## I Y Popov

## List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Practical analytical solutions for benchmarking of 2-D and 3-D geodynamic Stokes problems with variable viscosity. Solid Earth, 2014, 5, 461-476.	1.2	37
2	Asymptotics of bound states and bands for laterally coupled waveguides and layers. Journal of Mathematical Physics, 2002, 43, 215-234.	0.5	26
3	EXTENSION THEORY AND LOCALIZATION OF RESONANCES FOR DOMAINS OF TRAP TYPE. Sbornik: Mathematics, 1992, 71, 209-234.	0.2	22
4	The extension theory and resonances for a quantum waveguide. Physics Letters, Section A: General, Atomic and Solid State Physics, 1993, 173, 484-488.	0.9	22
5	Group-theoretical analysis of lattice Hamiltonians with a magnetic field. Physics Letters, Section A: General, Atomic and Solid State Physics, 1995, 201, 359-364.	0.9	21
6	A remark on Schatten–von Neumann properties of resolvent differences of generalized Robin Laplacians on bounded domains. Journal of Mathematical Analysis and Applications, 2010, 371, 750-758.	0.5	19
7	Possible construction of a quantum multiplexer. Europhysics Letters, 2000, 52, 196-202.	0.7	18
8	Scattering on a Compact Domain with Few Semi-Infinite Wires Attached: Resonance Case. Mathematische Nachrichten, 2002, 235, 101-128.	0.4	18
9	The spectrum of a magneto-Bloch electron in a periodic array of quantum dots: Explicitly solvable model. European Physical Journal B, 1994, 93, 437-439.	0.6	16
10	Asymptotics of resonances and bound states for laterally coupled curved quantum waveguides. Physics Letters, Section A: General, Atomic and Solid State Physics, 2000, 269, 148-153.	0.9	15
11	Dynamics of nanotube twisting in a viscous fluid. Doklady Physics, 2007, 52, 60-62.	0.2	14
12	Spectral problem for branching chain quantum graph. Physics Letters, Section A: General, Atomic and Solid State Physics, 2013, 377, 439-442.	0.9	14
13	Periodic array of quantum dots in a magnetic field: Irrational flux; honeycomb lattice. European Physical Journal B, 1995, 98, 473-477.	0.6	13
14	Resonant tunneling in zero-dimensional systems: Explicitly solvable model. Physics Letters, Section A: General, Atomic and Solid State Physics, 1994, 187, 410-412.	0.9	12
15	On the existence of point spectrum for branching strips quantum graph. Journal of Mathematical Physics, 2014, 55, 033504.	0.5	12
16	The operator extension theory, semitransparent surface and short range potential. Mathematical Proceedings of the Cambridge Philosophical Society, 1995, 118, 555-563.	0.3	10
17	Spectral properties of a charged particle in antidot array: A limiting case of quantum billiard. Journal of Mathematical Physics, 1996, 37, 5171-5194.	0.5	10
18	Ballistic transport in nanostructures: Explicity solvable models. Theoretical and Mathematical Physics(Russian Federation), 1996, 107, 427-434.	0.3	10

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19	Hydrotron: Creep and slip. Fluid Dynamics Research, 1996, 18, 199-210.	0.6	10
20	Simulation of the formation of nanorolls. Glass Physics and Chemistry, 2007, 33, 315-319.	0.2	10
21	Formation and evolution of nanoscroll ensembles based on layered-structure compounds. Doklady Physics, 2009, 54, 491-493.	0.2	10
22	Lower bound on the spectrum of the two-dimensional SchrĶdinger operator with a δ-perturbation on a curve. Theoretical and Mathematical Physics(Russian Federation), 2010, 162, 332-340.	0.3	10
23	Statistical derivation of modified hydrodynamic equations for nanotube flows. Physica Scripta, 2011, 83, 045601.	1.2	10
