

# Klas Modin

## List of Publications by Year in descending order

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37  
papers

378  
citations

840728

11  
h-index

839512

18  
g-index

38  
all docs

38  
docs citations

38  
times ranked

228  
citing authors

#	ARTICLE	IF	CITATIONS
1	General method for atomistic spin-lattice dynamics with first-principles accuracy. <i>Physical Review B</i> , 2019, 99, .	3.2	37
2	Generalized Hunter–Saxton Equations, Optimal Information Transport, and Factorization of Diffeomorphisms. <i>Journal of Geometric Analysis</i> , 2015, 25, 1306-1334.	1.0	26
3	Geometric integration of Hamiltonian systems perturbed by Rayleigh damping. <i>BIT Numerical Mathematics</i> , 2011, 51, 977-1007.	2.0	23
4	Diffeomorphic Density Matching by Optimal Information Transport. <i>SIAM Journal on Imaging Sciences</i> , 2015, 8, 1718-1751.	2.2	23
5	Symplectic integrators for spin systems. <i>Physical Review E</i> , 2014, 89, 061301.	2.1	20
6	B-series methods are exactly the affine equivariant methods. <i>Numerische Mathematik</i> , 2016, 133, 599-622.	1.9	20
7	Geometric Generalisations of shake and rattle. <i>Foundations of Computational Mathematics</i> , 2014, 14, 339-370.	2.5	19
8	A Casimir preserving scheme for long-time simulation of spherical ideal hydrodynamics. <i>Journal of Fluid Mechanics</i> , 2020, 884, .	3.4	19
9	Geometry of matrix decompositions seen through optimal transport and information geometry. <i>Journal of Geometric Mechanics</i> , 2017, 9, 335-390.	0.8	16
10	On Euler–Arnold equations and totally geodesic subgroups. <i>Journal of Geometry and Physics</i> , 2011, 61, 1446-1461.	1.4	15
11	Geometric hydrodynamics via Madelung transform. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 6165-6170.	7.1	13
12	Lie–Poisson Methods for Isospectral Flows. <i>Foundations of Computational Mathematics</i> , 2020, 20, 889-921.	2.5	13
13	Collective Lie-Poisson integrators on $R^3$ . <i>IMA Journal of Numerical Analysis</i> , 2015, 35, 546-560.	2.9	12
14	A minimal-variable symplectic integrator on spheres. <i>Mathematics of Computation</i> , 2016, 86, 2325-2344.	2.1	12
15	A multiscale theory for image registration and nonlinear inverse problems. <i>Advances in Mathematics</i> , 2019, 346, 1009-1066.	1.1	12
16	Geometry of the Madelung Transform. <i>Archive for Rational Mechanics and Analysis</i> , 2019, 234, 549-573.	2.4	11
17	Geometric hydrodynamics and infinite-dimensional Newton’s equations. <i>Bulletin of the American Mathematical Society</i> , 2021, 58, 377-442.	1.5	10
18	A Numerical Algorithm for $C^2$ -Splines on Symmetric Spaces. <i>SIAM Journal on Numerical Analysis</i> , 2018, 56, 2623-2647.	2.3	9

#	ARTICLE	IF	CITATIONS
19	Collective symplectic integrators. <i>Nonlinearity</i> , 2014, 27, 1525-1542.	1.4	8
20	Canonical scale separation in two-dimensional incompressible hydrodynamics. <i>Journal of Fluid Mechanics</i> , 2022, 943, .	3.4	8
21	Integrability of Point-Vortex Dynamics via Symplectic Reduction: A Survey. <i>Arnold Mathematical Journal</i> , 2021, 7, 357-385.	0.4	7
22	Integrability of nonholonomically coupled oscillators. <i>Discrete and Continuous Dynamical Systems</i> , 2014, 34, 1121-1130.	0.9	7
23	Geodesic Warps by Conformal Mappings. <i>International Journal of Computer Vision</i> , 2013, 105, 144-154.	15.6	6
24	What makes nonholonomic integrators work?. <i>Numerische Mathematik</i> , 2020, 145, 405-435.	1.9	6
25	Semi-invariant Riemannian metrics in hydrodynamics. <i>Calculus of Variations and Partial Differential Equations</i> , 2020, 59, 1.	1.7	6
26	Diffeomorphic Random Sampling Using Optimal Information Transport. <i>Lecture Notes in Computer Science</i> , 2017, , 135-142.	1.3	3
27	Time transformation and reversibility of Nambu-Poisson systems. <i>Journal of Generalized Lie Theory and Applications</i> , 2009, 3, 39-52.	0.1	3
28	An Efficient Exponential Integrator for Large Nonlinear Stiff Systems Part 2: Symplecticity and Global Error Analysis. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2014, , 269-280.	0.5	3
29	Symplectic Integrators for Index 1 Constraints. <i>SIAM Journal of Scientific Computing</i> , 2013, 35, A2150-A2162.	2.8	2
30	On geodesic completeness for Riemannian metrics on smooth probability densities. <i>Calculus of Variations and Partial Differential Equations</i> , 2017, 56, 1.	1.7	2
31	Currents and Finite Elements as Tools for Shape Space. <i>Journal of Mathematical Imaging and Vision</i> , 2019, 61, 1197-1220.	1.3	2
32	An Efficient Exponential Integrator for Large Nonlinear Stiff Systems Part 1: Theoretical Investigation. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2014, , 259-268.	0.5	2
33	On conformal variational problems and free boundary continua. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2014, 47, 145204.	2.1	1
34	Geometry of Discrete-Time Spin Systems. <i>Journal of Nonlinear Science</i> , 2016, 26, 1507-1523.	2.1	1
35	Diffeomorphic density registration. , 2020, , 577-603.		1
36	Symmetry reduction for central force problems. <i>European Journal of Physics</i> , 2016, 37, 055003.	0.6	0

#	ARTICLE	IF	CITATIONS
37	Time transformation and reversibility of Nambu-Poisson systems. Journal of Generalized Lie Theory and Applications, 2009, 03, .	0.1	0