

# J D Meiss

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2403583/publications.pdf>

Version: 2024-02-01

118  
papers

5,234  
citations

101384

36  
h-index

95083

68  
g-index

121  
all docs

121  
docs citations

121  
times ranked

2000  
citing authors

#	ARTICLE	IF	CITATIONS
1	Transport in Hamiltonian systems. <i>Physica D: Nonlinear Phenomena</i> , 1984, 13, 55-81.	1.3	589
2	Symplectic maps, variational principles, and transport. <i>Reviews of Modern Physics</i> , 1992, 64, 795-848.	16.4	563
3	Markov-Tree Model of Intrinsic Transport in Hamiltonian Systems. <i>Physical Review Letters</i> , 1985, 55, 2741-2744.	2.9	217
4	Markov tree model of transport in area-preserving maps. <i>Physica D: Nonlinear Phenomena</i> , 1986, 20, 387-402.	1.3	200
5	Solitary drift waves in the presence of magnetic shear. <i>Physics of Fluids</i> , 1983, 26, 990.	1.4	165
6	Stochasticity and Transport in Hamiltonian Systems. <i>Physical Review Letters</i> , 1984, 52, 697-700.	2.9	164
7	Resonances in area-preserving maps. <i>Physica D: Nonlinear Phenomena</i> , 1987, 27, 1-20.	1.3	136
8	Shear-Alfvén dynamics of toroidally confined plasmas. <i>Physics Reports</i> , 1985, 121, 1-164.	10.3	112
9	Algebraic decay in self-similar Markov chains. <i>Journal of Statistical Physics</i> , 1985, 39, 327-345.	0.5	108
10	Scattering of regularized-long-wave solitary waves. <i>Physica D: Nonlinear Phenomena</i> , 1984, 11, 324-336.	1.3	101
11	Relation between quantum and classical thresholds for multiphoton ionization of excited atoms. <i>Physical Review A</i> , 1988, 37, 4702-4706.	1.0	96
12	Self-consistent chaos in the beam-plasma instability. <i>Physica D: Nonlinear Phenomena</i> , 1994, 71, 1-17.	1.3	88
13	Thirty years of turnstiles and transport. <i>Chaos</i> , 2015, 25, 097602.	1.0	80
14	Correlations of periodic, area-preserving maps. <i>Physica D: Nonlinear Phenomena</i> , 1983, 6, 375-384.	1.3	77
15	Class renormalization: Islands around islands. <i>Physical Review A</i> , 1986, 34, 2375-2383.	1.0	76
16	Targeting chaotic orbits to the Moon through recurrence. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1995, 204, 373-378.	0.9	72
17	Fluctuation spectra of a drift wave soliton gas. <i>Physics of Fluids</i> , 1982, 25, 1838.	1.4	69
18	Periodic orbits for reversible, symplectic mappings. <i>Physica D: Nonlinear Phenomena</i> , 1989, 35, 65-86.	1.3	69

#	ARTICLE	IF	CITATIONS
19	Converse KAM theory for symplectic twist maps. <i>Nonlinearity</i> , 1989, 2, 555-570.	0.6	67
20	Rigorously diffusive deterministic map. <i>Physical Review A</i> , 1981, 24, 2664-2668.	1.0	55
21	Title is missing!. <i>Regular and Chaotic Dynamics</i> , 2006, 11, 191.	0.3	54
22	Cantori for symplectic maps near the anti-integrable limit. <i>Nonlinearity</i> , 1992, 5, 149-160.	0.6	53
23	Homoclinic bifurcations for the Hénon map. <i>Physica D: Nonlinear Phenomena</i> , 1999, 134, 153-184.	1.3	51
24	Andronov-Hopf bifurcations in planar, piecewise-smooth, continuous flows. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2007, 371, 213-220.	0.9	51
25	Quadratic volume-preserving maps. <i>Nonlinearity</i> , 1998, 11, 557-574.	0.6	49
26	Generic twistless bifurcations. <i>Nonlinearity</i> , 2000, 13, 203-224.	0.6	47
27	Canonical coordinates for guiding center particles. <i>Physics of Fluids B</i> , 1990, 2, 2563-2567.	1.7	45
28	Shrinking point bifurcations of resonance tongues for piecewise-smooth, continuous maps. <i>Nonlinearity</i> , 2009, 22, 1123-1144.	0.6	45
29	Solitary vortices in a rotating plasma. <i>Physics of Fluids</i> , 1986, 29, 1004.	1.4	44
30	Internal wave solitons. <i>Physics of Fluids</i> , 1978, 21, 700.	1.4	43
31	Description of nonlinear internal wave interactions using Langevin methods. <i>Journal of Geophysical Research</i> , 1980, 85, 1085-1094.	3.3	43
32	Aspects of bifurcation theory for piecewise-smooth, continuous systems. <i>Physica D: Nonlinear Phenomena</i> , 2012, 241, 1861-1868.	1.3	42
33	Generalized Hénon maps: the cubic diffeomorphisms of the plane. <i>Physica D: Nonlinear Phenomena</i> , 2000, 143, 262-289.	1.3	41
34	Chaotic advection and reaction during engineered injection and extraction in heterogeneous porous media. <i>Water Resources Research</i> , 2014, 50, 1433-1447.	1.7	39
35	Statistical characterization of periodic, area-preserving mappings. <i>Physical Review A</i> , 1981, 23, 2744-2746.	1.0	38
36	Controlling chaotic transport through recurrence. <i>Physica D: Nonlinear Phenomena</i> , 1995, 81, 280-294.	1.3	38

