

# Johannes Markkanen

## List of Publications by Year in descending order

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49  
papers

642  
citations

567281

15  
h-index

610901

24  
g-index

51  
all docs

51  
docs citations

51  
times ranked

591  
citing authors

#	ARTICLE	IF	CITATIONS
1	Discretization of Volume Integral Equation Formulations for Extremely Anisotropic Materials. IEEE Transactions on Antennas and Propagation, 2012, 60, 5195-5202.	5.1	75
2	SURFACE AND VOLUME INTEGRAL EQUATION METHODS FOR TIME-HARMONIC SOLUTIONS OF MAXWELL'S EQUATIONS (Invited Paper). Progress in Electromagnetics Research, 2014, 149, 15-44.	4.4	54
3	Analysis of Volume Integral Equation Formulations for Scattering by High-Contrast Penetrable Objects. IEEE Transactions on Antennas and Propagation, 2012, 60, 2367-2374.	5.1	52
4	Fast superposition T-matrix solution for clusters with arbitrarily-shaped constituent particles. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 189, 181-188.	2.3	43
5	Multiple scattering of light in discrete random media using incoherent interactions. Optics Letters, 2018, 43, 683.	3.3	37
6	Interpretation of the Phase Functions Measured by the OSIRIS Instrument for Comet 67P/Churyumov-Gerasimenko. Astrophysical Journal Letters, 2018, 868, L16.	8.3	34
7	The Dust-to-Gas Ratio, Size Distribution, and Dust Fall-Back Fraction of Comet 67P/Churyumov-Gerasimenko: Inferences From Linking the Optical and Dynamical Properties of the Inner Comae. Frontiers in Physics, 2020, 8, .	2.1	30
8	Broadband Multilevel Fast Multipole Algorithm for Electric-Magnetic Current Volume Integral Equation. IEEE Transactions on Antennas and Propagation, 2013, 61, 4393-4397.	5.1	24
9	On the applicability of discrete dipole approximation for plasmonic particles. Journal of Quantitative Spectroscopy and Radiative Transfer, 2016, 169, 23-35.	2.3	19
10	Numerical comparison of spectral properties of volume-integral-equation formulations. Journal of Quantitative Spectroscopy and Radiative Transfer, 2016, 178, 269-275.	2.3	18
11	Scattering and absorption in dense discrete random media of irregular particles. Optics Letters, 2018, 43, 2925.	3.3	18
12	Radiative transfer with reciprocal transactions: Numerical method and its implementation. PLoS ONE, 2019, 14, e0210155.	2.5	17
13	Error-controllable and well-conditioned mom solutions in computational electromagnetics: ultimate surface integral-equation formulation [open problems in cem]. IEEE Antennas and Propagation Magazine, 2013, 55, 310-331.	1.4	16
14	Discrete Helmholtz Decomposition for Electric Current Volume Integral Equation Formulation. IEEE Transactions on Antennas and Propagation, 2014, 62, 6282-6289.	5.1	16
15	Rigorous light-scattering simulations of nanophase iron space-weathering effects on reflectance spectra of olivine grains. Icarus, 2020, 345, 113727.	2.5	15
16	Realization of spherical $\epsilon^2$ boundary by a layer of wave-guiding medium. Metamaterials, 2011, 5, 149-154.	2.2	12
17	Scattering, absorption, and thermal emission by large cometary dust particles: Synoptic numerical solution. Astronomy and Astrophysics, 2019, 631, A164.	5.1	11
18	Discretization of Electric Current Volume Integral Equation With Piecewise Linear Basis Functions. IEEE Transactions on Antennas and Propagation, 2014, 62, 4877-4880.	5.1	10

