Ivaïlo M Mladenov

List of Publications by Year
in descending order

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	Numerical Ranges of the Real 2×2 Matrices Derived by First Principles. Geometry, Integrability and Quantization, 2022, 24, 65-83.	0.2	0
2	Cayley Map for Symplectic Groups. Geometry, Integrability and Quantization, 2021, 22, 154-164.	0.2	0
3	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
4	A Plethora of Non-Bending Surfaces of Revolution: Classifications and Explicit Parameterizations. Geometry, Integrability and Quantization, 2021, , 219-241.	0.2	0
5	Classical motions of infinitesimal rotators on Mylar balloons. Mathematical Methods in the Applied Sciences, 2020, 43, 9874-9887.	1.2	5
6	Mechanics of infinitesimal gyroscopes on Mylar balloons and their action€angle analysis. Mathematical Methods in the Applied Sciences, 2020, 43, 3040-3051.	1.2	3
7	Rotations in ${\mathbb R}^3$ and their Parametric Representations. Geometry, Integrability and Quantization, 2020, 21, 186-220.	0.2	0
8	Torus-Like Balloons. Journal of Geometry and Symmetry in Physics, 2020, 56, 59-65.	0.1	1
9	The Rectifications of the Cassinian Ovals: Third Round. Journal of Geometry and Symmetry in Physics, 2020, 57, 87-98.	0.1	0
10	Further Deformations of the Axially-Symmetric Non-Bending Surfaces. Journal of Geometry and Symmetry in Physics, 2020, 55, 51-73.	0.1	1
11	Explicit Parameterizations of Non-Bending Torus-Like Surfaces. Geometry, Integrability and Quantization, 2020, 21, 251-264.	0.2	0
12	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
13	Mechanics of Infinitesimal Test Bodies on Delaunay Surfaces: Spheres and Cylinders as Limits of Unduloids and Their Action-Angle Analysis. Journal of Geometry and Symmetry in Physics, 2019, 53, 55-84.	0.1	5
14	Some Classes of Shapes of the Rotating Liquid Drop. Journal of Geometry and Symmetry in Physics, 2019, 52, 67-102.	0.1	0
15	Rotating Liquid Drops and Delaunay Surfaces. Journal of Geometry and Symmetry in Physics, 2019, 54, 55-78.	0.1	2
16	Explicit Description of Some Classes of Non-Bending Surfaces. Journal of Geometry and Symmetry in Physics, 2019, 51, 41-71.	0.1	0
17	Deformations Without Bending: Explicit Examples. Geometry, Integrability and Quantization, 2019, , 246-254.	0.2	1
18	From the Kinematics of Precession Motion to Generalized Rabi Cycles. Advances in Mathematical Physics, 2018, 2018, 1-10.	0.4	6

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19	Alternative Description of Rigid Body Kinematics and Quantum Mechanical Angular Momenta. Geometry, Integrability and Quantization, 2018, 19, 148-158.	0.2	2
20	On a Class of Linear Weingarten Surfaces. Geometry, Integrability and Quantization, 2018, 19, 168-187.	0.2	0
21	Factorizations in Special Relativity and Quantum Scattering on the Line. Studies in Computational Intelligence, 2017, , 1-14.	0.7	0
22	Biological Membranes. Forum for Interdisciplinary Mathematics, 2017, , 69-82.	0.8	0
23	Equations of Equilibrium States of Membranes. Forum for Interdisciplinary Mathematics, 2017, , 151-166.	0.8	0
24	Surface Tension and Equilibrium. Forum for Interdisciplinary Mathematics, 2017, , 83-149.	0.8	0
25	Exact Solutions and Applications. Forum for Interdisciplinary Mathematics, 2017, , 167-199.	0.8	0
26	Planar Curves Whose Curvature Depends Only on the Distance From a Fixed Point. Forum for Interdisciplinary Mathematics, 2017, , 47-68.	0.8	0
27	Cayley Map and Higher Dimensional Representations of Rotations. Geometry, Integrability and Quantization, 2017, 18, 150-182.	0.2	1
28	Trajectories of the Plate-Ball Problem. Geometry, Integrability and Quantization, 2017, 18, 203-216.	0.2	0
29	Generalized Euler Angles Viewed as Spherical Coordinates. Geometry, Integrability and Quantization, 2017, 18, 105-116.	0.2	0
30	On the geometry of the rotating liquid drop. Mathematics and Computers in Simulation, 2016, 127, 194-202.	2.4	1
31	Factorizations in special relativity and quantum scattering on the line II. AIP Conference Proceedings, 2016, , .	0.3	3
32	Elastic Sturmian spirals in the Lorentz-Minkowski plane. Open Mathematics, 2016, 14, 1149-1156.	0.5	2
33	Axially Symmetric Willmore Surfaces Determined by Quadratures. Geometry, Integrability and Quantization, 2016, 17, 369-378.	0.2	1
34	A New Characterization of Eulerian Elasticas. Geometry, Integrability and Quantization, 2016, 17, 309-317.	0.2	0
35	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
36	On the necessary and sufficient condition for the decomposition of orthogonal transformations. AIP Conference Proceedings, 2015, , .	0.3	1

