Martin Gugat

List of Publications by Year
in descending order

105 papers	1,673 citations	279701 23 h-index	345118 36 g-index
111 all docs	111 docs citations	111 times ranked	517 citing authors

#	Article	IF	Citations
1	Optimal Control for Traffic Flow Networks. Journal of Optimization Theory and Applications, 2005, 126, 589-616.	0.8	107
2	Existence of classical solutions and feedback stabilization for the flow in gas networks. ESAIM - Control, Optimisation and Calculus of Variations, 2011, 17, 28-51.	0.7	81
3	Global boundary controllability of the deÂSt.ÂVenant equations between steady states. Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire, 2003, 20, 1-11.	0.7	78
4	Classical solutions and feedback stabilization for the gas flow in a sequence of pipes. Networks and Heterogeneous Media, 2010, 5, 691-709.	0.5	66
5	Gas Flow in Fan-Shaped Networks: Classical Solutions and Feedback Stabilization. SIAM Journal on Control and Optimization, 2011, 49, 2101-2117.	1.1	63
6	Flow control in gas networks: Exact controllability to a given demand. Mathematical Methods in the Applied Sciences, 2011, 34, 745-757.	1.2	59
7	Boundary feedback stabilization by time delay for one-dimensional wave equations. IMA Journal of Mathematical Control and Information, 2010, 27, 189-203.	1.1	48
8	Optimal Neumann control for the 1D wave equation: Finite horizon, infinite horizon, boundary tracking terms and the turnpike property. Systems and Control Letters, 2016, 90, 61-70.	1.3	48
9	Global controllability between steady supercritical flows in channel networks. Mathematical Methods in the Applied Sciences, 2004, 27, 781-802.	1.2	43
10	Lp-Optimal Boundary Control for the Wave Equation. SIAM Journal on Control and Optimization, 2005, 44, 49-74.	1.1	39
11	Global boundary controllability of the Saint-Venant system for sloped canals with friction. Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire, 2009, 26, 257-270.	0.7	35
12	Time-delayed boundary feedback stabilization of the isothermal Euler equations with friction. Mathematical Control and Related Fields, 2011, 1, 469-491.	0.6	35
13	MIP-based instantaneous control of mixed-integer PDE-constrained gas transport problems. Computational Optimization and Applications, 2018, 70, 267-294.	0.9	34
14	L^{â^ž}-Norm minimal control of the wave equation: on the weakness of the bang-bang principle. ESAIM - Control, Optimisation and Calculus of Variations, 2008, 14, 254-283.	0.7	32
15	Stars of vibrating strings: Switching boundary feedback stabilization. Networks and Heterogeneous Media, 2010, 5, 299-314.	0.5	32
16	Stationary states in gas networks. Networks and Heterogeneous Media, 2015, 10, 295-320.	0.5	31
17	An example for the switching delay feedback stabilization of an infinite dimensional system: The boundary stabilization of a string. Systems and Control Letters, 2011, 60, 226-233.	1.3	30
18	Optimal switching boundary control of a string to rest in finite time. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2008, 88, 283-305.	0.9	28

