

Vladislav V Kravchenko

List of Publications by Year in descending order

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127
papers

1,495
citations

364017

20
h-index

435775

31
g-index

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all docs

132
docs citations

132
times ranked

166
citing authors

#	ARTICLE	IF	CITATIONS
1	Runge property and approximation by complete systems of solutions for strongly elliptic equations. <i>Complex Variables and Elliptic Equations</i> , 2022, 67, 661-682.	0.9	3
2	Transmutation operators and a new representation for solutions of perturbed Bessel equations. <i>Mathematical Methods in the Applied Sciences</i> , 2021, 44, 6344-6375.	2.2	6
3	Complete Systems of Beltrami Fields Using Complex Quaternions and Transmutation Theory. <i>Advances in Applied Clifford Algebras</i> , 2021, 31, 1.	1.1	3
4	A practical method for recovering Sturm-Liouville problems from the Weyl function. <i>Inverse Problems</i> , 2021, 37, 065011.	2.0	11
5	A Neumann Series of Bessel Functions Representation for Solutions of the Radial Dirac System. <i>Springer Proceedings in Mathematics and Statistics</i> , 2021, , 319-331.	0.0	0
6	A direct method for solving inverse Sturm-Liouville problems*. <i>Inverse Problems</i> , 2021, 37, 015015.	2.0	12
7	A representation for Jost solutions and an efficient method for solving the spectral problem on the half line. <i>Mathematical Methods in the Applied Sciences</i> , 2020, 43, 9304-9319.	2.2	9
8	A Practical Method for Solving the Inverse Quantum Scattering Problem on a Half Line. <i>Journal of Physics: Conference Series</i> , 2020, 1540, 012007.	0.4	5
9	Time-Dependent One-Dimensional Electromagnetic Wave Propagation in Inhomogeneous Media: Exact Solution in Terms of Transmutations and Neumann Series of Bessel Functions. <i>Lobachevskii Journal of Mathematics</i> , 2020, 41, 785-796.	0.9	5
10	Editorial. <i>Mathematical Methods in the Applied Sciences</i> , 2020, 43, 9303-9303.	2.2	0
11	The Bergman kernel for the Vekua equation. <i>Mathematical Methods in the Applied Sciences</i> , 2020, 43, 9448-9454.	2.2	2
12	Transmutation operators and complete systems of solutions for the radial Schrödinger equation. <i>Mathematical Methods in the Applied Sciences</i> , 2020, 43, 9455-9486.	2.2	5
13	Some Recent Developments in the Transmutation Operator Approach. <i>Trends in Mathematics</i> , 2020, , 3-9.	0.0	4
14	A transmutation operator method for solving the inverse quantum scattering problem [*] . <i>Inverse Problems</i> , 2020, 36, 125007.	2.0	9
15	Solution of the Inverse Problem on the Half-Line. <i>Frontiers in Mathematics</i> , 2020, , 117-123.	0.0	0
16	Direct and Inverse Sturm-Liouville Problems on a Half-Line. <i>Frontiers in Mathematics</i> , 2020, , 19-22.	0.0	0
17	Preliminaries on Sturm-Liouville Equations. <i>Frontiers in Mathematics</i> , 2020, , 7-13.	0.0	0
18	The Inverse Sturm-Liouville Problem on a Finite Interval. <i>Frontiers in Mathematics</i> , 2020, , 101-116.	0.0	0

