

# Nicola Guglielmi

## List of Publications by Year in descending order

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82  
papers

1,401  
citations

304743

22  
h-index

377865

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g-index

83  
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83  
docs citations

83  
times ranked

490  
citing authors

#	ARTICLE	IF	CITATIONS
1	An efficient algorithm for solving piecewise-smooth dynamical systems. <i>Numerical Algorithms</i> , 2022, 89, 1311-1334.	1.9	4
2	Measuring the stability of spectral clustering. <i>Linear Algebra and Its Applications</i> , 2021, 610, 673-697.	0.9	3
3	Switching systems with dwell time: Computing the maximal Lyapunov exponent. <i>Nonlinear Analysis: Hybrid Systems</i> , 2021, 40, 101021.	3.5	8
4	A gradient system approach for Hankel structured low-rank approximation. <i>Linear Algebra and Its Applications</i> , 2021, 623, 236-257.	0.9	4
5	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
6	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
7	Numerical inverse Laplace transform for convection-diffusion equations. <i>Mathematics of Computation</i> , 2020, 89, 1161-1191.	2.1	5
8	An efficient method for non-negative low-rank completion. <i>Advances in Computational Mathematics</i> , 2020, 46, 1.	1.6	3
9	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
10	An ODE-based method for computing the approximate greatest common divisor of polynomials. <i>Numerical Algorithms</i> , 2019, 81, 719-740.	1.9	12
11	Computing the closest real normal matrix and normal completion. <i>Advances in Computational Mathematics</i> , 2019, 45, 2867-2891.	1.6	6
12	Stability of Gyroscopic Systems with Respect to Perturbations. <i>Springer INdAM Series</i> , 2019, , 253-266.	0.5	1
13	Constrained Graph Partitioning via Matrix Differential Equations. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2019, 40, 1-22.	1.4	2
14	Linear switched dynamical systems on graphs. <i>Nonlinear Analysis: Hybrid Systems</i> , 2018, 29, 165-186.	3.5	7
15	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
16	A Gradient System for Low Rank Matrix Completion. <i>Axioms</i> , 2018, 7, 51.	1.9	4
17	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
18	Polytope Lyapunov Functions for Stable and for Stabilizable LSS. <i>Foundations of Computational Mathematics</i> , 2017, 17, 567-623.	2.5	21

#	ARTICLE	IF	CITATIONS
19	A Novel Iterative Method To Approximate Structured Singular Values. SIAM Journal on Matrix Analysis and Applications, 2017, 38, 361-386.	1.4	13
20	Solutions leaving a codimension- $2$ sliding. Nonlinear Dynamics, 2017, 88, 1427-1439.	5.2	8
21	On the Nearest Singular Matrix Pencil. SIAM Journal on Matrix Analysis and Applications, 2017, 38, 776-806.	1.4	16
22	An ODE-Based Method for Computing the Distance of Coprime Polynomials to Common Divisibility. SIAM Journal on Numerical Analysis, 2017, 55, 1456-1482.	2.3	8
23	Matrix Stabilization Using Differential Equations. SIAM Journal on Numerical Analysis, 2017, 55, 3097-3119.	2.3	11
24	Computing Lyapunov exponents of switching systems. AIP Conference Proceedings, 2016, , .	0.4	0
25	On the Method by Rostami for Computing the Real Stability Radius of Large and Sparse Matrices. SIAM Journal of Scientific Computing, 2016, 38, A1662-A1681.	2.8	5
26	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
27	Path-regularization of linear neutral delay differential equations with several delays. Journal of Computational and Applied Mathematics, 2016, 292, 785-794.	2.0	3
28	An iterative method for computing robustness of polynomial stability. Journal of Computational and Applied Mathematics, 2016, 292, 638-653.	2.0	1
29	Limits of level and parameter dependent subdivision schemes: A matrix approach. Applied Mathematics and Computation, 2016, 272, 20-27.	2.2	5
30	Differential Equations for Real-Structured Defectivity Measures. SIAM Journal on Matrix Analysis and Applications, 2015, 36, 523-548.	1.4	3
31	Approximating real stability radii. IMA Journal of Numerical Analysis, 2015, 35, 1402-1425.	2.9	15
32	An Efficient Algorithm for Computing the Generalized Null Space Decomposition. SIAM Journal on Matrix Analysis and Applications, 2015, 36, 38-54.	1.4	13
33	Canonical Construction of Polytope Barabanov Norms and Antinorms for Sets of Matrices. SIAM Journal on Matrix Analysis and Applications, 2015, 36, 634-655.	1.4	10
34	Classification of Hidden Dynamics in Discontinuous Dynamical Systems. SIAM Journal on Applied Dynamical Systems, 2015, 14, 1454-1477.	1.6	28
35	Low rank differential equations for Hamiltonian matrix nearness problems. Numerische Mathematik, 2015, 129, 279-319.	1.9	22
36	Delay Differential Equations. , 2015, , 334-338.		0