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19	Analysis of a system of nonlocal conservation laws for multi-commodity flow on networks. Networks and Heterogeneous Media, 2015, 10, 749-785.	0.5	27
20	A Fast Algorithm for a Class of Generalized Fractional Programs. Management Science, 1996, 42, 1493-1499.	2.4	25
21	On the Turnpike Phenomenon for Optimal Boundary Control Problems with Hyperbolic Systems. SIAM Journal on Control and Optimization, 2019, 57, 264-289.	1.1	25
22	Modelling, Stabilization, and Control of Flow in Networks of Open Channels. , 2001, , 251-270.		25
23	Penalty Techniques for State Constrained Optimal Control Problems with the Wave Equation. SIAM Journal on Control and Optimization, 2010, 48, 3026-3051.	1.1	24
24	H 2-stabilization of the Isothermal Euler equations: a Lyapunov function approach. Chinese Annals of Mathematics Series B, 2012, 33, 479-500.	0.2	24
25	Optimal boundary feedback stabilization of a string with moving boundary. IMA Journal of Mathematical Control and Information, 2007, 25, 111-121.	1.1	23
26	Analytic Solutions of Lâˆž Optimal Control Problems for the Wave Equation. Journal of Optimization Theory and Applications, 2002, 114, 397-421.	0.8	22
27	Boundary feedback stabilization of the telegraph equation: Decay rates for vanishing damping term. Systems and Control Letters, 2014, 66, 72-84.	1.3	22
28	Contamination Source Determination in Water Distribution Networks. SIAM Journal on Applied Mathematics, 2012, 72, 1772-1791.	0.8	20
29	Prox-Regularization Methods for Generalized Fractional Programming. Journal of Optimization Theory and Applications, 1998, 99, 691-722.	0.8	19
30	Optimal distributed control of the wave equation subject to state constraints. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2009, 89, 420-444.	0.9	19
31	Boundary Controllability between Sub- and Supercritical Flow. SIAM Journal on Control and Optimization, 2003, 42, 1056-1070.	1.1	18
32	Optimal Energy Control in Finite Time by varying the Length of the String. SIAM Journal on Control and Optimization, 2007, 46, 1705-1725.	1.1	18
33	Optimal Boundary Control and Boundary Stabilization of Hyperbolic Systems. Springer Briefs in Electrical and Computer Engineering, 2015, , .	0.3	18
34	Boundary feedback stabilization of the SchlÃ¶gl system. Automatica, 2015, 51, 192-199.	3.0	17
35	A strict H^1-Lyapunov function and feedback stabilization for the isothermal Euler equations with friction. Numerical Algebra, Control and Optimization, 2011, 1, 225-244.	1.0	17
36	Controllability of a slowly rotating Timoshenko beam. ESAIM - Control, Optimisation and Calculus of Variations, 2001, 6, 333-360.	0.7	16

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37	The isothermal Euler equations for ideal gas with source term: Product solutions, flow reversal and no blow up. Journal of Mathematical Analysis and Applications, 2017, 454, 439-452.	0.5	16
38	Towards simulation based mixedâ€integer optimization with differential equations. Networks, 2018, 72, 60-83.	1.6	16
39	Neumann boundary feedback stabilization for a nonlinear wave equation: A strict H^2-lyapunov function. Mathematical Control and Related Fields, 2017, 7, 419-448.	0.6	16
40	Optimal boundary control of a string to rest in finite time with continuous state. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2006, 86, 134-150.	0.9	15
41	Weber problems with mixed distances and regional demand. Mathematical Methods of Operations Research, 2007, 66, 419-449.	0.4	15
42	The smoothed-penalty algorithm for state constrained optimal control problems for partial differential equations. Optimization Methods and Software, 2010, 25, 573-599.	1.6	15
43	Networks of pipelines for gas with nonconstant compressibility factor: stationary states. Computational and Applied Mathematics, 2018, 37, 1066-1097.	1.3	15
44	Well-posedness of Networked Hyperbolic Systems of Balance Laws. International Series of Numerical Mathematics, 2012, , 123-146.	1.0	14
45	Stabilization of Networked Hyperbolic Systems with Boundary Feedback. International Series of Numerical Mathematics, 2014, , 487-504.	1.0	13
46	Approximation of Semigroups and Related Operator Functions by Resolvent Series. SIAM Journal on Numerical Analysis, 2010, 48, 1826-1845.	1.1	12
47	Norm-minimal Neumann boundary control of the wave equation. Arabian Journal of Mathematics, 2015, 4, 41-58.	0.4	12
48	Boundary stabilization of quasilinear hyperbolic systems of balance laws: exponential decay for small source terms. Journal of Evolution Equations, 2018, 18, 1471-1500.	0.6	12
49	One-sided derivatives for the value function in convex parametric programming. Optimization, 1994, 28, 301-314.	1.0	11
50	Stabilizing a vibrating string by time delay. , 2010, , .		11
51	Exact penalization of terminal constraints for optimal control problems. Optimal Control Applications and Methods, 2016, 37, 1329-1354.	1.3	11
52	A Newton method for the computation of time-optimal boundary controls of one-dimensional vibrating systems. Journal of Computational and Applied Mathematics, 2000, 114, 103-119.	1.1	10
53	Optimal boundary control of the wave equation withÂpointwise control constraints. Computational Optimization and Applications, 2011, 49, 123-147.	0.9	10
54	Conservation law constrained optimization based upon Front-Tracking. ESAIM: Mathematical Modelling and Numerical Analysis, 2006, 40, 939-960.	0.8	10

