

# Mahta Moghaddam

## List of Publications by Year in descending order

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260  
papers

7,705  
citations

76326

40  
h-index

54911

84  
g-index

261  
all docs

261  
docs citations

261  
times ranked

5807  
citing authors

#	ARTICLE	IF	CITATIONS
1	The Soil Moisture Active Passive (SMAP) Mission. Proceedings of the IEEE, 2010, 98, 704-716.	21.3	2,546
2	Validation of SMAP surface soil moisture products with core validation sites. Remote Sensing of Environment, 2017, 191, 215-231.	11.0	503
3	Vegetation characteristics and underlying topography from interferometric radar. Radio Science, 1996, 31, 1449-1485.	1.6	338
4	The Soil Moisture Active Passive Validation Experiment 2012 (SMAPVEX12): Prelaunch Calibration and Validation of the SMAP Soil Moisture Algorithms. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 2784-2801.	6.3	206
5	Assessment of the SMAP Level-4 Surface and Root-Zone Soil Moisture Product Using In Situ Measurements. Journal of Hydrometeorology, 2017, 18, 2621-2645.	1.9	196
6	Bistatic scattering from three-dimensional layered rough surfaces. IEEE Transactions on Geoscience and Remote Sensing, 2006, 44, 2102-2114.	6.3	139
7	Estimation of crown and stem water content and biomass of boreal forest using polarimetric SAR imagery. IEEE Transactions on Geoscience and Remote Sensing, 2000, 38, 697-709.	6.3	123
8	Empirical relationships between AIRSAR backscatter and LiDAR-derived forest biomass, Queensland, Australia. Remote Sensing of Environment, 2006, 100, 407-425.	11.0	122
9	The International Soil Moisture Network: serving Earth system science for over a decade. Hydrology and Earth System Sciences, 2021, 25, 5749-5804.	4.9	116
10	A Preclinical System Prototype for Focused Microwave Thermal Therapy of the Breast. IEEE Transactions on Biomedical Engineering, 2012, 59, 2431-2438.	4.2	113
11	The Sensitivity of North American Terrestrial Carbon Fluxes to Spatial and Temporal Variation in Soil Moisture: An Analysis Using Radar-Derived Estimates of Root-Zone Soil Moisture. Journal of Geophysical Research C: Biogeosciences, 2019, 124, 3208-3231.	3.0	111
12	Models of L-Band Radar Backscattering Coefficients Over Global Terrain for Soil Moisture Retrieval. IEEE Transactions on Geoscience and Remote Sensing, 2014, 52, 1381-1396.	6.3	110
13	P-Band Radar Retrieval of Subsurface Soil Moisture Profile as a Second-Order Polynomial: First AirMOSS Results. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 645-658.	6.3	107
14	Mapping vegetated wetlands of Alaska using L-band radar satellite imagery. Canadian Journal of Remote Sensing, 2009, 35, 54-72.	2.4	101
15	A Wireless Soil Moisture Smart Sensor Web Using Physics-Based Optimal Control: Concept and Initial Demonstrations. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2010, 3, 522-535.	4.9	91
16	Real-time Microwave Imaging of Differential Temperature for Thermal Therapy Monitoring. IEEE Transactions on Biomedical Engineering, 2014, 61, 1787-1797.	4.2	90
17	Remote sensing in BOREAS: Lessons learned. Remote Sensing of Environment, 2004, 89, 139-162.	11.0	76
18	Estimating subcanopy soil moisture with radar. Journal of Geophysical Research, 2000, 105, 14899-14911.	3.3	71

