

LIST OF PUBLICATIONS

of Leonid PASTUR

1. On the dislocation model of a twin (with A.Kosevich).
Soviet Physics Solid State **3**, 935-939 (1961)
2. Form a thin twin inclined at an angle to the surface (with A.Kosevich).
Soviet Physics Solid State, **3**, 1363-1365 (1961)
3. Fields of dislocation in an anisotropic and inhomogeneous medium (with E.Feldman, A.Kosevich, V.Kosevich).
Soviet Physics Solid State, **4**, 1896-1900 (1962)
4. Relation between the dislocation theory of twins and the macroscopic theory of I.Lifshitz (with A.Kosevich).
Soviet Physics Solid State, **5**, 1439-1444 (1963)
5. Dislocation description of the plastic deformation in the strip (with V.Bojko and E.Feldman).
Soviet Physics Solid State, **8**, 2384-2389 (1966)
6. Fields of dislocation and linear charges in piezoelectric crystals (with A.Kosevich and E.Feldman).
Crystallography (Russian), **12**, 916-923 (1967)
7. On the spectrum of random matrices (with V.Marchenko).
Teor. Funkcii, Funkcional. Anal. i Prilozhen. (Russian), **4**, 122-145 (1967)
8. The eigenvalue distribution in some ensembles of random matrices (with V.Marchenko).
Math.USSR Sbornik, **1**, 457-483 (1967)
9. Average number of states in some model problem (with M.Bendersky).
Soviet Physics J.E.T.P., **30**, 158-162 (1970)
10. On the spectrum of the one-dimensional Schrodinger equation with a random potential (with M.Bendersky).
Math.USSR Sbornik, **11**, 245-251 (1970)
11. On the Shroedinger equation with a random potential.
Teor.Math.Phys., **6**, 292-306 (1970)
12. Selfaveraging of the number of states of the Schroedinger equation with a random potential.
Mat. Fiz. i Funkcional. Anal.(Russian) **2** (1971)111-116 (1971)
13. On the spectrum of random matrices.
Teor.Math.Phys., **10**, 67-74 (1972)
14. On the eigenvalue distribution of the Schrodinger equation with a random potential.
Funct.Anal., Appl., **6**, 163-165 (1972)
15. On the elastic deformation due to the epitaxial crystal growth (with E.Feldman).
Soviet Physics Solid State, **14**, 2689-2692 (1972)

16. * ¹ Spectra of random self-adjoint operators.
Russian Mathematical Surveys, **28**, 1-67 (1973)
17. On the existence and continuity of the pressure in the quantum statistical mechanics.
Teor.Math.Phys., **14**, 157-163 (1973)
18. Spectral theory of the Kirkwood-Zalzburg equation in a finite volume.
Teor.Math.Phys., **18**, 165-171 (1974)
19. On the wave transmission coefficient for a thick layer of a randomly inhomogeneous medium (with E.Feldman).
Soviet Physics J.E.T.P., **40**, 241-243 (1974)
20. The distribution of the eigenvalues of Schrödinger's equation with a random potential. (Russian)
Mat.Fiz.i Func.Anal.(Russian), **5** 141-143 (1974)
21. * Energy spectrum of quasiparticles in one-dimensional disordered systems (with S.Gredeskul).
Soviet J.Low Temper.Physics, **1**, 135-152 (1975)
22. On the behavior of the density of states near the spectrum edges of one-dimensional disordered systems (with S.Gredeskul).
Teor.Math.Phys., **23**, 404-409 (1976)
23. On the asymptotic behavior of solution of second order equation with random coefficient (with M.Bendersky).
Teor.Funkcii, Funkcional.Anal. i Prilozhen.(Russian), **22**, 3-10, (1976)
24. * Fluctuation levels in disordered systems (with S.Gredeskul and I.Lifshitz).
Soviet J.Low Temper.Physics, **2**, 533-552 (1976)
25. Exactly soluble model of a spin glass (with A.Figotin).
Soviet Physics J.E.T.P. Letters, **25**, 348-353 (1977)
26. On the spectrum of Jacobian random matrices and the Schroedinger equation with a random potential on the whole axis.
In: Limit Theor. for Random Proc.(Russian), pp.152-166, Naukova Dumka, Kiev (1977).