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55	Regularization of L â^ž-Optimal Control Problems for Distributed Parameter Systems. Computational Optimization and Applications, 2002, 22, 151-192.	0.9	9
56	Lipschitz solutions of initial boundary value problems for balance laws. Mathematical Models and Methods in Applied Sciences, 2018, 28, 921-951.	1.7	9
57	A note on the approximation of Dirichlet boundary control problems for the wave equation on curved domains. Applicable Analysis, 2013, 92, 2200-2214.	0.6	8
58	On the limits of stabilizability for networks of strings. Systems and Control Letters, 2019, 131, 104494.	1.3	8
59	Optimal Neumann Boundary Control of a Vibrating String with Uncertain Initial Data and Probabilistic Terminal Constraints. SIAM Journal on Control and Optimization, 2020, 58, 2288-2311.	1.1	8
60	The sensitivity of optimal states to time delay. Proceedings in Applied Mathematics and Mechanics, 2014, 14, 775-776.	0.2	7
61	Boundary Feedback Stabilization of the Isothermal Euler Equations with Uncertain Boundary Data. SIAM Journal on Control and Optimization, 2018, 56, 1491-1507.	1.1	7
62	Coupling conditions for the transition from supersonic to subsonic fluid states. Networks and Heterogeneous Media, 2017, 12, 371-380.	0.5	7
63	Parametric Disjunctive Programming: One-Sided Differentiability of the Value Function. Journal of Optimization Theory and Applications, 1997, 92, 285-310.	0.8	6
64	Error bounds for infinite systems of convex inequalities without Slaterâ€™s condition. Mathematical Programming, 2000, 88, 255-275.	1.6	6
65	Exponential Stabilization of the Wave Equation by Dirichlet Integral Feedback. SIAM Journal on Control and Optimization, 2015, 53, 526-546.	1.1	6
66	Stabilization of the Gas Flow in Star-Shaped Networks by Feedback Controls with Varying Delay. International Federation for Information Processing, 2013, , 255-265.	0.4	6
67	The Newton differential correction algorithm for rational Chebyshev approximation with constrained denominators. Numerical Algorithms, 1996, 13, 107-122.	1.1	5
68	Lipschitz continuity of the value function in mixed-integer optimal control problems. Mathematics of Control, Signals, and Systems, 2017, 29, 1.	1.4	5
69	Stationary Gas Networks with Compressor Control and Random Loads: Optimization with Probabilistic Constraints. Mathematical Problems in Engineering, 2018, 2018, 1-17.	0.6	5
70	Transient Flow in Gas Networks: Traveling waves. International Journal of Applied Mathematics and Computer Science, 2018, 28, 341-348.	1.5	5
71	On the relaxation approximation of boundary control of the isothermal Euler equations. International Journal of Control, 2012, 85, 1766-1778.	1.2	4
72	A smoothed penalty iteration for state constrained optimal control problems for partial differential equations. Optimization, 2013, 62, 379-395.	1.0	4