#	ARTICLE	IF	CITATIONS
19	Introduction. <i>Frontiers in Mathematics</i> , 2020, , 1-4.	0.0	0
20	Series Representations for the Kernel $A(x, t)$ and for the Jost Solution. <i>Frontiers in Mathematics</i> , 2020, , 61-74.	0.0	0
21	Solution of the Inverse Quantum Scattering Problem on the Half-Line. <i>Frontiers in Mathematics</i> , 2020, , 125-130.	0.0	0
22	Direct and Inverse Sturm-Liouville Problems on Finite Intervals. <i>Frontiers in Mathematics</i> , 2020, , 15-18.	0.0	0
23	Construction of Transmutations and Series Representations for Solutions. <i>Frontiers in Mathematics</i> , 2020, , 41-60.	0.0	0
24	Spectral Problems on Infinite Intervals. <i>Frontiers in Mathematics</i> , 2020, , 89-98.	0.0	0
25	Quantum Scattering Problem on the Half-Line. <i>Frontiers in Mathematics</i> , 2020, , 23-24.	0.0	0
26	Sturm-Liouville Problems on Finite Intervals. <i>Frontiers in Mathematics</i> , 2020, , 77-87.	0.0	0
27	Main Transmutation Operators. <i>Frontiers in Mathematics</i> , 2020, , 35-40.	0.0	0
28	Inverse Scattering Transform Method. <i>Frontiers in Mathematics</i> , 2020, , 29-31.	0.0	0
29	Solution of the Inverse Scattering Problem on the Line. <i>Frontiers in Mathematics</i> , 2020, , 131-143.	0.0	0
30	Generalized wave polynomials and transmutations related to perturbed Bessel equations. <i>Mathematical Methods in the Applied Sciences</i> , 2019, 42, 5008-5028.	2.2	8
31	The transmutation operator method for efficient solution of the inverse Sturm-Liouville problem on a half-line. <i>Mathematical Methods in the Applied Sciences</i> , 2019, 42, 7359-7366.	2.2	20
32	A method for computation of scattering amplitudes and Green functions of whole axis problems. <i>Mathematical Methods in the Applied Sciences</i> , 2019, 42, 5106-5117.	2.2	1
33	PRICING DOUBLE BARRIER OPTIONS ON HOMOGENEOUS DIFFUSIONS: A NEUMANN SERIES OF BESSEL FUNCTIONS REPRESENTATION. <i>International Journal of Theoretical and Applied Finance</i> , 2019, 22, 1950030.	0.5	4
34	Solution of parabolic free boundary problems using transmuted heat polynomials. <i>Mathematical Methods in the Applied Sciences</i> , 2019, 42, 5094-5105.	2.2	9
35	A representation of the transmutation kernels for the Schrödinger operator in terms of eigenfunctions and applications. <i>Applied Mathematics and Computation</i> , 2019, 353, 274-281.	2.3	7
36	A Right Inverse Operator for $\text{curl} + \lambda$ and Applications. <i>Advances in Applied Clifford Algebras</i> , 2019, 29, 1.	1.1	8

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37	On a method for solving the inverse Sturm-Liouville problem. <i>Journal of Inverse and Ill-Posed Problems</i> , 2019, 27, 401-407.	0.9	32
38	On a method for solving the inverse scattering problem on the line. <i>Mathematical Methods in the Applied Sciences</i> , 2019, 42, 1321-1327.	2.2	20
39	Spectral parameter power series for arbitrary order linear differential equations. <i>Mathematical Methods in the Applied Sciences</i> , 2019, 42, 4902-4908.	2.2	4
40	On Transmutation Operators and Neumann Series of Bessel Functions Representations for Solutions of Linear Higher Order Differential Equations. <i>Springer Proceedings in Mathematics and Statistics</i> , 2019, , 371-385.	0.0	0
41	A Neumann series of Bessel functions representation for solutions of Sturm-Liouville equations. <i>Calcolo</i> , 2018, 55, 1.	1.2	17
42	Construction of a transmutation for the one-dimensional Schrödinger operator and a representation for solutions. <i>Applied Mathematics and Computation</i> , 2018, 328, 75-81.	2.3	8
43	A Neumann series of Bessel functions representation for solutions of perturbed Bessel equations. <i>Applicable Analysis</i> , 2018, 97, 677-704.	1.3	25
44	On a Series Representation for Integral Kernels of Transmutation Operators for Perturbed Bessel Equations. <i>Mathematical Notes</i> , 2018, 104, 530-544.	0.5	16
45	Representation of solutions to the one-dimensional Schrödinger equation in terms of Neumann series of Bessel functions. <i>Applied Mathematics and Computation</i> , 2017, 314, 173-192.	2.3	47
46	Asymptotics with respect to the spectral parameter and Neumann series of Bessel functions for solutions of the one-dimensional Schrödinger equation. <i>Journal of Mathematical Physics</i> , 2017, 58, 122107.	1.2	3
47	Analytic Approximation of Solutions of Parabolic Partial Differential Equations with Variable Coefficients. <i>Advances in Mathematical Physics</i> , 2017, 2017, 1-5.	0.8	10
48	Modulated electromagnetic fields in inhomogeneous media, hyperbolic pseudoanalytic functions, and transmutations. <i>Journal of Mathematical Physics</i> , 2016, 57, 051503.	1.2	5
49	Analytic approximation of transmutation operators and related systems of functions. <i>Boletin De La Sociedad Matematica Mexicana</i> , 2016, 22, 389-429.	0.7	7
50	Liouville transformation, analytic approximation of transmutation operators and solution of spectral problems. <i>Applied Mathematics and Computation</i> , 2016, 273, 321-336.	2.3	15
51	Spectral parameter power series for Sturm-Liouville equations with a potential polynomially dependent on the spectral parameter and Zakharov-Shabat systems. <i>Journal of Mathematical Physics</i> , 2015, 56, .	1.2	11
52	Analysis of graded-index optical fibers by the spectral parameter power series method. <i>Journal of Optics (United Kingdom)</i> , 2015, 17, 025607.	2.2	14
53	Eigenvalue problems, spectral parameter power series, and modern applications. <i>Mathematical Methods in the Applied Sciences</i> , 2015, 38, 1945-1969.	2.2	35
54	Analytic approximation of transmutation operators and applications to highly accurate solution of spectral problems. <i>Journal of Computational and Applied Mathematics</i> , 2015, 275, 1-26.	2.0	31