24	Eigenvalues and bands imbedded in the continuous spectrum for a system of resonators and a waveguide: solvable model. Physics Letters, Section A: General, Atomic and Solid State Physics, 1996, 222, 286-290.	0.9	9
25	Three laterally coupled quantum waveguides: breaking of symmetry and resonance asymptotics. Journal of Physics A, 2003, 36, 1655-1670.	1.6	9
26	Acoustic model of zero-width slits and hydrodynamic boundary layer stability. Theoretical and Mathematical Physics(Russian Federation), 1991, 86, 269-276.	0.3	7
27	Fractal spectrum of periodic quantum systems in a magnetic field. Chaos, Solitons and Fractals, 2000, 11, 281-288.	2.5	7
28	Quantum computer elements based on coupled quantum waveguides. Physics of Particles and Nuclei Letters, 2007, 4, 137-140.	0.1	7
29	Asymptotics of bound states and bands for waveguides coupled through small windows. Applied Mathematics Letters, 2001, 14, 109-113.	1.5	6
30	Electronic transport in the multilayers with very thin magnetic layers. Physica E: Low-Dimensional Systems and Nanostructures, 2007, 36, 12-16.	1.3	5
31	Coupled dielectric waveguides with photonic crystal properties. Computational Mathematics and Mathematical Physics, 2010, 50, 1830-1836.	0.2	5
32	Soliton in a nanotube wall and stokes flow in the nanotube. Technical Physics Letters, 2010, 36, 852-855.	0.2	5
33	Model of tunnelling through nanosphere in a magnetic field. Physica E: Low-Dimensional Systems and Nanostructures, 2012, 44, 1598-1601.	1.3	5
34	Operator extensions theory model for electromagnetic field–electron interaction. Journal of Mathematical Physics, 2012, 53, 063505.	0.5	5
35	Numerical approach to the Stokes problem with high contrasts in viscosity. Applied Mathematics and Computation, 2014, 235, 17-25.	1.4	5
36	Line with attached segment as a model of Helmholtz resonator: Resonant states completeness. Journal of King Saud University - Science, 2017, 29, 133-136.	1.6	5

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37	Higher moments in a model of zero-width slits. Theoretical and Mathematical Physics(Russian) Tj ETQq1 1 0.7843	14.ggBT /C	Vyerlock 10
38	Quantum switch based on coupled waveguides. European Physical Journal B, 2001, 21, 283-287.	0.6	4
39	Asymptotics of bound states and bands for laterally coupled three-dimensional waveguides. Reports on Mathematical Physics, 2001, 48, 277-288.	0.4	4
40	Quantum interference rectifier. Physica E: Low-Dimensional Systems and Nanostructures, 2001, 9, 631-634.	1.3	4
41	Coupled dielectric waveguides: variational estimations. Journal of Mathematical Physics, 2005, 46, 073501.	0.5	4
42	Electron in a multilayered magnetic structure: resonance asymptotics. Theoretical and Mathematical Physics(Russian Federation), 2006, 146, 361-372.	0.3	4
43	Model of Point-Like Window for Electromagnetic Helmholtz Resonator. Zeitschrift Fur Analysis Und Ihre Anwendung, 2013, 32, 155-162.	0.8	4
44	Model of quantum dot and resonant states for the Helmholtz resonator. Journal of Physics: Conference Series, 2015, 643, 012097.	0.3	4
45	Spectral properties of multi-layered graphene in a magnetic field. Superlattices and Microstructures, 2015, 86, 68-72.	1.4	4
46	Electron spectrum for aligned SWNT array in a magnetic field. Superlattices and Microstructures, 2016, 100, 1276-1282.	1.4	4
47	Spectral problem for solvable model of bent nano peapod. Applicable Analysis, 2017, 96, 215-224.	0.6	4
48	Analytical solution of Taylor circulation in a prolate ellipsoid droplet in the frame of 2D Stokes equations. Chemical Engineering Science, 2019, 207, 145-152.	1.9	4
49	On the behaviour of the two-dimensional Hamiltonian \$-,{m{Delta }}+lambda [delta (vec{x}+{vec{x}}_{0})+delta (vec{x}-{vec{x}_{0}]\$ as the distance between the two centres vanishes. Physica Scripta, 2020, 95, 075209.	1.2	4
