Giovanni Fantuzzi

List of Publications by Year
in descending order

28 papers	354 citations	840776 11 h-index	888059 17 g-index
28 all docs	28 docs citations	28 times ranked	154 citing authors

#	Article	IF	Citations
1	Bounds for Deterministic and Stochastic Dynamical Systems using Sum-of-Squares Optimization. SIAM Journal on Applied Dynamical Systems, 2016, 15, 1962-1988.	1.6	45
2	Chordal decomposition in operator-splitting methods for sparse semidefinite programs. Mathematical Programming, 2020, 180, 489-532.	2.4	41
3	Bounds on mean energy in the Kuramoto–Sivashinsky equation computed using semidefinite programming. Nonlinearity, 2019, 32, 1705-1730.	1.4	37
4	Fast ADMM for semidefinite programs with chordal sparsity. , 2017, , .		25
5	Bounding Extreme Events in Nonlinear Dynamics Using Convex Optimization. SIAM Journal on Applied Dynamical Systems, 2020, 19, 1823-1864.	1.6	19
6	Exploiting Sparsity in the Coefficient Matching Conditions in Sum-of-Squares Programming Using ADMM. , 2017, 1, 80-85.		17
7	Chordal and factor-width decompositions for scalable semidefinite and polynomial optimization. Annual Reviews in Control, 2021, 52, 243-279.	7.9	17
8	Bounds on heat transfer for Bénard–Marangoni convection at infinite Prandtl number. Journal of Fluid Mechanics, 2018, 837, 562-596.	3.4	15
9	Bounds for Rayleigh–Bénard convection between free-slip boundaries with an imposed heat flux. Journal of Fluid Mechanics, 2018, 837, .	3.4	14
10	Fast ADMM for Sum-of-Squares Programs Using Partial Orthogonality. IEEE Transactions on Automatic Control, 2019, 64, 3869-3876.	5.7	13
11	Construction of an optimal background profile for the Kuramoto–Sivashinsky equation using semidefinite programming. Physics Letters, Section A: General, Atomic and Solid State Physics, 2015, 379, 23-32.	2.1	12
12	Finding Extremal Periodic Orbits with Polynomial Optimization, with Application to a Nine-Mode Model of Shear Flow. SIAM Journal on Applied Dynamical Systems, 2020, 19, 763-787.	1.6	12
13	Optimal bounds with semidefinite programming: An application to stress-driven shear flows. Physical Review E, 2016, 93, 043308.	2.1	11
14	Bounds on heat transport for convection driven by internal heating. Journal of Fluid Mechanics, 2021, 919, .	3.4	11
15	Sparse sum-of-squares (SOS) optimization: A bridge between DSOS/SDSOS and SOS optimization for sparse polynomials. , 2019, , .		10
16	Fast ADMM for homogeneous self-dual embedding of sparse SDPs * *Y. Zheng and G. Fantuzzi contributed equally to this work. Y. Zheng is supported by the Clarendon Scholarship and the Jason Hu Scholarship.. IFAC-PapersOnLine, 2017, 50, 8411-8416.	0.9	9
17	Optimization With Affine Homogeneous Quadratic Integral Inequality Constraints. IEEE Transactions on Automatic Control, 2017, 62, 6221-6236.	5.7	6
18	Bounds for internally heated convection with fixed boundary heat flux. Journal of Fluid Mechanics, 2021, 922, .	3.4	6

#	Article	IF	Citations
19	Analytical bounds on the heat transport in internally heated convection. Journal of Fluid Mechanics, 2022, 938, .	3.4	6
20	New bounds on the vertical heat transport for BÃ©nardâ€"Marangoni convection at infinite Prandtl number. Journal of Fluid Mechanics, 2020, 885, .	3.4	5
21	The background method: theory and computations. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2022, 380, 20210038.	3.4	5
22	Sum-of-squares chordal decomposition of polynomial matrix inequalities. Mathematical Programming, 2023, 197, 71-108.	2.4	4
23	Decomposition and Completion of Sum-of-Squares Matrices. , 2018, , .		3
24	Finding unstable periodic orbits: A hybrid approach with polynomial optimization. Physica D: Nonlinear Phenomena, 2021, 427, 133009.	2.8	3
25	Exact energy stability of BÃ©nardâ€"Marangoni convection at infinite Prandtl number. Journal of Fluid Mechanics, 2017, 822, .	3.4	3
26	Semidefinite relaxation of a class of quadratic integral inequalities. , 2016, , .		2
27	Rigorous bounds on the heat transport of rotating convection with Ekman pumping. Journal of Mathematical Physics, 2020, 61, 023101.	1.1	2
28	Decomposition Methods for Large-Scale Semidefinite Programs with Chordal Aggregate Sparsity and Partial Orthogonality. Lecture Notes in Mathematics, 2018, , 33-55.	0.2	1