#	ARTICLE	IF	CITATIONS
37	Resonances and transport in the sawtooth map. <i>Physica D: Nonlinear Phenomena</i> , 1990, 46, 217-240.	1.3	35
38	Analytic theory of the nonlinear $m=1$ tearing mode. <i>Physics of Fluids</i> , 1986, 29, 1633.	1.4	34
39	Flux and differences in action for continuous time Hamiltonian systems. <i>Journal of Physics A</i> , 1986, 19, L225-L229.	1.6	31
40	Exploring the topology of dynamical reconstructions. <i>Physica D: Nonlinear Phenomena</i> , 2016, 334, 49-59.	1.3	31
41	Drift-Wave Turbulence from a Soliton Gas. <i>Physical Review Letters</i> , 1982, 48, 1362-1364.	2.9	29
42	Transient measures in the standard map. <i>Physica D: Nonlinear Phenomena</i> , 1994, 74, 254-267.	1.3	29
43	Computing connectedness: An exercise in computational topology. <i>Nonlinearity</i> , 1998, 11, 913-922.	0.6	28
44	Quadratic Volume-Preserving Maps: Invariant Circles and Bifurcations. <i>SIAM Journal on Applied Dynamical Systems</i> , 2009, 8, 76-128.	0.7	26
45	Transport in Transitory Dynamical Systems. <i>SIAM Journal on Applied Dynamical Systems</i> , 2011, 10, 35-65.	0.7	26
46	Computing connectedness: disconnectedness and discreteness. <i>Physica D: Nonlinear Phenomena</i> , 2000, 139, 276-300.	1.3	25
47	Greene's residue criterion for the breakup of invariant tori of volume-preserving maps. <i>Physica D: Nonlinear Phenomena</i> , 2013, 243, 45-63.	1.3	25
48	Integrability of multiple three-wave interactions. <i>Physical Review A</i> , 1979, 19, 1780-1789.	1.0	23
49	Evolution of magnetic islands in a Helic. <i>Physics of Plasmas</i> , 1995, 2, 752-759.	0.7	22
50	Twist singularities for symplectic maps. <i>Chaos</i> , 2003, 13, 1-16.	1.0	22
51	An approximate renormalization for the break-up of invariant tori with three frequencies. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1994, 190, 417-424.	0.9	20
52	Comment on "Microwave ionization of H atoms: Breakdown of classical dynamics for high frequencies". <i>Physical Review Letters</i> , 1989, 62, 1576-1576.	2.9	19
53	Computing periodic orbits using the anti-integrable limit. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1998, 241, 46-52.	0.9	19
54	Diffusion in symplectic maps. <i>Physical Review A</i> , 1990, 41, 4143-4150.	1.0	18

