

Christophe Prieur

List of Publications by Year in descending order

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146
all docs

146
docs citations

146
times ranked

1189
citing authors

#	ARTICLE	IF	CITATIONS
1	Input-to-State Stability of Infinite-Dimensional Systems: Recent Results and Open Questions. SIAM Review, 2020, 62, 529-614.	4.2	118
2	ISS-Lyapunov functions for time-varying hyperbolic systems of balance laws. Mathematics of Control, Signals, and Systems, 2012, 24, 111-134.	1.4	117
3	Robust boundary control of systems of conservation laws. Mathematics of Control, Signals, and Systems, 2008, 20, 173-197.	1.4	99
4	Strict Lyapunov functions for semilinear parabolic partial differential equations. Mathematical Control and Related Fields, 2011, 1, 231-250.	0.6	91
5	Boundary Control of Open Channels With Numerical and Experimental Validations. IEEE Transactions on Control Systems Technology, 2008, 16, 1252-1264.	3.2	85
6	Boundary observers for linear and quasi-linear hyperbolic systems with application to flow control. Automatica, 2013, 49, 3180-3188.	3.0	85
7	Event-based control of linear hyperbolic systems of conservation laws. Automatica, 2016, 70, 275-287.	3.0	84
8	Uniting Local and Global Controllers with Robustness to Vanishing Noise. Mathematics of Control, Signals, and Systems, 2001, 14, 143-172.	1.4	82
9	Observer-based feedback stabilization of linear systems with event-triggered sampling and dynamic quantization. Systems and Control Letters, 2016, 94, 46-56.	1.3	77
10	Feedback Stabilization of a 1-D Linear Reaction-Diffusion Equation With Delay Boundary Control. IEEE Transactions on Automatic Control, 2019, 64, 1415-1425.	3.6	72
11	LQ-based event-triggered controller co-design for saturated linear systems. Automatica, 2016, 74, 47-54.	3.0	68
12	Stabilization of linear impulsive systems through a nearly-periodic reset. Nonlinear Analysis: Hybrid Systems, 2013, 7, 4-15.	2.1	67
13	Hybrid Feedback Control and Robust Stabilization of Nonlinear Systems. IEEE Transactions on Automatic Control, 2007, 52, 2103-2117.	3.6	65
14	Stochastic stability of Markov jump hyperbolic systems with application to traffic flow control. Automatica, 2017, 86, 29-37.	3.0	53
15	Event-Based Boundary Control of a Linear 2×2 Hyperbolic System via Backstepping Approach. IEEE Transactions on Automatic Control, 2018, 63, 2686-2693.	3.6	51
16	Wave Equation With Cone-Bounded Control Laws. IEEE Transactions on Automatic Control, 2016, 61, 3452-3463.	3.6	50
17	Lyapunov-based hybrid loops for stability and performance of continuous-time control systems. Automatica, 2013, 49, 577-584.	3.0	49
18	PI boundary control of linear hyperbolic balance laws with stabilization of ARZ traffic flow models. Systems and Control Letters, 2019, 123, 85-91.	1.3	43

