

IvaĀlo M Mladenov

List of Publications by Year in descending order

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97
papers

464
citations

933264

10
h-index

794469

19
g-index

120
all docs

120
docs citations

120
times ranked

206
citing authors

#	ARTICLE	IF	CITATIONS
1	Cylindrical equilibrium shapes of fluid membranes. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2008, 41, 435201.	0.7	56
2	Analytic description and explicit parametrisation of the equilibrium shapes of elastic rings and tubes under uniform hydrostatic pressure. <i>International Journal of Mechanical Sciences</i> , 2011, 53, 355-364.	3.6	44
3	Geometric quantisation of the MIC-Kepler problem. <i>Journal of Physics A</i> , 1987, 20, 5865-5871.	1.6	36
4	Geometric quantization of the multidimensional Kepler problem. <i>Journal of Geometry and Physics</i> , 1985, 2, 17-24.	0.7	33
5	The Mylar Balloon Revisited. <i>American Mathematical Monthly</i> , 2003, 110, 761-784.	0.2	32
6	New solutions of the shape equation. <i>European Physical Journal B</i> , 2002, 29, 327-330.	0.6	18
7	Vector decomposition of finite rotations. <i>Reports on Mathematical Physics</i> , 2011, 68, 107-117.	0.4	15
8	New perspective on the gimbal lock problem. <i>AIP Conference Proceedings</i> , 2013, , .	0.3	12
9	An extension of the Saxon-Hutner theorem in the relativistic domain. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1989, 137, 313-318.	0.9	11
10	Reduction in stages and complete quantization of the MIC-Kepler problem. <i>Journal of Physics A</i> , 1999, 32, 3779-3791.	1.6	11
11	Equilibrium Configurations of Lipid Bilayer Membranes and Carbon Nanostructures. <i>Communications in Theoretical Physics</i> , 2013, 59, 213-228.	1.1	10
12	The Mylar Balloon Revisited. <i>American Mathematical Monthly</i> , 2003, 110, 761.	0.2	9
13	Traveling Wave Solutions of the Gardner Equation and Motion of Plane Curves Governed by the mKdV Flow. <i>AIP Conference Proceedings</i> , 2011, , .	0.3	9
14	Method for computing the characteristic polynomial. <i>International Journal of Quantum Chemistry</i> , 1980, 18, 339-341.	1.0	8
15	New Geometrical Applications of the Elliptic Integrals: The Mylar Balloon. <i>Journal of Nonlinear Mathematical Physics</i> , 2004, 11, 55.	0.8	8
16	Wigner rotation and Thomas precession: geometric phases and related physical theories. <i>Journal of the Korean Physical Society</i> , 2015, 66, 1656-1663.	0.3	8
17	Scattering of charged particles off dyons. <i>Journal of Physics A</i> , 1988, 21, L1-L4.	1.6	7
18	Geometric quantization of the five-dimensional Kepler problem. <i>Foundations of Physics</i> , 1991, 21, 871-888.	0.6	7

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19	Generalization of the Saxon-Hutner Theorem in the Relativistic Domain. <i>Physica Status Solidi (B): Basic Research</i> , 1988, 145, K115.	0.7	6
20	From the Kinematics of Precession Motion to Generalized Rabi Cycles. <i>Advances in Mathematical Physics</i> , 2018, 2018, 1-10.	0.4	6
21	Quantization on curved surfaces. <i>International Journal of Quantum Chemistry</i> , 2002, 89, 248-254.	1.0	5
22	On the Plane Curves whose Curvature Depends on the Distance from the Origin. , 2010, , .		5
23	On Some Deformations of the Cassinian Oval. <i>AIP Conference Proceedings</i> , 2011, , .	0.3	5
24	Explicit parametrizations of Willmore surfaces. , 2014, , .		5
25	Comment on "Shape transition of unstrained flattest single-walled carbon nanotubes under pressure" [J. Appl. Phys. 115, 044512 (2014)]. <i>Journal of Applied Physics</i> , 2015, 117, .	1.1	5
26	Classical motions of infinitesimal rotators on Mylar balloons. <i>Mathematical Methods in the Applied Sciences</i> , 2020, 43, 9874-9887.	1.2	5
27	Mechanics of Infinitesimal Test Bodies on Delaunay Surfaces: Spheres and Cylinders as Limits of Unduloids and Their Action-Angle Analysis. <i>Journal of Geometry and Symmetry in Physics</i> , 2019, 53, 55-84.	0.1	5
28	Geometry of the Saxon-Hutner theorem. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1997, 230, 245-252.	0.9	4
29	On The intrinsic equation behind the Delaunay surfaces. , 2008, , .		4
30	Some new results on three-dimensional rotations and pseudo-rotations. , 2013, , .		4
31	Generalized Euler decompositions of some six-dimensional Lie groups. , 2014, , .		4
32	Reductions and quantization. <i>International Journal of Theoretical Physics</i> , 1989, 28, 1255-1267.	0.5	3
33	Factorizations in special relativity and quantum scattering on the line II. <i>AIP Conference Proceedings</i> , 2016, , .	0.3	3
34	Mechanics of infinitesimal gyroscopes on Mylar balloons and their action-angle analysis. <i>Mathematical Methods in the Applied Sciences</i> , 2020, 43, 3040-3051.	1.2	3
35	Mechanics of incompressible test bodies moving on \hat{I}^n spheres. <i>Mathematical Methods in the Applied Sciences</i> , 0, , .	1.2	3
36	Analytic Description of the Equilibrium Shapes of Elastic Rings Under Uniform Hydrostatic Pressure. , 2011, , .		2

