Yves Achdou

List of Publications by Year
in descending order

56 papers	1,713 citations	394421 19 h-index	302126 39 g-index
58 all docs	58 docs citations	58 times ranked	681 citing authors

#	Article	IF	Citations
1	Mean Field Games: Numerical Methods. SIAM Journal on Numerical Analysis, 2010, 48, 1136-1162.	2.3	226
2	Effective Boundary Conditions for Laminar Flows over Periodic Rough Boundaries. Journal of Computational Physics, 1998, 147, 187-218.	3.8	175
3	Mean Field Games: Numerical Methods for the Planning Problem. SIAM Journal on Control and Optimization, 2012, 50, 77-109.	2.1	138
4	Income and Wealth Distribution in Macroeconomics: A Continuous-Time Approach. Review of Economic Studies, 2022, 89, 45-86.	5.4	100
5	Partial differential equation models in macroeconomics. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2014, 372, 20130397.	3.4	94
6	Iterative Substructuring Preconditioners for Mortar Element Methods in Two Dimensions. SIAM Journal on Numerical Analysis, 1999, 36, 551-580.	2.3	88
7	Mean Field Games: Convergence of a Finite Difference Method. SIAM Journal on Numerical Analysis, 2013, 51, 2585-2612.	2.3	65
8	A domain decomposition preconditioner for an advection–diffusion problem. Computer Methods in Applied Mechanics and Engineering, 2000, 184, 145-170.	6.6	57
9	Hamilton–Jacobi equations constrained on networks. Nonlinear Differential Equations and Applications, 2013, 20, 413-445.	0.8	44
10	Convergence of a Finite Difference Scheme to Weak Solutions of the System of Partial Differential Equations Arising in Mean Field Games. SIAM Journal on Numerical Analysis, 2016, 54, 161-186.	2.3	42
11	Mean field games models of segregation. Mathematical Models and Methods in Applied Sciences, 2017, 27, 75-113.	3.3	38
12	An Inverse Problem for a Parabolic Variational Inequality Arising in Volatility Calibration with American Options. SIAM Journal on Control and Optimization, 2005, 43, 1583-1615.	2.1	37
13	HOMOGENIZATION OF HAMILTON–JACOBI EQUATIONS: NUMERICAL METHODS. Mathematical Models and Methods in Applied Sciences, 2008, 18, 1115-1143.	3.3	35
14	Iterative strategies for solving linearized discrete mean field games systems. Networks and Heterogeneous Media, 2012, 7, 197-217.	1.1	32
15	On the system of partial differential equations arising in mean field type control. Discrete and Continuous Dynamical Systems, 2015, 35, 3879-3900.	0.9	31
16	Finite Difference Methods for Mean Field Games. Lecture Notes in Mathematics, 2013, , 1-47.	0.2	30
17	Hamilton-Jacobi Equations: Approximations, Numerical Analysis and Applications. Lecture Notes in Mathematics, 2013, , .	0.2	28
18	Mean Field Games and Applications: Numerical Aspects. Lecture Notes in Mathematics, 2020, , 249-307.	0.2	26

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19	Variational Analysis for the Black and Scholes Equation with Stochastic Volatility. ESAIM: Mathematical Modelling and Numerical Analysis, 2002, 36, 373-395.	1.9	25
20	Hamilton-Jacobi Equations on Networks as Limits of Singularly Perturbed Problems in Optimal Control: Dimension Reduction. Communications in Partial Differential Equations, 2015, 40, 652-693.	2.2	21
21	Mean field games with congestion. Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire, 2018, 35, 443-480.	1.4	20
22	A Robin-Robin preconditioner for an advection-diffusion problem. Comptes Rendus Mathematique, 1997, 325, 1211-1216.	0.5	19
23	The Mortar Element Method with Overlapping Subdomains. SIAM Journal on Numerical Analysis, 2002, 40, 601-628.	2.3	19
24	VOLATILITY SMILE BY MULTILEVEL LEAST SQUARE. International Journal of Theoretical and Applied Finance, 2002, 05, 619-643.	0.5	18
25	Mean Field Type Control with Congestion. Applied Mathematics and Optimization, 2016, 73, 393-418.	1.6	18
26	Numerical Procedure for Calibration of Volatility with American Options. Applied Mathematical Finance, 2005, 12, 201-241.	1.2	16
27	A Posteriori Error Estimates for Parabolic Variational Inequalities. Journal of Scientific Computing, 2008, 37, 336-366.	2.3	16
28	Mean Field Type Control with Congestion (II): An Augmented Lagrangian Method. Applied Mathematics and Optimization, 2016, 74, 535-578.	1.6	16
29	Diffusion and propagation problems in some ramified domains with a fractal boundary. ESAIM: Mathematical Modelling and Numerical Analysis, 2006, 40, 623-652.	1.9	14
30	Trace results on domains with self-similar fractal boundaries. Journal Des Mathematiques Pures Et Appliquees, 2008, 89, 596-623.	1.6	13
31	Hamilton–Jacobi equations for optimal control on junctions and networks. ESAIM - Control, Optimisation and Calculus of Variations, 2015, 21, 876-899.	1.3	12
32	Deterministic mean field games with control on the acceleration. Nonlinear Differential Equations and Applications, 2020, 27, 1.	0.8	12
33	On a Parallel Implementation of the Mortar Element Method. ESAIM: Mathematical Modelling and Numerical Analysis, 1999, 33, 245-259.	1.9	11
34	A Multiscale Numerical Method for Poisson Problems in Some Ramified Domains with a Fractal Boundary. Multiscale Modeling and Simulation, 2006, 5, 828-860.	1.6	11
35	Mean Field Games for Modeling Crowd Motion. Computational Methods in Applied Sciences (Springer), 2019, , 17-42.	0.3	11
36	A Long-Term Mathematical Model for Mining Industries. Applied Mathematics and Optimization, 2016, 74, 579-618.	1.6	10

