

Raphaël Danchin

List of Publications by Year in descending order

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58
papers

4,176
citations

159585

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55
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all docs

58
docs citations

58
times ranked

769
citing authors

#	ARTICLE	IF	CITATIONS
1	Fourier Analysis and Nonlinear Partial Differential Equations. Grundlehren Der Mathematischen Wissenschaften in Einzeldarstellungen Mit Besonderer Berücksichtigung Der Anwendungsgebiete, 2011, , .	0.9	1,185
2	Global existence in critical spaces for compressible Navier-Stokes equations. Inventiones Mathematicae, 2000, 141, 579-614.	2.5	371
3	LOCAL THEORY IN CRITICAL SPACES FOR COMPRESSIBLE VISCOUS AND HEAT-CONDUCTIVE GASES. Communications in Partial Differential Equations, 2001, 26, 1183-1233.	2.2	179
4	GLOBAL EXISTENCE RESULTS FOR THE ANISOTROPIC BOUSSINESQ SYSTEM IN DIMENSION TWO. Mathematical Models and Methods in Applied Sciences, 2011, 21, 421-457.	3.3	156
5	Global Existence in Critical Spaces for Flows of Compressible Viscous and Heat-Conductive Gases. Archive for Rational Mechanics and Analysis, 2001, 160, 1-39.	2.4	155
6	Density-dependent incompressible viscous fluids in critical spaces. Proceedings of the Royal Society of Edinburgh Section A: Mathematics, 2003, 133, 1311-1334.	1.2	155
7	Existence of solutions for compressible fluid models of Korteweg type. Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire, 2001, 18, 97-133.	1.4	139
8	Global Well-Posedness Issues for the Inviscid Boussinesq System with Yudovich's Type Data. Communications in Mathematical Physics, 2009, 290, 1-14.	2.2	137
9	A Global Existence Result for the Compressible Navier-Stokes Equations in the Critical L^p Framework. Archive for Rational Mechanics and Analysis, 2010, 198, 233-271.	2.4	113
10	A Lagrangian Approach for the Incompressible Navier-Stokes Equations with Variable Density. Communications on Pure and Applied Mathematics, 2012, 65, 1458-1480.	3.1	106
11	Les théorèmes de Leray et de Fujita-Kato pour le système de Boussinesq partiellement visqueux. Bulletin De La Societe Mathematique De France, 2008, 136, 261-309.	0.2	87
12	Zero Mach number limit for compressible flows with periodic boundary conditions. American Journal of Mathematics, 2002, 124, 1153-1219.	1.1	84
13	On the well-posedness for the Euler-Korteweg model in several space dimensions. Indiana University Mathematics Journal, 2007, 56, 1499-1579.	0.9	81
14	Well-Posedness in Critical Spaces for Barotropic Viscous Fluids with Truly Not Constant Density. Communications in Partial Differential Equations, 2007, 32, 1373-1397.	2.2	78
15	Zero Mach number limit in critical spaces for compressible Navier-Stokes equations. Annales Scientifiques De L'Ecole Normale Supérieure, 2002, 35, 27-75.	0.8	75
16	Existence and uniqueness results for the Boussinesq system with data in Lorentz spaces. Physica D: Nonlinear Phenomena, 2008, 237, 1444-1460.	2.8	74
17	Optimal Time-decay Estimates for the Compressible Navier-Stokes Equations in the Critical L^p Framework. Archive for Rational Mechanics and Analysis, 2017, 224, 53-90.	2.4	66
18	On the well-posedness of the incompressible density-dependent Euler equations in the L^p framework. Journal of Differential Equations, 2010, 248, 2130-2170.	2.2	61