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37	Variations of (pseudo-)rotations and the Laplace-Beltrami operator on homogeneous spaces. AIP Conference Proceedings, 2015, , .	0.3	0
38	On the compositions of rotations. AIP Conference Proceedings, 2015, , .	0.3	2
39	Membrane fusion based on the geometry of the stalk model. Mechanics Research Communications, 2015, 63, 54-60.	1.0	1
40	Wigner rotation and Thomas precession: geometric phases and related physical theories. Journal of the Korean Physical Society, 2015, 66, 1656-1663.	0.3	8
41	Comment on â€œShape transition of unstrained flattest single-walled carbon nanotubes under pressureâ€•[J. Appl. Phys. 115, 044512 (2014)]. Journal of Applied Physics, 2015, 117, .	1.1	5
42	Elastic spirals. , 2014, , .		2
43	Generalized Euler decompositions of some six-dimensional Lie groups. , 2014, , .		4
44	New forms of the equations of the attitude kinematics. Proceedings in Applied Mathematics and Mechanics, 2014, 14, 87-88.	0.2	0
45	Two-axes decompositions of (pseudo-)rotations and some of their applications. , 2014, , .		1
46	Explicit parametrizations of Willmore surfaces. , 2014, , .		5
47	Lie Group Analysis of the Willmore and Membrane Shape Equations. Lecture Notes in Applied and Computational Mechanics, 2014, , 365-376.	2.0	1
48	Symmetries and Some Special Solutions of the Helfrich Model. Lecture Notes in Applied and Computational Mechanics, 2014, , 353-364.	2.0	1
49	Some new results on three-dimensional rotations and pseudo-rotations. , 2013, , .		4
50	Traveling wave solutions of the one-dimensional Boussinesq paradigm equation. , 2013, , .		0
51	New perspective on the gimbal lock problem. AIP Conference Proceedings, 2013, , .	0.3	12
52	Equilibrium Configurations of Lipid Bilayer Membranes and Carbon Nanostructures. Communications in Theoretical Physics, 2013, 59, 213-228.	1.1	10
53	Cylindrical Fluid Membranes and the Evolutions of Planar Curves. Geometry, Integrability and Quantization, 2013, 14, 142-151.	0.2	0
54	Unduloid-like Equilibrium Shapes of Carbon Nanotubes Subjected to Hydrostatic Pressure. , 2013, , 195-202.		0

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55	About parametric representations of SO(n) matrices and plane rotations. , 2012, , .		1
56	An approach for decomposition of finite rotations. Proceedings in Applied Mathematics and Mechanics, 2012, 12, 45-46.	0.2	0
57	Deformation of injected vesicles adhering onto flat rigid substrates. Computers and Mathematics With Applications, 2012, 64, 214-220.	1.4	2
58	Geometry of the anisotropic minimal surfaces. Analele Stiintifice Ale Universitatii Ovidius Constanta, Seria Matematica, 2012, 20, 79-88.	0.1	0
59	Vector decomposition of finite rotations. Reports on Mathematical Physics, 2011, 68, 107-117.	0.4	15
60	On Some Deformations of the Cassinian Oval. AIP Conference Proceedings, 2011, , .	0.3	5
61	Analytic Description of the Equilibrium Shapes of Elastic Rings Under Uniform Hydrostatic Pressure. , 2011, , .		2
62	Analytic description and explicit parametrisation of the equilibrium shapes of elastic rings and tubes under uniform hydrostatic pressure. International Journal of Mechanical Sciences, 2011, 53, 355-364.	3.6	44
63	Cell Membranes Under Hydrostatic Pressure Subjected to Micro-Injection. , 2011, , .		1
64	Traveling Wave Solutions of the Gardner Equation and Motion of Plane Curves Governed by the mKdV Flow. AIP Conference Proceedings, 2011, , .	0.3	9
65	On the Plane Curves whose Curvature Depends on the Distance from the Origin. , 2010, , .		5
66	Some Explicit Solutions of the Shape Equation. , 2010, , .		1
67	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
68	On the Whewell Parametrization of the Euler Elastica. , 2009, , .		0
69	On The intrinsic equation behind the Delaunay surfaces. , 2008, , .		4
70	Cylindrical equilibrium shapes of fluid membranes. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 435201.	0.7	56
71	ON THE ALGEBRAIC ASPECTS OF SAXON-HUTNER THEOREM. AIP Conference Proceedings, 2007, , .	0.3	0
72	An approach to reduction of the real symmetric 3 Ã— 3 secular problem and applications. Physics of Atomic Nuclei, 2005, 68, 1916-1921.	0.1	0

