

Serkan Gugercin

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

67
papers

2,190
citations

18
h-index

46
g-index

74
ext. papers

2,773
ext. citations

2.4
avg, IF

5.55
L-index

#	Paper	IF	Citations
67	Estimating experimental dispersion curves from steady-state frequency response measurements. <i>Mechanical Systems and Signal Processing</i> , 2022 , 164, 108218	7.8	3
66	Data-Driven Modeling of Linear Dynamical Systems with Quadratic Output in the AAA Framework.. <i>Journal of Scientific Computing</i> , 2022 , 91, 16	2.3	
65	Model Reduction of Linear Dynamical Systems via Balancing for Bayesian Inference. <i>Journal of Scientific Computing</i> , 2022 , 91, 1	2.3	1
64	Data-Driven Balancing of Linear Dynamical Systems. <i>SIAM Journal of Scientific Computing</i> , 2022 , 44, A554-A582	2.6	0
63	Structure-Preserving Interpolatory Model Reduction for Port-Hamiltonian Differential-Algebraic Systems 2022 , 235-254		1
62	\mathcal{H}_2 -gap Model Reduction for Stabilizable and Detectable Systems 2022 , 317-334		
61	Wavelet-based dynamic mode decomposition. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2021 , 20, e202000355	0.2	2
60	Structure-preserving interpolation of bilinear control systems. <i>Advances in Computational Mathematics</i> , 2021 , 47, 1	1.6	1
59	Preconditioning Parametrized Linear Systems. <i>SIAM Journal of Scientific Computing</i> , 2021 , 43, A2242-A2267		0
58	Structure-preserving interpolation for model reduction of parametric bilinear systems. <i>Automatica</i> , 2021 , 132, 109799	5.7	1
57	Estimating dispersion curves from Frequency Response Functions via Vector-Fitting. <i>Mechanical Systems and Signal Processing</i> , 2020 , 140, 106597	7.8	4
56	Sampling-free model reduction of systems with low-rank parameterization. <i>Advances in Computational Mathematics</i> , 2020 , 46, 1	1.6	0
55	Stability of Discrete Empirical Interpolation and Gappy Proper Orthogonal Decomposition with Randomized and Deterministic Sampling Points. <i>SIAM Journal of Scientific Computing</i> , 2020 , 42, A2837-A2864	2.6	7
54	Revisiting IRKA: Connections with Pole Placement and Backward Stability. <i>Vietnam Journal of Mathematics</i> , 2020 , 48, 963-985	0.5	
53	Recreating Periodic Events: Characterizing Footsteps in a Continuous Walking Signal. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2020 , 231-235	0.3	
52	Kolmogorov n-widths for linear dynamical systems. <i>Advances in Computational Mathematics</i> , 2019 , 45, 2273-2286	1.6	9
51	H_2 (tf) optimality conditions for a finite-time horizon. <i>Automatica</i> , 2019 , 110, 108604	5.7	7

50	Data-driven structured realization. <i>Linear Algebra and Its Applications</i> , 2018 , 537, 250-286	0.9	18
49	Damping optimization of parameter dependent mechanical systems by rational interpolation. <i>Advances in Computational Mathematics</i> , 2018 , 44, 1797-1820	1.6	5
48	Interpolatory model reduction of parameterized bilinear dynamical systems. <i>Advances in Computational Mathematics</i> , 2018 , 44, 1887-1916	1.6	4
47	Mathcal H ₂ -Quasi-Optimal Model Order Reduction for Quadratic-Bilinear Control Systems. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2018 , 39, 983-1032	1.5	33
46	Data-Driven Modeling Techniques to Estimate Dispersion Relations of Structural Components 2018		1
45	Model reduction for systems with inhomogeneous initial conditions. <i>Systems and Control Letters</i> , 2017 , 99, 99-106	2.4	26
44	Application of projection-based model reduction to finite-element plate models for two-dimensional traveling waves. <i>Journal of Intelligent Material Systems and Structures</i> , 2017 , 28, 1886-1904	2.3	10
43	Chapter 7: Model Reduction by Rational Interpolation 2017 , 297-334		15
42	Computing Reduced Order Models via Inner-Outer Krylov Recycling in Diffuse Optical Tomography. <i>SIAM Journal of Scientific Computing</i> , 2017 , 39, B272-B297	2.6	8
41	Data-Driven Reduced Model Construction with Time-Domain Loewner Models. <i>SIAM Journal of Scientific Computing</i> , 2017 , 39, A2152-A2178	2.6	26
40	Interpolatory Methods for (mathcal{H}_{\infty}) Model Reduction of Multi-Input/Multi-Output Systems. <i>Modeling, Simulation and Applications</i> , 2017 , 349-365	1.1	1
39	A New Selection Operator for the Discrete Empirical Interpolation Method---Improved A Priori Error Bound and Extensions. <i>SIAM Journal of Scientific Computing</i> , 2016 , 38, A631-A648	2.6	118
38	Feedback stabilization of fluids using reduced-order models for control and compensator design 2016 ,		2
37	A Structure-preserving Model Reduction Algorithm for Dynamical Systems with Nonlinear Frequency Dependence. <i>IFAC-PapersOnLine</i> , 2016 , 49, 56-61	0.7	2
36	Quadrature-based IRKA for optimal H2 model reduction?. <i>IFAC-PapersOnLine</i> , 2015 , 48, 5-6	0.7	3
35	Nonlinear Parametric Inversion Using Interpolatory Model Reduction. <i>SIAM Journal of Scientific Computing</i> , 2015 , 37, B495-B517	2.6	13
34	Multipoint Volterra Series Interpolation and Mathcal{H} ₂ Optimal Model Reduction of Bilinear Systems. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2015 , 36, 549-579	1.5	45
33	Reduced Plate Model Used for 2D Traveling Wave Propagation 2015 ,		3

