Hyeonbae Kang

List of Publications by Year
in descending order

88	2,948	147801 31	182427 51
papers	citations	h-index	g-index

92	92	92	654
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Existence of weakly neutral coated inclusions of general shape in two dimensions. Applicable Analysis, 2022, 101, 1330-1353.	1.3	6
2	Surface Localization of Plasmons in Three Dimensions and Convexity. SIAM Journal on Applied Mathematics, 2021, 81, 1020-1033.	1.8	7
3	Neutral Inclusions, Weakly Neutral Inclusions, and an Over-determined Problem for Confocal Ellipsoids. Springer INdAM Series, 2021, , 151-181.	0.5	3
4	A proof of the Flahertyâ€“Keller formula on the effective property of densely packed elastic composites. Calculus of Variations and Partial Differential Equations, 2020, 59, 1.	1.7	14
5	Quantitative estimates for enhancement of the field excited by an emitter due to presence of two closely located spherical inclusions. Journal of Differential Equations, 2020, 269, 2977-3002.	2.2	0
6	Spectral structure of the Neumannâ€“PoincarÃ© operator on tori. Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire, 2019, 36, 1817-1828.	1.4	6
7	Precise estimates of the field excited by an emitter in presence of closely located inclusions of a bow-tie shape. Journal of Mathematical Analysis and Applications, 2019, 479, 1670-1707.	1.0	1
8	A concavity condition for existence of a negative value in Neumann-PoincarÃ© spectrum in three dimensions. Proceedings of the American Mathematical Society, 2019, 147, 3431-3438.	0.8	9
9	Quantitative Characterization of Stress Concentration in the Presence of Closely Spaced Hard Inclusions in Two-Dimensional Linear Elasticity. Archive for Rational Mechanics and Analysis, 2019, 232, 121-196.	2.4	24
10	Construction of Weakly Neutral Inclusions of General Shape by Imperfect Interfaces. SIAM Journal on Applied Mathematics, 2019, 79, 396-414.	1.8	8
11	Elastic Neumannâ€“PoincarÃ© Operators on Three Dimensional Smooth Domains: Polynomial Compactness and Spectral Structure. International Mathematics Research Notices, 2019, 2019, 3883-3900.	1.0	16
12	Optimal estimates of the field enhancement in presence of a bow-tie structure of perfectly conducting inclusions in two dimensions. Journal of Differential Equations, 2019, 266, 5064-5094.	2.2	8
13	Spectral properties of the Neumannâ€“PoincarÃ© operator and cloaking by anomalous localized resonance for the elasto-static system. European Journal of Applied Mathematics, 2018, 29, 189-225.	2.9	25
14	Exponential decay estimates of the eigenvalues for the Neumann-Poincare operator on analytic boundaries in two dimensions. Journal of Integral Equations and Applications, 2018, 30, .	0.6	16
15	Spectral Resolution of the Neumannâ€“PoincarÃ© Operator on Intersecting Disks and Analysis of Plasmon Resonance. Archive for Rational Mechanics and Analysis, 2017, 226, 83-115.	2.4	27
16	Spectrum of Neumann–PoincarÃ© Operator on Annuli and Cloaking by Anomalous Localized Resonance for Linear Elasticity. SIAM Journal on Mathematical Analysis, 2017, 49, 4232-4250.	1.9	7
17	Classification of spectra of the Neumannâ€“PoincarÃ© operator on planar domains with corners by resonance. Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire, 2017, 34, 991-1011.	1.4	30
18	Spectral properties of the Neumannâ€“PoincarÃ© operator and uniformity of estimates for the conductivity equation with complex coefficients. Journal of the London Mathematical Society, 2016, 93, 519-545.	1.0	22