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37	Deformation of injected vesicles adhering onto flat rigid substrates. Computers and Mathematics With Applications, 2012, 64, 214-220.	1.4	2
38	Elastic spirals. , 2014, , .		2
39	On the compositions of rotations. AIP Conference Proceedings, 2015, , .	0.3	2
40	Elastic Sturmian spirals in the Lorentz-Minkowski plane. Open Mathematics, 2016, 14, 1149-1156.	0.5	2
41	Alternative Description of Rigid Body Kinematics and Quantum Mechanical Angular Momenta. Geometry, Integrability and Quantization, 2018, 19, 148-158.	0.2	2
42	Rotating Liquid Drops and Delaunay Surfaces. Journal of Geometry and Symmetry in Physics, 2019, 54, 55-78.	0.1	2
43	On Debye-Hückel's Theory. Europhysics Letters, 1993, 24, 693-698.	0.7	1
44	Quantization of the moment map of coupled harmonic oscillators. Journal of Physics A, 1993, 26, 7115-7123.	1.6	1
45	Saxon-Hutner theorem via matrix exponential. Europhysics Letters, 1997, 37, 159-164.	0.7	1
46	The matrizant and Saxon - Hutner theorem. Journal of Physics A, 1997, 30, 1689-1694.	1.6	1
47	Some Explicit Solutions of the Shape Equation. , 2010, , .		1
48	Cell Membranes Under Hydrostatic Pressure Subjected to Micro-Injection. , 2011, , .		1
49	About parametric representations of $SO(n)$ matrices and plane rotations. , 2012, , .		1
50	Two-axes decompositions of (pseudo-)rotations and some of their applications. , 2014, , .		1
51	On the necessary and sufficient condition for the decomposition of orthogonal transformations. AIP Conference Proceedings, 2015, , .	0.3	1
52	Membrane fusion based on the geometry of the stalk model. Mechanics Research Communications, 2015, 63, 54-60.	1.0	1
53	On the geometry of the rotating liquid drop. Mathematics and Computers in Simulation, 2016, 127, 194-202.	2.4	1
54	Axially Symmetric Willmore Surfaces Determined by Quadratures. Geometry, Integrability and Quantization, 2016, 17, 369-378.	0.2	1

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55	Lie Group Analysis of the Willmore and Membrane Shape Equations. Lecture Notes in Applied and Computational Mechanics, 2014, , 365-376.	2.0	1
56	Symmetries and Some Special Solutions of the Helfrich Model. Lecture Notes in Applied and Computational Mechanics, 2014, , 353-364.	2.0	1
57	Vector-Parameter Forms of $SU(1,1)$, $SL(2,R)$ and Their Connection to $SO(2,1)$. Geometry, Integrability and Quantization, 2016, 17, 196-230.	0.2	1
58	Cayley Map and Higher Dimensional Representations of Rotations. Geometry, Integrability and Quantization, 2017, 18, 150-182.	0.2	1
59	Deformations Without Bending: Explicit Examples. Geometry, Integrability and Quantization, 2019, , 246-254.	0.2	1
60	Torus-Like Balloons. Journal of Geometry and Symmetry in Physics, 2020, 56, 59-65.	0.1	1
61	Further Deformations of the Axially-Symmetric Non-Bending Surfaces. Journal of Geometry and Symmetry in Physics, 2020, 55, 51-73.	0.1	1
62	12. A quantum mechanical study on hormonal steroids. The Journal of Steroid Biochemistry, 1978, 9, 815.	1.3	0
63	Geometric quantization of the Kepler problem with a magnetic charge. , 1988, , 275-281.		0
64	GROUP REPRESENTATIONS AND QUANTIZATION OF THE MOMENTUM MAP. , 1993, , .		0
65	Kirkwood's formula revisited. Europhysics Letters, 1996, 33, 577-582.	0.7	0
66	An approach to reduction of the real symmetric 3×3 secular problem and applications. Physics of Atomic Nuclei, 2005, 68, 1916-1921.	0.1	0
67	ON THE ALGEBRAIC ASPECTS OF SAXON-HUTNER THEOREM. AIP Conference Proceedings, 2007, , .	0.3	0
68	Instability of Protein Drops via Applied Electric Field: Mathematical and Experimental Aspects. Annals of the New York Academy of Sciences, 2009, 1161, 246-255.	1.8	0
69	On the Whewell Parametrization of the Euler Elastica. , 2009, , .		0
70	An approach for decomposition of finite rotations. Proceedings in Applied Mathematics and Mechanics, 2012, 12, 45-46.	0.2	0
71	Traveling wave solutions of the one-dimensional Boussinesq paradigm equation. , 2013, , .		0
72	New forms of the equations of the attitude kinematics. Proceedings in Applied Mathematics and Mechanics, 2014, 14, 87-88.	0.2	0

