

Jean-Michel Coron

List of Publications by Year in descending order

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65
papers

3,748
citations

172457
29
h-index

128289
60
g-index

65
all docs

65
docs citations

65
times ranked

1083
citing authors

#	ARTICLE	IF	CITATIONS
1	Harmonic maps with defects. Communications in Mathematical Physics, 1986, 107, 649-705.	2.2	369
2	A Strict Lyapunov Function for Boundary Control of Hyperbolic Systems of Conservation Laws. IEEE Transactions on Automatic Control, 2007, 52, 2-11.	5.7	314
3	Adding an integrator for the stabilization problem. Systems and Control Letters, 1991, 17, 89-104.	2.3	246
4	Stability and Boundary Stabilization of 1-D Hyperbolic Systems. Progress in Nonlinear Differential Equations and Their Application, 2016, , .	0.9	237
5	Dissipative Boundary Conditions for One-Dimensional Nonlinear Hyperbolic Systems. SIAM Journal on Control and Optimization, 2008, 47, 1460-1498.	2.1	200
6	Multiple solutions of H-systems and Rellich's conjecture. Communications on Pure and Applied Mathematics, 1984, 37, 149-187.	3.1	184
7	Free vibrations for a nonlinear wave equation and a theorem of P. Rabinowitz. Communications on Pure and Applied Mathematics, 1980, 33, 667-684.	3.1	172
8	On the controllability of the 2-D incompressible Navier-Stokes equations with the Navier slip boundary conditions. ESAIM - Control, Optimisation and Calculus of Variations, 1996, 1, 35-75.	1.3	129
9	Lyapunov exponential stability of 1-D linear hyperbolic systems of balance laws. Automatica, 2012, 48, 109-114.	5.0	116
10	Controllability of a quantum particle in a moving potential well. Journal of Functional Analysis, 2006, 232, 328-389.	1.4	110
11	Large solutions for harmonic maps in two dimensions. Communications in Mathematical Physics, 1983, 92, 203-215.	2.2	109
12	Explicit feedbacks stabilizing the attitude of a rigid spacecraft with two control torques. Automatica, 1996, 32, 669-677.	5.0	96
13	A necessary condition for feedback stabilization. Systems and Control Letters, 1990, 14, 227-232.	2.3	95
14	Finite-time boundary stabilization of general linear hyperbolic balance laws via Fredholm backstepping transformation. Automatica, 2017, 84, 95-100.	5.0	84
15	Rapid Stabilization for a Korteweg-de Vries Equation From the Left Dirichlet Boundary Condition. IEEE Transactions on Automatic Control, 2013, 58, 1688-1695.	5.7	78
16	On boundary feedback stabilization of non-uniform linear hyperbolic systems over a bounded interval. Systems and Control Letters, 2011, 60, 900-906.	2.3	75
17	Controllability Issues for Continuous-Spectrum Systems and Ensemble Controllability of Bloch Equations. Communications in Mathematical Physics, 2010, 296, 525-557.	2.2	72
18	Local controllability of a 1-D tank containing a fluid modeled by the shallow water equations. ESAIM - Control, Optimisation and Calculus of Variations, 2002, 8, 513-554.	1.3	69