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55	Construction of Transmutation Operators and Hyperbolic Pseudoanalytic Functions. Complex Analysis and Operator Theory, 2015, 9, 379-429.	0.6	21
56	The phase retrieval problem: a spectral parameter power series approach. Journal of Engineering Mathematics, 2014, 85, 179-209.	1.2	3
57	Spectral parameter power series analysis of isotropic planarly layered waveguides. Applicable Analysis, 2014, 93, 729-755.	1.3	17
58	Modified spectral parameter power series representations for solutions of Sturm-Liouville equations and their applications. Applied Mathematics and Computation, 2014, 238, 82-105.	2.3	16
59	Electromagnetic fields in dispersive chiral media generated by modulated nonuniformly moving sources. Russian Journal of Mathematical Physics, 2013, 20, 39-55.	1.8	2
60	Fundamentals of Bicomplex Pseudoanalytic Function Theory: Cauchy Integral Formulas, Negative Formal Powers and Schrödinger Equations with Complex Coefficients. Complex Analysis and Operator Theory, 2013, 7, 485-518.	0.6	13
61	Spectral parameter power series for perturbed Bessel equations. Applied Mathematics and Computation, 2013, 220, 676-694.	2.3	28
62	Wave polynomials, transmutations and Cauchy's problem for the Klein-Gordon equation. Journal of Mathematical Analysis and Applications, 2013, 399, 191-212.	1.1	21
63	Analysis of electromagnetic fields from moving modulated sources in dispersive chiral media applying quaternionic analysis and the two-dimensional stationary phase method. AIP Conference Proceedings, 2013, , .	0.3	0
64	Transmutations and Spectral Parameter Power Series in Eigenvalue Problems. , 2013, , 209-238.		9
65	Spectral problems in inhomogeneous media, spectral parameter power series and transmutation operators. , 2012, , .		2
66	Complete Families of Solutions for the Dirac Equation Using Bicomplex Function Theory and Transmutations. Advances in Applied Clifford Algebras, 2012, 22, 577-594.	1.1	19
67	Construction and application of Bergman-type reproducing kernels for boundary and eigenvalue problems in the plane. Complex Variables and Elliptic Equations, 2012, 57, 787-824.	0.9	18
68	Spectral parameter power series for fourth-order Sturm-Liouville problems. Applied Mathematics and Computation, 2012, 219, 3610-3624.	2.3	32
69	Transmutations for Darboux transformed operators with applications. Journal of Physics A: Mathematical and Theoretical, 2012, 45, 075201.	2.2	21
70	Complete systems of recursive integrals and Taylor series for solutions of Sturm-Liouville equations. Mathematical Methods in the Applied Sciences, 2012, 35, 704-715.	2.2	9
71	Transmutations, L-bases and complete families of solutions of the stationary Schrödinger equation in the plane. Journal of Mathematical Analysis and Applications, 2012, 389, 1222-1238.	1.1	33
72	Solution of boundary and eigenvalue problems for second-order elliptic operators in the plane using pseudoanalytic formal powers. Mathematical Methods in the Applied Sciences, 2011, 34, n/a-n/a.	2.2	5

