

# Hyeonbae Kang

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/11621692/publications.pdf>

Version: 2024-02-01

88  
papers

2,948  
citations

147566

31  
h-index

182168

51  
g-index

92  
all docs

92  
docs citations

92  
times ranked

654  
citing authors

#	ARTICLE	IF	CITATIONS
1	Reconstruction of Small Inhomogeneities from Boundary Measurements. Lecture Notes in Mathematics, 2004, , .	0.1	319
2	Spectral Theory of a Neumann–Poincaré-Type Operator and Analysis of Cloaking Due to Anomalous Localized Resonance. Archive for Rational Mechanics and Analysis, 2013, 208, 667-692.	1.1	127
3	The Inverse Conductivity Problem with One Measurement: Stability and Estimation of Size. SIAM Journal on Mathematical Analysis, 1997, 28, 1389-1405.	0.9	91
4	The layer potential technique for the inverse conductivity problem. Inverse Problems, 1996, 12, 267-278.	1.0	86
5	Gradient estimates for solutions to the conductivity problem. Mathematische Annalen, 2005, 332, 277-286.	0.7	84
6	Solutions to the Pólya–Szegő Conjecture and the Weak Eshelby Conjecture. Archive for Rational Mechanics and Analysis, 2008, 188, 93-116.	1.1	82
7	Asymptotic Imaging of Perfectly Conducting Cracks. SIAM Journal of Scientific Computing, 2010, 32, 894-922.	1.3	80
8	Mathematical and Statistical Methods for Multistatic Imaging. Lecture Notes in Mathematics, 2013, , .	0.1	76
9	Mathematical Modeling in Photoacoustic Imaging of Small Absorbers. SIAM Review, 2010, 52, 677-695.	4.2	70
10	Enhancement of Near-Cloaking. Part II: The Helmholtz Equation. Communications in Mathematical Physics, 2013, 317, 485-502.	1.0	70
11	Enhancement of Near Cloaking Using Generalized Polarization Tensors Vanishing Structures. Part I: The Conductivity Problem. Communications in Mathematical Physics, 2013, 317, 253-266.	1.0	68
12	Analysis of plasmon resonance on smooth domains using spectral properties of the Neumann–Poincaré operator. Journal of Mathematical Analysis and Applications, 2016, 435, 162-178.	0.5	67
13	Spectral Analysis of the Neumann–Poincaré Operator and Characterization of the Stress Concentration in Anti-Plane Elasticity. Archive for Rational Mechanics and Analysis, 2013, 208, 275-304.	1.1	66
14	High-Order Terms in the Asymptotic Expansions of the Steady-State Voltage Potentials in the Presence of Conductivity Inhomogeneities of Small Diameter. SIAM Journal on Mathematical Analysis, 2003, 34, 1152-1166.	0.9	62
15	Optimal estimates for the electric field in two dimensions. Journal Des Mathematiques Pures Et Appliquees, 2007, 88, 307-324.	0.8	60
16	Boundary layer techniques for solving the Helmholtz equation in the presence of small inhomogeneities. Journal of Mathematical Analysis and Applications, 2004, 296, 190-208.	0.5	58
17	Enhancement of Near Cloaking for the Full Maxwell Equations. SIAM Journal on Applied Mathematics, 2013, 73, 2055-2076.	0.8	58
18	Inclusion Pairs Satisfying Eshelby's Uniformity Property. SIAM Journal on Applied Mathematics, 2008, 69, 577-595.	0.8	55

