

# Karri Muinonen

## List of Publications by Year in descending order

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76  
papers

12,737  
citations

257450

24  
h-index

114465

63  
g-index

90  
all docs

90  
docs citations

90  
times ranked

11296  
citing authors

#	ARTICLE	IF	CITATIONS
1	Taxonomy of Asteroids From the Legacy Survey of Space and Time Using Neural Networks. <i>Frontiers in Astronomy and Space Sciences</i> , 2022, 9, .	2.8	6
2	New Polarimetric Data for the Galilean Satellites: Europa Observations and Modeling. <i>Planetary Science Journal</i> , 2022, 3, 134.	3.6	3
3	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
4	Asteroid spectral taxonomy using neural networks. <i>Astronomy and Astrophysics</i> , 2021, 649, A46.	5.1	15
5	Asteroid absolute magnitudes and phase curve parameters from <i>Gaia</i> photometry. <i>Astronomy and Astrophysics</i> , 2021, 649, A98.	5.1	13
6	Spectral Reflectance Processing via Local Wavelength-Direction Correlations. <i>IEEE Geoscience and Remote Sensing Letters</i> , 2020, 17, 948-952.	3.1	1
7	Investigating Mercuryâ€™s Environment with the Two-Spacecraft BepiColombo Mission. <i>Space Science Reviews</i> , 2020, 216, 1.	8.1	71
8	Solar Intensity X-Ray and Particle Spectrometer SIXS: Instrument Design and First Results. <i>Space Science Reviews</i> , 2020, 216, 1.	8.1	20
9	The BepiColombo Mercury Imaging X-Ray Spectrometer: Science Goals, Instrument Performance and Operations. <i>Space Science Reviews</i> , 2020, 216, 1.	8.1	36
10	Omnidirectional microscopy by ultrasonic sample control. <i>Applied Physics Letters</i> , 2020, 116, .	3.3	13
11	Rigorous light-scattering simulations of nanophase iron space-weathering effects on reflectance spectra of olivine grains. <i>Icarus</i> , 2020, 345, 113727.	2.5	15
12	SIMBIO-SYS: Scientific Cameras and Spectrometer for the BepiColombo Mission. <i>Space Science Reviews</i> , 2020, 216, 1.	8.1	47
13	Rationale for BepiColombo Studies of Mercuryâ€™s Surface and Composition. <i>Space Science Reviews</i> , 2020, 216, 1.	8.1	46
14	Radiation fields in radiative transfer: Spherical-wavelet representation. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2020, 243, 106821.	2.3	1
15	4Ï€ Scatterometer: A new technique for understanding the general and complete scattering properties of particulate media. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2020, 246, 106910.	2.3	6
16	Asteroid lightcurve inversion with Bayesian inference. <i>Astronomy and Astrophysics</i> , 2020, 642, A138.	5.1	14
17	Scattering of light by a large, densely packed agglomerate of small silica spheres. <i>Optics Letters</i> , 2020, 45, 1679.	3.3	5
18	Inversion of HIPPARCOS and <i>Gaia</i> photometric data for asteroids. <i>Astronomy and Astrophysics</i> , 2019, 631, A67.	5.1	6

#	ARTICLE	IF	CITATIONS
19	Scattering And Absorption of Light in Planetary Regoliths. Journal of Visualized Experiments, 2019, , .	0.3	7
20	Simulating Acoustic Orientation Trapping for Stable Levitation. , 2019, , .		1
21	Non-spherical particles in optical tweezers: A numerical solution. PLoS ONE, 2019, 14, e0225773.	2.5	6
22	Multifrequency Acoustic Levitation. , 2019, , .		7
23	Absolute spectral modelling of asteroid (4) Vesta. Monthly Notices of the Royal Astronomical Society, 2019, 483, 1952-1956.	4.4	5
24	Radiative transfer with reciprocal transactions: Numerical method and its implementation. PLoS ONE, 2019, 14, e0210155.	2.5	17
25	Non-spherical particles in optical tweezers: A numerical solution. , 2019, 14, e0225773.		0
26	Non-spherical particles in optical tweezers: A numerical solution. , 2019, 14, e0225773.		0
27	Non-spherical particles in optical tweezers: A numerical solution. , 2019, 14, e0225773.		0
28	Non-spherical particles in optical tweezers: A numerical solution. , 2019, 14, e0225773.		0
29	Spectral modeling of meteorites at UV-vis-NIR wavelengths. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 204, 144-151.	2.3	13
30	Non-destructive controlled single-particle light scattering measurement. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 204, 159-164.	2.3	11
31	Polarized scattering by Gaussian random particles under radiative torques. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 205, 40-49.	2.3	4
32	Feasibility of asteroid exploration using CubeSatsâ€™ ASPECT case study. Advances in Space Research, 2018, 62, 2239-2244.	2.6	27
33	Interpretation of the Phase Functions Measured by the OSIRIS Instrument for Comet 67P/Churyumovâ€™Gerasimenko. Astrophysical Journal Letters, 2018, 868, L16.	8.3	34
34	<i>Gaia</i> Data Release 2. Astronomy and Astrophysics, 2018, 616, A13.	5.1	78
35	Added-value interfaces to asteroid photometric and spectroscopic data in the Gaia database. Advances in Space Research, 2018, 62, 464-476.	2.6	6
36	Nanospacecraft fleet for multi-asteroid touring with electric solar wind sails. , 2018, , .		10