#	ARTICLE	IF	CITATIONS
19	Stability and Observer Design for Lur'e Systems with Multivalued, Nonmonotone, Time-Varying Nonlinearities and State Jumps. SIAM Journal on Control and Optimization, 2014, 52, 3639-3672.	1.1	41
20	Stability of Switched Linear Hyperbolic Systems by Lyapunov Techniques. IEEE Transactions on Automatic Control, 2014, 59, 2196-2202.	3.6	39
21	Stability Analysis and Stabilization of Systems With Input Backlash. IEEE Transactions on Automatic Control, 2014, 59, 488-494.	3.6	38
22	Necessary and Sufficient Conditions on the Exponential Stability of Positive Hyperbolic Systems. IEEE Transactions on Automatic Control, 2017, 62, 3610-3617.	3.6	38
23	Uniting Two Control Lyapunov Functions for Affine Systems. IEEE Transactions on Automatic Control, 2010, 55, 1923-1927.	3.6	37
24	Global Stabilization of a Korteweg-De Vries Equation With Saturating Distributed Control. SIAM Journal on Control and Optimization, 2017, 55, 1452-1480.	1.1	37
25	Stabilization of a 1-D tank containing a fluid modeled by the shallow water equations. Systems and Control Letters, 2004, 52, 167-178.	1.3	35
26	Stability analysis for linear systems with input backlash through sufficient LMI conditions. Automatica, 2010, 46, 1911-1915.	3.0	35
27	An LMI condition for the robustness of constant-delay linear predictor feedback with respect to uncertain time-varying input delays. Automatica, 2019, 109, 108551.	3.0	35
28	Event-triggered sampling algorithms based on a Lyapunov function. , 2011, , .		34
29	Stability Analysis of a $\{\text{ext}\{2\}\} \times \{\text{ext}\{2\}\}$ Linear Hyperbolic System With a Sampled-Data Controller via Backstepping Method and Looped-Functionals. IEEE Transactions on Automatic Control, 2019, 64, 1718-1725.	3.6	30
30	A Nonsmooth Hybrid Invariance Principle Applied to Robust Event-Triggered Design. IEEE Transactions on Automatic Control, 2019, 64, 2061-2068.	3.6	29
31	Tikhonov theorem for linear hyperbolic systems. Automatica, 2015, 57, 1-10.	3.0	27
32	Stability Analysis of Output Feedback Control Systems With a Memory-Based Event-Triggering Mechanism. IEEE Transactions on Automatic Control, 2017, 62, 6625-6632.	3.6	27
33	Using Luenberger observers and dwell-time logic for feedback hybrid loops in continuous-time control systems. International Journal of Robust and Nonlinear Control, 2013, 23, 1065-1086.	2.1	25
34	Feedback Stabilization of a Class of Diagonal Infinite-Dimensional Systems With Delay Boundary Control. IEEE Transactions on Automatic Control, 2021, 66, 105-120.	3.6	25
35	Cone-bounded feedback laws for m-dissipative operators on Hilbert spaces. Mathematics of Control, Signals, and Systems, 2017, 29, 1.	1.4	24
36	Well-Posedness and Output Regulation for Implicit Time-Varying Evolution Variational Inequalities. SIAM Journal on Control and Optimization, 2018, 56, 751-781.	1.1	24

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37	PI Regulation of a Reactionâ€“Diffusion Equation With Delayed Boundary Control. IEEE Transactions on Automatic Control, 2021, 66, 1573-1587.	3.6	24
38	New formulation of predictors for finite-dimensional linear control systems with input delay. Systems and Control Letters, 2018, 113, 9-16.	1.3	23
39	A hybrid scheme for reducing peaking in high-gain observers for a class of nonlinear systems. Automatica, 2016, 72, 138-146.	3.0	22
40	Finite-dimensional observer-based boundary stabilization of reactionâ€“diffusion equations with either a Dirichlet or Neumann boundary measurement. Automatica, 2022, 135, 109955.	3.0	22
41	Predictor-based output feedback stabilization of an input delayed parabolic PDE with boundary measurement. Automatica, 2022, 137, 110115.	3.0	22
42	Boundary feedback control of linear hyperbolic systems: Application to the Saint-Venantâ€“Exner equations. Automatica, 2018, 89, 44-51.	3.0	21
43	Robustness to In-Domain Viscous Damping of a Collocated Boundary Adaptive Feedback Law for an Antidamped Boundary Wave PDE. IEEE Transactions on Automatic Control, 2019, 64, 3284-3299.	3.6	21
44	Observer Design for Unilaterally Constrained Lagrangian Systems: A Passivity-Based Approach. IEEE Transactions on Automatic Control, 2016, 61, 2386-2401.	3.6	20
45	Experimental validation of a Lyapunov-based controller for the plasma safety factor and plasma pressure in the TCV tokamak. Nuclear Fusion, 2018, 58, 056011.	1.6	20
46	Quasiâ€“Optimal Robust Stabilization of Control Systems. SIAM Journal on Control and Optimization, 2006, 45, 1875-1897.	1.1	19
47	Stability analysis for reset systems with input saturation. , 2007, , .		19
48	Analysis and Synthesis of Reset Control Systems. Foundations and Trends in Systems and Control, 2018, 6, 117-338.	3.8	19
49	Switching Rules for Stabilization of Linear Systems of Conservation Laws. SIAM Journal on Control and Optimization, 2015, 53, 1599-1624.	1.1	18
50	Relaxed Persistent Flow/Jump Conditions for Uniform Global Asymptotic Stability. IEEE Transactions on Automatic Control, 2014, 59, 2766-2771.	3.6	17
51	Local Stabilization of an Unstable Parabolic Equation via Saturated Controls. IEEE Transactions on Automatic Control, 2021, 66, 2162-2176.	3.6	17
52	Stability Analysis of Dissipative Systems Subject to Nonlinear Damping via Lyapunov Techniques. IEEE Transactions on Automatic Control, 2020, 65, 2139-2146.	3.6	16
53	Control of a clamped-free beam by a piezoelectric actuator. ESAIM - Control, Optimisation and Calculus of Variations, 2006, 12, 545-563.	0.7	15
54	Stabilization of a linear Korteweg-de Vries equation with a saturated internal control. , 2015, , .		15

