

# Michael Dellnitz

## List of Publications by Year in descending order

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83  
papers

2,526  
citations

236833

25  
h-index

214721

47  
g-index

87  
all docs

87  
docs citations

87  
times ranked

1138  
citing authors

#	ARTICLE	IF	CITATIONS
1	Electrophysiological signatures of dedifferentiation differ between fit and less fit older adults. <i>Cognitive Neurodynamics</i> , 2021, 15, 847-859.	2.3	1
2	Pareto Explorer: a global/local exploration tool for many-objective optimization problems. <i>Engineering Optimization</i> , 2020, 52, 832-855.	1.5	20
3	On the equivariance properties of self-adjoint matrices. <i>Dynamical Systems</i> , 2020, 35, 197-215.	0.2	0
4	A Set-Oriented Path Following Method for the Approximation of Parameter Dependent Attractors. <i>SIAM Journal on Applied Dynamical Systems</i> , 2020, 19, 705-723.	0.7	3
5	Deep model predictive flow control with limited sensor data and online learning. <i>Theoretical and Computational Fluid Dynamics</i> , 2020, 34, 577-591.	0.9	42
6	Structural Properties of Pareto Fronts: The Occurrence of Dents in Classical and Parametric Multiobjective Optimization Problems. <i>Studies in Systems, Decision and Control</i> , 2020, , 315-336.	0.8	0
7	Continuous relaxations for the traveling salesman problem. <i>Nonlinear Dynamics</i> , 2019, 97, 2003-2022.	2.7	3
8	The Numerical Computation of Unstable Manifolds for Infinite Dimensional Dynamical Systems by Embedding Techniques. <i>SIAM Journal on Applied Dynamical Systems</i> , 2019, 18, 1265-1292.	0.7	6
9	Finite-Control-Set Model Predictive Control for a Permanent Magnet Synchronous Motor Application with Online Least Squares System Identification. , 2019, , .		17
10	On the hierarchical structure of Pareto critical sets. <i>Journal of Global Optimization</i> , 2019, 73, 891-913.	1.1	14
11	On the hierarchical structure of Pareto critical sets. <i>AIP Conference Proceedings</i> , 2019, , .	0.3	2
12	Multiobjective Optimal Control Methods for the Navier-Stokes Equations Using Reduced Order Modeling. <i>Acta Applicandae Mathematicae</i> , 2019, 161, 171-199.	0.5	18
13	Transition Manifolds of Complex Metastable Systems. <i>Journal of Nonlinear Science</i> , 2018, 28, 471-512.	1.0	36
14	Gradient-Based Multiobjective Optimization with Uncertainties. <i>Studies in Computational Intelligence</i> , 2018, , 159-182.	0.7	11
15	Improved Neural Control of Movements Manifests in Expertise-Related Differences in Force Output and Brain Network Dynamics. <i>Frontiers in Physiology</i> , 2018, 9, 1540.	1.3	6
16	Age- and Expertise-Related Differences of Sensorimotor Network Dynamics during Force Control. <i>Neuroscience</i> , 2018, 388, 203-213.	1.1	7
17	A Survey of Recent Trends in Multiobjective Optimal Control – Surrogate Models, Feedback Control and Objective Reduction. <i>Mathematical and Computational Applications</i> , 2018, 23, 30.	0.7	44
18	Mathematische Optimierung. <i>Intelligente Technische Systeme, Lösungen Aus Dem Spitzencluster Itä€™s OWL</i> , 2018, , 119-152.	0.1	0

