshunov, A. Vallat, H. Beck, Frustrated XY models with accidental degeneracy of the ground state, Phys. Rev. B 51 (5), 3071-3080 (1995), WoS: A1995QG31200057, Scopus: 2-s2.0-0001561767, ADS: 1995PhRvB..51.3071K, РИНЦ: 30809035.

47. S.E. Korshunov, R. Meyer, P. Martinoli, Magnetoinductance of a superconducting Sierpinski gasket, Phys. Rev. B 51 (9), 5914-5926 (1995), WoS: A1995QL71700039, Scopus: 2-s2.0-0000970759, ADS: 1995PhRvB..51.5914K, РИНЦ: 30814819.

48. S.E. Korshunov, Anomalous vortex diffusion in proximity-junction arrays, Phys. Rev. B 50(18), 13616-13621 (1994), WoS: A1994PT41000060, Scopus: 2-s2.0-0000753256, ADS: 1994PhRvB..5013616K, РИНЦ: 30837477.

49. R. Théron, S.E. Korshunov, J.B. Simond, Ch. Leemann, P. Martinoli, Observation of domain-wall superlattice states in a frustrated triangular array of Josephson junctions, Phys. Rev. Lett. 72 (4), 562-565 (1994), WoS: A1994MR97600028, Scopus: 2-s2.0-0000251518, ADS: 1994PhRvL..72..562T, РИНЦ: 30806994.

50. R. Meyer, B. Jeanneret, S.E. Korshunov, P. Martinoli, Observation of dilational symmetry breaking in a superconducting array of Sierpinski gaskets, Physica B 194-196 (Pt.2), 1725-1726 (1994), WoS: A1994NC27500187, Scopus: 2-s2.0-0028759971, ADS: 1994PhyB..194.1725M, РИНЦ: 31134696.

51. S.E. Korshunov, Chiral phase of the Heisenberg antiferromagnet with a triangular lattice, Phys. Rev. B 47(10), 6165-6168 (1993), WoS: A1993KT87900078, Scopus: 2-s2.0-0008596406, ADS: 1993PhRvB..47.6165K, РИНЦ: 30809450.

52. S.E. Korshunov, Possible destruction of the ordered phase in Josephson-junction arrays with positional disorder, Phys. Rev. B 48 (2), 1124-1127 (1993), WoS: A1993LM88500050, Scopus: 2-s2.0-0000854901, ADS: 1993PhRvB..48.1124K, РИНЦ: 30812647.

53. S.E. Korshunov, Replica symmetry breaking in vortex glasses, Phys. Rev. B 48 (6), 3969-3975 (1993), WoS: A1993LT22900043, Scopus: 2-s2.0-0000843107, ADS: 1993PhRvB..48.3969K, РИНЦ: 30814639.

54. S.E. Korshunov, Destruction of superconductivity in Josephson junction arrays by positional disorder, Helvetica Physica Acta, 65 (2-3), 492-493 (1992), WoS: A1992HR05300110, Scopus: -.

55. S.E. Korshunov, A.I. Larkin, Problem of Josephson-vortex-lattice melting in layered superconductors, Phys. Rev. B 46(10), 6395-6399 (1992), WoS: A1992JM40900056, Scopus: 2-s2.0-0001385708, ADS: 1992PhRvB..46.6395K, РИНЦ: 30799978.

56. S.E. Korshunov, Disorder-induced first-order transition in superconducting films, Phys. Rev. B 46(10), 6615-6617 (1992), WoS: A1992JM40900087, Scopus: 2-s2.0-4243401878, ADS: 1992PhRvB..46.6615K, РИНЦ: 30943652.

57. S.E. Korshunov, Fluctuations and Melting of the Uniaxial Vortex Crystal in a Layered Superconductor, Europhys. Lett., 15 (7), 771-776 (1991), WoS: A1991FY22800013, Scopus: 2-s2.0-84956274771, РИНЦ: 30992056.

58. S.E. Korshunov, Instability of Superfluid Helium Free Surface in the Presence of Heat Flow, Europhys. Lett., 16 (7), 673-675 (1991), WoS: A1991GL09200011, Scopus: 2-s2.0-84956225411, РИНЦ: 30991572.

59. A. Vallat, S.E. Korshunov, H. Beck, XY model on a Sierpinski gasket, Phys. Rev. B 43(10), 8482-8486 (1991), WoS: A1991FE55100045, Scopus: 2-s2.0-0011127864, РИНЦ: 30860976.

60. S.E. Korshunov, Vortex Rings and Phase Transition in Layered-Lattice Superconductors, Europhys. Lett., 11 (8), 757-762 (1990), WoS: A1990DA28500011, Scopus: 2-s2.0-84913159062.

61. S.E. Korshunov, Phase Diagram of a Chain of Dissipative Josephson Junctions, Europhys. Lett., 9 (2), 107-111 (1989); Erratum — ibid, 9(8) 839 (1989), WoS: A1989U815700003, Scopus: 2-s2.0-84891565912.