#	ARTICLE	IF	CITATIONS
19	Mathematical models and reconstruction methods in magneto-acoustic imaging. <i>European Journal of Applied Mathematics</i> , 2009, 20, 303-317.	1.4	51
20	Plasmon Resonance with Finite Frequencies: a Validation of the Quasi-static Approximation for Diametrically Small Inclusions. <i>SIAM Journal on Applied Mathematics</i> , 2016, 76, 731-749.	0.8	50
21	Asymptotics and computation of the solution to the conductivity equation in the presence of adjacent inclusions with extreme conductivities. <i>Journal Des Mathematiques Pures Et Appliquees</i> , 2013, 99, 234-249.	0.8	48
22	Reconstruction of Closely Spaced Small Inclusions. <i>SIAM Journal on Numerical Analysis</i> , 2005, 42, 2408-2428.	1.1	45
23	Identification of simple poles via boundary measurements and an application of EIT. <i>Inverse Problems</i> , 2004, 20, 1853-1863.	1.0	43
24	Decomposition theorems and fine estimates for electrical fields in the presence of closely located circular inclusions. <i>Journal of Differential Equations</i> , 2009, 247, 2897-2912.	1.1	43
25	A MUSIC-type algorithm for detecting internal corrosion from electrostatic boundary measurements. <i>Numerische Mathematik</i> , 2008, 108, 501-528.	0.9	37
26	Anomalous localized resonance using a folded geometry in three dimensions. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2013, 469, 20130048.	1.0	37
27	Characterization of the Electric Field Concentration between Two Adjacent Spherical Perfect Conductors. <i>SIAM Journal on Applied Mathematics</i> , 2014, 74, 125-146.	0.8	37
28	Reconstruction of the Optical Absorption Coefficient of a Small Absorber from the Absorbed Energy Density. <i>SIAM Journal on Applied Mathematics</i> , 2011, 71, 676-693.	0.8	34
29	Conductivity interface problems. Part I: Small perturbations of an interface. <i>Transactions of the American Mathematical Society</i> , 2009, 362, 2435-2449.	0.5	33
30	Generalized polarization tensors for shape description. <i>Numerische Mathematik</i> , 2014, 126, 199-224.	0.9	33
31	Optimal estimates and asymptotics for the stress concentration between closely located stiff inclusions. <i>Mathematische Annalen</i> , 2015, 363, 1281-1306.	0.7	32
32	A New Optimal Control Approach for the Reconstruction of Extended Inclusions. <i>SIAM Journal on Control and Optimization</i> , 2013, 51, 1372-1394.	1.1	30
33	Classification of spectra of the Neumann-Poincaré operator on planar domains with corners by resonance. <i>Annales De L'Institut Henri Poincaré (C) Analyse Non Lineaire</i> , 2017, 34, 991-1011.	0.7	30
34	Target Identification Using Dictionary Matching of Generalized Polarization Tensors. <i>Foundations of Computational Mathematics</i> , 2014, 14, 27-62.	1.5	28
35	Spectral Resolution of the Neumann-Poincaré Operator on Intersecting Disks and Analysis of Plasmon Resonance. <i>Archive for Rational Mechanics and Analysis</i> , 2017, 226, 83-115.	1.1	27
36	Inverse Conductivity Problem with One Measurement: Error Estimates and Approximate Identification for Perturbed Disks. <i>SIAM Journal on Mathematical Analysis</i> , 1999, 30, 699-720.	0.9	25

