

# Xavier Ros-Oton

## List of Publications by Year in descending order

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50  
papers

1,923  
citations

361413

20  
h-index

254184

43  
g-index

50  
all docs

50  
docs citations

50  
times ranked

631  
citing authors

#	ARTICLE	IF	CITATIONS
1	The Dirichlet problem for the fractional Laplacian: Regularity up to the boundary. <i>Journal Des Mathematiques Pures Et Appliquees</i> , 2014, 101, 275-302.	1.6	496
2	The Pohozaev Identity for the Fractional Laplacian. <i>Archive for Rational Mechanics and Analysis</i> , 2014, 213, 587-628.	2.4	196
3	Nonlocal problems with Neumann boundary conditions. <i>Revista Matematica Iberoamericana</i> , 2017, 33, 377-416.	0.9	138
4	Nonlocal elliptic equations in bounded domains: a survey. <i>Publicacions Matematiques</i> , 2016, 60, 3-26.	0.5	135
5	Regularity theory for general stable operators. <i>Journal of Differential Equations</i> , 2016, 260, 8675-8715.	2.2	91
6	The extremal solution for the fractional Laplacian. <i>Calculus of Variations and Partial Differential Equations</i> , 2014, 50, 723-750.	1.7	75
7	Boundary regularity for fully nonlinear integro-differential equations. <i>Duke Mathematical Journal</i> , 2016, 165, .	1.5	65
8	Sobolev and isoperimetric inequalities with monomial weights. <i>Journal of Differential Equations</i> , 2013, 255, 4312-4336.	2.2	60
9	Obstacle problems for integro-differential operators: regularity of solutions and free boundaries. <i>Inventiones Mathematicae</i> , 2017, 208, 1155-1211.	2.5	46
10	Regularity theory for general stable operators: Parabolic equations. <i>Journal of Functional Analysis</i> , 2017, 272, 4165-4221.	1.4	43
11	Regularity of Stable Solutions up to Dimension 7 in Domains of Double Revolution. <i>Communications in Partial Differential Equations</i> , 2013, 38, 135-154.	2.2	37
12	Sharp isoperimetric inequalities via the ABP method. <i>Journal of the European Mathematical Society</i> , 2016, 18, 2971-2998.	1.4	37
13	Nonexistence Results for Nonlocal Equations with Critical and Supercritical Nonlinearities. <i>Communications in Partial Differential Equations</i> , 2015, 40, 115-133.	2.2	33
14	Stable inversion of Abel equations: Application to tracking control in DC-DC nonminimum phase boost converters. <i>Automatica</i> , 2011, 47, 221-226.	5.0	31
15	Local integration by parts and Pohozaev identities for higher order fractional Laplacians. <i>Discrete and Continuous Dynamical Systems</i> , 2015, 35, 2131-2150.	0.9	30
16	Stable solutions to semilinear elliptic equations are smooth up to dimension 9. <i>Acta Mathematica</i> , 2020, 224, 187-252.	3.9	30
17	Fractional Laplacian: Pohozaev identity and nonexistence results. <i>Comptes Rendus Mathematique</i> , 2012, 350, 505-508.	0.3	29
18	Boundary regularity for the fractional heat equation. <i>Revista De La Real Academia De Ciencias Exactas, Fisicas Y Naturales - Serie A: Matematicas</i> , 2016, 110, 49-64.	1.2	28

