

Julius Kaplunov

List of Publications by Year in descending order

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105
papers

2,126
citations

218677

26
h-index

276875

41
g-index

114
all docs

114
docs citations

114
times ranked

727
citing authors

#	ARTICLE	IF	CITATIONS
1	On integral and differential formulations in nonlocal elasticity. <i>European Journal of Mechanics, A/Solids</i> , 2023, 100, 104497.	3.7	11
2	Low-frequency vibrations of a thin-walled functionally graded cylinder (plane strain problem). <i>Mechanics of Advanced Materials and Structures</i> , 2023, 30, 1172-1180.	2.6	4
3	Asymptotic derivation of a refined equation for an elastic beam resting on a Winkler foundation. <i>Mathematics and Mechanics of Solids</i> , 2022, 27, 1638-1648.	2.4	10
4	Dynamic Sliding Contact for a Thin Elastic Layer. <i>Advanced Structured Materials</i> , 2022, , 103-114.	0.5	0
5	On non-locally elastic Rayleigh wave. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2022, 380, .	3.4	6
6	Asymptotic derivation of 2D dynamic equations of motion for transversely inhomogeneous elastic plates. <i>International Journal of Engineering Science</i> , 2022, 178, 103723.	5.0	5
7	Asymptotic derivation of refined dynamic equations for a thin elastic annulus. <i>Mathematics and Mechanics of Solids</i> , 2021, 26, 118-132.	2.4	6
8	Antiplane shear of an asymmetric sandwich plate. <i>Continuum Mechanics and Thermodynamics</i> , 2021, 33, 1247-1262.	2.2	25
9	Asymptotic analysis of an anti-plane dynamic problem for a three-layered strongly inhomogeneous laminate. <i>Mathematics and Mechanics of Solids</i> , 2020, 25, 3-16.	2.4	45
10	The lowest vibration modes of an elastic beam composed of alternating stiff and soft components. <i>Archive of Applied Mechanics</i> , 2020, 90, 339-352.	2.2	17
11	On the dynamics of drilling. <i>International Journal of Engineering Science</i> , 2020, 146, 103184.	5.0	5
12	Preface to a special feature dedicated to the memory of Prof. Peter Chadwick FRS. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2020, 476, 20200615.	2.1	0
13	Perturbed rigid body motions of an elastic rectangle. <i>Zeitschrift Fur Angewandte Mathematik Und Physik</i> , 2020, 71, 1.	1.4	2
14	A second-order asymptotic model for Rayleigh waves on a linearly elastic half plane. <i>IMA Journal of Applied Mathematics</i> , 2020, 85, 113-131.	1.6	16
15	Reduced model for the surface dynamics of a generally anisotropic elastic half-space. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2020, 476, 20190590.	2.1	16
16	Composite dynamic models for periodically heterogeneous media. <i>Mathematics and Mechanics of Solids</i> , 2019, 24, 2663-2693.	2.4	4
17	An asymptotic hyperbolic-elliptic model for flexural-seismic metasurfaces. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2019, 475, 20190079.	2.1	19
18	A composite hyperbolic equation for plate extension. <i>Mechanics Research Communications</i> , 2019, 99, 64-67.	1.8	3

