

Nicola Guglielmi

List of Publications by Year in descending order

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82
papers

1,401
citations

304743

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377865

34
g-index

83
all docs

83
docs citations

83
times ranked

490
citing authors

#	ARTICLE	IF	CITATIONS
1	Implementing Radau IIA Methods for Stiff Delay Differential Equations. Computing (Vienna/New York), 2001, 67, 1-12.	4.8	108
2	Exact Computation of Joint Spectral Characteristics of Linear Operators. Foundations of Computational Mathematics, 2013, 13, 37-97.	2.5	95
3	Computing breaking points in implicit delay differential equations. Advances in Computational Mathematics, 2008, 29, 229-247.	1.6	63
4	Fast Algorithms for the Approximation of the Pseudospectral Abscissa and Pseudospectral Radius of a Matrix. SIAM Journal on Matrix Analysis and Applications, 2011, 32, 1166-1192.	1.4	56
5	Numerical stability of nonlinear delay differential equations of neutral type. Journal of Computational and Applied Mathematics, 2000, 125, 251-263.	2.0	50
6	Complex Polytope Extremality Results for Families of Matrices. SIAM Journal on Matrix Analysis and Applications, 2005, 27, 721-743.	1.4	47
7	Recent trends in the numerical solution of retarded functional differential equations. Acta Numerica, 2009, 18, 1-110.	10.7	47
8	Order stars and stability for delay differential equations. Numerische Mathematik, 1999, 83, 371-383.	1.9	46
9	Low-Rank Dynamics for Computing Extremal Points of Real Pseudospectra. SIAM Journal on Matrix Analysis and Applications, 2013, 34, 40-66.	1.4	43
10	An algorithm for finding extremal polytope norms of matrix families. Linear Algebra and Its Applications, 2008, 428, 2265-2282.	0.9	41
11	On the asymptotic properties of a family of matrices. Linear Algebra and Its Applications, 2001, 322, 169-192.	0.9	40
12	Fast Approximation of the H_∞ Norm via Optimization over Spectral Value Sets. SIAM Journal on Matrix Analysis and Applications, 2013, 34, 709-737.	1.4	40
13	On the asymptotic stability properties of Runge-Kutta methods for delay differential equations. Numerische Mathematik, 1997, 77, 467-485.	1.9	35
14	Stability of one-leg \hat{A} -methods for the variable coefficient pantograph equation on the quasi-geometric mesh. IMA Journal of Numerical Analysis, 2003, 23, 421-438.	2.9	35
15	Differential Equations for Roaming Pseudospectra: Paths to Extremal Points and Boundary Tracking. SIAM Journal on Numerical Analysis, 2011, 49, 1194-1209.	2.3	33
16	Solving neutral delay differential equations with state-dependent delays. Journal of Computational and Applied Mathematics, 2009, 229, 350-362.	2.0	29
17	Finiteness property of pairs of $\langle \text{mml:math xmlns:mml}="http://www.w3.org/1998/Math/MathML" \text{ altimg}="si1.gif" \text{ overflow}="scroll">\langle \text{mml:mrow}>\langle \text{mml:mn}>2</\text{mml:mn}>\langle \text{mml:mo}>\hat{A}-\langle \text{mml:mo}>\langle \text{mml:mn}>2</\text{mml:mn}>\langle \text{mml:mrow}>\langle \text{mml:math}>\text{sign-matrices via real extremal polytope norms. Linear Algebra and Its Applications. 2010. 432. 796-816.$	0.9	28
18	Classification of Hidden Dynamics in Discontinuous Dynamical Systems. SIAM Journal on Applied Dynamical Systems, 2015, 14, 1454-1477.	1.6	28