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19	Eingesetzte wissenschaftliche Methoden. Intelligente Technische Systeme, Lösungen Aus Dem Spitzencluster Itä€™s OWL, 2018, , 41-104.	0.1	0
20	A Set-Oriented Numerical Approach for Dynamical Systems with Parameter Uncertainty. SIAM Journal on Applied Dynamical Systems, 2017, 16, 120-138.	0.7	9
21	Sensing and control in symmetric networks. Dynamical Systems, 2017, 32, 61-79.	0.2	5
22	A Multiobjective MPC Approach for Autonomously Driven Electric Vehicles * *This research was funded by the German Federal Ministry of Education and Research (BMBF) within the Leading-Edge Cluster Intelligent Technical Systems OstWestfalenLippe (itä€™s OWL).. IFAC-PapersOnLine, 2017, 50, 8674-8679.	0.5	19
23	PODä€based multiobjective optimal control of PDEs with nonä€smooth objectives. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 51-54.	0.2	4
24	A Comparison of two Predictive Approaches to Control the Longitudinal Dynamics of Electric Vehicles. Procedia Technology, 2016, 26, 465-472.	1.1	10
25	Multiobjective Model Predictive Control of an Industrial Laundry. Procedia Technology, 2016, 26, 483-490.	1.1	7
26	Multiobjective Optimal Control Methods for the Development of an Intelligent Cruise Control. Mathematics in Industry, 2016, , 633-641.	0.1	4
27	On the computation of attractors for delay differential equations. Journal of Computational Dynamics, 2016, 3, 5-5.	0.4	5
28	Development of an Intelligent Cruise Control Using Optimal Control Methods. Procedia Technology, 2014, 15, 285-294.	1.1	11
29	The Paradigm of Self-optimization. Lecture Notes in Mechanical Engineering, 2014, , 1-25.	0.3	2
30	Methods for the Design and Development. Lecture Notes in Mechanical Engineering, 2014, , 183-350.	0.3	0
31	A variational approach to define robustness for parametric multiobjective optimization problems. Journal of Global Optimization, 2013, 57, 331-345.	1.1	16
32	Set Oriented Methods for the Numerical Treatment of Multiobjective Optimization Problems. Studies in Computational Intelligence, 2013, , 187-219.	0.7	21
33	Handling high-dimensional problems with multi-objective continuation methods via successive approximation of the tangent space. Engineering Optimization, 2012, 44, 1117-1146.	1.5	24
34	Optimal Control on Stable Manifolds for a Double Pendulum. Proceedings in Applied Mathematics and Mechanics, 2012, 12, 723-724.	0.2	0
35	The efficient approximation of coherent pairs in non-autonomous dynamical systems. Discrete and Continuous Dynamical Systems, 2012, 32, 3029-3042.	0.5	1
36	Multilevel Subdivision Techniques for Scalar Optimization Problems. , 2012, , 221-252.		0

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37	Low-Energy Earth-to-Halo Transfers in the Earth-Moon Scenario with Sun-Perturbation. , 2011, , 39-51.		2
38	Continuous and Discrete Concepts for Detecting Transport Barriers in the Planar Circular Restricted Three Body Problem. , 2011, , 99-105.		0
39	On the Approximation of Transport Phenomena – a Dynamical Systems Approach. GAMM Mitteilungen, 2009, 32, 47-60.	2.7	3
40	A multi-objective approach to the design of low thrust space trajectories using optimal control. Celestial Mechanics and Dynamical Astronomy, 2009, 105, 33-59.	0.5	24
41	Local expansion concepts for detecting transport barriers in dynamical systems. Communications in Nonlinear Science and Numerical Simulation, 2009, 14, 4176-4190.	1.7	25
42	Multiobjective optimization for transistor sizing of CMOS logic standard cells using set-oriented numerical techniques. , 2009, , .		13
43	Designing optimal low-thrust gravity-assist trajectories using space pruning and a multi-objective approach. Engineering Optimization, 2009, 41, 155-181.	1.5	53
44	Convergence of stochastic search algorithms to finite size pareto set approximations. Journal of Global Optimization, 2008, 41, 559-577.	1.1	54
45	A new approach for online multiobjective optimization of mechatronic systems. International Journal on Software Tools for Technology Transfer, 2008, 10, 223-231.	1.7	18
46	Hybridizing evolutionary strategies with continuation methods for solving multi-objective problems. Engineering Optimization, 2008, 40, 383-402.	1.5	40
47	Multi-objective shape optimization for piezoceramics. , 2008, , .		0
48	Multiobjective Optimization of Control Trajectories for the Guidance of a Rail-bound Vehicle. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 4380-4386.	0.4	11
49	Set Oriented Approximation of Invariant Manifolds: Review of Concepts for Astrodynamical Problems. AIP Conference Proceedings, 2007, , .	0.3	3
50	Global Optimization using a Dynamical Systems Approach. Journal of Global Optimization, 2006, 34, 569-587.	1.1	10
51	On target for Venus – set oriented computation of energy efficient low thrust trajectories. Celestial Mechanics and Dynamical Astronomy, 2006, 95, 357-370.	0.5	42
52	Symmetry of attractors and the Perron-Frobenius operator. Journal of Difference Equations and Applications, 2006, 12, 1147-1178.	0.7	4
53	Graph Algorithms for Dynamical Systems. , 2006, , 619-645.		27
54	TRANSPORT IN DYNAMICAL ASTRONOMY AND MULTIBODY PROBLEMS. World Scientific Series on Nonlinear Science, Series B, 2006, , 3-31.	0.2	0