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19	Microwave scattering from mixed-species forests, Queensland, Australia. IEEE Transactions on Geoscience and Remote Sensing, 2004, 42, 2142-2159.	6.3	71
20	Canadian Experiment for Soil Moisture in 2010 (CanEx-SM10): Overview and Preliminary Results. IEEE Transactions on Geoscience and Remote Sensing, 2013, 51, 347-363.	6.3	71
21	Human activity recognition using magnetic induction-based motion signals and deep recurrent neural networks. Nature Communications, 2020, 11, 1551.	12.8	68
22	Radiative transfer model for microwave bistatic scattering from forest canopies. IEEE Transactions on Geoscience and Remote Sensing, 2005, 43, 2470-2483.	6.3	65
23	Integration of radar and Landsat-derived foliage projected cover for woody regrowth mapping, Queensland, Australia. Remote Sensing of Environment, 2006, 100, 388-406.	11.0	63
24	Validation of Soil Moisture Data Products From the NASA SMAP Mission. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2022, 15, 364-392.	4.9	62
25	A Python-Based Open Source System for Geographic Object-Based Image Analysis (GEOBIA) Utilizing Raster Attribute Tables. Remote Sensing, 2014, 6, 6111-6135.	4.0	59
26	The SMAP mission combined active-passive soil moisture product at 9°km and 3°km spatial resolutions. Remote Sensing of Environment, 2018, 211, 204-217.	11.0	59
27	A Generalized Radar Backscattering Model Based on Wave Theory for Multilayer Multispecies Vegetation. IEEE Transactions on Geoscience and Remote Sensing, 2011, 49, 4832-4845.	6.3	58
28	Inverse Scattering Using a Joint Norm-Based Regularization. IEEE Transactions on Antennas and Propagation, 2016, 64, 1373-1384.	5.1	53
29	Comprehensive analysis of alternative downscaled soil moisture products. Remote Sensing of Environment, 2020, 239, 111586.	11.0	52
30	Real-Time Three-Dimensional Microwave Monitoring of Interstitial Thermal Therapy. IEEE Transactions on Biomedical Engineering, 2018, 65, 528-538.	4.2	51
31	Characterizing permafrost active layer dynamics and sensitivity to landscape spatial heterogeneity in Alaska. Cryosphere, 2018, 12, 145-161.	3.9	49
32	A Method for Upscaling In Situ Soil Moisture Measurements to Satellite Footprint Scale Using Random Forests. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2017, 10, 2663-2673.	4.9	47
33	Microwave Observatory of Subcanopy and Subsurface (MOSS): A Mission Concept for Global Deep Soil Moisture Observations. IEEE Transactions on Geoscience and Remote Sensing, 2007, 45, 2630-2643.	6.3	46
34	Electromagnetic Scattering From Multilayer Rough Surfaces With Arbitrary Dielectric Profiles for Remote Sensing of Subsurface Soil Moisture. IEEE Transactions on Geoscience and Remote Sensing, 2007, 45, 349-366.	6.3	45
35	Temporal dynamics of soil moisture in a northern temperate mixed successional forest after a prescribed intermediate disturbance. Agricultural and Forest Meteorology, 2013, 180, 22-33.	4.8	45
36	Learning-Assisted Multimodality Dielectric Imaging. IEEE Transactions on Antennas and Propagation, 2020, 68, 2356-2369.	5.1	44

#	ARTICLE	IF	CITATIONS
37	Inversion of Subsurface Properties of Layered Dielectric Structures With Random Slightly Rough Interfaces Using the Method of Simulated Annealing. IEEE Transactions on Geoscience and Remote Sensing, 2009, 47, 2035-2046.	6.3	43
38	3D Nonlinear Super-Resolution Microwave Inversion Technique Using Time-Domain Data. IEEE Transactions on Antennas and Propagation, 2010, 58, 2327-2336.	5.1	42
39	Microwave Breast Imaging System Prototype with Integrated Numerical Characterization. International Journal of Biomedical Imaging, 2012, 2012, 1-18.	3.9	42
40	Classification of Alaska Spring Thaw Characteristics Using Satellite L-Band Radar Remote Sensing. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 542-556.	6.3	42
41	Advancing NASA's AirMOSS P-Band Radar Root Zone Soil Moisture Retrieval Algorithm via Incorporation of Richards's Equation. Remote Sensing, 2017, 9, 17.	4.0	41
42	Retrieval of Permafrost Active Layer Properties Using Time-Series P-Band Radar Observations. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 6037-6054.	6.3	40
43	A Combined Active-Passive Soil Moisture Estimation Algorithm With Adaptive Regularization in Support of SMAP. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 3312-3324.	6.3	38
44	3-D Vector Electromagnetic Scattering From Arbitrary Random Rough Surfaces Using Stabilized Extended Boundary Condition Method for Remote Sensing of Soil Moisture. IEEE Transactions on Geoscience and Remote Sensing, 2012, 50, 87-103.	6.3	37
45	Wireless Subnanosecond RF Synchronization for Distributed Ultrawideband Software-Defined Radar Networks. IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 4787-4804.	4.6	37
46	Power-Management Techniques for Wireless Sensor Networks and Similar Low-Power Communication Devices Based on Nonrechargeable Batteries. Journal of Computer Networks and Communications, 2012, 2012, 1-10.	1.6	35
47	AirMOSS: An Airborne P-band SAR to measure root-zone soil moisture. , 2012, , .		33
48	Evaluation of ALOS PALSAR Data for High-Resolution Mapping of Vegetated Wetlands in Alaska. Remote Sensing, 2015, 7, 7272-7297.	4.0	33
49	Coherent Scattering of Electromagnetic Waves From Two-Layer Rough Surfaces Within the Kirchhoff Regime. IEEE Transactions on Geoscience and Remote Sensing, 2013, 51, 3943-3953.	6.3	32
50	Large-Domain, Low-Contrast Acoustic Inverse Scattering for Ultrasound Breast Imaging. IEEE Transactions on Biomedical Engineering, 2010, 57, 2712-2722.	4.2	31
51	Ultrawideband Synthesis for High-Range-Resolution Software-Defined Radar. IEEE Transactions on Instrumentation and Measurement, 2020, 69, 3789-3803.	4.7	31
52	Design and Implementation of Low-Power and Mid-Range Magnetic-Induction-Based Wireless Underground Sensor Networks. IEEE Transactions on Instrumentation and Measurement, 2016, 65, 821-835.	4.7	30
53	Measurement Scheduling for Soil Moisture Sensing: From Physical Models to Optimal Control. Proceedings of the IEEE, 2010, 98, 1918-1933.	21.3	27
54	Vector Green's function for S-parameter measurements of the electromagnetic volume integral equation. IEEE Transactions on Antennas and Propagation, 2012, 60, 1400-1413.	5.1	27