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19	Geometric proofs of numerical stability for delay equations. IMA Journal of Numerical Analysis, 2001, 21, 439-450.	2.9	25
20	Asymptotic Stability Barriers for Natural Runge–Kutta Processes for Delay Equations. SIAM Journal on Numerical Analysis, 2001, 39, 763-783.	2.3	25
21	A regularization for discontinuous differential equations with application to state-dependent delay differential equations of neutral type. Journal of Differential Equations, 2011, 250, 3230-3279.	2.2	25
22	Low rank differential equations for Hamiltonian matrix nearness problems. Numerische Mathematik, 2015, 129, 279-319.	1.9	22
23	Polytope Lyapunov Functions for Stable and for Stabilizable LSS. Foundations of Computational Mathematics, 2017, 17, 567-623.	2.5	21
24	Asymptotic Expansions for Regularized State-Dependent Neutral Delay Equations. SIAM Journal on Mathematical Analysis, 2012, 44, 2428-2458.	1.9	16
25	On the Nearest Singular Matrix Pencil. SIAM Journal on Matrix Analysis and Applications, 2017, 38, 776-806.	1.4	16
26	Convergence analysis of Hermite interpolatory subdivision schemes by explicit joint spectral radius formulas. Linear Algebra and Its Applications, 2011, 434, 884-902.	1.4	15
27	Computing the Structured Pseudospectrum of a Toeplitz Matrix and Its Extreme Points. SIAM Journal on Matrix Analysis and Applications, 2012, 33, 1300-1319.	1.4	15
28	Regularizing Piecewise Smooth Differential Systems: Co-Dimension 2 Discontinuity Surface. Journal of Dynamics and Differential Equations, 2013, 25, 71-94.	1.9	15
29	Approximating real stability radii. IMA Journal of Numerical Analysis, 2015, 35, 1402-1425.	2.9	15
30	Invariant Polytopes of Sets of Matrices with Application to Regularity of Wavelets and Subdivisions. SIAM Journal on Matrix Analysis and Applications, 2016, 37, 18-52.	1.4	15
31	Electromagnetic two-body problem: recurrent dynamics in the presence of state-dependent delay. Journal of Physics A: Mathematical and Theoretical, 2010, 43, 205103.	2.1	14
32	An Iterative Method for Computing the Pseudospectral Abscissa for a Class of Nonlinear Eigenvalue Problems. SIAM Journal of Scientific Computing, 2012, 34, A2366-A2393.	2.8	13
33	An Efficient Algorithm for Computing the Generalized Null Space Decomposition. SIAM Journal on Matrix Analysis and Applications, 2015, 36, 38-54.	1.4	13
34	A Novel Iterative Method To Approximate Structured Singular Values. SIAM Journal on Matrix Analysis and Applications, 2017, 38, 361-386.	1.4	13
35	On the limit products of a family of matrices. Linear Algebra and Its Applications, 2003, 362, 11-27.	0.9	12
36	Global stability for nonlinear difference equations with variable coefficients. Journal of Mathematical Analysis and Applications, 2007, 334, 232-247.	1.0	12

#	ARTICLE	IF	CITATIONS
37	An ODE-based method for computing the approximate greatest common divisor of polynomials. <i>Numerical Algorithms</i> , 2019, 81, 719-740.	1.9	12
38	Short proofs and a counterexample for analytical and numerical stability of delay equations with infinite memory. <i>IMA Journal of Numerical Analysis</i> , 2006, 26, 60-77.	2.9	11
39	Numerical approaches for state-dependent neutral delay equations with discontinuities. <i>Mathematics and Computers in Simulation</i> , 2014, 95, 2-12.	4.4	11
40	Matrix Stabilization Using Differential Equations. <i>SIAM Journal on Numerical Analysis</i> , 2017, 55, 3097-3119.	2.3	11
41	Open issues in devising software for the numerical solution of implicit delay differential equations. <i>Journal of Computational and Applied Mathematics</i> , 2006, 185, 261-277.	2.0	10
42	Canonical Construction of Polytope Barabanov Norms and Antinorms for Sets of Matrices. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2015, 36, 634-655.	1.4	10
43	On the Closest Stable/Unstable Nonnegative Matrix and Related Stability Radii. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2018, 39, 1642-1669.	1.4	10
44	Regularization of Neutral Delay Differential Equations with Several Delays. <i>Journal of Dynamics and Differential Equations</i> , 2013, 25, 173-192.	1.9	9
45	Lifted Polytope Methods for Computing the Joint Spectral Radius. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2014, 35, 391-410.	1.4	9
46	INEXACT NEWTON METHODS FOR THE STEADY STATE ANALYSIS OF NONLINEAR CIRCUITS. <i>Mathematical Models and Methods in Applied Sciences</i> , 1996, 06, 43-57.	3.3	8
47	Solutions leaving a codimension- 2 sliding. <i>Nonlinear Dynamics</i> , 2017, 88, 1427-1439.	5.2	8
48	An ODE-Based Method for Computing the Distance of Coprime Polynomials to Common Divisibility. <i>SIAM Journal on Numerical Analysis</i> , 2017, 55, 1456-1482.	2.3	8
49	Switching systems with dwell time: Computing the maximal Lyapunov exponent. <i>Nonlinear Analysis: Hybrid Systems</i> , 2021, 40, 101021.	3.5	8
50	Erratum/Addendum: Differential Equations for Roaming Pseudospectra: Paths to Extremal Points and Boundary Tracking. <i>SIAM Journal on Numerical Analysis</i> , 2012, 50, 977-981.	2.3	7
51	Linear switched dynamical systems on graphs. <i>Nonlinear Analysis: Hybrid Systems</i> , 2018, 29, 165-186.	3.5	7
52	Generalized algorithms for the approximate matrix polynomial GCD of reducing data uncertainties with application to MIMO system and control. <i>Journal of Computational and Applied Mathematics</i> , 2021, 393, 113499.	2.0	7
53	On the Newton iteration in the application of collocation methods to implicit delay equations. <i>Applied Numerical Mathematics</i> , 2005, 53, 281-297.	2.1	6
54	Computing Extremal Points of Symplectic Pseudospectra and Solving Symplectic Matrix Nearness Problems. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2014, 35, 1407-1428.	1.4	6