50	Title is missing!. Theoretical and Mathematical Physics(Russian Federation), 2002, 131, 791-800.	0.3	3
51	Analytical benchmark solution for Stokes flow with variable viscosity in spherical layer. Progress in Computational Fluid Dynamics, 2018, 18, 56.	0.1	3
52	Boundary Triplets, Tensor Products and Point Contacts to Reservoirs. Annales Henri Poincare, 2018, 19, 2783-2837.	0.8	3
53	On Quantitative Determination of the Degree of Independence of Qubit Transformation by a Quantum Gate or Channel. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2018, 124, 720-725.	0.2	3
54	Charge pumping in nanotube filled with electrolyte. Chinese Journal of Physics, 2018, 56, 2531-2537.	2.0	3

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#	Article	IF	CITATIONS
55	Model of tunnelling through quantum dot and spin–orbit interaction. Pramana - Journal of Physics, 2019, 92, 1.	0.9	3
56	Schrödinger and Dirac dynamics on time-dependent quantum graph. Indian Journal of Physics, 2019, 93, 913-920.	0.9	3
57	Model of cell membrane in ultrasonic field. Chinese Journal of Physics, 2020, 65, 334-340.	2.0	3
58	Quantum waveguides laterally coupled by a periodic system of small windows: Bandgap evaluation. Technical Physics Letters, 2002, 28, 340-342.	0.2	2
59	Nonlinear optical properties of a medium with M-configuration of atomic levels. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2010, 109, 413-419.	0.2	2
60	Nanocones rolling in hydro-thermal medium and flows in conical domains. Journal of Physics: Conference Series, 2010, 248, 012013.	0.3	2
61	Model of fluid flow in nanotube: classical and quantum features. Journal of Physics: Conference Series, 2010, 248, 012006.	0.3	2
62	Model of tunnelling through periodic array of quantum dots in a magnetic field. Chinese Physics B, 2012, 21, 117306.	0.7	2
63	Soliton-induced flow in carbon nanotubes. Europhysics Letters, 2013, 101, 66001.	0.7	2
64	A benchmark solution for 2D Stokes flow over cavity. Zeitschrift Fur Angewandte Mathematik Und Physik, 2014, 65, 339-348.	0.7	2
65	Real-time estimation and detection of non-linearity in bio-signals using wireless brain-computer interface. International Journal of Bioinformatics Research and Applications, 2014, 10, 190.	0.1	2
66	The effect of Rashba spin-orbit interaction on persistent current in a chain of two Holstein-Hubbard rings. Journal of Physics: Conference Series, 2019, 1400, 077011.	0.3	2
67	Entanglement transmission through turbulent atmosphere for modes of Gaussian beam. Quantum Information Processing, 2020, 19, 1.	1.0	2
68	Singular numbers, entangled qubits transmission through a turbulent atmosphere and teleportation. Indian Journal of Physics, 2022, 96, 2501-2505.	0.9	2
69	Completeness of resonance states for quantum graph with two semi-infinite edges. Complex Variables and Elliptic Equations, 2018, 63, 996-1010.	0.4	2
70	Variational model of scoliosis. Theoretical and Applied Mechanics, 2018, 45, 167-175.	0.1	2
71	Indefinite metric and scattering by a domain with a small hole. Mathematical Notes, 1995, 58, 1276-1285.	0.1	1
72	Stratified flow in an electric field, the Schrödinger equation, and the operator extension theory model. Theoretical and Mathematical Physics(Russian Federation), 1995, 103, 535-542.	0.3	1

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73	Solvable model for the transmission of sound through a screen with narrow slit in the presence of a low-Mach-number bias flow. Reports on Mathematical Physics, 1996, 37, 419-426.	0.4	1