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19	The edge bending wave on a plate reinforced by a beam (L). Journal of the Acoustical Society of America, 2019, 146, 1061-1064.	1.1	7
20	Rayleigh-type waves on a coated elastic half-space with a clamped surface. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20190111.	3.4	23
21	Elastic bending wave on the edge of a semi-infinite plate reinforced by a strip plate. Mathematics and Mechanics of Solids, 2019, 24, 3319-3330.	2.4	13
22	Scale effect and higher-order boundary conditions for generalized lattices, with direct and indirect interactions. Mechanics Research Communications, 2019, 97, 1-7.	1.8	19
23	Multi-parametric dynamic analysis of lightweight elastic laminates. IOP Conference Series: Materials Science and Engineering, 2019, 683, 012014.	0.6	1
24	The lowest vibration spectra of multi-component structures with contrast material properties. Journal of Sound and Vibration, 2019, 445, 132-147.	3.9	26
25	Elastic contact of a stiff thin layer and a half-space. Zeitschrift Fur Angewandte Mathematik Und Physik, 2019, 70, 1.	1.4	10
26	A Composite Wave Model for a Cylindrical Shell. Advanced Structured Materials, 2019, , 315-328.	0.5	0
27	The effect of a weak nonlinearity on the lowest cut-off frequencies of a cylindrical shell. Zeitschrift Fur Angewandte Mathematik Und Physik, 2018, 69, 1.	1.4	6
28	Dispersion of elastic waves in a layer interacting with a Winkler foundation. Journal of the Acoustical Society of America, 2018, 144, 2918-2925.	1.1	23
29	Approximate analysis of surface wave-structure interaction. Journal of Mechanics of Materials and Structures, 2018, 13, 297-309.	0.6	15
30	Justification and refinement of Winkler's Fuss hypothesis. Zeitschrift Fur Angewandte Mathematik Und Physik, 2018, 69, 1.	1.4	25
31	An asymptotic higher-order theory for rectangular beams. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2018, 474, 20180001.	2.1	8
32	Composite wave models for elastic plates. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2018, 474, 20180103.	2.1	9
33	The near-resonant regimes of a moving load in a three-dimensional problem for a coated elastic half-space. Mathematics and Mechanics of Solids, 2017, 22, 89-100.	2.4	21
34	The edge waves on a Kirchhoff plate bilaterally supported by a two-parameter elastic foundation. JVC/Journal of Vibration and Control, 2017, 23, 2014-2022.	2.6	23
35	Multi-parametric analysis of strongly inhomogeneous periodic waveguides with internal cutoff frequencies. Mathematical Methods in the Applied Sciences, 2017, 40, 3381-3392.	2.3	21
36	Dispersion of elastic waves in a strongly inhomogeneous three-layered plate. International Journal of Solids and Structures, 2017, 113-114, 169-179.	2.7	72

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37	A robust approach for analysing dispersion of elastic waves in an orthotropic cylindrical shell. Journal of Sound and Vibration, 2017, 401, 23-35.	3.9	14
38	On surface wave fields arising in soil-structure interaction problems. Procedia Engineering, 2017, 199, 2366-2371.	1.2	2
39	An edge moving load on an orthotropic plate resting on a Winkler foundation. Procedia Engineering, 2017, 199, 2579-2584.	1.2	1
40	Dispersion of elastic waves in laminated glass. Procedia Engineering, 2017, 199, 1489-1494.	1.2	3
41	A non-local asymptotic theory for thin elastic plates. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2017, 473, 20170249.	2.1	13
42	Asymptotic Theory for Rayleigh and Rayleigh-Type Waves. Advances in Applied Mechanics, 2017, 50, 1-106.	2.3	59
43	Structural Modelling at the Micro-, Meso-, and Nanoscales. Modelling and Simulation in Engineering, 2017, 2017, 1-3.	0.7	3
44	On steady-state moving load problems for an elastic half-space. , 2016, , .		1
45	Vibrations of an elastic cylindrical shell near the lowest cut-off frequency. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2016, 472, 20150753.	2.1	17
46	Edge bending wave on a thin elastic plate resting on a Winkler foundation. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2016, 472, 20160178.	2.1	16
47	Refined boundary conditions on the free surface of an elastic half-space taking into account non-local effects. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2016, 472, 20150800.	2.1	19
48	Multi-parametric analysis of the lowest natural frequencies of strongly inhomogeneous elastic rods. Journal of Sound and Vibration, 2016, 366, 264-276.	3.9	34
49	Nonlinear Vibrations of a Rotor-Fluid-Foundation System Supported by Rolling Bearings. Strojniski Vestnik/Journal of Mechanical Engineering, 2016, 62, 351-362.	1.1	5
50	Celebrating the Centenary of Timoshenko's Study of Effects of Shear Deformation and Rotary Inertia. Applied Mechanics Reviews, 2015, 67, .	10.1	104
51	Anti-plane shear waves in a fibre-reinforced composite with a non-linear imperfect interface. International Journal of Non-Linear Mechanics, 2015, 76, 223-232.	2.6	10
52	Low-frequency perturbations of rigid body motions of a viscoelastic inhomogeneous bar. Mechanics of Time-Dependent Materials, 2015, 19, 135-151.	4.4	7
53	About Multi-parametric Analysis of Drill String Vibrations. Mechanisms and Machine Science, 2015, , 373-377.	0.5	0
54	The edge wave on an elastically supported Kirchhoff plate. Journal of the Acoustical Society of America, 2014, 136, 1487-1490.	1.1	25