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37	Computing Extremal Points of Symplectic Pseudospectra and Solving Symplectic Matrix Nearness Problems. SIAM Journal on Matrix Analysis and Applications, 2014, 35, 1407-1428.	1.4	6
38	Lifted Polytope Methods for Computing the Joint Spectral Radius. SIAM Journal on Matrix Analysis and Applications, 2014, 35, 391-410.	1.4	9
39	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
40	Numerical approaches for state-dependent neutral delay equations with discontinuities. Mathematics and Computers in Simulation, 2014, 95, 2-12.	4.4	11
41	Stability of Linear Problems: Joint Spectral Radius of Sets of Matrices. Lecture Notes in Mathematics, 2014, , 265-313.	0.2	4
42	Regularizing Piecewise Smooth Differential Systems: Co-Dimension $\infty$ Discontinuity Surface. Journal of Dynamics and Differential Equations, 2013, 25, 71-94.	1.9	15
43	Regularization of Neutral Delay Differential Equations with Several Delays. Journal of Dynamics and Differential Equations, 2013, 25, 173-192.	1.9	9
44	Low-Rank Dynamics for Computing Extremal Points of Real Pseudospectra. SIAM Journal on Matrix Analysis and Applications, 2013, 34, 40-66.	1.4	43
45	Polytope joint Lyapunov functions for positive LSS. , 2013, , .		2
46	Exact Computation of Joint Spectral Characteristics of Linear Operators. Foundations of Computational Mathematics, 2013, 13, 37-97.	2.5	95
47	Fast Approximation of the $H_\infty$ Norm via Optimization over Spectral Value Sets. SIAM Journal on Matrix Analysis and Applications, 2013, 34, 709-737.	1.4	40
48	A novel method to approximate structured stability radii. , 2013, , .		0
49	Asymptotic Expansions for Regularized State-Dependent Neutral Delay Equations. SIAM Journal on Mathematical Analysis, 2012, 44, 2428-2458.	1.9	16
50	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
51	Erratum/Addendum: Differential Equations for Roaming Pseudospectra: Paths to Extremal Points and Boundary Tracking. SIAM Journal on Numerical Analysis, 2012, 50, 977-981.	2.3	7
52	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
53	On the asymptotic regularity of a family of matrices. Linear Algebra and Its Applications, 2012, 436, 2093-2104.	0.9	1
54	Differential Equations for Roaming Pseudospectra: Paths to Extremal Points and Boundary Tracking. SIAM Journal on Numerical Analysis, 2011, 49, 1194-1209.	2.3	33

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55	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
56	Convergence analysis of Hermite interpolatory subdivision schemes by explicit joint spectral radius formulas. Linear Algebra and Its Applications, 2011, 434, 884-902.	0.9	28
57	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
58	Finiteness property of pairs of sign-matrices via real extremal polytope norms. Linear Algebra and Its Applications, 2010, 432, 796-816.	0.9	28
59	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
60	Recent trends in the numerical solution of retarded functional differential equations. Acta Numerica, 2009, 18, 1-110.	10.7	47
61	New global stability conditions for a class of difference equations. Frontiers of Mathematics in China, 2009, 4, 131-154.	0.7	1
62	Solving neutral delay differential equations with state-dependent delays. Journal of Computational and Applied Mathematics, 2009, 229, 350-362.	2.0	29
63	Computing breaking points in implicit delay differential equations. Advances in Computational Mathematics, 2008, 29, 229-247.	1.6	63
64	An algorithm for finding extremal polytope norms of matrix families. Linear Algebra and Its Applications, 2008, 428, 2265-2282.	0.9	41
65	Global stability for nonlinear difference equations with variable coefficients. Journal of Mathematical Analysis and Applications, 2007, 334, 232-247.	1.0	12
66	Stiff delay equations. Scholarpedia Journal, 2007, 2, 2850.	0.3	3
67	NUMERICS FOR NEUTRAL DELAY DIFFERENTIAL EQUATIONS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 211-216.	0.4	1
68	Open issues in devising software for the numerical solution of implicit delay differential equations. Journal of Computational and Applied Mathematics, 2006, 185, 261-277.	2.0	10
69	Short proofs and a counterexample for analytical and numerical stability of delay equations with infinite memory. IMA Journal of Numerical Analysis, 2006, 26, 60-77.	2.9	11
70	On the Newton iteration in the application of collocation methods to implicit delay equations. Applied Numerical Mathematics, 2005, 53, 281-297.	2.1	6
71	Complex Polytope Extremality Results for Families of Matrices. SIAM Journal on Matrix Analysis and Applications, 2005, 27, 721-743.	1.4	47
72	On the limit products of a family of matrices. Linear Algebra and Its Applications, 2003, 362, 11-27.	0.9	12

#	ARTICLE	IF	CITATIONS
73	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
74	Geometric proofs of numerical stability for delay equations. IMA Journal of Numerical Analysis, 2001, 21, 439-450.	2.9	25
75	Asymptotic Stability Barriers for Natural Runge-Kutta Processes for Delay Equations. SIAM Journal on Numerical Analysis, 2001, 39, 763-783.	2.3	25
76	Implementing Radau IIA Methods for Stiff Delay Differential Equations. Computing (Vienna/New York), 2001, 67, 1-12.	4.8	108
77	On the asymptotic properties of a family of matrices. Linear Algebra and Its Applications, 2001, 322, 169-192.	0.9	40
78	Numerical stability of nonlinear delay differential equations of neutral type. Journal of Computational and Applied Mathematics, 2000, 125, 251-263.	2.0	50
79	Order stars and stability for delay differential equations. Numerische Mathematik, 1999, 83, 371-383.	1.9	46
80	On the asymptotic stability properties of Runge-Kutta methods for delay differential equations. Numerische Mathematik, 1997, 77, 467-485.	1.9	35
81	INEXACT NEWTON METHODS FOR THE STEADY STATE ANALYSIS OF NONLINEAR CIRCUITS. Mathematical Models and Methods in Applied Sciences, 1996, 06, 43-57.	3.3	8
82	Highly constrained neural networks for industrial quality control. IEEE Transactions on Neural Networks, 1996, 7, 206-213.	4.2	4