#	ARTICLE	IF	CITATIONS
19	Incompressible Flows with Piecewise Constant Density. Archive for Rational Mechanics and Analysis, 2013, 207, 991-1023.	2.4	60
20	On the uniqueness in critical spaces for compressible Navier-Stokes equations. Nonlinear Differential Equations and Applications, 2005, 12, 111-128.	0.8	59
21	Madelung, Gross and Pitaevskii and Korteweg. Nonlinearity, 2012, 25, 2843-2873.	1.4	55
22	A Lagrangian approach for the compressible Navier-Stokes equations. Annales De L'Institut Fourier, 2014, 64, 753-791.	0.6	55
23	Density-Dependent Incompressible Fluids in Bounded Domains. Journal of Mathematical Fluid Mechanics, 2006, 8, 333-381.	1.0	49
24	The inviscid limit for density-dependent incompressible fluids. Annales De La Faculté Des Sciences De Toulouse, 2006, 15, 637-688.	0.3	48
25	A critical functional framework for the inhomogeneous Navier-Stokes equations in the half-space. Journal of Functional Analysis, 2009, 256, 881-927.	1.4	47
26	On the well-posedness of the full compressible Navier-Stokes system in critical Besov spaces. Journal of Differential Equations, 2015, 258, 3435-3467.	2.2	43
27	The Incompressible Navier-Stokes Equations in Vacuum. Communications on Pure and Applied Mathematics, 2019, 72, 1351-1385.	3.1	41
28	Compressible Navier-Stokes system: Large solutions and incompressible limit. Advances in Mathematics, 2017, 320, 904-925.	1.1	37
29	The incompressible limit in L^p type critical spaces. Mathematische Annalen, 2016, 366, 1365-1402.	1.4	36
30	Estimates in Besov spaces for transport and transport-diffusion equations with almost Lipschitz coefficients. Revista Matematica Iberoamericana, 2005, 21, 863-888.	0.9	33
31	Inhomogeneous Navier-Stokes equations in the half-space, with only bounded density. Journal of Functional Analysis, 2014, 267, 2371-2436.	1.4	29
32	UNIFORM ESTIMATES FOR TRANSPORT-DIFFUSION EQUATIONS. Journal of Hyperbolic Differential Equations, 2007, 04, 1-17.	0.5	27
33	The well-posedness issue for the density-dependent Euler equations in endpoint Besov spaces. Journal Des Mathematiques Pures Et Appliquees, 2011, 96, 253-278.	1.6	25
34	On a simplified model for radiating flows. Journal of Evolution Equations, 2014, 14, 155-195.	1.1	22
35	Regular solutions to the fractional Euler alignment system in the Besov spaces framework. Mathematical Models and Methods in Applied Sciences, 2019, 29, 89-119.	3.3	21
36	Global persistence of geometrical structures for the Boussinesq equation with no diffusion. Communications in Partial Differential Equations, 2017, 42, 68-99.	2.2	19

#	ARTICLE	IF	CITATIONS
37	Evolution d'une singularité de type cusp dans une poche de tourbillon. Revista Matematica Iberoamericana, 2000, 16, 281-329.	0.9	17
38	ON THE WELL-POSEDNESS OF THE FULL LOW MACH NUMBER LIMIT SYSTEM IN GENERAL CRITICAL BESOV SPACES. Communications in Contemporary Mathematics, 2012, 14, 1250022.	1.2	16
39	On the linear wave regime of the Gross-Pitaevskii equation. Journal D'Analyse Mathematique, 2010, 110, 297-338.	0.8	13
40	On the solvability of the compressible Navier-Stokes system in bounded domains. Nonlinearity, 2010, 23, 383-407.	1.4	13
41	A survey on Fourier analysis methods for solving the compressible Navier-Stokes equations. Science China Mathematics, 2012, 55, 245-275.	1.7	13
42	On the global existence and time decay estimates in critical spaces for the Navier-Stokes-Poisson system. Mathematische Nachrichten, 2017, 290, 1939-1970.	0.8	13
43	The Low Mach Number Limit for a Barotropic Model of Radiative Flow. SIAM Journal on Mathematical Analysis, 2016, 48, 1025-1053.	1.9	12
44	The divergence equation in rough spaces. Journal of Mathematical Analysis and Applications, 2012, 386, 10-31.	1.0	9
45	Partially dissipative one-dimensional hyperbolic systems in the critical regularity setting, and applications. Pure and Applied Analysis, 2022, 4, 85-125.	1.1	9
46	Optimal decay estimates in the critical L^p framework for flows of compressible viscous and heat-conductive gases. Journal of Mathematical Fluid Mechanics, 2018, 20, 1641-1665.	1.0	8
47	A well-posedness result for viscous compressible fluids with only bounded density. Analysis and PDE, 2020, 13, 275-316.	1.4	8
48	Fourier Analysis Methods for the Compressible Navier-Stokes Equations. , 2016, , 1-62.		8
49	From compressible to incompressible inhomogeneous flows in the case of large data. Tunisian Journal of Mathematics, 2019, 1, 127-149.	0.6	6
50	Fourier Analysis Methods for the Compressible Navier-Stokes Equations. , 2018, , 1843-1903.		5
51	Divergence. Discrete and Continuous Dynamical Systems - Series S, 2013, 6, 1163-1172.	1.1	5
52	The Oberbeck-Boussinesq approximation in critical spaces. Asymptotic Analysis, 2013, 84, 61-102.	0.5	4
53	New Maximal Regularity Results for the Heat Equation in Exterior Domains, and Applications. Progress in Nonlinear Differential Equations and Their Application, 2013, , 101-128.	0.9	3
54	Existence of strong solutions with critical regularity to a polytropic model for radiating flows. Annali Di Matematica Pura Ed Applicata, 2017, 196, 107-153.	1.0	3

#	ARTICLE	IF	CITATIONS
55	On perfect fluids with bounded vorticity. <i>Comptes Rendus Mathematique</i> , 2007, 345, 391-394.	0.3	1
56	On the global existence for the compressible Euler-Poisson system, and the instability of static solutions. <i>Journal of Evolution Equations</i> , 2020, , 1.	1.1	1
57	The global existence issue for the compressible Euler system with Poisson or Helmholtz couplings. <i>Journal of Hyperbolic Differential Equations</i> , 2021, 18, 169-193.	0.5	1
58	On the Global Existence for the Compressible Euler-Riesz System. <i>Journal of Mathematical Fluid Mechanics</i> , 2022, 24, 1.	1.0	0