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55	Study of Validity Region of Small Perturbation Method for Two-Layer Rough Surfaces. IEEE Geoscience and Remote Sensing Letters, 2010, 7, 319-323.	3.1	26
56	Sensitivity of active-layer freezing process to snow cover in Arctic Alaska. Cryosphere, 2019, 13, 197-218.	3.9	26
57	Mapping recharge from space: roadmap to meeting the grand challenge. Hydrogeology Journal, 2007, 15, 105-116.	2.1	25
58	Effects of fine-scale soil moisture and canopy heterogeneity on energy and water fluxes in a northern temperate mixed forest. Agricultural and Forest Meteorology, 2014, 184, 243-256.	4.8	25
59	Data Assimilation to Extract Soil Moisture Information from SMAP Observations. Remote Sensing, 2017, 9, 1179.	4.0	25
60	Bistatic Vector 3-D Scattering From Layered Rough Surfaces Using Stabilized Extended Boundary Condition Method. IEEE Transactions on Geoscience and Remote Sensing, 2013, 51, 2722-2733.	6.3	24
61	Multipole and S-Parameter Antenna and Propagation Model. IEEE Transactions on Antennas and Propagation, 2011, 59, 225-235.	5.1	23
62	Super resolution for microwave imaging: A deep learning approach. , 2017, , .		23
63	Modeling the Effects of Topography on Delay-Doppler Maps. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2020, 13, 1740-1751.	4.9	23
64	Potential of L-Band Radar for Retrieval of Canopy and Subcanopy Parameters of Boreal Forests. IEEE Transactions on Geoscience and Remote Sensing, 2012, 50, 2150-2160.	6.3	21
65	Theoretical Modeling and Analysis of Magnetic Induction Communication in Wireless Body Area Networks (WBANs). IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology, 2018, 2, 48-55.	3.4	21
66	Permafrost variability over the Northern Hemisphere based on the MERRA-2 reanalysis. Cryosphere, 2019, 13, 2087-2110.	3.9	21
67	Electromagnetic Inverse Scattering Algorithm and Experiment Using Absolute Source Characterization. IEEE Transactions on Antennas and Propagation, 2012, 60, 1854-1867.	5.1	19
68	A Simulation Study of Compact Polarimetry for Radar Retrieval of Soil Moisture. IEEE Transactions on Geoscience and Remote Sensing, 2014, 52, 5966-5973.	6.3	19
69	An Approach to Mapping Forest Growth Stages in Queensland, Australia through Integration of ALOS PALSAR and Landsat Sensor Data. Remote Sensing, 2012, 4, 2236-2255.	4.0	18
70	Theoretical Modeling and Analysis of L- and P-band Radar Backscatter Sensitivity to Soil Active Layer Dielectric Variations. Remote Sensing, 2015, 7, 9450-9472.	4.0	18
71	Retrieving Root-Zone Soil Moisture Profile From P-Band Radar via Hybrid Global and Local Optimization. IEEE Transactions on Geoscience and Remote Sensing, 2020, 58, 5400-5408.	6.3	18
72	The Effect of Variable Soil Moisture Profiles on P-Band Backscatter. IEEE Transactions on Geoscience and Remote Sensing, 2014, 52, 6315-6325.	6.3	16