74	A quantum loop in magnetic field and a quantum interference rectifier. Technical Physics Letters, 2001, 27, 444-446.	0.2	1
75	The lower-boundary asymptotics of continuous spectrum for quantum layers laterally coupled by a periodic system of small windows. Technical Physics Letters, 2001, 27, 855-856.	0.2	1
76	Quantum graph of Sierpinski gasket type: Computational experiment. Russian Journal of Mathematical Physics, 2007, 14, 388-396.	0.4	1
77	Two particle scattering on pencil of rays. Journal of Physics: Conference Series, 2008, 129, 012048.	0.3	1
78	Hydrodynamics of nanorolling. Russian Physics Journal, 2009, 52, 1117-1120.	0.2	1
79	"Almost quasistationary―approximation for the problem of solidification front stability. Zeitschrift Fur Angewandte Mathematik Und Physik, 2009, 60, 178-188.	0.7	1
80	Waveguide modes and adhesion conditions for flow in a nanochannel. Doklady Physics, 2010, 55, 271-273.	0.2	1
81	Multi-qubit teleportation algorithm and teleportation manager. Physics of Particles and Nuclei Letters, 2011, 8, 455-457.	0.1	1
82	A Model of Irregular Impurity at the Surface of Nanoparticle and Catalytic Activity. Communications in Theoretical Physics, 2012, 58, 55-58.	1.1	1
83	Regular Potential Approximation for \$delta\$-Perturbation Supported by Curve of the Laplace-Beltrami Operator on the Sphere. Zeitschrift Fur Analysis Und Ihre Anwendung, 2012, 31, 125-137.	0.8	1
84	DNA-algorithm for timetable problem. International Journal of Bioinformatics Research and Applications, 2014, 10, 145.	0.1	1
85	The discrete spectrum of the multiparticle Hamiltonian in the framework of the Hartree-Fock approximation. Journal of Physics: Conference Series, 2014, 541, 012099.	0.3	1
86	On Molchanov's Condition for the Spectrum Discreteness of a Quantum Graph Hamiltonian with Î'-Coupling. Reports on Mathematical Physics, 2015, 76, 171-178.	0.4	1
87	On the discrete spectrum of the Dirac operator on bent chain quantum graph. ITM Web of Conferences, 2017, 9, 01007.	0.4	1
88	Resonance state completeness problem for quantum graph. AIP Conference Proceedings, 2017, , .	0.3	1
89	Spectral Properties of Graphene with Periodic Array of Defects in a Magnetic Field. Russian Journal of Mathematical Physics, 2018, 25, 277-283.	0.4	1
90	Incompleteness of resonance states for quantum ring with two semi-infinite edges. Analysis and Mathematical Physics, 2019, 9, 1287-1302.	0.6	1

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91	Time-dependent metric graph: Wave dynamics. AIP Conference Proceedings, 2019, , .	0.3	1
92	Model of time-dependent geometric graph for dynamical Casimir effect. Indian Journal of Physics, 2021, 95, 2115-2118.	0.9	1
93	Flow on the surface of sloped rotating cylinder. Zeitschrift Fur Angewandte Mathematik Und Physik, 2020, 71, 1.	0.7	1
94	A model of a boundary composed of the Helmholtz resonators. Complex Variables and Elliptic Equations, 2020, , 1-8.	0.4	1
95	On the electron transmission control by a direction of magnetic field. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2021, 34, e2918.	1.2	1
96	Scattering on a Compact Domain with Few Semi-Infinite Wires Attached: Resonance Case. , 2002, 235, 101.		1
97	Harnack's Inequality for Stokes Graph. Zeitschrift Fur Analysis Und Ihre Anwendung, 2016, 35, 383-396.	0.8	1
98	Selection of parameters for a model of cracks of zero width. USSR Computational Mathematics and Mathematical Physics, 1987, 27, 99-102.	0.0	0
99	Justification of the model of cracks of zero width for the Dirichlet problem. Siberian Mathematical Journal, 1990, 30, 428-432.	0.2	0