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55	Long-wave asymptotic theories: The connection between functionally graded waveguides and periodic media. <i>Wave Motion</i> , 2014, 51, 581-588.	2.0	56
56	On a 3D moving load problem for an elastic half space. <i>Wave Motion</i> , 2013, 50, 1229-1238.	2.0	31
57	The Rayleigh wave field in mixed problems for a half-plane. <i>IMA Journal of Applied Mathematics</i> , 2013, 78, 1078-1086.	1.6	12
58	Explicit Models for Surface, Interfacial and Edge Waves. <i>CISM International Centre for Mechanical Sciences, Courses and Lectures</i> , 2013, , 73-114.	0.6	12
59	Analysis of localized edge vibrations of cylindrical shells using the Stroh formalism. <i>Mathematics and Mechanics of Solids</i> , 2012, 17, 59-66.	2.4	7
60	Edge waves and resonance on elastic structures: An overview. <i>Mathematics and Mechanics of Solids</i> , 2012, 17, 4-16.	2.4	62
61	Bloch dispersion and high frequency homogenization for separable doubly-periodic structures. <i>Wave Motion</i> , 2012, 49, 333-346.	2.0	28
62	High-frequency homogenization for checkerboard structures: defect modes, ultrarefraction, and all-angle negative refraction. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2011, 28, 1032.	1.5	31
63	A plane contact problem for an elastic orthotropic strip. <i>Journal of Engineering Mathematics</i> , 2011, 70, 399-409.	1.2	32
64	Riemann-Hilbert Approach to the Elastodynamic Equation: Part I. <i>Letters in Mathematical Physics</i> , 2011, 96, 53-83.	1.1	8
65	On a class of three-phase checkerboards with unusual effective properties. <i>Comptes Rendus - Mecanique</i> , 2011, 339, 411-417.	2.1	2
66	High frequency homogenization for structural mechanics. <i>Journal of the Mechanics and Physics of Solids</i> , 2011, 59, 651-671.	4.8	59
67	A revisit to the moving load problem using an asymptotic model for the Rayleigh wave. <i>Wave Motion</i> , 2010, 47, 440-451.	2.0	28
68	A long-wave model for the surface elastic wave in a coated half-space. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2010, 466, 3097-3116.	2.1	49
69	Uniform Asymptotic Behaviour of Integrals of Bessel Functions with a Large Parameter in the Argument. <i>Quarterly Journal of Mechanics and Applied Mathematics</i> , 2010, 63, 57-72.	1.3	3
70	High-Frequency Asymptotics, Homogenisation and Localisation for Lattices. <i>Quarterly Journal of Mechanics and Applied Mathematics</i> , 2010, 63, 497-519.	1.3	58
71	High-frequency homogenization for periodic media. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2010, 466, 2341-2362.	2.1	238
72	Low-Frequency Cutoffs for the Dispersion Spectrum of Elastic Waves in a Thin-Walled Anisotropic Cylinder. <i>Journal of Elasticity</i> , 2009, 95, 31-42.	1.9	1