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55	Fresh Air Fraction Control in Engines Using Dynamic Boundary Stabilization of LPV Hyperbolic Systems. IEEE Transactions on Control Systems Technology, 2015, 23, 963-974.	3.2	15
56	LMI-Based Reset H_{∞} Design for Linear Continuous-Time Plants. IEEE Transactions on Automatic Control, 2016, 61, 4157-4163.	3.6	15
57	Backstepping Control of a Wave PDE With Unstable Source Terms and Dynamic Boundary. , 2018, 2, 459-464.		15
58	Robustness of constant-delay predictor feedback for in-domain stabilization of reaction-diffusion PDEs with time- and spatially-varying input delays. Automatica, 2021, 123, 109347.	3.0	15
59	Guaranteed stability for nonlinear systems by means of a hybrid loop. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 72-77.	0.4	13
60	Exponential input-to-state stabilization of a class of diagonal boundary control systems with delay boundary control. Systems and Control Letters, 2020, 138, 104651.	1.3	13
61	Hybrid high-gain observers without peaking for planar nonlinear systems. , 2012, , .		12
62	Stability notions for a class of nonlinear systems with measure controls. Mathematics of Control, Signals, and Systems, 2015, 27, 245-275.	1.4	12
63	Backstepping observer based-control for an anti-damped boundary wave PDE in presence of in-domain viscous damping. , 2016, , .		12
64	Event-based stabilization of linear systems of conservation laws using a dynamic triggering condition. IFAC-PapersOnLine, 2016, 49, 362-367.	0.5	12
65	Magnetic Field Gradient-Based EKF for Velocity Estimation in Indoor Navigation. Sensors, 2020, 20, 5726.	2.1	12
66	Fluid-flow modeling and stability analysis of communication networks. IFAC-PapersOnLine, 2017, 50, 4534-4539.	0.5	11
67	L-asymptotic stability analysis of a 1D wave equation with a nonlinear damping. Journal of Differential Equations, 2020, 269, 8107-8131.	1.1	11
68	An optimisation approach for stability analysis and controller synthesis of linear hyperbolic systems. ESAIM - Control, Optimisation and Calculus of Variations, 2016, 22, 1236-1263.	0.7	11
69	Event-based controller synthesis by bounding methods. European Journal of Control, 2015, 26, 12-21.	1.6	10
70	Singular perturbation approximation by means of a H_{∞} Lyapunov function for linear hyperbolic systems. Systems and Control Letters, 2016, 88, 24-31.	1.3	10
71	Quadratic Optimal Control of Linear Complementarity Systems: First-Order Necessary Conditions and Numerical Analysis. IEEE Transactions on Automatic Control, 2020, 65, 2743-2750.	3.6	10
72	High-Gain Observer Design for Some Semilinear Reaction-Diffusion Systems: A Transformation-Based Approach. , 2021, 5, 629-634.		10

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73	Local Exponential Stabilization of Semi-Linear Hyperbolic Systems by Means of a Boundary Feedback Control. , 2018, 2, 55-60.		9
74	High-Gain Observer Design for a Class of Hyperbolic Systems of Balance Laws. , 2018, , .		9
75	Control Law Realification for the Feedback Stabilization of a Class of Diagonal Infinite-Dimensional Systems With Delay Boundary Control. , 2019, 3, 930-935.		9
76	Boundary observer design for cascaded ODE & Hyperbolic PDE systems: A matrix inequalities approach. Automatica, 2020, 119, 109027.	3.0	9
77	High-Gain Observer Design for a Class of Quasi-Linear Integro-Differential Hyperbolic Systems& Application to an Epidemic Model. IEEE Transactions on Automatic Control, 2022, 67, 292-303.	3.6	9
78	BiLSTM Network-Based Extended Kalman Filter for Magnetic Field Gradient Aided Indoor Navigation. IEEE Sensors Journal, 2022, 22, 4781-4789.	2.4	9
79	Distributed Control of Coupled Inhomogeneous Diffusion in Tokamak Plasmas. IEEE Transactions on Control Systems Technology, 2019, 27, 443-450.	3.2	8
80	Regional Stabilization of Input-Delayed Uncertain Nonlinear Polynomial Systems. IEEE Transactions on Automatic Control, 2020, 65, 2300-2307.	3.6	8
81	Finite-Dimensional Observer-Based PI Regulation Control of a Reaction& Diffusion Equation. IEEE Transactions on Automatic Control, 2022, 67, 6143-6150.	3.6	8
82	Well-posedness and stability of a 1D wave equation with saturating distributed input. , 2014, , .		7
83	Stability analysis of a singularly perturbed coupled ODE-PDE system. , 2015, , .		7
84	Singular Perturbation Approximation of Linear Hyperbolic Systems of Balance Laws. IEEE Transactions on Automatic Control, 2016, 61, 3031-3037.	3.6	7
85	High-gain observer for 3& linear heterodirectional hyperbolic systems. Automatica, 2021, 129, 109607.	3.0	7
86	Local Output Feedback Stabilization of a Reaction& Diffusion Equation With Saturated Actuation. IEEE Transactions on Automatic Control, 2023, 68, 564-571.	3.6	7
87	Delayed stabilization of the Korteweg& de Vries equation on a star-shaped network. Mathematics of Control, Signals, and Systems, 2022, 34, 559-605.	1.4	7
88	Boundary output feedback stabilisation of a class of reaction& diffusion PDEs with delayed boundary measurement. International Journal of Control, 2023, 96, 2285-2295.	1.2	7
89	Approximate controllability of a reaction-diffusion system. Systems and Control Letters, 2008, 57, 1048-1057.	1.3	6
90	Event-triggered algorithms for continuous-time systems based on reachability analysis. , 2013, , .		6

