Jerome Droniou

List of Publications by Year
in descending order

51 papers	1,549 citations	361045 20 h-index	315357 38 g-index
51 all docs	51 docs citations	51 times ranked	644 citing authors

#	Article	IF	Citations
1	Finite volume schemes for diffusion equations: Introduction to and review of modern methods. Mathematical Models and Methods in Applied Sciences, 2014, 24, 1575-1619.	1.7	209
2	A UNIFIED APPROACH TO MIMETIC FINITE DIFFERENCE, HYBRID FINITE VOLUME AND MIXED FINITE VOLUME METHODS. Mathematical Models and Methods in Applied Sciences, 2010, 20, 265-295.	1.7	173
3	Fractal First-Order Partial Differential Equations. Archive for Rational Mechanics and Analysis, 2006, 182, 299-331.	1.1	127
4	GRADIENT SCHEMES: A GENERIC FRAMEWORK FOR THE DISCRETISATION OF LINEAR, NONLINEAR AND NONLOCAL ELLIPTIC AND PARABOLIC EQUATIONS. Mathematical Models and Methods in Applied Sciences, 2013, 23, 2395-2432.	1.7	96
5	Parabolic Capacity and Soft Measures for Nonlinear Equations. Potential Analysis, 2003, 19, 99-161.	0.4	87
6	Construction and Convergence Study of Schemes Preserving the Elliptic Local Maximum Principle. SIAM Journal on Numerical Analysis, 2011, 49, 459-490.	1.1	84
7	A Discontinuous-Skeletal Method for Advection-Diffusion-Reaction on General Meshes. SIAM Journal on Numerical Analysis, 2015, 53, 2135-2157.	1.1	58
8	Non-coercive Linear Elliptic Problems. Potential Analysis, 2002, 17, 181-203.	0.4	53
9	Equivalence between entropy and renormalized solutions for parabolic equations with smooth measure data. Nonlinear Differential Equations and Applications, 2007, 14, 181-205.	0.4	51
10	Discontinuous Skeletal Gradient Discretisation methods on polytopal meshes. Journal of Computational Physics, 2018, 355, 397-425.	1.9	46
11	A unified approach for handling convection terms in finite volumes and mimetic discretization methods for elliptic problems. IMA Journal of Numerical Analysis, 2011, 31, 1357-1401.	1.5	44
12	Finite-volume schemes for noncoercive elliptic problems with Neumann boundary conditions. IMA Journal of Numerical Analysis, 2011, 31, 61-85.	1.5	40
13	A numerical method for fractal conservation laws. Mathematics of Computation, 2010, 79, 95-95.	1.1	38
14	Uniform-in-time convergence of numerical methods for non-linear degenerate parabolic equations. Numerische Mathematik, 2016, 132, 721-766.	0.9	34
15	A Finite Volume Scheme for a Noncoercive Elliptic Equation with Measure Data. SIAM Journal on Numerical Analysis, 2003, 41, 1997-2031.	1.1	33
16	Ws,p-approximation properties of elliptic projectors on polynomial spaces, with application to the error analysis of a Hybrid High-Order discretisation of Lerayâ€"Lions problems. Mathematical Models and Methods in Applied Sciences, 2017, 27, 879-908.	1.7	33
17	Convergence Analysis of a Mixed Finite Volume Scheme for an Elliptic-Parabolic System Modeling Miscible Fluid Flows in Porous Media. SIAM Journal on Numerical Analysis, 2007, 45, 2228-2258.	1.1	32
18	A Hybrid High-Order discretisation of the Brinkman problem robust in the Darcy and Stokes limits. Computer Methods in Applied Mechanics and Engineering, 2018, 341, 278-310.	3.4	29