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73	Extensional edge modes in elastic plates and shells. Journal of the Acoustical Society of America, 2009, 125, 621-623.	1.1	5
74	An example of a quasi-trapped mode in a weakly non-linear elastic waveguide. Comptes Rendus - Mecanique, 2008, 336, 553-558.	2.1	5
75	Three-dimensional edge waves in plates. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2008, 464, 301-318.	2.1	40
76	An asymptotic analysis of initial-value problems for thin elastic plates. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2006, 462, 2541-2561.	2.1	15
77	Approximation of the flexural velocity branch in plates. International Journal of Solids and Structures, 2006, 43, 6329-6346.	2.7	8
78	Resonance vibrations of an elastic interfacial layer. Journal of Sound and Vibration, 2006, 294, 663-677.	3.9	4
79	Explicit models for elastic and piezoelectric surface waves. IMA Journal of Applied Mathematics, 2006, 71, 768-782.	1.6	42
80	On a Lamb-type problem for a bi-axially pre-stressed incompressible elastic plate. IMA Journal of Applied Mathematics, 2006, 71, 171-185.	1.6	3
81	Eigenvalue of a semi-infinite elastic strip. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2006, 462, 1255-1270.	2.1	36
82	A bending quasi-front generated by an instantaneous impulse loading at the edge of a semi-infinite pre-stressed incompressible elastic plate. Journal of the Mechanics and Physics of Solids, 2005, 53, 1079-1098.	4.8	5
83	An asymptotic theory for internal reflection in weakly inhomogeneous elastic waveguides. Wave Motion, 2005, 41, 95-108.	2.0	12
84	A perturbation approach for evaluating natural frequencies of moderately thick elliptic plates. Journal of Sound and Vibration, 2005, 281, 905-919.	3.9	31
85	On three-dimensional edge waves in semi-infinite isotropic plates subject to mixed face boundary conditions. Journal of the Acoustical Society of America, 2005, 118, 2975-2983.	1.1	29
86	Radiation conditions for a semi-infinite elastic strip. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2005, 461, 1163-1179.	2.1	6
87	Radiation conditions for a semi-infinite elastic strip. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2005, 461, 1163-1179.	2.1	4
88	An explicit asymptotic model for the Bleustein-Gulyaev wave. Comptes Rendus - Mecanique, 2004, 332, 487-492.	2.1	7
89	Low-frequency decay conditions for a semi-infinite elastic strip. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2004, 460, 2153-2169.	2.1	21
90	Matching of asymptotic models in scattering of a plane acoustic wave by an elastic cylindrical shell. Journal of Sound and Vibration, 2003, 264, 639-655.	3.9	1

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91	The Two-Term Interior Asymptotic Expansion in the Case of Low-frequency Longitudinal Vibrations of an Elongated Elastic Rectangle. , 2003, , 137-145.		2
92	Free interfacial vibrations in cylindrical shells. Journal of the Acoustical Society of America, 2002, 111, 2692-2704.	1.1	11
93	Short wave motion in a pre-stressed incompressible elastic plate. IMA Journal of Applied Mathematics, 2002, 67, 383-399.	1.6	9
94	An Asymptotically Consistent Model for Long-Wave High-Frequency Motion in a Pre-Stressed Elastic Plate. Mathematics and Mechanics of Solids, 2002, 7, 581-606.	2.4	27
95	Analysis of transient waves in thin structures utilizing matched asymptotic expansions. Acta Mechanica, 2001, 149, 55-68.	2.1	4
96	Impact normal compression of an elastic plate: analysis utilising an advanced asymptotic 2D model. Mechanics Research Communications, 2000, 27, 117-122.	1.8	0
97	Direct asymptotic integration of the equations of transversely isotropic elasticity for a plate near cut-off frequencies. Quarterly Journal of Mechanics and Applied Mathematics, 2000, 53, 323-341.	1.3	29
98	Free localized vibrations of a semi-infinite cylindrical shell. Journal of the Acoustical Society of America, 2000, 107, 1383-1393.	1.1	34
99	Synthesis of the dispersion curves for a cylindrical shell on the basis of approximate theories. Journal of Sound and Vibration, 1995, 186, 37-53.	3.9	11
100	Elastic-plastic torsion of a Cosserat-type rod. Acta Mechanica, 1995, 113, 53-62.	2.1	5
101	A simple example of a trapped mode in an unbounded waveguide. Journal of the Acoustical Society of America, 1995, 97, 3898-3899.	1.1	17
102	Plane vibrations and radiation of an elastic layer lying on a liquid half-space. Wave Motion, 1993, 17, 199-211.	2.0	32
103	On Timoshenko-Reissner type theories of plates and shells. International Journal of Solids and Structures, 1993, 30, 675-694.	2.7	93
104	Homogenized equation of second-order accuracy for conductivity of laminates. Applicable Analysis, 0, , 1-9.	1.3	0
105	Elastodynamics of a coated half-space under a sliding contact. Mathematics and Mechanics of Solids, 0, , 108128652210944.	2.4	5