27. The random Schroedinger operator has a pure point spectrum (with I.Goldsheidt and S.Molchanov).
Funct.Anal., Appl., **11**, 1-8 (1977)
28. On a model of the spin glass (with A.Figotin)
Soviet J.Low Temper.Physics, **3**, 378-383 (1977)
29. Behavior of some Wiener integrals for large times and the density of states of the random Schrodinger equation.
Teor.Math.Phys., **32**, 615-623 (1978)
30. On the theory of disordered spin systems (with A.Figotin).
Teor.Math.Phys., **35**, 403-414 (1978)
31. Density of states of one-dimensional disordered systems in the two-band approximation (with S.Gredeskul).
Soviet Physics J.E.T.P., **48**, 729-735 (1978)

¹here and below "*"denotes reviews and books

32. Ergodic properties of the distribution of eigenvalues of some classes of random selfadjoint operators (with A.Figotin).
In: Diff. Equations and Methods of Functional Anal.(Russian), pp. 117-133, Naukova Dumka, Kiev (1978).
33. On singular interaction potentials in the quantum statistical mechanics (with V.Zagrebnov).
Teor.Math.Phys., **36**, 784-797 (1978)
34. Spectral properties of disordered systems in one-body approximation.
Commun. Math. Phys., **75**, 179-196 (1980)
35. Localization of states and kinetic properties of one-dimensional disordered systems (with T.Antsygina and V.Slyusarev).
Soviet J.Low Temper.Physics, **7**, 1-21 (1981)
36. * Introduction to the Theory of Disordered Systems (Russian) (with S.Gredeskul and I.Lifshitz).
Moscow, Nauka, 1982, 360 pp.
37. Disordered spherical model.
J.Stat.Phys., **27**, 119-151 (1982)
38. On the infinite range limit in the theory of disordered spin system (with A.Figotin).
Teor.Math. Phys., **51**, 564-579 (1982)
39. On the theory of wave and particle propagation in randomly inhomogeneous media (with S.Gredeskul and I.Lifshitz).
Soviet Physics J.E.T.P., **56** 1370-1378 (1982)
40. Localization in an incommensurate potential: an exactly soluble model (with A.Figotin).
Soviet Physics J.E.T.P. Letters, **37**, 686-688 (1983)
41. On the vacuum instability in a random electric field (with I.Krive).
Soviet J.Nuclear Physics, **39**, 140-144 (1984)
42. On the positivity of the Lyapunov exponent and the absence of an absolutely continuous spectrum for the Almost-Mathieu operator (with A.Figotin).
J.Math.Phys. **25**, 774-777 (1984)
43. On the selfconsistent theory of localization (with T.Antsygina and V.Slusarev)
Solid State Commun., **51**, 301-303 (1984)
44. An exactly soluble model of a multidimensional incommensurate structure (with A.Figotin).
Commun.Math.Phys. **95**, 401-425 (1984)
45. The infinite range limit for the correlation functions of lattice systems (with M.Shcherbina).
Teor.Math.Phys., **61**, 956-964 (1984)
46. Ergodic properties of the eigenvalue distribution of some classes of random self-adjoint operators (with A.Figotin).
Selecta Math.Sovetica, **3**, 69-86 (1984)
47. Spectral properties of random and almost periodic differential and finite-difference operators.
In: Statistical physics and dynamical systems (Köszeg, 1984), 49-66, Progr. Phys., **10**, Birkhäuser Boston, Boston, Mass., 1985

48. On the spectral theory of some class of the Schrodinger operator with a limit periodic potential (with V.Tkachenko).
Soviet Math.Doklady, **20**, 773-776 (1984)
49. Spectral characteristics of the impurity band in a model of the structural disorder (with S.Gredeskul).
J.Stat.Phys., **38**, 37-69 (1985)