#	ARTICLE	IF	CITATIONS
19	Null Controllability and Finite Time Stabilization for the Heat Equations with Variable Coefficients in Space in One Dimension via Backstepping Approach. Archive for Rational Mechanics and Analysis, 2017, 225, 993-1023.	2.4	68
20	Local rapid stabilization for a Kortewegâ€“de Vries equation with a Neumann boundary control on the right. Journal Des Mathematiques Pures Et Appliquees, 2014, 102, 1080-1120.	1.6	61
21	On Homogeneous Finite-Time Control for Linear Evolution Equation in Hilbert Space. IEEE Transactions on Automatic Control, 2018, 63, 3143-3150.	5.7	60
22	Stability of linear density-flow hyperbolic systems under PI boundary control. Automatica, 2015, 53, 37-42.	5.0	55
23	Local null controllability of the three-dimensional Navierâ€“Stokes system with a distributed control having two vanishing components. Inventiones Mathematicae, 2014, 198, 833-880.	2.5	54
24	Dissipative Boundary Conditions for One-Dimensional Quasi-linear Hyperbolic Systems: Lyapunov Stability for the C^1 -Norm. SIAM Journal on Control and Optimization, 2015, 53, 1464-1483.	2.1	50
25	Null controllability of the N-dimensional Stokes system with $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" overflow="scroll" \rangle \langle \text{mml:mi} \rangle N \langle \text{mml:mi} \rangle \langle \text{mml:mo} \rangle \hat{\wedge} \langle \text{mml:mo} \rangle \langle \text{mml:mn} \rangle 1 \langle \text{mml:mn} \rangle \langle \text{mml:math} \rangle$ scalar controls. Journal of Differential Equations, 2009, 246, 2908-2921.	2.2	48
26	On the stabilization of controllable and observable systems by an output feedback law. Mathematics of Control, Signals, and Systems, 1994, 7, 187-216.	2.3	46
27	Fredholm transform and local rapid stabilization for a Kuramotoâ€“Sivashinsky equation. Journal of Differential Equations, 2015, 259, 3683-3729.	2.2	42
28	Quantum control design by Lyapunov trajectory tracking for dipole and polarizability coupling. New Journal of Physics, 2009, 11, 105034.	2.9	40
29	Stabilization and controllability of first-order integro-differential hyperbolic equations. Journal of Functional Analysis, 2016, 271, 3554-3587.	1.4	35
30	Output Feedback Stabilization for a Scalar Conservation Law with a Nonlocal Velocity. SIAM Journal on Mathematical Analysis, 2013, 45, 2646-2665.	1.9	30
31	Dissipative Boundary Conditions for Nonlinear 1-D Hyperbolic Systems: Sharp Conditions Through an Approach via Time-Delay Systems. SIAM Journal on Mathematical Analysis, 2015, 47, 2220-2240.	1.9	30
32	Asymptotic stability of a nonlinear Kortewegâ€“de Vries equation with critical lengths. Journal of Differential Equations, 2015, 259, 4045-4085.	2.2	28
33	Controllability for a scalar conservation law with nonlocal velocity. Journal of Differential Equations, 2012, 252, 181-201.	2.2	27
34	PI Controllers for 1-D Nonlinear Transport Equation. IEEE Transactions on Automatic Control, 2019, 64, 4570-4582.	5.7	25
35	A quadratic Lyapunov function for hyperbolic densityâ€“velocity systems with nonuniform steady states. Systems and Control Letters, 2017, 104, 66-71.	2.3	23
36	Rapid stabilization of a linearized bilinear 1-D SchrÃ¶dinger equation. Journal Des Mathematiques Pures Et Appliquees, 2018, 115, 24-73.	1.6	23