#	ARTICLE	IF	CITATIONS
55	Computing the closest real normal matrix and normal completion. <i>Advances in Computational Mathematics</i> , 2019, 45, 2867-2891.	1.6	6
56	On the Method by Rostami for Computing the Real Stability Radius of Large and Sparse Matrices. <i>SIAM Journal of Scientific Computing</i> , 2016, 38, A1662-A1681.	2.8	5
57	Limits of level and parameter dependent subdivision schemes: A matrix approach. <i>Applied Mathematics and Computation</i> , 2016, 272, 20-27.	2.2	5
58	Barabanov norms, Lipschitz continuity and monotonicity for the max algebraic joint spectral radius. <i>Linear Algebra and Its Applications</i> , 2018, 550, 37-58.	0.9	5
59	Numerical inverse Laplace transform for convection-diffusion equations. <i>Mathematics of Computation</i> , 2020, 89, 1161-1191.	2.1	5
60	Highly constrained neural networks for industrial quality control. <i>IEEE Transactions on Neural Networks</i> , 1996, 7, 206-213.	4.2	4
61	A Gradient System for Low Rank Matrix Completion. <i>Axioms</i> , 2018, 7, 51.	1.9	4
62	An efficient algorithm for solving piecewise-smooth dynamical systems. <i>Numerical Algorithms</i> , 2022, 89, 1311-1334.	1.9	4
63	A gradient system approach for Hankel structured low-rank approximation. <i>Linear Algebra and Its Applications</i> , 2021, 623, 236-257.	0.9	4
64	Stability of Linear Problems: Joint Spectral Radius of Sets of Matrices. <i>Lecture Notes in Mathematics</i> , 2014, , 265-313.	0.2	4
65	Differential Equations for Real-Structured Defectivity Measures. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2015, 36, 523-548.	1.4	3
66	Path-regularization of linear neutral delay differential equations with several delays. <i>Journal of Computational and Applied Mathematics</i> , 2016, 292, 785-794.	2.0	3
67	An efficient method for non-negative low-rank completion. <i>Advances in Computational Mathematics</i> , 2020, 46, 1.	1.6	3
68	Measuring the stability of spectral clustering. <i>Linear Algebra and Its Applications</i> , 2021, 610, 673-697.	0.9	3
69	Stiff delay equations. <i>Scholarpedia Journal</i> , 2007, 2, 2850.	0.3	3
70	An antinorm theory for sets of matrices: Bounds and approximations to the lower spectral radius. <i>Linear Algebra and Its Applications</i> , 2020, 607, 89-117.	0.9	3
71	Finding the Nearest Passive or Nonpassive System via Hamiltonian Eigenvalue Optimization. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2021, 42, 1553-1580.	1.4	3
72	Polytope joint Lyapunov functions for positive LSS. , 2013, , .		2

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73	Constrained Graph Partitioning via Matrix Differential Equations. SIAM Journal on Matrix Analysis and Applications, 2019, 40, 1-22.	1.4	2
74	NUMERICS FOR NEUTRAL DELAY DIFFERENTIAL EQUATIONS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 211-216.	0.4	1
75	New global stability conditions for a class of difference equations. Frontiers of Mathematics in China, 2009, 4, 131-154.	0.7	1
76	On the asymptotic regularity of a family of matrices. Linear Algebra and Its Applications, 2012, 436, 2093-2104.	0.9	1
77	Fast algorithms for computing the distance to instability of nonlinear eigenvalue problems, with application to time-delay systems. International Journal of Dynamics and Control, 2014, 2, 133.	2.5	1
78	An iterative method for computing robustness of polynomial stability. Journal of Computational and Applied Mathematics, 2016, 292, 638-653.	2.0	1
79	Stability of Gyroscopic Systems with Respect to Perturbations. Springer INdAM Series, 2019, , 253-266.	0.5	1
80	A novel method to approximate structured stability radii. , 2013, , .		0
81	Computing Lyapunov exponents of switching systems. AIP Conference Proceedings, 2016, , .	0.4	0
82	Delay Differential Equations. , 2015, , 334-338.		0