50. Works of I.Lifshitz on disordered systems (with S.Gredeskul).
J.Stat.Phys., **38**, 25-36 (1985)
51. Density of states near the spectrum edges of one-dimensional incommensurate systems (with S.Gredeskul).
Teor.Math.Phys., **62**, 316-321 (1985)
52. Wave transmission coefficient for random homogeneous medium (with A.Marchenko).
Rus.Math.Surveys, **40**, 241-242 (1985)
53. Absorption of the random signal in superconductors (with E.Bratus', S.Gredeskul and V.Shumeiko).
Soviet J.Low Temp.Phys., **12**, 184-185 (1986)
54. Wave and particle propagation through long random barriers (with A.Marchenko).
Teor. Math. Phys., **68**, 929-940 (1986)
55. Existence of long-range order in some quantum systems. (with B.Khoruzhenko)
In: Mathematical Physics, Functional Analysis (Russian), pp.17-25, Naukova Dumka, Kiev, 1986
56. Spectral Properties of random and almost periodic differential and finite-difference operators.
In: Statistical Physics and Dynamical Systems (Rigorous Results), pp. 49-66, Birkhauser, Basel, 1985
57. On the pure point spectrum of one dimensional Anderson model with the Gaussian potential.
Preprint Karl-Marx University, 1985, 23 pp.
58. Spectral properties of one dimensional finite-difference and random operators.
In: Proc. First Bernoulli Soc.Congress, Moscow, Nauka, (1986)
59. Spectral properties of the metrically transitive operators and related problems.
In: Proc. of Int. Congr. of Math., AMS, Providence, 1296-1311 (1986)
60. V. A. Marchenko. Non Linear Equations and Operator Algebras (Book Review, in Russian)
Algebra i Analiz **2** (1990) 251-256
61. * Spectral theory of random self-adjoint operators.
In: Itogi Nauki i Techn., Teor.Ver., **25**, 3-67 (1987)
62. Lower bounds on the Lyapunov exponent of some finite-difference equations with quasi-periodic coefficients.
In: Operators in Infinite-Dimensional Spaces and the Function Theory (Russian), pp.3-13, Kiev, Naukova Dumka (1987)
63. On some generalization of the superconductivity model with localized pairs (with V.Slusarev).
Soviet J.Low Temper. Phys., **13**, 622-623 (1987)
64. Phase transition in quantum models of rotators and ferroelectrics (with B.Khoruzhenko).
Teor. Math.Phys., **73**, 111-124 (1987)

65. * Spectral properties of random and almost periodic operators
In: Soviet Mathematical Physics Reviews, by S.Novikov (Ed.), Harwood Acad.Publisher, London **6**, 2-112 (1987)
66. Restoration of chiral symmetry by a stochastic external field (with I.Krive and A.Rozhavsky).
Soviet J. Nuclear Phys. **46** 759-763 (1987)
67. On the spectral theory of the Schrodinger operator with aperiodic complex potential (with V.Tkachenko).
Funct.Anal.Appl., **22**, 156-158 (1988)
68. Polarization of vacuum by a stochastic external field (with I.Krive and A.Rozhavsky).
Soviet J. Nuclear Phys. **47**, 370-376 (1988)
69. An example of the multidimensional Schroedinger operator with a nonlocal quasi periodic potential and overlapping point and absolutely continuous spectra (with A.Figotin).
Teor.Funkcii., Funkcionaln.Anal. i Prilozhen., **49**, 194-101 (1988)
70. * Introduction in the Theory of Disordered Systems (with S.Gredeskul and I.Lifshitz).
New York, Wiley, 1988, 476 pp.
71. Quantum dynamics of quasiparticles in a stochastic field and nonlinear dissipation of wave packets (with E.Bratus', S.Gredescul and V.Schumeiko).
