

Dmitry V Valovik

List of Publications by Year in descending order

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81
papers

808
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471061

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84
all docs

84
docs citations

84
times ranked

79
citing authors

#	ARTICLE	IF	CITATIONS
1	Guided electromagnetic waves propagating in a plane dielectric waveguide with nonlinear permittivity. <i>Physical Review A</i> , 2015, 91, .	1.0	74
2	Novel propagation regimes for TE waves guided by a waveguide filled with Kerr medium. <i>Journal of Nonlinear Optical Physics and Materials</i> , 2016, 25, 1650051.	1.1	43
3	Integral dispersion equation method to solve a nonlinear boundary eigenvalue problem. <i>Nonlinear Analysis: Real World Applications</i> , 2014, 20, 52-58.	0.9	38
4	On the infinitely many nonperturbative solutions in a transmission eigenvalue problem for Maxwell's equations with cubic nonlinearity. <i>Journal of Mathematical Physics</i> , 2016, 57, .	0.5	32
5	Guided Electromagnetic Waves Propagating in a Two-Layer Cylindrical Dielectric Waveguide with Inhomogeneous Nonlinear Permittivity. <i>Advances in Mathematical Physics</i> , 2015, 2015, 1-11.	0.4	31
6	On the problem of nonlinear coupled electromagnetic transverse-electric-transverse magnetic wave propagation. <i>Journal of Mathematical Physics</i> , 2013, 54, .	0.5	27
7	Problem of nonlinear coupled electromagnetic TE-TE wave propagation. <i>Journal of Mathematical Physics</i> , 2013, 54, 083502.	0.5	25
8	Coupled electromagnetic TE-TM wave propagation in a layer with Kerr nonlinearity. <i>Journal of Mathematical Physics</i> , 2012, 53, .	0.5	24
9	Propagation of TM waves in a Kerr nonlinear layer. <i>Computational Mathematics and Mathematical Physics</i> , 2008, 48, 2217-2225.	0.2	23
10	On the existence of infinitely many nonperturbative solutions in a transmission eigenvalue problem for nonlinear Helmholtz equation with polynomial nonlinearity. <i>Applied Mathematical Modelling</i> , 2018, 53, 296-309.	2.2	23
11	Propagation of electromagnetic TE waves in a nonlinear medium with saturation. <i>Journal of Communications Technology and Electronics</i> , 2011, 56, 1311-1316.	0.2	22
12	Nonlinear Double-Layer Bragg Waveguide: Analytical and Numerical Approaches to Investigate Waveguiding Problem. <i>Advances in Numerical Analysis</i> , 2014, 2014, 1-11.	0.2	22
13	Calculation of the propagation constants of inhomogeneous nonlinear double-layer circular cylindrical waveguide by means of the Cauchy problem method. <i>Journal of Communications Technology and Electronics</i> , 2013, 58, 762-769.	0.2	20
14	Nonlinear effects in the problem of propagation of TM electromagnetic waves in a Kerr nonlinear layer. <i>Journal of Communications Technology and Electronics</i> , 2011, 56, 283-288.	0.2	19
15	Nonlinear Effects of Electromagnetic TM Wave Propagation in Anisotropic Layer with Kerr Nonlinearity. <i>Advances in Mathematical Physics</i> , 2012, 2012, 1-21.	0.4	19
16	Coupled electromagnetic transverse-electric-transverse magnetic wave propagation in a cylindrical waveguide with Kerr nonlinearity. <i>Journal of Mathematical Physics</i> , 2013, 54, .	0.5	19
17	Nonlinear coupled electromagnetic wave propagation: Saturable nonlinearities. <i>Wave Motion</i> , 2016, 60, 166-180.	1.0	19
18	Nonlinear multi-frequency electromagnetic wave propagation phenomena. <i>Journal of Optics (United Kingdom)</i> , 2016, 18, 15018.	1.0	18