#	ARTICLE	IF	CITATIONS
19	How much is enough? The convergence of finite sample scattering properties to those of infinite media. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2021, 262, 107524.	2.3	10
20	Computation of Scattering by DB Objects With Surface Integral Equation Method. <i>IEEE Transactions on Antennas and Propagation</i> , 2011, 59, 154-161.	5.1	9
21	Dynamics of small particles in electromagnetic radiation fields: A numerical solution. <i>Radio Science</i> , 2017, 52, 1016-1029.	1.6	9
22	Inhomogeneous particle model for light-scattering by cometary dust. <i>Planetary and Space Science</i> , 2015, 118, 164-172.	1.7	8
23	Controlled time integration for the numerical simulation of meteor radar reflections. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2016, 178, 295-305.	2.3	8
24	Multiple Scattering in Discrete Random Media Using First-Order Incoherent Interactions. <i>Radio Science</i> , 2017, 52, 1419-1431.	1.6	8
25	Material realizations of extreme electromagnetic boundary conditions and metasurfaces. , 2011, , .		7
26	Volume integral equation methods in computational electromagnetics. , 2013, , .		7
27	Polarized backscattering by clusters of spherical particles. <i>Optics Letters</i> , 2015, 40, 3663.	3.3	7
28	Current-Based Volume Integral Equation Formulation for Bianisotropic Materials. <i>IEEE Transactions on Antennas and Propagation</i> , 2016, 64, 3470-3477.	5.1	7
29	Scattering And Absorption of Light in Planetary Regoliths. <i>Journal of Visualized Experiments</i> , 2019, , .	0.3	7
30	Non-spherical particles in optical tweezers: A numerical solution. <i>PLoS ONE</i> , 2019, 14, e0225773.	2.5	6
31	A 3-D Tensorial Integral Formulation of Scattering Containing Intriguing Relations. <i>IEEE Transactions on Antennas and Propagation</i> , 2018, 66, 5274-5281.	5.1	5
32	Thermophysical model for icy cometary dust particles. <i>Astronomy and Astrophysics</i> , 2020, 643, A16.	5.1	5
33	Scattering of light by a large, densely packed agglomerate of small silica spheres. <i>Optics Letters</i> , 2020, 45, 1679.	3.3	5
34	VLT spectropolarimetry of comet 67P: dust environment around the end of its intense southern summer. <i>Astronomy and Astrophysics</i> , 2022, 657, A40.	5.1	5
35	Numerical Analysis of the Potential Formulation of the Volume Integral Equation for Electromagnetic Scattering. <i>Radio Science</i> , 2017, 52, 1301-1311.	1.6	4
36	Polarized scattering by Gaussian random particles under radiative torques. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2018, 205, 40-49.	2.3	4

#	ARTICLE	IF	CITATIONS
37	Integral Equation Solution for the $\langle \text{formula} \rangle \langle \text{tex} \rangle \{m D\}^{\{prime\}}\{m B\}^{\{prime\}}\langle \text{/tex} \rangle \langle \text{/formula} \rangle$ Boundary Condition. IEEE Antennas and Wireless Propagation Letters, 2010, 9, 526-529.	4.0	3
38	Morphological Models for Inhomogeneous Particles: Light Scattering by Aerosols, Cometary Dust, and Living Cells. , 2016, , 299-337.		3
39	An update of the correlation between polarimetric and thermal properties of cometary dust. Astronomy and Astrophysics, 2021, 650, L7.	5.1	3
40	Multiple scattering by dense random media: Volume-element extinction. , 2016, , .		2
41	Validation of radiative transfer and coherent backscattering for discrete random media. , 2016, , .		2
42	Volume potential-integral-equation formulation for electromagnetic scattering by dielectric objects. , 2016, , .		2
43	A COMPOSITE MODEL FOR REFLECTANCE AND POLARISATION OF LIGHT FROM GRANULATE MATERIALS. ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences, 0, V-1-2020, 375-382.	0.0	2
44	Numerical methods for scattering problems expressed in terms of normal field components and their normal derivatives. , 2010, , .		1
45	Multiple scattering by dense random media: Numerical solution. , 2016, , .		1
46	On the spectrum and preconditioning of electromagnetic volume integral equations. , 2016, , .		1
47	Analysis of single unknown volume integral equation for general scatterers. , 2011, , .		0
48	Dynamics of interstellar dust particles in electromagnetic radiation fields. , 2016, , .		0
49	Numerical validation of a boundary element method with E and E/N as the boundary unknowns. , 2018, , .		0