Phys.Letters, **131**, 449-453 (1988)
72. The quasiparticles dynamics in a nonstationary random field (with E.Bratus, S.Gredescul and V.Schumeiko).
Teor. Math.Phys., **76**, 945-956 (1988)
73. Spectral theory of the one-dimensional Schroedinger operator with a limit periodic potential (with V.Tkachenko).
Transact. of Moscow Math.Soc., **51**, 115-166 (1988)
74. Random and almost periodic operators: new examples of spectral behavior.
In: Proc.of IXth IAMP Congress, A.Truman (Ed.), Bristol, A.Hilger, 350-353 (1989)
75. One-dimensional scattering problem for random potential and kinetic properties of disordered systems.
In: Stochastic Methods in Math. and Phys., V.Karvovski, R.Gielerak (Eds.), Singapore, World Sci. Publ., 240-250 (1989)
76. Aleksei Vasilevich Pogorelov (on the occasion of his seventieth birthday) (with Marchenko V. A., Maslov K. V., Milka A. D., Mitropolskii Yu. A., Ostrovskii I. V.)
Ukrain. Mat. Zh.**41**, 388-391 (1989) (Russian)
77. Limit theorem for a sum of exponentials.
Math.Notes, **46**, 712-716 (1989)
78. Polarization of the vacuum by a stochastic field and phase transitions in relativistic systems (with I.Krive, and A.Rozhavsky).
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79. On the wave transmission coefficient for one-dimensional random barriers. (with A.Marchenko and S.Molchanov).
Teor. Math. Phys., **81**, 1096-1106 (1989)

80. Large- n limit of the Heisenberg model: the decorated lattice and the disordered chain (with B.Khoruzhenko and M.Shcherbina).
J.Stat.Phys. **57**, 41-52 (1989)
81. Spectral theory of random self-adjoint operators.
J. Sov. Math. **46**, No. 4, 1979-2021 (1989)
82. Transmission properties of the two-band dispersion disordered media (with S.Gredeskul and P.Seba).
J.Stat.Phys. **58**, 795-816 (1990)
83. Schrodinger operator with a nonlocal potential whose absolutely continuous and point spectra coexist (with A.L.Figotin).
Commun.Math.Phys., **130** , 357-380 (1990)
84. L. Shubnikov. Short Biography (with B.Verkin, Yu.Freiman, S.Gredeskul, and Yu.Khramov).
In: L.Shubnikov: Selected Works, Reminiscences (Russian), B.Verkin (Ed.), 5-19, Kiev, Naukova Dumka (1990)
85. L. Shubnikov. Short Review of Scientific Works (with B.Verkin, Yu.Freiman, S.Gredeskul, and Yu.Khramov).
In: L. Shubnikov: Selected Works, Reminiscences (Russian), B.Verkin (Ed.), 20-42, Kiev, Naukova Dumka (1990)
86. The large-time asymptotics of some Wiener integrals and the interband light absorption coefficient (with W.Kirsch).
Commun. Math. Phys., **132** , 365-382 (1990)
87. One-dimensional Schrodinger operator with an unbounded potential: pure point spectrum (with W.Kirsch and S.Molchanov).
Funct.Anal., Appl., **24**, (1990) 176-186
88. History of the discovery of the Shubnikov-de Haas effect (with B.Verkin, S.Gredeskul, and Yu.Freiman).
Soviet J.Low Temperature Physics, **16**, 1203-1215 (1990)
89. Inverse problem for a certain class of one-dimensional Schroedinger operators with a complex valued periodic potential (with V.Tkachenko)
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90. Absence of self-averaging of the order parameter in the Sherrington-Kirkpatrick model (with M.Shcherbina)
J.Stat.Phys., **62**, 1-19 (1991)
91. Wave and particle propagation in one-dimensional and quasi one- dimensional random media.
Lectures in Appl.Math., **27**, 417-428 (1991)
92. Spectral analytical approach to ADALINE learning for neural networks (with H.Englisch)
In: Neurocomputers and Attention, A.Holden, V.Krylov (Eds.) Manchester Univ.Press, Manchester, 517-522 (1991)
93. Backscattering enhancement by an impedance rough surface (with T.N.Antzygina, V.Freylikher, S.Gredeskul and V.Slyusarev)
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94. On the geometry of spectrum of one-dimensional Schrodinger operator with a complex-valued periodic potential (with V.Tkachenko)
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95. Lev Shubnikov, un genio de las bajas temperaturas (with Yu.Freiman, S.Gre deskul and B.Verkin)
Rivista Espanola de Fisica, **5** , 58-63 (1991)
96. On the density of states of random band matrices (with L.Bogachev and S.Molchanov)
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97. Large time behaviour of moments of fundamental solutions of the random parabolic equation (with W.Kirsch).