#	Article	IF	Citations
19	Plasmon Resonance with Finite Frequencies: a Validation of the Quasi-static Approximation for Diametrically Small Inclusions. SIAM Journal on Applied Mathematics, 2016, 76, 731-749.	1.8	50
20	Spectrum of the Neumannâ€“PoincarÃ© Operator for Ellipsoids and Tunability. Integral Equations and Operator Theory, 2016, 84, 591-599.	0.8	5
21	Analysis of plasmon resonance on smooth domains using spectral properties of the Neumannâ€“PoincarÃ© operator. Journal of Mathematical Analysis and Applications, 2016, 435, 162-178.	1.0	67
22	Construction of conformal mappings by generalized polarization tensors. Mathematical Methods in the Applied Sciences, 2015, 38, 1847-1854.	2.3	7
23	Optimal estimates and asymptotics for the stress concentration between closely located stiff inclusions. Mathematische Annalen, 2015, 363, 1281-1306.	1.4	32
24	A non-iterative method for the electrical impedance tomography based on joint sparse recovery. Inverse Problems, 2015, 31, 075002.	2.0	11
25	Expansion Methods. , 2015, , 535-590.		0
26	Bounds on the Size of an Inclusion Using the Translation Method for Two-Dimensional Complex Conductivity. SIAM Journal on Applied Mathematics, 2014, 74, 939-958.	1.8	7
27	Characterization of the Electric Field Concentration between Two Adjacent Spherical Perfect Conductors. SIAM Journal on Applied Mathematics, 2014, 74, 125-146.	1.8	37
28	Cloaking Due to Anomalous Localized Resonance in Plasmonic Structures of Confocal Ellipses. SIAM Journal on Applied Mathematics, 2014, 74, 1691-1707.	1.8	16
29	Coated inclusions of finite conductivity neutral to multiple fields in two-dimensional conductivity or anti-plane elasticity. European Journal of Applied Mathematics, 2014, 25, 329-338.	2.9	11
30	Generalized polarization tensors for shape description. Numerische Mathematik, 2014, 126, 199-224.	1.9	33
31	Bounds on the Volume Fraction of the Two-Phase Shallow Shell Using One Measurement. Journal of Elasticity, 2014, 114, 41-53.	1.9	8
32	Target Identification Using Dictionary Matching of Generalized Polarization Tensors. Foundations of Computational Mathematics, 2014, 14, 27-62.	2.5	28
33	Reconstruction of inhomogeneous conductivities via the concept of generalized polarization tensors. Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire, 2014, 31, 877-897.	1.4	15
34	Spectral Theory of a Neumannâ€“PoincarÃ©-Type Operator and Analysis of Cloaking Due to Anomalous Localized Resonance. Archive for Rational Mechanics and Analysis, 2013, 208, 667-692.	2.4	127
35	Spectral Analysis of the Neumannâ€“PoincarÃ© Operator and Characterization of the Stress Concentration in Anti-Plane Elasticity. Archive for Rational Mechanics and Analysis, 2013, 208, 275-304.	2.4	66
36	Tracking of a Mobile Target Using Generalized Polarization Tensors. SIAM Journal on Imaging Sciences, 2013, 6, 1477-1498.	2.2	13

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37	A New Optimal Control Approach for the Reconstruction of Extended Inclusions. SIAM Journal on Control and Optimization, 2013, 51, 1372-1394.	2.1	30
38	Strong convergence of the solutions of the linear elasticity and uniformity of asymptotic expansions in the presence of small inclusions. Journal of Differential Equations, 2013, 254, 4446-4464.	2.2	22
39	Boundary Perturbations Due to the Presence of Small Linear Cracks in an Elastic Body. Journal of Elasticity, 2013, 113, 75-91.	1.9	20
40	Asymptotics and computation of the solution to the conductivity equation in the presence of adjacent inclusions with extreme conductivities. Journal Des Mathematiques Pures Et Appliquees, 2013, 99, 234-249.	1.6	48
41	Bounds on the Volume Fractions of Two Materials in a Three-Dimensional Body from Boundary Measurements by the Translation Method. SIAM Journal on Applied Mathematics, 2013, 73, 475-492.	1.8	19
42	Enhancement of Near Cloaking Using Generalized Polarization Tensors Vanishing Structures. Part I: The Conductivity Problem. Communications in Mathematical Physics, 2013, 317, 253-266.	2.2	68
43	Enhancement of Near-Cloaking. Part II: The Helmholtz Equation. Communications in Mathematical Physics, 2013, 317, 485-502.	2.2	70
44	Enhancement of Near Cloaking for the Full Maxwell Equations. SIAM Journal on Applied Mathematics, 2013, 73, 2055-2076.	1.8	58
45	Mathematical and Statistical Methods for Multistatic Imaging. Lecture Notes in Mathematics, 2013, , .	0.2	76
46	Anomalous localized resonance using a folded geometry in three dimensions. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2013, 469, 20130048.	2.1	37
47	Effective viscosity properties of dilute suspensions of arbitrarily shaped particles. Asymptotic Analysis, 2012, 80, 189-211.	0.5	23
48	Sharp bounds on the volume fractions of two materials in a two-dimensional body from electrical boundary measurements: the translation method. Calculus of Variations and Partial Differential Equations, 2012, 45, 367-401.	1.7	21
49	Sharp estimates for the Neumann functions and applications to quantitative photo-acoustic imaging in inhomogeneous media. Journal of Differential Equations, 2012, 253, 41-72.	2.2	9
50	Expansion Methods. , 2011, , 447-499.		12
51	A Direct Algorithm for Ultrasound Imaging of Internal Corrosion. SIAM Journal on Numerical Analysis, 2011, 49, 1177-1193.	2.3	13
52	Reconstruction of the Optical Absorption Coefficient of a Small Absorber from the Absorbed Energy Density. SIAM Journal on Applied Mathematics, 2011, 71, 676-693.	1.8	34
53	Transient Wave Imaging with Limited-View Data. SIAM Journal on Imaging Sciences, 2011, 4, 1097-1121.	2.2	14
54	Transient elasticity imaging and time reversal. Proceedings of the Royal Society of Edinburgh Section A: Mathematics, 2011, 141, 1121-1140.	1.2	5