#	ARTICLE	IF	CITATIONS
37	Dissipative boundary conditions for 2 \times 2 hyperbolic systems of conservation laws for entropy solutions in BV. Journal of Differential Equations, 2017, 262, 1-30.	2.2	20
38	Local null controllability of the two-dimensional Navier-Stokes system in the torus with a control force having a vanishing component. Journal Des Mathematiques Pures Et Appliquees, 2009, 92, 528-545.	1.6	19
39	Small-time global exact controllability of the Navier-Stokes equation with Navier slip-with-friction boundary conditions. Journal of the European Mathematical Society, 2020, 22, 1625-1673.	1.4	18
40	On Boundary Finite-Time Feedback Control for Heat Equation. IFAC-PapersOnLine, 2017, 50, 671-676.	0.9	16
41	Exponential boundary feedback stabilization of a shock steady state for the inviscid Burgers equation. Mathematical Models and Methods in Applied Sciences, 2019, 29, 271-316.	3.3	15
42	Boundary stabilization in finite time of one-dimensional linear hyperbolic balance laws with coefficients depending on time and space. Journal of Differential Equations, 2021, 271, 1109-1170.	2.2	15
43	Asymptotic stability of a Korteweg-de Vries equation with a two-dimensional center manifold. Advances in Nonlinear Analysis, 2018, 7, 497-515.	2.6	14
44	Feedforward boundary control of 2 \times 2 nonlinear hyperbolic systems with application to Saint-Venant equations. European Journal of Control, 2021, 57, 41-53.	2.6	13
45	Local exponential stabilization for a class of Korteweg-de Vries equations by means of time-varying feedback laws. Analysis and PDE, 2017, 10, 1089-1122.	1.4	12
46	Minimal time for the bilinear control of Schrödinger equations. Systems and Control Letters, 2014, 71, 1-6.	2.3	10
47	Boundary Controllability and Asymptotic Stabilization of a Nonlocal Traffic Flow Model. Vietnam Journal of Mathematics, 2021, 49, 957-985.	0.8	10
48	Finite-time stabilization in optimal time of homogeneous quasilinear hyperbolic systems in one dimensional space. ESAIM - Control, Optimisation and Calculus of Variations, 2020, 26, 119.	1.3	10
49	Small-time global stabilization of the viscous Burgers equation with three scalar controls. Journal Des Mathematiques Pures Et Appliquees, 2021, 151, 212-256.	1.6	9
50	Null-controllability of linear hyperbolic systems in one dimensional space. Systems and Control Letters, 2021, 148, 104851.	2.3	8
51	Input-to-State Stability in sup norms for hyperbolic systems with boundary disturbances. Nonlinear Analysis: Theory, Methods & Applications, 2021, 208, 112300.	1.1	8
52	Minimal time for the approximate bilinear control of Schrödinger equations. Mathematical Methods in the Applied Sciences, 2018, 41, 1831-1844.	2.3	6
53	An Acoustic Model for Automatic Control of a Slide Flute. Acta Acustica United With Acustica, 2010, 96, 713-721.	0.8	5
54	Optimization of an amplification protocol for misfolded proteins by using relaxed control. Journal of Mathematical Biology, 2015, 70, 289-327.	1.9	5

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55	Optimal Geometric Control Applied to the Protein Misfolding Cyclic Amplification Process. Acta Applicandae Mathematicae, 2015, 135, 145-173.	1.0	5
56	Boundary feedback stabilization of hydraulic jumps. IFAC Journal of Systems and Control, 2019, 7, 100026.	1.7	5
57	Nonlocal Transport Equations--Existence and Uniqueness of Solutions and Relation to the Corresponding Conservation Laws. SIAM Journal on Mathematical Analysis, 2020, 52, 5500-5532.	1.9	5
58	Phantom tracking method, homogeneity and rapid stabilization. Mathematical Control and Related Fields, 2013, 3, 303-322.	1.1	5
59	Stabilization of the Linearized Water Tank System. Archive for Rational Mechanics and Analysis, 2022, 244, 1019-1097.	2.4	5
60	Exponential stability of PI control for Saint-Venant equations with a friction term. Methods and Applications of Analysis, 2019, 26, 101-112.	0.5	4
61	Asymptotic State Observers for a Simplified Brass Instrument Model. Acta Acustica United With Acustica, 2010, 96, 733-742.	0.8	2
62	Analysis of a model of phosphorus uptake by plant roots. Journal of Evolution Equations, 2013, 13, 595-615.	1.1	2
63	Gevrey Class Regularity of a Semigroup Associated with a Nonlinear Korteweg-de Vries Equation. Chinese Annals of Mathematics Series B, 2018, 39, 201-212.	0.4	2
64	Boundary Control of 1-D Hyperbolic Systems. , 2021, , 150-157.		0
65	Boundary Control of 1-D Hyperbolic Systems. , 2020, , 1-8.		0