

# Peter Kuchment

## List of Publications by Year in descending order

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58  
papers

4,102  
citations

212478

28  
h-index

175968

55  
g-index

65  
all docs

65  
docs citations

65  
times ranked

1632  
citing authors

#	ARTICLE	IF	CITATIONS
1	Three-Representation Problem in Banach Spaces. <i>Complex Analysis and Operator Theory</i> , 2021, 15, 1.	0.3	3
2	Specific Examples of Liouville-Riemann-Roch Theorems. <i>Lecture Notes in Mathematics</i> , 2021, , 55-66.	0.1	0
3	Proofs of the Main Results. <i>Lecture Notes in Mathematics</i> , 2021, , 35-53.	0.1	0
4	Auxiliary Statements and Proofs of Technical Lemmas. <i>Lecture Notes in Mathematics</i> , 2021, , 67-84.	0.1	0
5	The Main Results. <i>Lecture Notes in Mathematics</i> , 2021, , 23-33.	0.1	0
6	Generic properties of dispersion relations for discrete periodic operators. <i>Journal of Mathematical Physics</i> , 2020, 61, .	0.5	14
7	Deep learning for 2D passive source detection in presence of complex cargo. <i>Inverse Problems</i> , 2020, 36, 104001.	1.0	1
8	Analyticity of the spectrum and Dirichlet-to-Neumann operator technique for quantum graphs. <i>Journal of Mathematical Physics</i> , 2019, 60, .	0.5	5
9	Compton camera imaging and the cone transform: a brief overview. <i>Inverse Problems</i> , 2018, 34, 054002.	1.0	35
10	Green's function asymptotics near the internal edges of spectra of periodic elliptic operators. <i>Spectral gap interior. Journal of Spectral Theory</i> , 2017, 7, 1171-1233.	0.4	8
11	Inversion of weighted divergent beam and cone transforms. <i>Inverse Problems and Imaging</i> , 2017, 11, 1071-1090.	0.6	21
12	Passive Detection of Small Low-Emission Sources: Two-Dimensional Numerical Case Studies. <i>Nuclear Science and Engineering</i> , 2016, 184, 125-150.	0.5	6
13	An overview of periodic elliptic operators. <i>Bulletin of the American Mathematical Society</i> , 2016, 53, 343-414.	0.8	116
14	Three-Dimensional Image Reconstruction from Compton Camera Data. <i>SIAM Journal on Imaging Sciences</i> , 2016, 9, 1708-1725.	1.3	26
15	Stabilizing inverse problems by internal data. II: non-local internal data and generic linearized uniqueness. <i>Analysis and Mathematical Physics</i> , 2015, 5, 391-425.	0.6	10
16	Tomography, Photoacoustic, and Thermoacoustic. , 2015, , 1488-1496.		2
17	Identities for $\sin x$ that Came from Medical Imaging. <i>American Mathematical Monthly</i> , 2013, 120, 609.	0.2	0
18	Quantum graph spectra of a graphyne structure. <i>The Nanoscale Systems: Mathematical Modeling and Applications</i> , 2013, 2, 107-123.	0.3	7

#	ARTICLE	IF	CITATIONS
19	Detecting small low emission radiating sources. <i>Inverse Problems and Imaging</i> , 2013, 7, 47-79.	0.6	28
20	Stabilizing inverse problems by internal data. <i>Inverse Problems</i> , 2012, 28, 084007.	1.0	48
21	Critical Partitions and Nodal Deficiency of Billiard Eigenfunctions. <i>Geometric and Functional Analysis</i> , 2012, 22, 1517-1540.	0.6	17
22	Green's function asymptotics near the internal edges of spectra of periodic elliptic operators. Spectral edge case. <i>Mathematische Nachrichten</i> , 2012, 285, 1880-1894.	0.4	16
23	Mathematics of Hybrid Imaging: A Brief Review. <i>Springer Proceedings in Mathematics</i> , 2012, , 183-208.	0.5	27
24	A Bayesian approach to the detection of small low emission sources. <i>Inverse Problems</i> , 2011, 27, 115009.	1.0	6
25	2D and 3D reconstructions in acousto-electric tomography. <i>Inverse Problems</i> , 2011, 27, 055013.	1.0	50
26	On the location of spectral edges in $\mathbb{Z}$ -periodic media. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2010, 43, 474022.	0.7	28
27	Mathematics of thermoacoustic tomography. <i>European Journal of Applied Mathematics</i> , 2008, 19, .	1.4	250
28	On occurrence of spectral edges for periodic operators inside the Brillouin zone. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2007, 40, 7597-7618.	0.7	50
29	Index theorems for quantum graphs. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2007, 40, 14165-14180.	0.7	47
30	Range descriptions for the spherical mean Radon transform. <i>Journal of Functional Analysis</i> , 2007, 248, 344-386.	0.7	49
31	On the Spectra of Carbon Nano-Structures. <i>Communications in Mathematical Physics</i> , 2007, 275, 805-826.	1.0	122
32	Liouville theorems and spectral edge behavior on abelian coverings of compact manifolds. <i>Transactions of the American Mathematical Society</i> , 2007, 359, 5777-5815.	0.5	24
33	A Range Description for the Planar Circular Radon Transform. <i>SIAM Journal on Mathematical Analysis</i> , 2006, 38, 681-692.	0.9	52
34	On the Structure of Eigenfunctions Corresponding to Embedded Eigenvalues of Locally Perturbed Periodic Graph Operators. <i>Communications in Mathematical Physics</i> , 2006, 268, 673-686.	1.0	32
35	Quantum graphs: II. Some spectral properties of quantum and combinatorial graphs. <i>Journal of Physics A</i> , 2005, 38, 4887-4900.	1.6	179
36	Reconstructions in limited-view thermoacoustic tomography. <i>Medical Physics</i> , 2004, 31, 724-733.	1.6	319