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19	Propagation of TM waves in a layer with arbitrary nonlinearity. Computational Mathematics and Mathematical Physics, 2011, 51, 1622-1632.	0.2	17
20	On the eigenvalues of a nonlinear spectral problem. Differential Equations, 2016, 52, 149-156.	0.1	17
21	Calculation of the propagation constants of TM electromagnetic waves in a nonlinear layer. Journal of Communications Technology and Electronics, 2008, 53, 883-889.	0.2	16
22	Numerical solution of the problem of propagation of TM-polarized electromagnetic waves in a nonlinear two-layered dielectric cylindrical waveguide. , 2012, , .		16
23	On spectral properties of the Sturm-Liouville operator with power nonlinearity. Monatshefte Fur Mathematik, 2019, 188, 369-385.	0.5	14
24	Nonlinear transmission eigenvalue problem describing TE wave propagation in two-layered cylindrical dielectric waveguides. Computational Mathematics and Mathematical Physics, 2013, 53, 973-983.	0.2	13
25	Electromagnetic wave propagation in a layer with power nonlinearity. Journal of Nonlinear Optical Physics and Materials, 2019, 28, 1950009.	1.1	13
26	Propagation of Electromagnetic Waves in an Open Planar Dielectric Waveguide Filled with a Nonlinear Medium I: TE Waves. Computational Mathematics and Mathematical Physics, 2019, 59, 958-977.	0.2	12
27	Propagation of electromagnetic waves in a nonlinear metamaterial layer. Journal of Communications Technology and Electronics, 2011, 56, 544-556.	0.2	11
28	On a Nonlinear Eigenvalue Problem Related to the Theory of Propagation of Electromagnetic Waves. Differential Equations, 2018, 54, 165-177.	0.1	10
29	Calculation of the propagation constants and fields of polarized electromagnetic TM waves in a nonlinear anisotropic layer. Journal of Communications Technology and Electronics, 2009, 54, 391-398.	0.2	9
30	Pseudodifferential operator method in a problem on the diffraction of an electromagnetic wave on a dielectric body. Differential Equations, 2012, 48, 517-523.	0.1	9
31	Reply to "Comment on "Guided electromagnetic waves propagating in a plane dielectric waveguide with nonlinear permittivity" Physical Review A, 2015, 92, .	1.0	9
32	The method of cauchy problem for solving a nonlinear eigenvalue transmission problem for tm waves propagating in a layer with arbitrary nonlinearity. Computational Mathematics and Mathematical Physics, 2013, 53, 78-92.	0.2	8
33	On the volume singular integro-differential equation approach for the electromagnetic diffraction problem. Applicable Analysis, 2017, 96, 173-189.	0.6	8
34	Nonlinear multiparameter eigenvalue problems: Linearised and nonlinearised solutions. Journal of Differential Equations, 2019, 267, 2357-2384.	1.1	8
35	On the Problem of Electromagnetic Waves Propagating along a Nonlinear Inhomogeneous Cylindrical Waveguide. ISRN Mathematical Analysis, 2013, 2013, 1-7.	0.3	7
36	Coupled electromagnetic wave propagation in a cylindrical dielectric waveguide filled with Kerr medium: nonlinear effects. Journal of Modern Optics, 2017, 64, 396-406.	0.6	7

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37	On the Existence of an Infinite Number of Eigenvalues in One Nonlinear Problem of Waveguide Theory. Computational Mathematics and Mathematical Physics, 2018, 58, 1600-1609.	0.2	7
38	Nonlinear coupled wave propagation in a n-dimensional layer. Applied Mathematics and Computation, 2017, 294, 146-156.	1.4	6
39	Maxwell's equations with arbitrary self-action nonlinearity in a waveguiding theory: Guided modes and asymptotic of eigenvalues. Journal of Mathematical Analysis and Applications, 2019, 479, 1138-1157.	0.5	6
40	Perturbation Method in the Theory of Propagation of Two-Frequency Electromagnetic Waves in a Nonlinear Waveguide I: TE-TE Waves. Computational Mathematics and Mathematical Physics, 2021, 61, 103-117.	0.2	6
41	Nonlinear propagation of coupled electromagnetic waves in a circular cylindrical waveguide. Computational Mathematics and Mathematical Physics, 2017, 57, 1294-1309.	0.2	5
42	Electromagnetic Guided Waves in a Lossless Cubic-Quintic Nonlinear Waveguide. Lobachevskii Journal of Mathematics, 2018, 39, 1108-1116.	0.1	5
43	Perturbation of nonlinear operators in the theory of nonlinear multifrequency electromagnetic wave propagation. Communications in Nonlinear Science and Numerical Simulation, 2019, 75, 76-93.	1.7	5
44	Propagation of Electromagnetic Waves in an Open Planar Dielectric Waveguide Filled with a Nonlinear Medium II: TM Waves. Computational Mathematics and Mathematical Physics, 2020, 60, 427-447.	0.2	5
45	Asymptotic analysis of a nonlinear eigenvalue problem arising in electromagnetics. Nonlinearity, 2020, 33, 3470-3499.	0.6	5
46	Study of a Nonlinear Eigenvalue Problem by the Integral Characteristic Equation Method. Differential Equations, 2020, 56, 171-184.	0.1	5
47	Boundary Eigenvalue Problem for Maxwell Equations in a Nonlinear Dielectric Layer. Applied Mathematics, 2010, 01, 29-36.	0.1	5
48	Solution of the nonlinear eigenvalue boundary-value problem for tm electromagnetic waves propagating in a Kerr-nonlinear layer by means of the cauchy problem method. Journal of Communications Technology and Electronics, 2013, 58, 62-65.	0.2	4
49	Theory of Nonlinear Guided Electromagnetic Waves in a Plane Two-Layered Dielectric Waveguide. Mathematical Problems in Engineering, 2017, 2017, 1-19.	0.6	4
50	A nonlinear boundary eigenvalue problem for TM-polarized electromagnetic waves in a nonlinear layer. Russian Mathematics, 2008, 52, 60-63.	0.1	3
51	On the problem of propagation of nonlinear coupled TE-TM waves in a layer. Computational Mathematics and Mathematical Physics, 2014, 54, 522-536.	0.2	3
52	Vector problem of electromagnetic wave diffraction by a system of inhomogeneous volume bodies, thin screens, and wire antennas. Journal of Electromagnetic Waves and Applications, 2016, 30, 1086-1100.	1.0	3
53	The spectral properties of some nonlinear operators of Sturm-Liouville type. Sbornik Mathematics, 2017, 208, 1282-1297.	0.2	3
54	Asymptotic Analysis of a Nonlinear Eigenvalue Problem Arising in the Waveguide Theory. Differential Equations, 2019, 55, 1554-1569.	0.1	3