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73	Exact Boundary Controllability for Free Traffic Flow with Lipschitz Continuous State. Mathematical Problems in Engineering, 2016, 2016, 1-11.	0.6	4
74	Convex Semi-Infinite Parametric Programming: Uniform Convergence of the Optimal Value Functions of Discretized Problems. Journal of Optimization Theory and Applications, 1999, 101, 191-201.	0.8	3
75	A parametric view on the Mangasarian-Fromovitz constraint qualification. Mathematical Programming, 1999, 85, 643-653.	1.6	3
76	Robustness analysis for the boundary control of the string equation. , 2007, , .		3
77	Joint Model of Probabilistic-Robust (Probust) Constraints Applied to Gas Network Optimization. Vietnam Journal of Mathematics, 2020, 49, 1097.	0.4	3
78	On the turnpike property with interior decay for optimal control problems. Mathematics of Control, Signals, and Systems, 2021, 33, 237-258.	1.4	3
79	Exponential synchronization of a nodal observer for a semilinear model for the flow in gas networks. IMA Journal of Mathematical Control and Information, 2021, 38, 1109-1147.	1.1	3
80	Modeling, control, and numerics of gas networks. Handbook of Numerical Analysis, 2022, , 59-86.	0.9	3
81	Semi-infinite terminal problems: a newton type method. Optimization, 1998, 44, 25-48.	1.0	2
82	Time Delay in Optimal Control Loops for Wave Equations. ESAIM - Control, Optimisation and Calculus of Variations, 2017, 23, 13-37.	0.7	2
83	Dynamic boundary control games with networks of strings. ESAIM - Control, Optimisation and Calculus of Variations, 2018, 24, 1789-1813.	0.7	2
84	L1â€"Optimal Boundary Control of a String to Rest in Finite Time. , 2006, , 149-162.		2
85	Convexity and starshapedness of feasible sets in stationary flow networks. Networks and Heterogeneous Media, 2020, 15, 171-195.	0.5	2
86	Closed loop control of gas flow in a pipe: stability for a transient model. Automatisierungstechnik, 2020, 68, 1001-1010.	0.4	2
87	Feedback stabilization of quasilinear hyperbolic systems with varying delays. , 2012, , .		1
88	Closed Form Representations of Some Series in Darlingâ€™s Model for Squeeze Film Damping with a Rectangular Plate. Applied Sciences (Switzerland), 2012, 2, 479-484.	1.3	1
89	Infinite Penalization for Optimal Control Problems: An infiniteâ€dimensional optimization method for constrained optimization problems. Proceedings in Applied Mathematics and Mechanics, 2013, 13, 587-588.	0.2	1
90	Efficient Numerical Evaluation of Semianalytical Models for Squeeze Film Damping for Torsion Mirrors. Journal of Nanomechanics & Micromechanics, 2013, 3, 06013001.	1.4	1

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91	Exponential Stability for the SchlÃ¶gl System by Pyragas Feedback. Vietnam Journal of Mathematics, 2020, 48, 769-790.	0.4	1
92	Probabilistic constrained optimization on flow networks. Optimization and Engineering, 0, , 1.	1.3	1
93	Boundary feedback stabilization of a semilinear model for the flow in star-shaped gas networks. ESAIM - Control, Optimisation and Calculus of Variations, 2021, 27, 67.	0.7	1
94	Transient gas pipeline flow: analytical examples, numerical simulation and a comparison to the quasi-static approach. Optimization and Engineering, 0, , 1.	1.3	1
95	Lavrentiev Prox-regularization Methods for Optimal Control Problems with Pointwise State Constraints. International Series of Numerical Mathematics, 2009, , 139-153.	1.0	1
96	Nonlinear elasticity: existence theory under subdifferential constaints. Applicable Analysis, 1993, 49, 93-99.	0.6	0
97	Optimal Boundary Control in Flood Management. International Series of Numerical Mathematics, 2007, , 69-94.	1.0	0
98	Boundary Stabilization. Springer Briefs in Electrical and Computer Engineering, 2015, , 69-87.	0.3	0
99	Exact Controllability. Springer Briefs in Electrical and Computer Engineering, 2015, , 29-46.	0.3	0
100	Optimization under functional constraints (semiâ€"infinite programming) and applications. Lecture Notes in Economics and Mathematical Systems, 1992, , 90-126.	0.3	0
101	Optimal Exact Control. Springer Briefs in Electrical and Computer Engineering, 2015, , 47-67.	0.3	0
102	Systems governed by the wave equation. Springer Briefs in Electrical and Computer Engineering, 2015, , 3-28.	0.3	0
103	Nonlinear Systems. Springer Briefs in Electrical and Computer Engineering, 2015, , 89-125.	0.3	0
104	On the Relaxation Approximation for $$2imes 2$$ Hyperbolic Balance Laws. Springer Proceedings in Mathematics and Statistics, 2018, , 651-663.	0.1	0
105	A New Model for Transient Flow in Gas Transportation Networks. Industrial and Applied Mathematics, 2020, , 147-156.	0.3	0