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91	Boundary control synthesis for hyperbolic systems: A singular perturbation approach. , 2014, , .		6
92	Robustness of an adaptive output feedback for an anti-damped boundary wave PDE in presence of in-domain viscous damping. , 2016, , .		6
93	Stability results for infinite-dimensional linear control systems subject to saturations. , 2018, , .		6
94	On L^{∞} stabilization of diagonal semilinear hyperbolic systems by saturated boundary control. ESAIM - Control, Optimisation and Calculus of Variations, 2020, 26, 23.	0.7	6
95	Nonlinear boundary output feedback stabilization of reaction-diffusion equations. Systems and Control Letters, 2022, 166, 105301.	1.3	6
96	Semi-global stabilization by an output feedback law from a hybrid state controller. Automatica, 2016, 74, 90-98.	3.0	5
97	Effect of time scales on stability of coupled systems involving the wave equation. , 2017, , .		5
98	Boundary Control Design for Linear Conservation Laws in the Presence of Energy-Bounded Measurement Noise. , 2018, , .		5
99	Nonstandard use of anti-windup loop for systems with input backlash. IFAC Journal of Systems and Control, 2018, 6, 33-42.	1.1	5
100	Improving Inertial Velocity Estimation Through Magnetic Field Gradient-based Extended Kalman Filter. , 2019, , .		5
101	Singular Perturbation Analysis of a Coupled System Involving the Wave Equation. IEEE Transactions on Automatic Control, 2020, 65, 4846-4853.	3.6	5
102	Local Proportional-Integral Boundary Feedback Stabilization for Quasilinear Hyperbolic Systems of Balance Laws. SIAM Journal on Control and Optimization, 2020, 58, 2143-2170.	1.1	5
103	Robustness of Constant-Delay Predictor Feedback with Respect to Distinct Uncertain Time-Varying Input Delays. IFAC-PapersOnLine, 2020, 53, 7677-7682.	0.5	5
104	Inertial Velocity Estimation for Indoor Navigation Through Magnetic Gradient-based EKF and LSTM Learning Model. , 2020, , .		5
105	Proportional Integral Regulation Control of a One-Dimensional Semilinear Wave Equation. SIAM Journal on Control and Optimization, 2022, 60, 1-21.	1.1	5
106	Output feedback stabilization of reaction-diffusion PDEs with a non-collocated boundary condition. Systems and Control Letters, 2022, 164, 105238.	1.3	5
107	Design of saturated boundary control for hyperbolic systems with in-domain disturbances. Automatica, 2022, 142, 110346.	3.0	5
108	A region-dependent gain condition for asymptotic stability. Automatica, 2015, 52, 309-316.	3.0	4

