

# Robert V Kohn

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/4495887/publications.pdf>

Version: 2024-02-01

46  
papers

2,828  
citations

257450

24  
h-index

223800

46  
g-index

47  
all docs

47  
docs citations

47  
times ranked

1046  
citing authors

#	ARTICLE	IF	CITATIONS
1	Optimal design and relaxation of variational problems, I. Communications on Pure and Applied Mathematics, 1986, 39, 113-137.	3.1	383
2	Optimal design and relaxation of variational problems, III. Communications on Pure and Applied Mathematics, 1986, 39, 353-377.	3.1	272
3	Local minimisers and singular perturbations. Proceedings of the Royal Society of Edinburgh Section A: Mathematics, 1989, 111, 69-84.	1.2	259
4	Surface energy and microstructure in coherent phase transitions. Communications on Pure and Applied Mathematics, 1994, 47, 405-435.	3.1	204
5	Optimal design and relaxation of variational problems, II. Communications on Pure and Applied Mathematics, 1986, 39, 139-182.	3.1	150
6	Upper Bounds on Coarsening Rates. Communications in Mathematical Physics, 2002, 229, 375-395.	2.2	121
7	On the slowness of phase boundary motion in one space dimension. Communications on Pure and Applied Mathematics, 1990, 43, 983-997.	3.1	118
8	Microstructures minimizing the energy of a two phase elastic composite in two space dimensions. II: The vigdergauz microstructure. Journal of the Mechanics and Physics of Solids, 1995, 43, 949-972.	4.8	111
9	A reduced theory for thin-film micromagnetics. Communications on Pure and Applied Mathematics, 2002, 55, 1408-1460.	3.1	109
10	Another Thin-Film Limit of Micromagnetics. Archive for Rational Mechanics and Analysis, 2005, 178, 227-245.	2.4	95
11	Domain Branching in Uniaxial Ferromagnets: A Scaling Law for the Minimum Energy. Communications in Mathematical Physics, 1999, 201, 61-79.	2.2	92
12	A compactness result in the gradient theory of phase transitions. Proceedings of the Royal Society of Edinburgh Section A: Mathematics, 2001, 131, 833-844.	1.2	77
13	Upper bound on the coarsening rate for an epitaxial growth model. Communications on Pure and Applied Mathematics, 2003, 56, 1549-1564.	3.1	76
14	Optimal design in elasticity and plasticity. International Journal for Numerical Methods in Engineering, 1986, 22, 183-188.	2.8	63
15	Action minimization and sharp-interface limits for the stochastic Allen-Cahn equation. Communications on Pure and Applied Mathematics, 2007, 60, 393-438.	3.1	58
16	Two-dimensional modelling of soft ferromagnetic films. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2001, 457, 2983-2991.	2.1	45
17	A deterministic control-based approach to fully nonlinear parabolic and elliptic equations. Communications on Pure and Applied Mathematics, 2010, 63, 1298-1350.	3.1	45
18	Effective dynamics for ferromagnetic thin films: a rigorous justification. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2005, 461, 143-154.	2.1	40

#	ARTICLE	IF	CITATIONS
19	Wrinkles as the Result of Compressive Stresses in an Annular Thin Film. <i>Communications on Pure and Applied Mathematics</i> , 2014, 67, 693-747.	3.1	40
20	Nucleation Barriers for the Cubic to Tetragonal Phase Transformation. <i>Communications on Pure and Applied Mathematics</i> , 2013, 66, 867-904.	3.1	39
21	Ground state energy scaling laws during the onset and destruction of the intermediate state in a type I superconductor. <i>Communications on Pure and Applied Mathematics</i> , 2008, 61, 595-626.	3.1	38
22	Cloaking via change of variables for the Helmholtz equation. <i>Communications on Pure and Applied Mathematics</i> , 2010, 63, 973-1016.	3.1	38
23	The String Method as a Dynamical System. <i>Journal of Nonlinear Science</i> , 2011, 21, 193-230.	2.1	27
24	Metric-Induced Wrinkling of a Thin Elastic Sheet. <i>Journal of Nonlinear Science</i> , 2014, 24, 1147-1176.	2.1	27
25	Repulsive Interaction of Néel Walls, and the Internal Length Scale of the Cross-Tie Wall. <i>Multiscale Modeling and Simulation</i> , 2003, 1, 57-104.	1.6	26
26	Optimization of structural topology in the high-porosity regime. <i>Journal of the Mechanics and Physics of Solids</i> , 2008, 56, 1043-1064.	4.8	23
27	Analysis of a Compressed Thin Film Bonded to a Compliant Substrate: The Energy Scaling Law. <i>Journal of Nonlinear Science</i> , 2013, 23, 343-362.	2.1	23
28	Sharp-interface limit of the Allen-Cahn action functional in one space dimension. <i>Calculus of Variations and Partial Differential Equations</i> , 2006, 25, 503-534.	1.7	22
29	Energy Scaling Laws for Conically Constrained Thin Elastic Sheets. <i>Journal of Elasticity</i> , 2013, 113, 251-264.	1.9	22
30	Blister Patterns and Energy Minimization in Compressed Thin Films on Compliant Substrates. <i>Communications on Pure and Applied Mathematics</i> , 2015, 68, 472-510.	3.1	20
31	On the Bending and Twisting of Rods with Misfit. <i>Journal of Elasticity</i> , 2018, 130, 115-143.	1.9	17
32	A new approach to the continuum modeling of epitaxial growth: slope selection, coarsening, and the role of the uphill current. <i>Physica D: Nonlinear Phenomena</i> , 2002, 161, 237-257.	2.8	15
33	Minimal energy for elastic inclusions. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2011, 467, 695-717.	2.1	14
34	The Wrinkling of a Twisted Ribbon. <i>Journal of Nonlinear Science</i> , 2018, 28, 1221-1249.	2.1	14
35	Optimal Fine-scale Structures in Compliance Minimization for a Shear Load. <i>Communications on Pure and Applied Mathematics</i> , 2016, 69, 1572-1610.	3.1	13
36	Coarsening of Folds in Hanging Drapes. <i>Communications on Pure and Applied Mathematics</i> , 2017, 70, 978-1021.	3.1	13

#	ARTICLE	IF	CITATIONS
37	Wrinkling of a thin circular sheet bonded to a spherical substrate. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20160157.	3.4	13
38	Effect of Step Anisotropy on Crystal Growth Inhibition by Immobile Impurity Stoppers. Crystal Growth and Design, 2017, 17, 5474-5487.	3.0	13
39	Asset price bubbles from heterogeneous beliefs about mean reversion rates. Finance and Stochastics, 2011, 15, 221-241.	1.1	12
40	Optimal fine-scale structures in compliance minimization for a uniaxial load. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2014, 470, 20140432.	2.1	11
41	Geometrically constrained walls. Calculus of Variations and Partial Differential Equations, 2006, 28, 33-57.	1.7	7
42	Prediction with Expert Advice: A PDE Perspective. Journal of Nonlinear Science, 2020, 30, 137-173.	2.1	6
43	On the equivalence of the static and dynamic asset allocation problems. Quantitative Finance, 2006, 6, 173-183.	1.7	5
44	Crystal Growth Inhibition by Mobile Randomly Distributed Stoppers. Crystal Growth and Design, 2020, 20, 1940-1950.	3.0	4
45	Modeling MOCVD Growth of YBCO Thin Films. Materials Research Society Symposia Proceedings, 2000, 648, 1.	0.1	1
46	A PDE Approach to the Prediction of a Binary Sequence with Advice from Two History-Dependent Experts. Communications on Pure and Applied Mathematics, 0, , .	3.1	0