#	ARTICLE	IF	CITATIONS
19	Boundary regularity estimates for nonlocal elliptic equations in $C^1$ and $C^{1,\alpha}$ . Annali Di Matematica Pura Ed Applicata, 2017, 196, 1637-1668.	1.0	27
20	Infinite Speed of Propagation and Regularity of Solutions to the Fractional Porous Medium Equation in General Domains. Communications on Pure and Applied Mathematics, 2017, 70, 1472-1508.	3.1	27
21	Free Boundary Regularity in the Parabolic Fractional Obstacle Problem. Communications on Pure and Applied Mathematics, 2018, 71, 2129-2159.	3.1	21
22	The Dirichlet problem for nonlocal operators with singular kernels: Convex and nonconvex domains. Advances in Mathematics, 2016, 288, 732-790.	1.1	20
23	Global regularity for the free boundary in the obstacle problem for the fractional Laplacian. American Journal of Mathematics, 2018, 140, 415-447.	1.1	19
24	Obstacle problems for integro-differential operators: Higher regularity of free boundaries. Advances in Mathematics, 2020, 360, 106931.	1.1	19
25	Euclidean balls solve some isoperimetric problems with nonradial weights. Comptes Rendus Mathematique, 2012, 350, 945-947.	0.3	18
26	Generic regularity of free boundaries for the obstacle problem. Publications Mathematiques De L'Institut Des Hautes Etudes Scientifiques, 2020, 132, 181-292.	4.3	17
27	Obstacle problems and free boundaries: an overview. SeMA Journal, 2018, 75, 399-419.	2.0	16
28	A one-dimensional symmetry result for a class of nonlocal semilinear equations in the plane. Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire, 2017, 34, 469-482.	1.4	13
29	Pohozaev identities for anisotropic integrodifferential operators. Communications in Partial Differential Equations, 2017, 42, 1290-1321.	2.2	13
30	The obstacle problem for the fractional Laplacian with critical drift. Mathematische Annalen, 2018, 371, 1683-1735.	1.4	13
31	Structure and regularity of the singular set in the obstacle problem for the fractional Laplacian. Revista Matematica Iberoamericana, 2019, 35, 1309-1365.	0.9	12
32	The structure of the free boundary in the fully nonlinear thin obstacle problem. Advances in Mathematics, 2017, 316, 710-747.	1.1	11
33	Non-symmetric stable operators: Regularity theory and integration by parts. Advances in Mathematics, 2022, 401, 108321.	1.1	10
34	Regularity for the fractional Gelfand problem up to dimension 7. Journal of Mathematical Analysis and Applications, 2014, 419, 10-19.	1.0	9
35	On the regularity of the free boundary in the p-Laplacian obstacle problem. Journal of Differential Equations, 2017, 263, 1931-1945.	2.2	8
36	The Boundary Harnack Principle for Nonlocal Elliptic Operators in Non-divergence Form. Potential Analysis, 2019, 51, 315-331.	0.9	8

#	ARTICLE	IF	CITATIONS
37	New boundary Harnack inequalities with right hand side. Journal of Differential Equations, 2021, 288, 204-249.	2.2	8
38	Boundary Regularity, Pohozaev Identities and Nonexistence Results. , 2017, , 335-358.		5
39	Free Boundary Regularity for Almost Every Solution to the Signorini Problem. Archive for Rational Mechanics and Analysis, 2021, 240, 419-466.	2.4	5
40	The Dirichlet problem for nonlocal elliptic operators with $C^{0,\alpha}$ exterior data. Proceedings of the American Mathematical Society, 2020, 148, 4455-4470.	0.8	5
41	On global solutions to semilinear elliptic equations related to the one-phase free boundary problem. Discrete and Continuous Dynamical Systems, 2019, 39, 6945-6959.	0.9	5
42	Periodic solutions with nonconstant sign in Abel equations of the second kind. Journal of Mathematical Analysis and Applications, 2011, 381, 582-589.	1.0	4
43	Higher-order boundary regularity estimates for nonlocal parabolic equations. Calculus of Variations and Partial Differential Equations, 2018, 57, 1.	1.7	4
44	Existence of periodic solutions with nonconstant sign in a class of generalized Abel equations. Discrete and Continuous Dynamical Systems, 2013, 33, 1603-1614.	0.9	2
45	Approximate tracking of periodic references in a class of bilinear systems via stable inversion. Discrete and Continuous Dynamical Systems - Series B, 2011, 15, 197-215.	0.9	2
46	Characterizing compact coincidence sets in the thin obstacle problem and the obstacle problem for the fractional Laplacian. Nonlinear Analysis: Theory, Methods & Applications, 2021, 211, 112473.	1.1	1
47	Global Schauder theory for minimizers of the $H(\hat{\Gamma})$ energy. Journal of Functional Analysis, 2022, 283, 109523.	1.4	1
48	On a factorization of Riemann's $\zeta$ function with respect to a quadratic field and its computation. Revista De La Real Academia De Ciencias Exactas, Fisicas Y Naturales - Serie A: Matematicas, 2012, 106, 419-427.	1.2	0
49	Geometric Measure Theory and Free Boundary Problems. Lecture Notes in Mathematics, 2021, , .	0.2	0
50	Regularity of Free Boundaries in Obstacle Problems. Lecture Notes in Mathematics, 2021, , 37-88.	0.2	0