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73	New Geometrical Applications of the Elliptic Integrals: The Mylar Balloon. Journal of Nonlinear Mathematical Physics, 2004, 11, 55.	0.8	8
74	The Mylar Balloon Revisited. American Mathematical Monthly, 2003, 110, 761.	0.2	9
75	The Mylar Balloon Revisited. American Mathematical Monthly, 2003, 110, 761-784.	0.2	32
76	Quantization on curved surfaces. International Journal of Quantum Chemistry, 2002, 89, 248-254.	1.0	5
77	New solutions of the shape equation. European Physical Journal B, 2002, 29, 327-330.	0.6	18
78	Reduction in stages and complete quantization of the MIC-Kepler problem. Journal of Physics A, 1999, 32, 3779-3791.	1.6	11
79	Saxon-Hutner theorem via matrix exponential. Europhysics Letters, 1997, 37, 159-164.	0.7	1
80	The matrizant and Saxon - Hutner theorem. Journal of Physics A, 1997, 30, 1689-1694.	1.6	1
81	Geometry of the Saxon-Hutner theorem. Physics Letters, Section A: General, Atomic and Solid State Physics, 1997, 230, 245-252.	0.9	4
82	Kirkwood's formula revisited. Europhysics Letters, 1996, 33, 577-582.	0.7	0
83	On the Spectrum of the Geodesic Flow on Spheres. , 1994, , 87-92.		0
84	GROUP REPRESENTATIONS AND QUANTIZATION OF THE MOMENTUM MAP. , 1993, , .		0
85	On Debye-Hückel's Theory. Europhysics Letters, 1993, 24, 693-698.	0.7	1
86	Quantization of the moment map of coupled harmonic oscillators. Journal of Physics A, 1993, 26, 7115-7123.	1.6	1
87	Geometric quantization of the five-dimensional Kepler problem. Foundations of Physics, 1991, 21, 871-888.	0.6	7
88	An extension of the Saxon-Hutner theorem in the relativistic domain. Physics Letters, Section A: General, Atomic and Solid State Physics, 1989, 137, 313-318.	0.9	11
89	Reductions and quantization. International Journal of Theoretical Physics, 1989, 28, 1255-1267.	0.5	3
90	Generalization of the Saxon–Hutner Theorem in the Relativistic Domain. Physica Status Solidi (B): Basic Research, 1988, 145, K115.	0.7	6

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91	Geometric quantization of the Kepler problem with a magnetic charge. , 1988, , 275-281.		0
92	Scattering of charged particles off dyons. Journal of Physics A, 1988, 21, L1-L4.	1.6	7
93	Geometric quantisation of the MIC-Kepler problem. Journal of Physics A, 1987, 20, 5865-5871.	1.6	36
94	Geometric quantization of the multidimensional Kepler problem. Journal of Geometry and Physics, 1985, 2, 17-24.	0.7	33
95	Method for computing the characteristic polynomial. International Journal of Quantum Chemistry, 1980, 18, 339-341.	1.0	8
96	12. A quantum mechanical study on hormonal steroids. The Journal of Steroid Biochemistry, 1978, 9, 815.	1.3	0
97	Mechanics of incompressible test bodies moving on λ €spheres. Mathematical Methods in the Applied Sciences, 0, , .	1.2	3