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37	Transparent boundary conditions for the Helmholtz equation in some ramified domains with a fractal boundary. Journal of Computational Physics, 2007, 220, 712-739.	3.8	9
38	Hamilton-Jacobi equations on networks. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 2577-2582.	0.4	9
39	Mean field games of controls: Finite difference approximations. Mathematics in Engineering, 2021, 3, 1-35.	0.9	9
40	Trace Theorems for a Class of Ramified Domains with Self-Similar Fractal Boundaries. SIAM Journal on Mathematical Analysis, 2010, 42, 1449-1482.	1.9	8
41	A partial differential equation connected to option pricing with stochastic volatility: Regularity results and discretization. Mathematics of Computation, 2004, 74, 1291-1323.	2.1	7
42	An Inverse Problem for a Parabolic Variational Inequality with an Integro-Differential Operator. SIAM Journal on Control and Optimization, 2008, 47, 733-767.	2.1	7
43	Effective transmission conditions for Hamilton–Jacobi equations defined on two domains separated by an oscillatory interface. Journal Des Mathematiques Pures Et Appliquees, 2016, 106, 1091-1121.	1.6	6
44	JLip versus Sobolev spaces on a class of self-similar fractal foliages. Journal Des Mathematiques Pures Et Appliquees, 2012, 97, 142-172.	1.6	5
45	A Transmission Problem Across a Fractal Self-Similar Interface. Multiscale Modeling and Simulation, 2016, 14, 708-736.	1.6	5
46	Optimal control of conditioned processes with feedback controls. Journal Des Mathematiques Pures Et Appliquees, 2021, 148, 308-341.	1.6	4
47	HOMOGENIZATION OF FIRST-ORDER EQUATIONS WITH u/∊-PERIODIC HAMILTONIAN: RATE OF CONVERGENCE AS ∊ → 0 AND NUMERICAL METHODS. Mathematical Models and Methods in Applied Sciences, 2011, 21, 1317-1353.	3.3	3
48	Comparison of Different Definitions of Traces for a Class of Ramified Domains with Self-Similar Fractal Boundaries. Potential Analysis, 2014, 40, 345-362.	0.9	3
49	Homogenization of a transmission problem with Hamilton–Jacobi equations and a two-scale interface. Effective transmission conditions. Journal Des Mathematiques Pures Et Appliquees, 2019, 122, 164-197.	1.6	3
50	Deterministic Mean Field Games with Control on the Acceleration and State Constraints. SIAM Journal on Mathematical Analysis, 2022, 54, 3757-3788.	1.9	3
51	Partial Differential Equations for Option Pricing. Handbook of Numerical Analysis, 2009, 15, 369-495.	1.8	2
52	Finite horizon mean field games on networks. Calculus of Variations and Partial Differential Equations, 2020, 59, 1.	1.7	2
53	Comparison of wall laws for unsteady incompressible Navier-Stokes equations over rough interfaces. , 2001, , 762-763.		2
54	Boundary Value Problems in Ramified Domains with Fractal Boundaries. Lecture Notes in Computational Science and Engineering, 2008, , 419-426.	0.3	1

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55	Calibration of LÃ©vy Processes with American Options. Computational Methods in Applied Sciences (Springer), 2008, , 259-277.	0.3	0
56	A class of short-term models for the oil industry that accounts for speculative oil storage. Finance and Stochastics, 2022, 26, 631-669.	1.1	0