100	A model of zero width slits for an orifice in a semitransparent boundary. Siberian Mathematical Journal, 1992, 33, 856-861.	0.2	0
101	On operator treatment of a Stokeslet. Siberian Mathematical Journal, 1994, 35, 1022-1026.	0.2	0
102	Hydrodynamic stability and perturbation of the Schr�dinger operator. Letters in Mathematical Physics, 1995, 35, 155-161.	0.5	0
103	Dynamic structure formation during high-temperature deformation of polycrystalline oxides. Russian Physics Journal, 1995, 38, 825-830.	0.2	0
104	Operator extension theory models for periodic array of quantum dots and double quantum layer in a magnetic field. Reports on Mathematical Physics, 1996, 38, 349-356.	0.4	0
105	Laterally coupled waveguides with Neumann boundary condition: formal asymptotic expansions. , 2003, , .		0
106	Violation of Symmetry in the System of Three Laterally Coupled Quantum Waveguides, and Resonance Asymptotics. Journal of Mathematical Sciences, 2005, 128, 2807-2811.	0.1	0
107	Spectral asymptotics for layered magnetic structures. , 2005, , .		0
108	Many particles problems for quantum layers. , 2006, , .		0

Many particles problems for quantum layers. , 2006, , . 108

#	Article	IF	CITATIONS
109	Vladimir A. Geyler. Russian Journal of Mathematical Physics, 2007, 14, 371-376.	0.4	Ο
110	Wave scattering in layers with rigid boundaries and lateral coupling through small windows. Acoustical Physics, 2007, 53, 421-425.	0.2	0
111	Approximation of a point perturbation on a Riemannian manifold. Theoretical and Mathematical Physics(Russian Federation), 2009, 158, 40-47.	0.3	0
112	Possible implementation of CNOT and CCNOT gates. Physics of Particles and Nuclei Letters, 2009, 6, 589-593.	0.1	0
113	Localized two-particle states in deformed nanolayers. , 2012, , .		0
114	Liquid flow in nanotubes. Journal of Physics: Conference Series, 2012, 345, 012036.	0.3	0
115	Electron energy spectrum for a bent chain of nanospheres. European Physical Journal B, 2014, 87, 1.	0.6	0
116	Stokes flow driven by a Stokeslet in a cone. Acta Mechanica, 2014, 225, 3115-3121.	1.1	0
117	Chain of point-like potentials in â,,>3and infiniteness of the number of bound states. Journal of Physics: Conference Series, 2014, 541, 012092.	0.3	0
118	Bent and branched chains of nanoresonators. Journal of Physics: Conference Series, 2014, 541, 012061.	0.3	0
119	Two-scale model of hydrothermal synthesis of nanotubes. Journal of Physics: Conference Series, 2014, 541, 012013.	0.3	0
120	Algorithm of molecular computing on the base of membranes. Journal of Physics: Conference Series, 2014, 541, 012094.	0.3	0
121	Discrete spectrum for quantum graph with local disturbance of the periodicity. Journal of Physics: Conference Series, 2015, 661, 012024.	0.3	0
122	On the spectrum discreteness of the quantum graph Hamiltonian with δ-coupling. Journal of Physics: Conference Series, 2015, 643, 012099.	0.3	0
123	Layered system with metamaterials. Journal of Physics: Conference Series, 2015, 661, 012025.	0.3	0
124	Band structure of one-dimensional photonic crystal containing two negative index materials. Journal of Physics: Conference Series, 2016, 769, 012027.	0.3	0
125	Periodic chain of resonators: gap control and geometry of the system. Journal of Physics: Conference Series, 2016, 735, 012062.	0.3	0
126	Bound state for dielectric waveguide with locally perturbed core. , 2016, , .		0

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127	Model of tunnelling through periodic array of quantum dots. ITM Web of Conferences, 2017, 9, 01008.	0.4	0
128	On the spectrum of the Dirac operator for bent periodic chain of spheres connected through 1D wires. , 2017, , .		0
