Dirk Lebiedz

List of Publications by Year
in descending order

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25 papers	555 citations	687363 13 h-index	642732 23 g-index
25 all docs	25 docs citations	25 times ranked	549 citing authors

#	Article	IF	Citations
1	Flow curvature manifold and energy of generalized LiÃ©nard systems. Chaos, Solitons and Fractals, 2022, 161, 112354.	5.1	3
2	Towards Differential Geometric Characterization of Slow Invariant Manifolds in Extended Phase Space: Sectional Curvature and Flow Invariance. SIAM Journal on Applied Dynamical Systems, 2018, 17, 732-753.	1.6	3
3	An Optimization Approach to Kinetic Model Reduction for Combustion Chemistry. Flow, Turbulence and Combustion, 2014, 92, 885-902.	2.6	3
4	A robust optimization approach to experimental design for model discrimination of dynamical systems. Mathematical Programming, 2013, 141, 405-433.	2.4	7
5	Simplified Reaction Models for Combustion in Gas Turbine Combustion Chambers. Fluid Mechanics and Its Applications, 2013, , 161-182.	0.2	0
6	A Continuation Method for the Efficient Solution of Parametric Optimization Problems in Kinetic Model Reduction. SIAM Journal of Scientific Computing, 2013, 35, A1584-A1603.	2.8	6
7	Robust Optimal Design of Synthetic Biological Networks. Methods in Molecular Biology, 2012, 813, 45-55.	0.9	3
8	A Variational Principle for Computing Slow Invariant Manifolds in Dissipative Dynamical Systems. SIAM Journal of Scientific Computing, 2011, 33, 703-720.	2.8	16
9	Geometric Criteria for Model Reduction in Chemical Kinetics via Optimization of Trajectories. Lecture Notes in Computational Science and Engineering, 2011, , 241-252.	0.3	4
10	Minimal curvature trajectories: Riemannian geometry concepts for slow manifold computation in chemical kinetics. Journal of Computational Physics, 2010, 229, 6512-6533.	3.8	22
11	Entropy-Related Extremum Principles for Model Reduction of Dissipative Dynamical Systems. Entropy, 2010, 12, 706-719.	2.2	22
12	Predicted Auxiliary Navigation Mechanism of Peritrichously Flagellated Chemotactic Bacteria. PLoS Computational Biology, 2010, 6, e1000717.	3.2	42
13	Role of Translational Coupling in Robustness of Bacterial Chemotaxis Pathway. PLoS Biology, 2009, 7, e1000171.	5.6	54
14	Oscillatory NAD(P)H Waves and Calcium Oscillations in Neutrophils? A Modeling Study of Feasibility. Biophysical Journal, 2009, 96, 417-428.	0.5	15
15	Protein exchange dynamics at chemoreceptor clusters in Escherichia coli. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 6403-6408.	7.1	75
16	Dependence of Bacterial Chemotaxis on Gradient Shape and Adaptation Rate. PLoS Computational Biology, 2008, 4, e1000242.	3.2	97
17	Targeting characteristic wave properties in reaction-diffusion systems by optimization of external forcing. Physical Review E, 2007, 76, 056211.	2.1	2
18	Influence of Coadsorbates on the NO Dissociation on a Rhodium(311) Surface. ChemPhysChem, 2005, 6, 2513-2521.	2.1	15

#	Article	IF	Citations
19	Automatic network coupling analysis for dynamical systems based on detailed kinetic models. Physical Review E, 2005, 72, 041911.	2.1	9
20	Coverage dependence of oxygen decomposition and surface diffusion on rhodium (111): A DFT study. Journal of Chemical Physics, 2005, 122, 034710.	3.0	56
21	Influence of initial oxygen coverage and magnetic moment on the NO decomposition on rhodium (111). Journal of Chemical Physics, 2005, 122, 154702.	3.0	29
22	Specific external forcing of spatiotemporal dynamics in reactionâ€“diffusion systems. Chaos, 2005, 15, 023901.	2.5	5
23	Linear relationship between activation energies and reaction energies for coverage-dependent dissociation reactions on rhodium surfaces. Physical Chemistry Chemical Physics, 2005, 7, 2552.	2.8	21
24	Dynamic control and information processing in chemical reaction systems by tuning self-organization behavior. Chaos, 2004, 14, 611-616.	2.5	7
25	Manipulation of Self-Aggregation Patterns and Waves in a Reaction-Diffusion System by Optimal Boundary Control Strategies. Physical Review Letters, 2003, 91, 208301.	7.8	39