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73	Variations of (pseudo-)rotations and the Laplace-Beltrami operator on homogeneous spaces. AIP Conference Proceedings, 2015, , .	0.3	0
74	Factorizations in Special Relativity and Quantum Scattering on the Line. Studies in Computational Intelligence, 2017, , 1-14.	0.7	0
75	Biological Membranes. Forum for Interdisciplinary Mathematics, 2017, , 69-82.	0.8	0
76	Equations of Equilibrium States of Membranes. Forum for Interdisciplinary Mathematics, 2017, , 151-166.	0.8	0
77	Surface Tension and Equilibrium. Forum for Interdisciplinary Mathematics, 2017, , 83-149.	0.8	0
78	Exact Solutions and Applications. Forum for Interdisciplinary Mathematics, 2017, , 167-199.	0.8	0
79	Planar Curves Whose Curvature Depends Only on the Distance From a Fixed Point. Forum for Interdisciplinary Mathematics, 2017, , 47-68.	0.8	0
80	Cayley Map for Symplectic Groups. Geometry, Integrability and Quantization, 2021, 22, 154-164.	0.2	0
81	New Parameterizations of $(\mathrm{SL}(2, \mathbb{R}))$ and Some Explicit Formulas for Its Logarithm. Journal of Geometry and Symmetry in Physics, 2021, 60, 65-81.	0.1	0
82	A Plethora of Non-Bending Surfaces of Revolution: Classifications and Explicit Parameterizations. Geometry, Integrability and Quantization, 2021, , 219-241.	0.2	0
83	Geometry of the anisotropic minimal surfaces. Analele Stiintifice Ale Universitatii Ovidius Constanta, Seria Matematica, 2012, 20, 79-88.	0.1	0
84	Cylindrical Fluid Membranes and the Evolutions of Planar Curves. Geometry, Integrability and Quantization, 2013, 14, 142-151.	0.2	0
85	Unduloid-like Equilibrium Shapes of Carbon Nanotubes Subjected to Hydrostatic Pressure. , 2013, , 195-202.		0
86	On the Spectrum of the Geodesic Flow on Spheres. , 1994, , 87-92.		0
87	A New Characterization of Eulerian Elasticas. Geometry, Integrability and Quantization, 2016, 17, 309-317.	0.2	0
88	Trajectories of the Plate-Ball Problem. Geometry, Integrability and Quantization, 2017, 18, 203-216.	0.2	0
89	Generalized Euler Angles Viewed as Spherical Coordinates. Geometry, Integrability and Quantization, 2017, 18, 105-116.	0.2	0
90	On a Class of Linear Weingarten Surfaces. Geometry, Integrability and Quantization, 2018, 19, 168-187.	0.2	0

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91	Some Classes of Shapes of the Rotating Liquid Drop. Journal of Geometry and Symmetry in Physics, 2019, 52, 67-102.	0.1	0
92	Explicit Description of Some Classes of Non-Bending Surfaces. Journal of Geometry and Symmetry in Physics, 2019, 51, 41-71.	0.1	0
93	Rotations in \mathbb{R}^3 and their Parametric Representations. Geometry, Integrability and Quantization, 2020, 21, 186-220.	0.2	0
94	The Rectifications of the Cassinian Ovals: Third Round. Journal of Geometry and Symmetry in Physics, 2020, 57, 87-98.	0.1	0
95	Explicit Parameterizations of Non-Bending Torus-Like Surfaces. Geometry, Integrability and Quantization, 2020, 21, 251-264.	0.2	0
96	The Spiric Sections of Perseus and the Uniform Parameterizations of the Cassinian Ovals. Journal of Geometry and Symmetry in Physics, 2020, 58, 81-97.	0.1	0
97	Numerical Ranges of the Real 2×2 Matrices Derived by First Principles. Geometry, Integrability and Quantization, 2022, 24, 65-83.	0.2	0