#	ARTICLE	IF	CITATIONS
37	Spectral properties of the Neumann–Poincaré operator and cloaking by anomalous localized resonance for the elasto-static system. <i>European Journal of Applied Mathematics</i> , 2018, 29, 189-225.	1.4	25
38	Transient anomaly imaging by the acoustic radiation force. <i>Journal of Differential Equations</i> , 2010, 249, 1579-1595.	1.1	24
39	Progress on the strong Eshelby's conjecture and extremal structures for the elastic moment tensor. <i>Journal Des Mathematiques Pures Et Appliquees</i> , 2010, 94, 93-106.	0.8	24
40	Quantitative Characterization of Stress Concentration in the Presence of Closely Spaced Hard Inclusions in Two-Dimensional Linear Elasticity. <i>Archive for Rational Mechanics and Analysis</i> , 2019, 232, 121-196.	1.1	24
41	Direct Algorithms for Thermal Imaging of Small Inclusions. <i>Multiscale Modeling and Simulation</i> , 2005, 4, 1116-1136.	0.6	23
42	Effective viscosity properties of dilute suspensions of arbitrarily shaped particles. <i>Asymptotic Analysis</i> , 2012, 80, 189-211.	0.2	23
43	Strong convergence of the solutions of the linear elasticity and uniformity of asymptotic expansions in the presence of small inclusions. <i>Journal of Differential Equations</i> , 2013, 254, 4446-4464.	1.1	22
44	Spectral properties of the Neumann–Poincaré operator and uniformity of estimates for the conductivity equation with complex coefficients. <i>Journal of the London Mathematical Society</i> , 2016, 93, 519-545.	0.5	22
45	Sharp bounds on the volume fractions of two materials in a two-dimensional body from electrical boundary measurements: the translation method. <i>Calculus of Variations and Partial Differential Equations</i> , 2012, 45, 367-401.	0.9	21
46	Boundary Perturbations Due to the Presence of Small Linear Cracks in an Elastic Body. <i>Journal of Elasticity</i> , 2013, 113, 75-91.	0.9	20
47	Bounds on the Volume Fractions of Two Materials in a Three-Dimensional Body from Boundary Measurements by the Translation Method. <i>SIAM Journal on Applied Mathematics</i> , 2013, 73, 475-492.	0.8	19
48	A probe method for the inverse boundary value problem of non-stationary heat equations. <i>Inverse Problems</i> , 2007, 23, 1787-1800.	1.0	18
49	Identification of domains with near-extreme conductivity: global stability and error estimates. <i>Inverse Problems</i> , 1999, 15, 851-867.	1.0	16
50	Conjectures of Pólya-szegő and Eshelby, and the Newtonian potential problem: A review. <i>Mechanics of Materials</i> , 2009, 41, 405-410.	1.7	16
51	Cloaking Due to Anomalous Localized Resonance in Plasmonic Structures of Confocal Ellipses. <i>SIAM Journal on Applied Mathematics</i> , 2014, 74, 1691-1707.	0.8	16
52	Exponential decay estimates of the eigenvalues for the Neumann-Poincaré operator on analytic boundaries in two dimensions. <i>Journal of Integral Equations and Applications</i> , 2018, 30, .	0.2	16
53	Elastic Neumann–Poincaré Operators on Three Dimensional Smooth Domains: Polynomial Compactness and Spectral Structure. <i>International Mathematics Research Notices</i> , 2019, 2019, 3883-3900.	0.5	16
54	Reconstruction of inhomogeneous conductivities via the concept of generalized polarization tensors. <i>Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire</i> , 2014, 31, 877-897.	0.7	15

#	ARTICLE	IF	CITATIONS
55	Transient Wave Imaging with Limited-View Data. <i>SIAM Journal on Imaging Sciences</i> , 2011, 4, 1097-1121.	1.3	14
56	A proof of the Flaherty-Keller formula on the effective property of densely packed elastic composites. <i>Calculus of Variations and Partial Differential Equations</i> , 2020, 59, 1.	0.9	14
57	Improved Hashin-Shtrikman Bounds for Elastic Moment Tensors and an Application. <i>Applied Mathematics and Optimization</i> , 2008, 57, 263-288.	0.8	13
58	A Direct Algorithm for Ultrasound Imaging of Internal Corrosion. <i>SIAM Journal on Numerical Analysis</i> , 2011, 49, 1177-1193.	1.1	13
59	Tracking of a Mobile Target Using Generalized Polarization Tensors. <i>SIAM Journal on Imaging Sciences</i> , 2013, 6, 1477-1498.	1.3	13
60	Expansion Methods. , 2011, , 447-499.		12
61	Coated inclusions of finite conductivity neutral to multiple fields in two-dimensional conductivity or anti-plane elasticity. <i>European Journal of Applied Mathematics</i> , 2014, 25, 329-338.	1.4	11
62	A non-iterative method for the electrical impedance tomography based on joint sparse recovery. <i>Inverse Problems</i> , 2015, 31, 075002.	1.0	11
63	Sharp estimates for the Neumann functions and applications to quantitative photo-acoustic imaging in inhomogeneous media. <i>Journal of Differential Equations</i> , 2012, 253, 41-72.	1.1	9
64	A concavity condition for existence of a negative value in Neumann-Poincaré spectrum in three dimensions. <i>Proceedings of the American Mathematical Society</i> , 2019, 147, 3431-3438.	0.4	9
65	Attainability by simply connected domains of optimal bounds for the polarization tensor. <i>European Journal of Applied Mathematics</i> , 2006, 17, 201.	1.4	8
66	Bounds on the Volume Fraction of the Two-Phase Shallow Shell Using One Measurement. <i>Journal of Elasticity</i> , 2014, 114, 41-53.	0.9	8
67	Construction of Weakly Neutral Inclusions of General Shape by Imperfect Interfaces. <i>SIAM Journal on Applied Mathematics</i> , 2019, 79, 396-414.	0.8	8
68	Optimal estimates of the field enhancement in presence of a bow-tie structure of perfectly conducting inclusions in two dimensions. <i>Journal of Differential Equations</i> , 2019, 266, 5064-5094.	1.1	8
69	Bounds on the Size of an Inclusion Using the Translation Method for Two-Dimensional Complex Conductivity. <i>SIAM Journal on Applied Mathematics</i> , 2014, 74, 939-958.	0.8	7
70	Construction of conformal mappings by generalized polarization tensors. <i>Mathematical Methods in the Applied Sciences</i> , 2015, 38, 1847-1854.	1.2	7
71	Spectrum of Neumann-Poincaré Operator on Annuli and Cloaking by Anomalous Localized Resonance for Linear Elasticity. <i>SIAM Journal on Mathematical Analysis</i> , 2017, 49, 4232-4250.	0.9	7
72	Surface Localization of Plasmons in Three Dimensions and Convexity. <i>SIAM Journal on Applied Mathematics</i> , 2021, 81, 1020-1033.	0.8	7