129	Classical and quantum wave dynamics on time-dependent geometric graph. Chinese Journal of Physics, 2018, 56, 747-753.	2.0	0
130	Modeling of vertebral system by the nudged elastic band method. AIP Conference Proceedings, 2018, , .	0.3	0
131	Benchmark solutions for two-component flows in microchannels. AIP Conference Proceedings, 2019, , ·	0.3	0
132	Preface to Symposium 71: Mathematical Methods and Models for Nano-Science. AIP Conference Proceedings, 2019, , .	0.3	0
133	Scattering of elastic waves by point-like obstacle in two-dimensional case. AIP Conference Proceedings, 2019, , .	0.3	0
134	Spectral analysis of the Dirac operator on Y-type chain quantum graph. AIP Conference Proceedings, 2019, , .	0.3	0
135	Point-like perturbation for Lamé operator. Complex Variables and Elliptic Equations, 2020, 65, 256-271.	0.4	0
136	Mathematical modeling of enhanced oil recovery by microbiological methods. AIP Conference Proceedings, 2020, , .	0.3	0
137	Point-like perturbation of Rashba Hamiltonian. Complex Variables and Elliptic Equations, 2021, 66, 154-164.	0.4	0
138	Modelling of nanobubbles at the liquid-solid interface in water and oil. Meccanica, 2021, 56, 2517-2532.	1.2	0
139	3D Helmholtz resonator with two close point-like windows: Regularisation for Dirichlet case. International Journal of Geometric Methods in Modern Physics, 2021, 18, 2150153.	0.8	0
140	Band gap structure in one-dimensional photonic crystal containing metamaterial with a single Lorentz contribution. Journal of Optics (India), 2021, 50, 529-534.	0.8	0
141	Scattering, Spectrum and Resonance States Completeness for a Quantum Graph with Rashba Hamiltonian. Operator Theory: Advances and Applications, 2021, , 51-62.	0.2	0
142	QUANTUM GRAPH OF SIERPINSKI GASKET TYPE IN ELECTRIC FIELD. Communications of the Korean Mathematical Society, 2016, 31, 263-275.	0.2	0
143	On the linear sizes of vertebrae and intervertebral discs of children in the beginning of puberty. Journal of Craniovertebral Junction and Spine, 2018, 9, 246.	0.4	0
144	Mathematical Model for Axisymmetric Taylor Flows Inside a Drop. Fluids, 2021, 6, 7.	0.8	0

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145	Preface of the "2nd Workshop "Mathematical Methods and Models for Nano-Science". AlP Conference Proceedings, 2020, , .	0.3	0
146	Dynamical Casimir effect and photon generation process in time dependent quantum graph. AIP Conference Proceedings, 2020, , .	0.3	0
147	Numerical analysis of multi-particle states in coupled nano-layers in electric field. AIP Conference Proceedings, 2020, , .	0.3	0
148	Relaxation and driven oscillation of viscous membrane. AIP Conference Proceedings, 2020, , .	0.3	0
149	A model of a quantum waveguide multiplexer. Physics of Complex Systems, 2020, 1, 158-164.	0.2	0
150	Mathematical model of quantum channel for teleportation through atmosphere. AIP Conference Proceedings, 2020, , .	0.3	0
151	On the spectrum and scattering for metric graph with fourth order operator. AIP Conference Proceedings, 2020, , .	0.3	0
152	Hopf bifurcations in a network of FitzHugh–Nagumo biological neurons. International Journal of Nonlinear Sciences and Numerical Simulation, 2021, .	0.4	0
153	Simulation of switchers for CNOT-gates based on optical waveguide interaction with coupled mode theory. Zhurnal Srednevolzhskogo Matematicheskogo Obshchestva, 2021, 23, 433-443.	0.0	0
154	Bound states for two delta potentials supported on parallel lines on the plane. , 2022, 3, 37-42.		0
155	Hofstadter butterflies for square and honeycomb periodic arrays of quantum dots with Aharonov-Bohm solenoids. , 2022, 168, 207325.		Ο