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98. * Spectra of Random and Almost Periodic Operators (with A.Figotin)
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99. Vladimir Aleksandrovich Marchenko (with Berezanskii Yu.M., Maslov V.P., Mitropolskii Yu.A., Sinai Ya.G.)
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100. An eigenvalue distribution of band random matrices (with S.Molchanov and A.Khorunzhy).
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101. Statistical physics and spectral theory of disordered systems: some recent developments.
In: Mathematical Physics X (Proc. of X-th Congress in Mathematical Physics), K.Smudgen (Ed.), Springer Verlag, Heidelberg, 70-86 (1992)
102. One-dimensional localization and wave propagation in linear and nonlinear media (with S.Gredescul).
In: Nonlinearity with Disorder, A.Bishop and S.Pneumaticos (Eds.) Springer Verlag, Heidelberg, 126-133 (1992)
103. * Large-n limit in the statistical mechanics and the spectral theory of disordered systems (with A.Khorunzhy, B.Khoruzhenko and M.Shcherbina).
In: Phase Transitions and Critical Phenomena, C.Domb, J.Lebowitz (Eds.), Academic Press, N.Y. **15**, 74-239 (1992)
104. On the phenomenological approach in the localization theory (with T.Antzygina, V.Slyusarev).
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105. On the universality of the level spacing distribution for some ensembles of random matrices.
Letters in Math. Phys., **25**, 259-265 (1992)
106. Integrated density of states of the deformed Wigner ensemble (with A.Khorunzhy).
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107. Large-time behaviour of moments of solutions of parabolic differential equations with random coefficients
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108. Eigenvalue distribution of random operators and matrices.
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109. One dimensional Schroedinger operators with high potential barriers (with W.Kirsch and S.Molchanov)
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110. Limits of infinite interaction radius, dimensionality and the number of components for random operators with off-diagonal randomness (with A.Khorunzhy)
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111. Leiden and Cambridge, or a short history of the discovery of the Shubnikov-De Haas effect (with B.Verkin, Yu.Freiman, and S.Gredescul).
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112. On the Kubo conductivity of band matrices (with A.Khorunzhy and W.Kirsch).
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113. On the eigenvalue distribution of the Schroedinger operator whose potential is the sum of a slowly growing and a bounded function (with A.Boutet de Monvel).
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114. The replica symmetric solution without replica trick for the Hopfield model (with M.Shcherbina, B.Tirozzi).
J. Stat. Phys., **74**, N5/6, 1185-1194 (1993)
115. Limits of infinite order or dimensionality for random finite-difference operators (with A.Khorunzhy).
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116. The interband light absorption coefficient in the weak disorder regime: an asymptotically exactly solvable model (with W.Kirsch and B.Khoruzhenko).
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117. Eigenvalue distribution for some class of random matrices in the limit of their infinite dimensionality (with M.Shcherbina).
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118. On the eigenvalue distribution of the deformed Wigner ensemble of random matrices (with A.Khorunzhy)
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119. The infinite component limit of the random anisotropy n -vector model. (with B.Khoruzhenko and M.Shcherbina).
Advances in Soviet Mathematics, **19**, 269-286, AMS, Providence (1994)
120. $1/n$ -corrections to the Green functions of random matrices with independent entries (with A. Khorunzhy and B. Khoruzhenko).
J. of Physics A: Math. and General, **28**, L31-L35 (1995)
121. On the statistical mechanics approach to the random matrix theory: the integrated density of states (with A.Boutet de Monvel, and M.Shcherbina).
J.Stat.Phys., **79**, 585-611 (1995)
122. * Particle and wave transmission in one-dimensional disordered systems (with S.Gredeskul and A.Marchenko).
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123. Multistability in the stationary scattering problem for a non-linear mean field model (with A.Boutet de Monvel and A.Marchenko).