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37	Multiple scattering of light in discrete random media using incoherent interactions. Optics Letters, 2018, 43, 683.	3.3	37
38	Scattering and absorption in dense discrete random media of irregular particles. Optics Letters, 2018, 43, 2925.	3.3	18
39	<i>Gaia</i> Data Release 2. Astronomy and Astrophysics, 2018, 616, A1.	5.1	6,364
40	Ray optics for absorbing particles with application to ice crystals at near-infrared wavelengths. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 217, 329-337.	2.3	20
41	Scattering Properties of Large Irregular Cosmic Dust Particles at Visible Wavelengths. Astrophysical Journal, 2017, 838, 74.	4.5	12
42	Multiple Scattering in Discrete Random Media Using First-Order Incoherent Interactions. Radio Science, 2017, 52, 1419-1431.	1.6	8
43	Dynamics of small particles in electromagnetic radiation fields: A numerical solution. Radio Science, 2017, 52, 1016-1029.	1.6	9
44	The<i>Gaia</i> mission. Astronomy and Astrophysics, 2016, 595, A1.	5.1	4,509
45	Light curve inversion of asteroid (585) Bilkis with Lommel-Seeliger ellipsoid method. Research in Astronomy and Astrophysics, 2016, 16, 180.	1.7	3
46	Multiple scattering by dense random media: Volume-element extinction. , 2016, , .		2
47	Validation of radiative transfer and coherent backscattering for discrete random media. , 2016, , .		2
48	Asteroid observations at low phase angles. IV. Average parameters for the new H , G 1 , G 2 magnitude system. Planetary and Space Science, 2016, 123, 101-116.	1.7	49
49	H, G1, G2 photometric phase function extended to low-accuracy data. Planetary and Space Science, 2016, 123, 117-125.	1.7	49
50	Studies for slowly rotating asteroids (168) Sibylla and (346) Hermentaria. Proceedings of the International Astronomical Union, 2015, 10, 185-192.	0.0	0
51	Spherical albedo of a Lommel-Seeliger scattering ellipsoidal asteroid. Proceedings of the International Astronomical Union, 2015, 10, 206-211.	0.0	0
52	Disk-integrated brightness of a Lommel-Seeliger scattering ellipsoidal asteroid. Astronomy and Astrophysics, 2015, 584, A23.	5.1	27
53	Asteroid lightcurve inversion with Lommel- Seeliger ellipsoids. Planetary and Space Science, 2015, 118, 227-241.	1.7	22
54	Photometric analysis for the spin and shape parameters of the C-type main-belt asteroids (171) Ophelia and (360) Carlova. Astronomy and Astrophysics, 2015, 581, A55.	5.1	7

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55	Inversion of sparse photometric data of asteroids using triaxial ellipsoid shape models and a Lommel-Seeliger scattering law. <i>Planetary and Space Science</i> , 2015, 118, 221-226.	1.7	16
56	Photometry of dark atmosphereless planetary bodies: an efficient numerical model. <i>Planetary and Space Science</i> , 2015, 118, 250-255.	1.7	11
57	Photometric analysis for the spin parameters and shapes of asteroids (362) Havnia and (506) Marion. <i>Planetary and Space Science</i> , 2015, 118, 242-249.	1.7	4
58	Inferring asteroid surface properties from radar albedos and circular polarization ratios. <i>Meteoritics and Planetary Science</i> , 2014, 49, 86-94.	1.6	11
59	Asteroid spin-axis longitudes from the Lowell Observatory database. <i>Meteoritics and Planetary Science</i> , 2014, 49, 95-102.	1.6	25
60	Dust in Comet C/1975 V1 (West). <i>Monthly Notices of the Royal Astronomical Society</i> , 2014, 440, 2928-2943.	4.4	41
61	Asteroid lightcurve phase shift from rough surface shadowing. <i>Meteoritics and Planetary Science</i> , 2014, 49, 1-7.	1.6	5
62	Light scattering by feldspar particles: Comparison of model agglomerate debris particles with laboratory samples. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2013, 131, 175-187.	2.3	72
63	COHERENT BACKSCATTERING VERIFIED NUMERICALLY FOR A FINITE VOLUME OF SPHERICAL PARTICLES. <i>Astrophysical Journal</i> , 2012, 760, 118.	4.5	81
64	Asteroid orbital inversion using a virtual-observation Markov-chain Monte Carlo method. <i>Planetary and Space Science</i> , 2012, 73, 15-20.	1.7	13
65	Ice cloud particle habit classification using principal components. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	33
66	Light scattering by Gaussian random ellipsoid particles: First results with discrete-dipole approximation. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2011, 112, 1747-1752.	2.3	17
67	A three-parameter magnitude phase function for asteroids. <i>Icarus</i> , 2010, 209, 542-555.	2.5	147
68	Effect of absorption on light scattering by agglomerated debris particles. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2009, 110, 1741-1749.	2.3	65
69	Light scattering by Gaussian particles with internal inclusions and roughened surfaces using ray optics. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2009, 110, 1628-1639.	2.3	56
70	Asteroid orbital ranging using Markov-Chain Monte Carlo. <i>Meteoritics and Planetary Science</i> , 2009, 44, 1897-1904.	1.6	20
71	Asteroid shape and spin statistics from convex models. <i>Icarus</i> , 2008, 198, 91-107.	2.5	28
72	Coherent backscattering of light by complex random media of spherical scatterers: numerical solution. <i>Waves in Random and Complex Media</i> , 2004, 14, 365-388.	1.5	124

#	ARTICLE	IF	CITATIONS
73	Light scattering by Gaussian random particles: Ray optics approximation. Journal of Quantitative Spectroscopy and Radiative Transfer, 1996, 55, 577-601.	2.3	197
74	Asteroid Orbit Determination Using Bayesian Probabilities. Icarus, 1993, 104, 255-279.	2.5	71
75	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
76	Asteroid Photometric Phase Functions From Bayesian Lightcurve Inversion. Frontiers in Astronomy and Space Sciences, 0, 9, .	2.8	5