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55	On target for Venus "set oriented computation of energy efficient low thrust trajectories. , 2006, , 357-370.		0
56	Return Time Dynamics as a Tool for Finding Almost Invariant Sets. Annals of the New York Academy of Sciences, 2005, 1065, 44-54.	1.8	1
57	Transport of Mars-Crossing Asteroids from the Quasi-Hilda Region. Physical Review Letters, 2005, 94, 231102.	2.9	27
58	TRANSPORT IN DYNAMICAL ASTRONOMY AND MULTIBODY PROBLEMS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2005, 15, 699-727.	0.7	86
59	Detecting and Locating Near-Optimal Almost-Invariant Sets and Cycles. SIAM Journal of Scientific Computing, 2003, 24, 1839-1863.	1.3	109
60	Covering Pareto Sets by Multilevel Evolutionary Subdivision Techniques. Lecture Notes in Computer Science, 2003, , 118-132.	1.0	41
61	Congestion and Almost Invariant Sets in Dynamical Systems. Lecture Notes in Computer Science, 2003, , 183-209.	1.0	10
62	Finding zeros by multilevel subdivision techniques. IMA Journal of Numerical Analysis, 2002, 22, 167-185.	1.5	25
63	Set Oriented Numerical Methods for Dynamical Systems. Handbook of Dynamical Systems, 2002, 2, 221-264.	0.6	120
64	Locating all the zeros of an analytic function in one complex variable. Journal of Computational and Applied Mathematics, 2002, 138, 325-333.	1.1	59
65	The Algorithms Behind GAIO " Set Oriented Numerical Methods for Dynamical Systems. , 2001, , 145-174.		111
66	The numerical detection of connecting orbits. Discrete and Continuous Dynamical Systems - Series B, 2001, 1, 125-135.	0.5	6
67	On the isolated spectrum of the Perron-Frobenius operator. Nonlinearity, 2000, 13, 1171-1188.	0.6	55
68	The computation of lyapunov exponents via spatial integration with application to blowout bifurcations. Computer Methods in Applied Mechanics and Engineering, 1999, 170, 223-237.	3.4	13
69	On the Approximation of Complicated Dynamical Behavior. SIAM Journal on Numerical Analysis, 1999, 36, 491-515.	1.1	386
70	On the Approximation of Complicated Dynamical Behavior. , 1999, , 400-424.		1
71	An adaptive subdivision technique for the approximation of attractors and invariant measures. Computing and Visualization in Science, 1998, 1, 63-68.	1.2	43
72	Almost Invariant Sets in Chua's Circuit. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1997, 07, 2475-2485.	0.7	44

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73	Exploring invariant sets and invariant measures. Chaos, 1997, 7, 221-228.	1.0	52
74	A subdivision algorithm for the computation of unstable manifolds and global attractors. Numerische Mathematik, 1997, 75, 293-317.	0.9	261
75	An adaptive method for the approximation of the generalized cell mapping. Chaos, Solitons and Fractals, 1997, 8, 525-534.	2.5	46
76	The Computation of Unstable Manifolds Using Subdivision and Continuation. , 1996, , 449-459.		45
77	SYMMETRY BREAKING BIFURCATIONS OF CHAOTIC ATTRACTORS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1995, 05, 1643-1676.	0.7	17
78	Generic movement of eigenvalues for equivariant self-adjoint matrices. Journal of Computational and Applied Mathematics, 1994, 55, 249-259.	1.1	8
79	Symmetry of Attractors and the Karhunen-LoÃve Decomposition. Applied Mathematical Sciences (Switzerland), 1994, , 73-108.	0.4	27
80	Detecting the symmetry of attractors. Physica D: Nonlinear Phenomena, 1993, 67, 66-87.	1.3	47
81	The structure of symmetric attractors. Archive for Rational Mechanics and Analysis, 1993, 123, 75-98.	1.1	65
82	Computational bifurcation of periodic solutions in systems with symmetry. IMA Journal of Numerical Analysis, 1992, 12, 429-455.	1.5	13
83	Computational methods for bifurcation problems with symmetriesâwith special attention to steady state and Hopf bifurcation points. Journal of Computational and Applied Mathematics, 1989, 26, 97-123.	1.1	65