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124. On asymptotic property of spectra of sum of one-dimensional random independent operators"(with A.Khorunzhy and V.Vasilchuk).
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125. Surface waves: propagation and localization
In: Journées "Equations aux Dérivées Partielles "Equations aux Dérivées Partielles"(Saint-Jean-de-Monts, 1995), Exp. No. VI, 12 pp.
126. * Spectral and probabilistic aspects of matrix models.
In: Algebraic and Geometric Methods in Mathematical Physics, 207-242, A.Boutet de Monvel and V.Marchenko (Eds.) Kluwer, Dordrecht (1996)
127. Eigenvalue distribution of random matrices.
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128. Random matrices with independent entries: asymptotic properties of the Green function. (with A. Khorunzhy and B. Khoruzhenko).
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129. Universality of the local eigenvalue statistics for a class of unitary invariant matrix ensembles (with M. Shcherbina).
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130. Localization of surface states: an explicitly solvable model (with B.Khoruzhenko).
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131. On asymptotic properties of certain orthogonal polynomials (with S.Albeverio and M. Shcherbina).
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132. On the propagation properties of surface waves (with V. Jaksic and S. Molchanov).
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133. Asymptotics of the interband light absorption coefficient near the band edges for an alloy type model (with W.Kirsh and H.Stork)
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134. On some asymptotic formulas in the strong localization regime of the theory of disordered systems
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135. On the replica symmetric equations for the Hopfield model (with M. Shcherbina and B.Tirozzi)
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136. A simple approach to global regime of random matrix theory
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139. On a heuristic expansion method in the strong localization regime of the theory of disordered systems
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140. On the law of addition of random matrices (with V.Vasilchuk)
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141. On completeness of random exponentials in the Bargmann-Fock space (with G.Chistyakov and Yu. Lyubarskii)
J. Math. Phys. **42**, 3754-3768 (2001)
142. Absolutely continuous spectrum and scattering in the surface Maryland model (with F. Bentosela and P. Briet)
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143. On the asymptotic behaviour of correlators of multi-cut matrix models. (with O. Lenoble)
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144. On the $1/n$ expansion for some unitary invariant ensembles of random matrices (with S. Albeverio and M. Shcherbina)
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145. A class of the multi-interval eigenvalue distributions of a matrix models and related structures (with V. Bulsaev)
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146. Asymptotics of orthogonal polynomials and eigenvalue distribution of random matrices.
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147. Matrices aléatoires: statistique asymptotique des valeurs propres (with A. Lejay).
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148. On the edge universality of the local statistics of matrix models (with M. Shcherbina)
Math. Phys. Analiz, Geom. **10**, no. 3, 335-365 (2002)
149. On the spectral and wave propagation properties of the surface Maryland model (with F. Bentosela and Ph. Briet)
J. Math. Phys. bf 44, 1-35 (2003)
150. On the Mott Formula for the AC conductivity and binary correlators in the strong localization regime of disordered systems (with W. Kirsch and O. Lenoble)
J. Phys. A: Math. Gen. **36**, 1257-1289 (2003)
151. Quasi 1D Localization: deterministic and random potentials (with W. Kirsch, S. Molchanov, B. Vainberg)
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152. On the thermodynamic limit for disordered spin systems.
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153. A random matrix model of relaxation (with J.L. Lebowitz).
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154. On the moments of traces of matrices of classical groups (with V., Vasilchuk).
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155. Bose-Einstein condensation in random potential (with O. Lenoble and V. Zagrebnov).
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156. Spectral analysis of the generalized surface Maryland model. (with F. Bentosela and Ph. Briet)
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157. A simple approach to the global regime of Gaussian ensembles of random matrices.
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158. From random matrices to quasi-periodic Jacobi matrices via orthogonal polynomials.
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159. Limiting laws of linear eigenvalue statistics for unitary invariant matrix models
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160. Condensation in a Disordered Infinite-Range Hopping Bose-Hubbard Model (with T. C. Dorlas and V. A. Zagrebnov)
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161. On the law of addition of random matrices: covariance and the Central Limit Theorem for traces of resolvent (with V. Vasilchuk)
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