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109	Output memory-based event-triggered control. , 2016, , .		4
110	Optimal observer-based output feedback controller for traffic congestion with bottleneck. International Journal of Robust and Nonlinear Control, 2021, 31, 7087-7106.	2.1	4
111	Rapid stabilization of a reaction-diffusion equation with distributed disturbance. , 2020, , .		4
112	Leader-Follower Synchronization of a Network of Boundary-Controlled Parabolic Equations With In-Domain Coupling. , 2022, 6, 2006-2011.		4
113	Event-based stabilizing controller using a state observer. , 2015, , .		3
114	Global sensitivity analysis for the boundary control of an open channel. Mathematics of Control, Signals, and Systems, 2016, 28, 1.	1.4	3
115	Asymptotic Stabilization of Some Finite and Infinite Dimensional Systems by Means of Dynamic Event-Triggered Output Feedbacks. Lecture Notes in Control and Information Sciences, 2017, , 201-230.	0.6	3
116	Regional stability and stabilization of a class of linear hyperbolic systems with nonlinear quadratic dynamic boundary conditions. European Journal of Control, 2018, 43, 46-56.	1.6	3
117	Parameter Identification of a Linear Wave Equation From Experimental Boundary Data. IEEE Transactions on Control Systems Technology, 2021, 29, 2166-2179.	3.2	3
118	Contributions to the Problem of High-Gain Observer Design for Hyperbolic Systems. Lecture Notes in Control and Information Sciences, 2022, , 109-134.	0.6	3
119	Synchronization of Identical Boundary-Actuated Semilinear Infinite-Dimensional Systems. , 2022, 6, 1322-1327.		3
120	In-Domain Stabilization of Block Diagonal Infinite-Dimensional Systems With Time-Varying Input Delays. IEEE Transactions on Automatic Control, 2021, 66, 6017-6024.	3.6	3
121	Stability analysis of reaction-diffusion PDEs coupled at the boundaries with an ODE. Automatica, 2022, 144, 110465.	3.0	3
122	Global sensitivity analysis for the boundary control of an open channel. , 2014, , .		2
123	Boundary Feedback Stabilization of Freeway Traffic Networks: ISS Control and Experiments. IEEE Transactions on Control Systems Technology, 2022, 30, 997-1008.	3.2	2
124	Boundary control design for conservation laws in the presence of measurement disturbances. Mathematics of Control, Signals, and Systems, 2021, 33, 49-77.	1.4	2
125	Q-Learning-Based Noise Covariance Adaptation in Kalman Filter for MARG Sensors Attitude Estimation. , 2022, , .		2
126	Using a high-gain observer for a hybrid output feedback: Finite-time and asymptotic cases for SISO affine systems. , 2014, , .		1

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127	Global stabilization of a Korteweg-de Vries equation with a distributed control saturated in L2-norm. IFAC-PapersOnLine, 2016, 49, 122-127.	0.5	1
128	Dynamic boundary control synthesis of coupled PDE-ODEs for communication networks under fluid flow modeling. , 2017, , .		1
129	Input shaping for infinite dimensional systems with application on oil well drilling. , 2018, , .		1
130	Goal-oriented error estimation for parameter-dependent nonlinear problems. ESAIM: Mathematical Modelling and Numerical Analysis, 2018, 52, 705-728.	0.8	1
131	Design of saturated controls for an unstable parabolic PDE. IFAC-PapersOnLine, 2019, 52, 310-315.	0.5	1
132	Singular Perturbation Approach for Linear Coupled ODE-PDE Systems. Advances in Delays and Dynamics, 2019, , 3-17.	0.4	1
133	Design of Saturated Boundary Control for Hyperbolic Systems. IFAC-PapersOnLine, 2020, 53, 5342-5347.	0.5	1
134	Enlarging the basin of attraction by a uniting output feedback controller. Automatica, 2018, 90, 73-80.	3.0	0
135	A Glimpse on Recent Educational Activities in the Nonlinear Control Field. IFAC-PapersOnLine, 2019, 52, 196-199.	0.5	0
136	Stability analysis of systems with nested saturation and backlash in the loop via nonstandard anti-windup compensation. , 2019, , .		0
137	Stability analysis of a 1D wave equation with a nonmonotone distributed damping. IFAC-PapersOnLine, 2019, 52, 36-41.	0.5	0
138	Output Feedback Control of a Cascade System of Linear Korteweg–de Vries Equations. SIAM Journal on Control and Optimization, 2021, 59, 2955-2976.	1.1	0
139	Neumann trace tracking of a constant reference input for 1-D boundary controlled heat-like equations with delay. IFAC-PapersOnLine, 2020, 53, 7716-7721.	0.5	0
140	Stabilization of the Wave Equation by the Mean of a Saturating Dirichlet Feedback. IFAC-PapersOnLine, 2021, 54, 442-447.	0.5	0
141	Velocity Stabilization of a Wave Equation with a Nonlinear Dynamic Boundary Condition. IEEE Transactions on Automatic Control, 2021, , 1-1.	3.6	0