#	ARTICLE	IF	CITATIONS
73	Detection of surface breaking cracks in two dimensions. <i>Inverse Problems</i> , 2003, 19, 909-918.	1.0	6
74	Spectral structure of the Neumann-Poincaré operator on tori. <i>Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire</i> , 2019, 36, 1817-1828.	0.7	6
75	Existence of weakly neutral coated inclusions of general shape in two dimensions. <i>Applicable Analysis</i> , 2022, 101, 1330-1353.	0.6	6
76	Boundary voltage perturbations caused by small conductivity inhomogeneities nearly touching the boundary. <i>Advances in Applied Mathematics</i> , 2005, 35, 368-391.	0.4	5
77	Vibration testing for anomaly detection. <i>Mathematical Methods in the Applied Sciences</i> , 2009, 32, 863-874.	1.2	5
78	Transient elasticity imaging and time reversal. <i>Proceedings of the Royal Society of Edinburgh Section A: Mathematics</i> , 2011, 141, 1121-1140.	0.8	5
79	Spectrum of the Neumann-Poincaré Operator for Ellipsoids and Tunability. <i>Integral Equations and Operator Theory</i> , 2016, 84, 591-599.	0.4	5
80	Polarization tensors and their applications. <i>Journal of Physics: Conference Series</i> , 2005, 12, 13-22.	0.3	4
81	An asymptotic formula for the voltage potential in the case of a near-surface conductivity inclusion. <i>Zeitschrift Fur Angewandte Mathematik Und Physik</i> , 2006, 57, 234-243.	0.7	4
82	Spectrum of the Neumann-Poincaré Operator and Optimal Estimates for Transmission Problems in the Presence of Two Circular Inclusions. <i>International Mathematics Research Notices</i> , 0, , .	0.5	4
83	Neutral Inclusions, Weakly Neutral Inclusions, and an Over-determined Problem for Confocal Ellipsoids. <i>Springer INdAM Series</i> , 2021, , 151-181.	0.4	3
84	The Method of Small-Volume Expansions for Medical Imaging. <i>Lecture Notes in Mathematics</i> , 2009, , 99-132.	0.1	2
85	Precise estimates of the field excited by an emitter in presence of closely located inclusions of a bow-tie shape. <i>Journal of Mathematical Analysis and Applications</i> , 2019, 479, 1670-1707.	0.5	1
86	Spectral structure of the Neumann-Poincaré operator on thin domains in two dimensions. <i>Journal D'Analyse Mathematique</i> , 0, , .	0.4	1
87	Quantitative estimates for enhancement of the field excited by an emitter due to presence of two closely located spherical inclusions. <i>Journal of Differential Equations</i> , 2020, 269, 2977-3002.	1.1	0
88	Expansion Methods. , 2015, , 535-590.		0