#	ARTICLE	IF	CITATIONS
37	Quantum graphs: I. Some basic structures. <i>Waves in Random and Complex Media</i> , 2004, 14, S107-S128.	1.5	434
38	Quantum graphs. <i>Waves in Random and Complex Media</i> , 2004, 14, S3-S5.	1.5	9
39	Call for papers for a special issue on Quantum Graphs and their Applications. <i>Waves in Random and Complex Media</i> , 2002, 12, E3-E3.	1.5	3
40	Graph models for waves in thin structures. <i>Waves in Random and Complex Media</i> , 2002, 12, R1-R24.	1.5	204
41	Differential Operators on Graphs and Photonic Crystals. <i>Advances in Computational Mathematics</i> , 2002, 16, 263-290.	0.8	36
42	7. The Mathematics of Photonic Crystals. , 2001, , 207-272.		102
43	Integral Representations and Liouville Theorems for Solutions of Periodic Elliptic Equations. <i>Journal of Functional Analysis</i> , 2001, 181, 402-446.	0.7	28
44	Convergence of Spectra of Mesoscopic Systems Collapsing onto a Graph. <i>Journal of Mathematical Analysis and Applications</i> , 2001, 258, 671-700.	0.5	108
45	Numerical harmonic analysis on the hyperbolic plane. <i>Applicable Analysis</i> , 2000, 76, 351-362.	0.6	4
46	On absence of embedded eigenvalues for schrödinger operators with perturbed periodic potentials. <i>Communications in Partial Differential Equations</i> , 2000, 25, 1809-1826.	1.0	30
47	Spectral Properties of High Contrast Band-Gap Materials and Operators on Graphs. <i>Experimental Mathematics</i> , 1999, 8, 1-28.	0.5	37
48	An Efficient Finite Element Method for Computing Spectra of Photonic and Acoustic Band-Gap Materials. <i>Journal of Computational Physics</i> , 1999, 150, 468-481.	1.9	153
49	Asymptotic methods for thin high-contrast two-dimensional PBG materials. <i>Journal of Lightwave Technology</i> , 1999, 17, 1996-2007.	2.7	20
50	Spectral Properties of Classical Waves in High-Contrast Periodic Media. <i>SIAM Journal on Applied Mathematics</i> , 1998, 58, 683-702.	0.8	85
51	Band-Gap Structure of Spectra of Periodic Dielectric and Acoustic Media. I. Scalar Model. <i>SIAM Journal on Applied Mathematics</i> , 1996, 56, 68-88.	0.8	123
52	Band-Gap Structure of Spectra of Periodic Dielectric and Acoustic Media. II. Two-Dimensional Photonic Crystals. <i>SIAM Journal on Applied Mathematics</i> , 1996, 56, 1561-1620.	0.8	120
53	Approximation by spherical waves in $L^p$ -spaces. <i>Journal of Geometric Analysis</i> , 1996, 6, 365-383.	0.5	46
54	Range conditions for the exponential Radon transform. <i>Journal D'Analyse Mathématique</i> , 1996, 68, 1-13.	0.4	24

#	ARTICLE	IF	CITATIONS
55	On local tomography. Inverse Problems, 1995, 11, 571-589.	1.0	80
56	Band-gap structure of the spectrum of periodic Maxwell operators. Journal of Statistical Physics, 1994, 74, 447-455.	0.5	12
57	On the Behavior of Floquet Exponents of a Kind of Periodic Evolution Problems. Journal of Differential Equations, 1994, 109, 309-324.	1.1	3
58	Floquet Theory for Partial Differential Equations. , 1993, , .		452