62. С.Е. Коршунов, Влияние диссипации на низкотемпературные свойства цепочки туннельных контактов, ЖЭТФ, 95 (3), 1058-1075 (1989) [S.E. Korshunov, Effect of dissipation on the low-temperature properties of a tunnel-junction chain, Sov. Phys. JETP 68(3), 609-618 (1989)], WoS: A1989T789100025.

63. С.Е. Коршунов, Переход в сверхтекучее состояние ступени на свободной поверхности квантового кристалла, ЖЭТФ, 95 (6), 2163-2169 (1989) [S.E. Korshunov, Transition to the superfluid state of a step on a free surface of a quantum crystal, Sov. Phys. JETP 68(6), 1250-1253 (1989)], WoS: A1989AE21900028.

64. S.E. Korshunov, Intersite vortex tunnelling in 2D lattice systems, Physica B 152 (1-2), 261-265 (1988), WoS: A1988Q602500041, Scopus: 2-s2.0-0024054221.

65. С.Е. Коршунов, Г.В. Уймин, Точные решения в двумерной задаче смачивания, ЖЭТФ, 94 (6), 270-288 (1988) [S.E. Korshunov, G.V. Uimin, Exact solutions in the two-dimensional wetting problem, Sov. Phys. JETP 67(6), 1242-1251 (1988)], WoS: A1988P114200027, MathSciNet: 0982411.

66. С.Е. Коршунов, Многочастичные обменные процессы м фазовый переход в находящемся в магнитном поле электронном кристалле, ЖЭТФ, 94(11), 328-330 (1988) [S.E. Korshunov, Multiparticle exchange processes and the phase transition of an electron crystal in a magnetic field, Sov. Phys. JETP 67(11), 2360-2361 (1988)], WoS: A1988R255300028.

67. С.Е. Коршунов, Влияние сжимаемости на квантовый распад метастабильной фазы при низких температурах, Физика низких темп., 14 (6), 575-579 (1988) [S.E. Korshunov, Effect of compressibility on the quantum decay of metastable phase at low temperatures, Sov. J. Low Temp. Phys. 14(6), 316-318 (1988)], WoS: A1988P540800002.

68. С.Е. Коршунов, Граничные условия и акустические коэффициенты для поверхности раздела He II – пар, ЖЭТФ, 92 (4), 1322-1330 (1987) [S.E. Korshunov, Boundary conditions and acoustic coefficients for an He II-vapor interface, Sov. Phys. JETP 65(4), 741-745 (1987)], WoS: A1987H136700016.

69. С.Е. Коршунов, Квантовомеханическое туннелирование с диссипацией в наклонном синусоидальном потенциале, ЖЭТФ, 92 (5), 1828-1833 (1987) [S.E. Korshunov, Quantum-mechanical tunneling with dissipation in a sloping sinusoidal potential, Sov. Phys. JETP 65(5), 1025-1028 (1987)], WoS: A1987H696400029.

70. С.Е. Коршунов, Подвижность диссипативной квантовой системы в периодическом потенциале, ЖЭТФ, 93 (4), 1526-1534 (1987) [S.E. Korshunov, Mobility of a dissipative quantum system in a periodic potential, Sov. Phys. JETP 66(4), 872-876 (1987)], WoS: A1987K620700039.

71. С.Е. Коршунов, Когерентное и некогерентное туннелирование в джозефсоновском контакте с "периодической" диссипацией, Письма в ЖЭТФ, 45 (7), 342-344 (1987) [S.E. Korshunov, Coherent and incoherent tunneling in a Josephson junction with a "periodic" dissipation, JETP Lett., 45 (7), 434-436 (1987)], WoS: A1987J719700010.

72. С.Е. Коршунов, Квантовая диффузия вихрей в двумерных решеточных системах, Письма в ЖЭТФ, 46(10), 385-388 (1987) [S.E. Korshunov, Quantum diffusion of vortices in 2D lattice systems, JETP Lett., 46(10), 485-489 (1987)], WoS: A1987N378300004, MathSciNet: 0940129.

73. S.E. Korshunov, Phase diagram of the modified XY model, J. Phys. C 19(23), 4427-4441 (1986), WoS: A1986D702900007, Scopus: 2-s2.0-18144425351.

74. S.E. Korshunov, Phase diagram of the antiferromagnetic XY model with a triangular lattice in an external magnetic field, J. Phys. C 19(29), 5927-5935 (1986), WoS: A1986E530200014, Scopus: 2-s2.0-0000711319.

75. S.E. Korshunov, G.V. Uimin, Phase transitions in two-dimensional uniformly frustrated XY models. I. Antiferromagnetic model on a triangular lattice, J. Stat. Phys., 43 (1-2), 1-16 (1986), WoS: A1986C491100001, Scopus: 2-s2.0-30244544608, MathSciNet: 0843763.

76. S.E. Korshunov, Phase transitions in two-dimensional uniformly frustrated XY models. II. General scheme, J. Stat. Phys., 43 (1-2), 17-32 (1986), WoS: A1986C491100002, Scopus: 2-s2.0-0002568186, MathSciNet: 0843764.