#	Article	IF	Citations
19	Noncoercive convectionâ€“diffusion elliptic problems with Neumann boundary conditions. Calculus of Variations and Partial Differential Equations, 2009, 34, 413-434.	0.9	27
20	A Hybrid High-Order method for the incompressible Navierâ€“Stokes equations based on Temam's device. Journal of Computational Physics, 2019, 376, 786-816.	1.9	24
21	A third Strang lemma and an Aubinâ€“Nitsche trick for schemes in fully discrete formulation. Calcolo, 2018, 55, 1.	0.6	20
22	Improved L^2 estimate for gradient schemes and super-convergence of the TPFA finite volume scheme. IMA Journal of Numerical Analysis, 2018, 38, 1254-1293.	1.5	18
23	Gradient Schemes for Stokes problem. IMA Journal of Numerical Analysis, 2016, 36, 1636-1669.	1.5	15
24	Convergence in C([0,T];L2(Î©)) of weak solutions to perturbed doubly degenerate parabolic equations. Journal of Differential Equations, 2016, 260, 7821-7860.	1.1	15
25	Robust Hybrid High-Order Method on Polytopal Meshes with Small Faces. Computational Methods in Applied Mathematics, 2022, 22, 47-71.	0.4	15
26	Gradient schemes for linear and non-linear elasticity equations. Numerische Mathematik, 2015, 129, 251-277.	0.9	14
27	On a Miscible Displacement Model in Porous Media Flow with Measure Data. SIAM Journal on Mathematical Analysis, 2014, 46, 3158-3175.	0.9	12
28	Numerical analysis of a two-phase flow discrete fracture matrix model. Numerische Mathematik, 2019, 141, 21-62.	0.9	12
29	Arbitrary-order pressure-robust DDR and VEM methods for the Stokes problem on polyhedral meshes. Computer Methods in Applied Mechanics and Engineering, 2022, 397, 115061.	3.4	12
30	Gradient schemes for the Signorini and the obstacle problems, and application to hybrid mimetic mixed methods. Computers and Mathematics With Applications, 2016, 72, 2788-2807.	1.4	11
31	An Arbitrary-Order Scheme on Generic Meshes for Miscible Displacements in Porous Media. SIAM Journal of Scientific Computing, 2018, 40, B1020-B1054.	1.3	10
32	An arbitrary-order method for magnetostatics on polyhedral meshes based on a discrete de Rham sequence. Journal of Computational Physics, 2021, 429, 109991.	1.9	9
33	A density result in Sobolev spaces. Journal Des Mathematiques Pures Et Appliquees, 2002, 81, 697-714.	0.8	8
34	A Gradient Discretization Method to Analyze Numerical Schemes for Nonlinear Variational Inequalities, Application to the Seepage Problem. SIAM Journal on Numerical Analysis, 2018, 56, 2375-2405.	1.1	7
35	A mixed finite element method for a sixth-order elliptic problem. IMA Journal of Numerical Analysis, 2019, 39, 374-397.	1.5	6
36	An HMMâ€“ELLAM scheme on generic polygonal meshes for miscible incompressible flows in porous media. Journal of Petroleum Science and Engineering, 2019, 172, 707-723.	2.1	6

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37	High-order Mass-lumped Schemes for Nonlinear Degenerate Elliptic Equations. SIAM Journal on Numerical Analysis, 2020, 58, 153-188.	1.1	6
38	Convergence of a finite-volume mixed finite-element method for an elliptic-hyperbolic system. IMA Journal of Numerical Analysis, 2003, 23, 507-538.	1.5	5
39	Gradient discretization of two-phase poro-mechanical models with discontinuous pressures at matrix fracture interfaces. ESAIM: Mathematical Modelling and Numerical Analysis, 2021, 55, 1741-1777.	0.8	5
40	Unified Convergence Analysis of Numerical Schemes for a Miscible Displacement Problem. Foundations of Computational Mathematics, 2019, 19, 333-374.	1.5	4
41	Design and analysis of finite volume methods for elliptic equations with oblique derivatives; application to Earth gravity field modelling. Journal of Computational Physics, 2019, 398, 108876.	1.9	4
42	Convergence analysis of a family of ELLAM schemes for a fully coupled model of miscible displacement in porous media. Numerische Mathematik, 2019, 141, 353-397.	0.9	4
43	The Hessian Discretisation Method for Fourth Order Linear Elliptic Equations. Journal of Scientific Computing, 2019, 78, 1405-1437.	1.1	3
44	The Gradient Discretization Method for Slow and Fast Diffusion Porous Media Equations. SIAM Journal on Numerical Analysis, 2020, 58, 1965-1992.	1.1	3
45	The Gradient Discretisation Method for Linear Advection Problems. Computational Methods in Applied Mathematics, 2020, 20, 437-458.	0.4	3
46	Convergence rate of the Allen-Cahn equation to generalized motion by mean curvature. Journal of Evolution Equations, 2012, 12, 267-294.	0.6	2
47	Numerical Analysis for the Pure Neumann Control Problem Using the Gradient Discretisation Method. Computational Methods in Applied Mathematics, 2018, 18, 609-637.	0.4	1
48	Application of diffusion-advection equations to in-field monitoring of soil suction profiles. Computers and Geotechnics, 2021, 139, 104329.	2.3	1
49	An Eclectic View on Numerical Methods for PDEs: Presentation of the Special Issue â€œAdvanced Numerical Methods: Recent Developments, Analysis and Applicationsâ€• Computational Methods in Applied Mathematics, 2018, 18, 323-325.	0.4	0
50	An Efficient Implementation of Mass Conserving Characteristic-Based Schemes in Two and Three Dimensions. SIAM Journal of Scientific Computing, 2020, 42, A1071-A1096.	1.3	0
51	Hessian discretisation method for fourth-order semi-linear elliptic equations: applications to the von KÃ¡rmÃ¡n and Navierâ€“Stokes models. Advances in Computational Mathematics, 2021, 47, 1.	0.8	0