#	ARTICLE	IF	CITATIONS
55	Volume-preserving maps with an invariant. <i>Chaos</i> , 2002, 12, 289-299.	1.0	18
56	Leveraging the mathematics of shape for solar magnetic eruption prediction. <i>Journal of Space Weather and Space Climate</i> , 2020, 10, 13.	1.1	18
57	Birkhoff averages and rotational invariant circles for area-preserving maps. <i>Physica D: Nonlinear Phenomena</i> , 2020, 411, 132569.	1.3	18
58	Numerical analysis of weakly nonlinear wave turbulence. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1979, 76, 2109-2113.	3.3	17
59	Flux-minimizing curves for reversible area-preserving maps. <i>Physica D: Nonlinear Phenomena</i> , 1992, 57, 476-506.	1.3	17
60	Visual explorations of dynamics: The standard map. <i>Pramana - Journal of Physics</i> , 2008, 70, 965-988.	0.9	17
61	Discontinuity induced bifurcations in a model of <i>Saccharomyces cerevisiae</i> . <i>Mathematical Biosciences</i> , 2009, 218, 40-49.	0.9	17
62	Critical invariant circles in asymmetric and multiharmonic generalized standard maps. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2014, 19, 1004-1026.	1.7	17
63	Drift by coupling to an anti-integrable limit. <i>Physica D: Nonlinear Phenomena</i> , 2001, 156, 201-218.	1.3	16
64	Resonance near border-collision bifurcations in piecewise-smooth, continuous maps. <i>Nonlinearity</i> , 2010, 23, 3091-3118.	0.6	16
65	Heteroclinic intersections between invariant circles of volume-preserving maps. <i>Nonlinearity</i> , 2003, 16, 1573-1595.	0.6	15
66	Reversors and symmetries for polynomial automorphisms of the complex plane. <i>Nonlinearity</i> , 2004, 17, 975-1000.	0.6	15
67	Blinking Rolls: Chaotic Advection in a Three-Dimensional Flow with an Invariant. <i>SIAM Journal on Applied Dynamical Systems</i> , 2005, 4, 159-186.	0.7	15
68	Resonance zones and lobe volumes for exact volume-preserving maps. <i>Nonlinearity</i> , 2009, 22, 1761-1789.	0.6	15
69	Resonances and Twist in Volume-Preserving Mappings. <i>SIAM Journal on Applied Dynamical Systems</i> , 2012, 11, 319-349.	0.7	15
70	Flux, resonances and the devil's staircase for the sawtooth map. <i>Nonlinearity</i> , 1989, 2, 347-356.	0.6	14
71	Reversible polynomial automorphisms of the plane: the involutory case. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2003, 312, 49-58.	0.9	14
72	Orbit extension method for finding unstable orbits. <i>Physica D: Nonlinear Phenomena</i> , 1987, 29, 143-154.	1.3	13

#	ARTICLE	IF	CITATIONS
73	Simultaneous border-collision and period-doubling bifurcations. <i>Chaos</i> , 2009, 19, 033146.	1.0	13
74	Accelerator modes and anomalous diffusion in 3D volume-preserving maps. <i>Nonlinearity</i> , 2018, 31, 5615-5642.	0.6	13
75	Effect of turbulent diffusion on collisionless tearing instabilities. <i>Physics of Fluids</i> , 1982, 25, 815.	1.4	12
76	Breakup of invariant tori for the four-dimensional semi-standard map. <i>Physica D: Nonlinear Phenomena</i> , 1993, 66, 282-297.	1.3	12
77	The destruction of tori in volume-preserving maps. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2012, 17, 2108-2121.	1.7	12
78	Diffusion and drift in volume-preserving maps. <i>Regular and Chaotic Dynamics</i> , 2017, 22, 700-720.	0.3	12
79	Computational Topology Techniques for Characterizing Time-Series Data. <i>Lecture Notes in Computer Science</i> , 2017, , 284-296.	1.0	12
80	Symbolic Codes for Rotational Orbits. <i>SIAM Journal on Applied Dynamical Systems</i> , 2005, 4, 515-562.	0.7	11
81	Nilpotent normal form for divergence-free vector fields and volume-preserving maps. <i>Physica D: Nonlinear Phenomena</i> , 2008, 237, 156-166.	1.3	11
82	Internal-wave interactions in the induced-diffusion approximation. <i>Journal of Fluid Mechanics</i> , 1982, 117, 315-341.	1.4	10
83	Canonical Melnikov theory for diffeomorphisms. <i>Nonlinearity</i> , 2008, 21, 485-508.	0.6	10
84	Applications of KAM theory to population dynamics. <i>Journal of Biological Dynamics</i> , 2011, 5, 44-63.	0.8	10
85	Chaotic advection and the emergence of tori in the KÃ¼ppers-Lortz state. <i>Chaos</i> , 2008, 18, 033104.	1.0	9
86	Simplicial Multivalued Maps and the Witness Complex for Dynamical Analysis of Time Series. <i>SIAM Journal on Applied Dynamical Systems</i> , 2015, 14, 1278-1307.	0.7	9
87	Birkhoff averages and the breakdown of invariant tori in volume-preserving maps. <i>Physica D: Nonlinear Phenomena</i> , 2021, 428, 133048.	1.3	9
88	Nonlinear electron Landau damping of ion-acoustic solitons. <i>Physics of Fluids</i> , 1983, 26, 983.	1.4	8
89	Stability of minimal periodic orbits. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1998, 247, 227-234.	0.9	8
90	Heteroclinic orbits and Flux in a perturbed integrable Suris map. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2000, 269, 309-318.	0.9	8