77. С.Е. Коршунов, Нефононный механизм трения для линейных дефектов в квантовых кристаллах, ЖЭТФ, 90 (6), 2118-2136 (1986) [S.E. Korshunov, Zero-phonon friction mechanism for linear defects in quantum crystals, Sov. Phys. JETP 63(6), 1242-1251 (1986)], WoS: A1986D123500022.

78. С.Е. Коршунов, К динамике роста квантового кристалла, ЖЭТФ, 91 (4), 1466-1482 (1986) [S.E. Korshunov, The growth dynamics of a quantum crystal, Sov. Phys. JETP 64(4), 864-873 (1986)], WoS: A1986E769400032.

79. S.V. Iordansky, S.E. Korshunov, Phase transitions on quantum crystal interfaces, J. Low Temp. Phys., 58 (5-6), 425-438 (1985), WoS: A1985ACQ9000003, Scopus: 2-s2.0-0022028296.

80. С.Е. Коршунов, Двумерная статистическая ферми-жидкость с p-спариванием, ЖЭТФ, 89 (2), 531-539 (1985) [S.E. Korshunov, Two-dimensional superfluid Fermi liquid with p-pairing, Sov. Phys. JETP 62(2), 301-306 (1985)], WoS: A1985AQU0100015.

81. С.Е. Коршунов, О возможности расщепления фазового перехода в двумерной XY-модели, Письма в ЖЭТФ, 41 (5), 216-218 (1985) [S.E. Korshunov, Possible splitting of a phase transition in a 2D XY model, JETP Lett., 41 (5), 263-266 (1985)], WoS: A1985AML9600015.

82. С.Е. Коршунов, Антиферромагнитная XY-модель на треугольной решетке: упорядоченные состояния в магнитном поле, Письма в ЖЭТФ, 41(12), 525-527 (1985) [S.E. Korshunov, Antiferromagnetic XY model on a triangular lattice: ordered states in a magnetic field, JETP Lett., 41(12), 641-643 (1985)], WoS: A1985ATB3000014.

83. С.В. Иорданский, С.Е. Коршунов, Квантовые модели поверхности кристалла, ЖЭТФ, 87 (3), 927-942 (1984) [S.V. Iordanskii, S.E. Korshunov, Quantum models of a crystal surface, Sov. Phys. JETP, 60(3), 528-536 (1984)], WoS: A1984TN38300025.

84. С.В. Иорданский, С.Е. Коршунов, Фазовые переходы на поверхности квантового кристалла, Письма в ЖЭТФ, 39(10), 466-469 (1984) [S.V. Iordanskii, S.E. Korshunov, Phase transitions on the surface of a quantum crystal, JETP Lett., 39(10), 567-570 (1984)], WoS: A1984TT10600006.

85. С.В. Иорданский, С.Е. Коршунов, Квантовые эффекты в переходе ограничения, Письма в ЖЭТФ, 38(11), 542-544 (1983) [S.V. Iordanskii, S.E. Korshunov, Quantum effects in a faceting transition, JETP Lett., 38(11), 655-657 (1983)], WoS: A1983ST18100010.

86. С.Е. Коршунов, Поверхностные спиновые волны в ^{3}He-B, ЖЭТФ, 83 (5), 1788-1793 (1982) [S.E. Korshunov, Surface spin waves in ^{3}He-B, Sov. Phys. JETP, 56(5), 1034-1036 (1982)], WoS: A1982PS22500018.

87. С.В. Иорданский, С.Е. Коршунов, И.А. Ларкин, Феноменологический вывод условий на границе раздела сверхтекучей жидкости и твердого тела, ЖЭТФ, 83 (6), 2110-2120 (1982) [S.V. Iordanskii, S.E. Korshunov, I.A. Larkin, Phenomenological derivation of the conditions at the interface between a superfluid liquid and a solid, Sov. Phys. JETP, 56(6), 1224-1229 (1982)], WoS: A1982PX03100014.

88. С.Е. Коршунов, А.В. Смирнов, Затухание волн кристаллизации в He^3 при низких температурах, ЖЭТФ, 83 (6), 2128-2136 (1982) [S.E. Korshunov, A.V. Smirnov, Damping of crystallization waves in He^3 at low temperatures, Sov. Phys. JETP, 56(6), 1234-1238 (1982)], WoS: A1982PX03100016.

89. S.E. Korshunov, Stability of shock waves with finite relaxation region (in Russian), Изв. АН СССР, Сер. механика жидкости и газа, 17(5), 176–179 (1982) [S.E. Korshunov, Stability of shock waves with finite relaxation region, Fluid Dynamics, 17(5), 802-806 (1982)], Scopus: 2-s2.0-0020179073.

Ссылки:

http://home.itp.ac.ru/~serkor/index-rus.html (резюме), http://home.itp.ac.ru/~serkor/index.html (english version)

https://www.itp.ac.ru/ru/persons/korshunov-sergey-evgenevich/ (персональная страница на сайте ИТФ с полным списком публикаций)