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55	Transient anomaly imaging by the acoustic radiation force. Journal of Differential Equations, 2010, 249, 1579-1595.	2.2	24
56	Progress on the strong Eshelby's conjecture and extremal structures for the elastic moment tensor. Journal Des Mathematiques Pures Et Appliquees, 2010, 94, 93-106.	1.6	24
57	Mathematical Modeling in Photoacoustic Imaging of Small Absorbers. SIAM Review, 2010, 52, 677-695.	9.5	70
58	Asymptotic Imaging of Perfectly Conducting Cracks. SIAM Journal of Scientific Computing, 2010, 32, 894-922.	2.8	80
59	Conductivity interface problems. Part I: Small perturbations of an interface. Transactions of the American Mathematical Society, 2009, 362, 2435-2449.	0.9	33
60	Mathematical models and reconstruction methods in magneto-acoustic imaging. European Journal of Applied Mathematics, 2009, 20, 303-317.	2.9	51
61	Vibration testing for anomaly detection. Mathematical Methods in the Applied Sciences, 2009, 32, 863-874.	2.3	5
62	Conjectures of PÃ³lya-szegÃ¶ and Eshelby, and the Newtonian potential problem: A review. Mechanics of Materials, 2009, 41, 405-410.	3.2	16
63	Decomposition theorems and fine estimates for electrical fields in the presence of closely located circular inclusions. Journal of Differential Equations, 2009, 247, 2897-2912.	2.2	43
64	The Method of Small-Volume Expansions for Medical Imaging. Lecture Notes in Mathematics, 2009, , 99-132.	0.2	2
65	Solutions to the PÃ³lyaâ€“SzegÃ¶ Conjecture and the Weak Eshelby Conjecture. Archive for Rational Mechanics and Analysis, 2008, 188, 93-116.	2.4	82
66	A MUSIC-type algorithm for detecting internal corrosion from electrostatic boundary measurements. Numerische Mathematik, 2008, 108, 501-528.	1.9	37
67	Improved Hashinâ€“Shtrikman Bounds for Elastic Moment Tensors and an Application. Applied Mathematics and Optimization, 2008, 57, 263-288.	1.6	13
68	Inclusion Pairs Satisfying Eshelby's Uniformity Property. SIAM Journal on Applied Mathematics, 2008, 69, 577-595.	1.8	55
69	A probe method for the inverse boundary value problem of non-stationary heat equations. Inverse Problems, 2007, 23, 1787-1800.	2.0	18
70	Optimal estimates for the electric field in two dimensions. Journal Des Mathematiques Pures Et Appliquees, 2007, 88, 307-324.	1.6	60
71	An asymptotic formula for the voltage potential in the case of a near-surface conductivity inclusion. Zeitschrift Fur Angewandte Mathematik Und Physik, 2006, 57, 234-243.	1.4	4
72	Attainability by simply connected domains of optimal bounds for the polarization tensor. European Journal of Applied Mathematics, 2006, 17, 201.	2.9	8

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73	Polarization tensors and their applications. Journal of Physics: Conference Series, 2005, 12, 13-22.	0.4	4
74	Boundary voltage perturbations caused by small conductivity inhomogeneities nearly touching the boundary. Advances in Applied Mathematics, 2005, 35, 368-391.	0.7	5
75	Gradient estimates for solutions to the conductivity problem. Mathematische Annalen, 2005, 332, 277-286.	1.4	84
76	Direct Algorithms for Thermal Imaging of Small Inclusions. Multiscale Modeling and Simulation, 2005, 4, 1116-1136.	1.6	23
77	Reconstruction of Closely Spaced Small Inclusions. SIAM Journal on Numerical Analysis, 2005, 42, 2408-2428.	2.3	45
78	Identification of simple poles via boundary measurements and an application of EIT. Inverse Problems, 2004, 20, 1853-1863.	2.0	43
79	Boundary layer techniques for solving the Helmholtz equation in the presence of small inhomogeneities. Journal of Mathematical Analysis and Applications, 2004, 296, 190-208.	1.0	58
80	Reconstruction of Small Inhomogeneities from Boundary Measurements. Lecture Notes in Mathematics, 2004, , .	0.2	319
81	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.	1.9	62
82	Detection of surface breaking cracks in two dimensions. Inverse Problems, 2003, 19, 909-918.	2.0	6
83	Identification of domains with near-extreme conductivity: global stability and error estimates. Inverse Problems, 1999, 15, 851-867.	2.0	16
84	Inverse Conductivity Problem with One Measurement: Error Estimates and Approximate Identification for Perturbed Disks. SIAM Journal on Mathematical Analysis, 1999, 30, 699-720.	1.9	25
85	The Inverse Conductivity Problem with One Measurement: Stability and Estimation of Size. SIAM Journal on Mathematical Analysis, 1997, 28, 1389-1405.	1.9	91
86	The layer potential technique for the inverse conductivity problem. Inverse Problems, 1996, 12, 267-278.	2.0	86
87	Spectrum of the Neumannâ€“PoincarÃ© Operator and Optimal Estimates for Transmission Problems in the Presence of Two Circular Inclusions. International Mathematics Research Notices, 0, , .	1.0	4
88	Spectral structure of the Neumannâ€“PoincarÃ© operator on thin domains in two dimensions. Journal D'Analyse Mathematique, 0, , .	0.8	1