#	ARTICLE	IF	CITATIONS
91	Unfolding a codimension-two, discontinuous, Andronov-Hopf bifurcation. <i>Chaos</i> , 2008, 18, 033125.	1.0	8
92	Generating forms for exact volume-preserving maps. <i>Discrete and Continuous Dynamical Systems - Series S</i> , 2009, 2, 361-377.	0.6	8
93	Application of Newton's method to Lagrangian mappings. <i>Physica D: Nonlinear Phenomena</i> , 1989, 36, 317-326.	1.3	7
94	Title is missing!. <i>Journal of Physics A</i> , 1990, 23, L1093-L1100.	1.6	6
95	Self-rotation number using the turning angle. <i>Physica D: Nonlinear Phenomena</i> , 2000, 145, 25-46.	1.3	6
96	Iterative techniques for computing the linearized manifolds of quasiperiodic tori. <i>Chaos</i> , 2006, 16, 023129.	1.0	6
97	Iterated function system models in data analysis: Detection and separation. <i>Chaos</i> , 2012, 22, 023103.	1.0	6
98	Using curvature to select the time lag for delay reconstruction. <i>Chaos</i> , 2020, 30, 063143.	1.0	6
99	Transport in Transitory, Three-Dimensional, Liouville Flows. <i>SIAM Journal on Applied Dynamical Systems</i> , 2012, 11, 1785-1816.	0.7	5
100	Computing the Conjugacy of Invariant Tori for Volume-Preserving Maps. <i>SIAM Journal on Applied Dynamical Systems</i> , 2016, 15, 557-579.	0.7	5
101	Poisson structure of the three-dimensional Euler equations in Fourier space. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2019, 52, 365501.	0.7	5
102	Destabilization of Alfvén-resonant modes by resistivity and diamagnetic drifts. <i>Physics of Fluids</i> , 1987, 30, 4.	1.4	4
103	Normal forms for 4D symplectic maps with twist singularities. <i>Physica D: Nonlinear Phenomena</i> , 2006, 215, 175-190.	1.3	4
104	Straight line orbits in Hamiltonian flows. <i>Celestial Mechanics and Dynamical Astronomy</i> , 2009, 105, 337-352.	0.5	4
105	Finite-Time Transport in Volume-Preserving Flows. <i>Physical Review Letters</i> , 2013, 110, 214101.	2.9	4
106	Toward automated extraction and characterization of scaling regions in dynamical systems. <i>Chaos</i> , 2021, 31, 123102.	1.0	4
107	Relaxation processes for a three-wave interaction model. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1981, 78, 2029-2032.	3.3	3
108	Symmetry reduction by lifting for maps. <i>Nonlinearity</i> , 2012, 25, 1709-1733.	0.6	3

#	ARTICLE	IF	CITATIONS
109	Nonexistence of invariant tori transverse to foliations: An application of converse KAM theory. <i>Chaos</i> , 2021, 31, 013124.	1.0	3
110	Relaxation to the steady state in neutral-beam-injected mirrors. <i>Physics of Fluids</i> , 1986, 29, 3740.	1.4	2
111	Mixed dynamics in a parabolic standard map. <i>Physica D: Nonlinear Phenomena</i> , 2016, 315, 58-71.	1.3	2
112	Elliptic Bubbles in Moser's 4D Quadratic Map: The Quadfurcation. <i>SIAM Journal on Applied Dynamical Systems</i> , 2020, 19, 442-479.	0.7	2
113	Integrability, normal forms, and magnetic axis coordinates. <i>Journal of Mathematical Physics</i> , 2021, 62, 122901.	0.5	2
114	Probing the statistics of transport in the Hénon Map. <i>European Physical Journal: Special Topics</i> , 2016, 225, 1181-1186.	1.2	1
115	Designing a Finite-Time Mixer: Optimizing Stirring for Two-Dimensional Maps. <i>SIAM Journal on Applied Dynamical Systems</i> , 2017, 16, 1514-1542.	0.7	1
116	Normal forms and near-axis expansions for Beltrami magnetic fields. <i>Physics of Plasmas</i> , 2021, 28, 122501.	0.7	1
117	Jeffrey Tennyson, 1950–1992. <i>Physica D: Nonlinear Phenomena</i> , 1994, 71, vii-viii.	1.3	0
118	Moser's Quadratic, Symplectic Map. <i>Regular and Chaotic Dynamics</i> , 2018, 23, 654-664.	0.3	0