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73	Dispersion equation and eigenvalues for the Zakharov-Shabat system using spectral parameter power series. <i>Journal of Mathematical Physics</i> , 2011, 52, 063517.	1.2	17
74	On Bers Generating Functions for First Order Systems of Mathematical Physics. <i>Advances in Applied Clifford Algebras</i> , 2011, 21, 547-559.	1.1	4
75	On the two-dimensional stationary Schrödinger equation with a singular potential. <i>Journal of Mathematical Analysis and Applications</i> , 2011, 377, 420-427.	1.1	2
76	Spatial pseudoanalytic functions arising from the factorization of linear second order elliptic operators. <i>Mathematical Methods in the Applied Sciences</i> , 2011, 34, 1999-2010.	2.2	4
77	Conformal mapping of right circular quadrilaterals. <i>Complex Variables and Elliptic Equations</i> , 2011, 56, 399-415.	0.9	6
78	Dispersion equation and eigenvalues for quantum wells using spectral parameter power series. <i>Journal of Mathematical Physics</i> , 2011, 52, 043522.	1.2	25
79	A finite-sum representation for solutions for the Jacobi operator. <i>Journal of Difference Equations and Applications</i> , 2011, 17, 567-575.	1.1	9
80	Zakharov-Shabat system and hyperbolic pseudoanalytic function theory. <i>Mathematical Methods in the Applied Sciences</i> , 2010, 33, 448-453.	2.2	2
81	Spectral parameter power series for Sturm-Liouville problems. <i>Mathematical Methods in the Applied Sciences</i> , 2010, 33, 459-468.	2.2	96
82	On the solution of the static Maxwell system in axially symmetric inhomogeneous media. <i>Mathematical Methods in the Applied Sciences</i> , 2010, 33, 439-447.	2.2	12
83	Explicit solutions of generalized Cauchy-Riemann systems using the transplanted operator. <i>Journal of Mathematical Analysis and Applications</i> , 2010, 370, 242-257.	1.1	3
84	Construction and use of reproducing kernels for boundary and eigenvalue problems in the plane using pseudoanalytic function theory. , 2010, , .		1
85	Time-dependent electromagnetic fields in chiral media. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2010, 43, 455213.	2.2	5
86	Analysis of local Drude-Born-Fedorov constitutive relations for time-dependent waves in chiral media. , 2010, , .		0
87	Efficient calculation of the reflectance and transmittance of finite inhomogeneous layers. <i>Journal of Optics</i> , 2009, 11, 065707.	1.5	19
88	On a factorization of the Schrödinger and Klein-Gordon operators. <i>Mathematical Methods in the Applied Sciences</i> , 2008, 31, 1722-1738.	2.2	3
89	On a transplanted operator and explicit construction of Cauchy-type integral representations for p-analytic functions. <i>Journal of Mathematical Analysis and Applications</i> , 2008, 339, 1103-1111.	1.1	4
90	A representation for solutions of the Sturm-Liouville equation. <i>Complex Variables and Elliptic Equations</i> , 2008, 53, 775-789.	0.9	69

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91	On the Klein-Gordon equation and hyperbolic pseudoanalytic function theory. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 065205.	2.2	11
92	Quaternionic approach to electromagnetic. , 2008, , .		0
93	On Beltrami fields with nonconstant proportionality factor on the plane. Reports on Mathematical Physics, 2008, 61, 29-38.	0.8	2
94	A Representation for Solutions of Sturm-Liouville Equations and its Application for Solving Boundary Value and Spectral Problems. AIP Conference Proceedings, 2008, , .	0.3	0
95	On a complex differential Riccati equation. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 085205.	2.2	3
96	Solution of the static Maxwell system for inhomogeneous media using generalized analytic function theory. , 2008, , .		0
97	On explicitly solvable Vekua equations and explicit solution of the stationary Schrödinger equation and of the equation $\text{div}(\hat{f}\hat{\mu})=0$. Complex Variables and Elliptic Equations, 2007, 52, 353-366.	0.9	11
98	On a factorization of second-order elliptic operators and applications. Journal of Physics A, 2006, 39, 12407-12425.	1.6	18
99	On force free magnetic fields. Quaternionic approach. Mathematical Methods in the Applied Sciences, 2005, 28, 379-386.	2.2	8
100	On the Relationship between p-Analytic Functions and the Schrödinger Equation. Zeitschrift Fur Analysis Und Ihre Anwendung, 2005, 24, 487-496.	0.7	11
101	On a relation of pseudoanalytic function theory to the two-dimensional stationary Schrödinger equation and Taylor series in formal powers for its solutions. Journal of Physics A, 2005, 38, 3947-3964.	1.6	28
102	On the reduction of the multidimensional stationary Schrödinger equation to a first-order equation and its relation to the pseudoanalytic function theory. Journal of Physics A, 2005, 38, 851-868.	1.6	17
103	New applications of pseudoanalytic function theory to the Dirac equation. Journal of Physics A, 2005, 38, 9207-9219.	1.6	20
104	On a quaternionic Maxwell equation for the time-dependent electromagnetic field in a chiral medium. Journal of Physics A, 2004, 37, 4641-4647.	1.6	36
105	On Beltrami fields with nonconstant proportionality factor. Journal of Physics A, 2003, 36, 1515-1522.	1.6	10
106	Quaternionic factorization of the Schrödinger operator and its applications to some first-order systems of mathematical physics. Journal of Physics A, 2003, 36, 11285-11297.	1.6	22
107	Quaternionic Fundamental Solutions for Electromagnetic Scattering Problems and Application. Zeitschrift Fur Analysis Und Ihre Anwendung, 2003, 22, 147-166.	0.7	8
108	QUATERNIONIC EQUATION FOR ELECTROMAGNETIC FIELDS IN INHOMOGENEOUS MEDIA. , 2003, , .		4