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55	Propagation of TE waves in a plane dielectric waveguide with nonlinear permittivity. , 2014, , .		2
56	Electromagnetic Symmetric Hybrid Wave Propagation Problem in a Medium with Arbitrary Nonlinear Saturation. , 2019, , .		2
57	Asymptotical analysis of a nonlinear Sturm-Liouville problem: Linearisable and non-linearisable solutions. Asymptotic Analysis, 2020, 119, 39-59.	0.2	2
58	Fully Symmetric Guided Electromagnetic Waves in a Shielded Plane Dielectric Slab. Lobachevskii Journal of Mathematics, 2019, 40, 1640-1652.	0.1	2
59	Electromagnetic Wave Propagation in Nonlinear Layered Waveguide Structures: Computational Approach to Determine Propagation Constants. Springer Proceedings in Mathematics and Statistics, 2013, , 69-89.	0.1	2
60	On the integral characteristic function of the Sturm-Liouville problem. Sbornik Mathematics, 2020, 211, 1539-1550.	0.2	2
61	How Kerr nonlinearity influences polarized electromagnetic wave propagation. URSI Radio Science Bulletin, 2017, 2017, 19-42.	0.2	2
62	Nonlinearizable solutions in an eigenvalue problem for Maxwell's equations with nonhomogeneous nonlinear permittivity in a layer. Studies in Applied Mathematics, 2022, 149, 565-587.	1.1	2
63	Electromagnetic TE wave propagation in a two-layered waveguide with nonlinear permittivity. , 2015, , .		1
64	On the infinitely many electromagnetic TE eigenmodes in a plane layered waveguide filled with nonlinear medium: Analytical results. , 2016, , .		1
65	Electromagnetic wave propagation in nonlinear media with saturation. , 2017, , .		1
66	Symmetric guided electromagnetic waves in a shielded slab filled with anisotropic dielectric. , 2019, , .		1
67	Operator Pencil Approach in an Electromagnetic Problem of Symmetric Wave Propagation in a Plane Shielded Waveguide. Lobachevskii Journal of Mathematics, 2020, 41, 1363-1370.	0.1	1
68	Integral Characteristic Function of a Nonlinear Sturm-Liouville Problem. Differential Equations, 2021, 57, 1555-1564.	0.1	1
69	Propagation of TM wave in a layer with Kerr law nonlinearity. , 2010, , .		0
70	Electromagnetic TM wave propagation in nonlinear multilayered waveguides. Numerical technique to obtain propagation constants. , 2012, , .		0
71	Coupled electromagnetic TE-TE waves propagation. Numerical approach to determine coupled propagation constants. , 2014, , .		0
72	Recent advances in the theory of coupled nonlinear guided waves. , 2014, , .		0

#	ARTICLE	IF	CITATIONS
73	Ellipticity of the electric field integral equation in a problem of diffraction by a partially shielded body. , 2016, , .		0
74	Nonlinear guided electromagnetic waves in a layer: Revisiting an old problem and new results. , 2016, , .		0
75	Volume singular integro-differential equations in the electromagnetic diffraction problem. , 2016, , .		0
76	Electromagnetic TM wave propagation in a layer with Kerr nonlinearity: Analytical results. , 2016, , .		0
77	Propagation of electromagnetic waves in a shielded dielectric layer with cubic nonlinearity. , 2018, , .		0
78	Nonlinear Transverse Magnetic Wave Propagation in a Layer Revisited. , 2019, , .		0
79	Propagation of TM waves in a shielded plane waveguide with anisotropic Kerr nonlinearity. , 2019, , .		0
80	Multifrequency electromagnetic wave propagation in a dielectric slab with Kerr nonlinearity: perturbative and nonperturbative guided waves. , 2019, , .		0
81	Propagation of TM waves in a shielded dielectric waveguide filled with nonlinear anisotropic medium. , 2020, , .		0