32	A Survey of Projection-Based Model Reduction Methods for Parametric Dynamical Systems. <i>SIAM Review</i> , 2015 , 57, 483-531	7.4	631
31	Near-optimal frequency-weighted interpolatory model reduction. <i>Systems and Control Letters</i> , 2015 , 78, 8-18	2.4	16
30	Model Reduction for DAEs with an Application to Flow Control. <i>Notes on Numerical Fluid Mechanics and Multidisciplinary Design</i> , 2015 , 381-396	0.3	1
29	Compensators via H ₂ -based Model Reduction and Proper Orthogonal Decomposition. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2014 , 47, 7779-7784		1
28	Interpolatory weighted- model reduction. <i>Automatica</i> , 2013 , 49, 1275-1280	5.7	24
27	Interpolatory model reduction. <i>Systems and Control Letters</i> , 2013 , 62, 567-574	2.4	5
26	On the ADI method for the Sylvester equation and the optimal-H ₂ points. <i>Applied Numerical Mathematics</i> , 2013 , 64, 50-58	2.5	22
25	Model Reduction of Descriptor Systems by Interpolatory Projection Methods. <i>SIAM Journal of Scientific Computing</i> , 2013 , 35, B1010-B1033	2.6	67
24	Inexact solves in interpolatory model reduction. <i>Linear Algebra and Its Applications</i> , 2012 , 436, 2916-2943	3.9	16
23	Convergence of the Iterative Rational Krylov Algorithm. <i>Systems and Control Letters</i> , 2012 , 61, 688-691	2.4	26
22	Recycling BiCG with an Application to Model Reduction. <i>SIAM Journal of Scientific Computing</i> , 2012 , 34, A1925-A1949	2.6	27
21	Structure-preserving tangential interpolation for model reduction of port-Hamiltonian systems. <i>Automatica</i> , 2012 , 48, 1963-1974	5.7	56
20	Realization-independent H ₂ -approximation 2012 ,		4
19	Model reduction for indoor-air behavior in control design for energy-efficient buildings 2012 ,		4
18	Weighted Model Reduction via Interpolation. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2011 , 44, 12757-12760		2
17	A note on shifted Hessenberg systems and frequency response computation. <i>ACM Transactions on Mathematical Software</i> , 2011 , 38, 1-16	2.3	4
16	Interpolatory Projection Methods for Parameterized Model Reduction. <i>SIAM Journal of Scientific Computing</i> , 2011 , 33, 2489-2518	2.6	110
15	Structure-preserving model reduction for nonlinear port-Hamiltonian systems 2011 ,		9

14	Rational Krylov methods for optimal L2 model reduction 2010 ,		4
13	Interpolatory Model Reduction of Large-Scale Dynamical Systems 2010 , 3-58		67
12	A trust region method for optimal H2 model reduction 2009 ,		14
11	Interpolation-based H2 model reduction for port-Hamiltonian systems 2009 ,		2
10	Interpolatory projection methods for structure-preserving model reduction. <i>Systems and Control Letters</i> , 2009 , 58, 225-232	2.4	71
9	Interpolation theory for structure-preserving model reduction 2008 ,		13
8	An iterative SVD-Krylov based method for model reduction of large-scale dynamical systems. <i>Linear Algebra and Its Applications</i> , 2008 , 428, 1964-1986	0.9	62
7	Krylov projection framework for Fourier model reduction. <i>Automatica</i> , 2008 , 44, 209-215	5.7	14
6	Krylov-based minimization for optimal H2 model reduction 2007 ,		13
5	Model reduction of large-scale systems by least squares. <i>Linear Algebra and Its Applications</i> , 2006 , 415, 290-321	0.9	33
4	Inexact Solves in Krylov-based Model Reduction 2006 ,		6
3	A Domain Decomposition Approach to POD 2006 ,		9
2	Smith-Type Methods for Balanced Truncation of Large Sparse Systems 2005 , 49-82		14
1	A Survey of Model Reduction by Balanced Truncation and Some New Results. <i>International Journal of Control</i> , 2004 , 77, 748-766	1.5	474