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109	On a Quaternionic Reformulation of Maxwell's Equations for Chiral Media and its Applications. Zeitschrift Fur Analysis Und Ihre Anwendung, 2003, 22, 569-589.	0.7	9
110	Quaternionic Reformulation of Maxwell Equations for Inhomogeneous Media and New Solutions. Zeitschrift Fur Analysis Und Ihre Anwendung, 2002, 21, 21-26.	0.7	21
111	An analogue of the Sommerfeld radiation condition for the Dirac operator. Mathematical Methods in the Applied Sciences, 2002, 25, 1383-1394.	2.2	8
112	Quaternionic Integral Representations for Electromagnetic Fields in Chiral Media. Telecommunications and Radio Engineering (English Translation of Elektrosvyaz and Radiotekhnika), 2001, 56, 9.	0.4	8
113	On a new approach for solving Dirac equations with some potentials and Maxwell's system in inhomogeneous media. , 2001, , 278-306.		4
114	Quaternionic Diagonalization of Maxwell's Equations. Telecommunications and Radio Engineering (English Translation of Elektrosvyaz and Radiotekhnika), 2001, 56, 8.	0.4	1
115	New exact solutions of the massive Dirac equation with electric or scalar potential. Mathematical Methods in the Applied Sciences, 2000, 23, 769-776.	2.2	10
116	A New Method for Obtaining Solutions of the Dirac Equation. Zeitschrift Fur Analysis Und Ihre Anwendung, 2000, 19, 655-676.	0.7	2
117	A New Approach for Describing Electromagnetic Wave Propagation in Inhomogeneous Media. Zeitschrift Fur Analysis Und Ihre Anwendung, 2000, 19, 903-912.	0.7	1
118	Exact solutions of the Dirac equation with harmonic pseudoscalar, scalar or electric potential. Journal of Physics A, 1998, 31, 7561-7575.	1.6	9
119	On the Dirac Operator with an Electromagnetic Potential. Zeitschrift Fur Analysis Und Ihre Anwendung, 1998, 17, 549-556.	0.7	7
120	On the Kernel of the Klein-Gordon Operator. Zeitschrift Fur Analysis Und Ihre Anwendung, 1998, 17, 261-265.	0.7	7
121	On Integral Representations and Boundary Properties of Spinor Fields. Mathematical Methods in the Applied Sciences, 1996, 19, 977-989.	2.2	2
122	Biquaternionic Integral Representations for Massive Dirac Spinors in a Magnetic Field and Generalized Biquaternionic Differentiability. Mathematical Methods in the Applied Sciences, 1996, 19, 1415-1431.	2.2	8
123	On a Biquaternionic Bag Model. Zeitschrift Fur Analysis Und Ihre Anwendung, 1995, 14, 3-14.	0.7	18
124	Quaternionic time-harmonic Maxwell operator. Journal of Physics A, 1995, 28, 5017-5031.	1.6	14
125	On some Nonlinear Equations Generated by Fueter Type Operators. Zeitschrift Fur Analysis Und Ihre Anwendung, 1994, 13, 599-602.	0.7	7
126	Helmholtz operator with a quaternionic wave number and associated function theory. II. Integral representations. Acta Applicandae Mathematicae, 1993, 32, 243-265.	1.0	24

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127	Special issue in honour of Vladimir S. Rabinovich. Complex Variables and Elliptic Equations, 0, , 1-6.	0.9	0