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73	Snow Depth Retrieval With an Autonomous UAV-Mounted Software-Defined Radar. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-16.	6.3	16
74	Electromagnetic Imaging of Dielectric Objects Using a Multidirectional-Search-Based Simulated Annealing. IEEE Journal on Multiscale and Multiphysics Computational Techniques, 2018, 3, 167-175.	2.2	15
75	A Conformal FDTD Method With Accurate Waveport Excitation and S-Parameter Extraction. IEEE Transactions on Antennas and Propagation, 2016, 64, 4504-4509.	5.1	13
76	Characterization of vegetation and soil scattering mechanisms across different biomes using P-band SAR polarimetry. Remote Sensing of Environment, 2018, 209, 107-117.	11.0	13
77	Ultra-wideband synthesis for high-range resolution software defined radar. , 2018, , .		13
78	Radar Retrieval of Surface and Deep Soil Moisture and Effect of Moisture Profile on Inversion Accuracy. IEEE Geoscience and Remote Sensing Letters, 2011, 8, 478-482.	3.1	12
79	Solving Inverse Scattering Problems Based on Truncated Cosine Fourier and Cubic B-Spline Expansions. IEEE Transactions on Antennas and Propagation, 2012, 60, 5914-5923.	5.1	11
80	Operating frequency selection for low-power magnetic induction-based wireless underground sensor networks. , 2015, , .		11
81	Assessment and Validation of AirMOSS P-Band Root-Zone Soil Moisture Products. IEEE Transactions on Geoscience and Remote Sensing, 2020, 58, 6181-6196.	6.3	11
82	Microwave Selective Heating Enhancement for Cancer Hyperthermia Therapy Based on Lithographically Defined Micro/Nanoparticles. Advanced Materials Technologies, 2016, 1, 1600038.	5.8	10
83	Full-Wave Electromagnetic Scattering From Rough Surfaces With Buried Inhomogeneities. IEEE Transactions on Geoscience and Remote Sensing, 2017, 55, 3338-3353.	6.3	10
84	Spatial and Temporal Variability of Root-Zone Soil Moisture Acquired From Hydrologic Modeling and AirMOSS P-Band Radar. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2018, 11, 4578-4590.	4.9	10
85	Soil and Vegetation Scattering Contributions in L-Band and P-Band Polarimetric SAR Observations. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 8417-8429.	6.3	10
86	Application of Ultra-Wideband Synthesis in Software Defined Radar for UAV-based Landmine Detection. , 2019, , .		9
87	Validation of Permafrost Active Layer Estimates from Airborne SAR Observations. Remote Sensing, 2021, 13, 2876.	4.0	9
88	X band model of Venus atmosphere permittivity. Radio Science, 2010, 45, n/a-n/a.	1.6	8
89	An Adaptive Energy-Management Framework for Sensor Nodes with Constrained Energy Scavenging Profiles. International Journal of Distributed Sensor Networks, 2013, 9, 272849.	2.2	8
90	Strategic frequency adaptation for mid-range magnetic induction-based Wireless Underground Sensor Networks. , 2015, , .		8

#	ARTICLE	IF	CITATIONS
91	Combined Radar-Radiometer Surface Soil Moisture and Roughness Estimation. IEEE Transactions on Geoscience and Remote Sensing, 2017, 55, 4098-4110.	6.3	8
92	Learning Nonlinearity of Microwave Imaging Through Deep Learning. , 2018, , .		8
93	Wireless Sensor Network Informed UAV Path Planning for Soil Moisture Mapping. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-13.	6.3	8
94	A model to characterize soil moisture and organic matter profiles in the permafrost active layer in support of radar remote sensing in Alaskan Arctic tundra. Environmental Research Letters, 2022, 17, 025011.	5.2	8
95	WSN-SA: Design foundations for situational awareness systems based on sensor networks. , 2013, , .		7
96	Improving the Efficiency of Magnetic Induction-Based Wireless Body Area Network (WBAN). , 2018, , .		7
97	The Future of Wireless Underground Sensing Networks Considering Physical Layer Aspects. Signals and Communication Technology, 2014, , 451-484.	0.5	7
98	Dual Polarized UHF/VHF Honeycomb Stacked-Patch Feed Array for a Large-Aperture Space-borne Radar Antenna. , 2007, , .		6
99	L-band and P-band studies of vegetation at JPL. , 2015, , .		6
100	A time-series active layer thickness retrieval algorithm using P- and L-band SAR observations. , 2016, , .		6
101	Retrieval of permafrost active layer properties using P-band airmoss and L-band UAVSAR data. , 2017, , .		6
102	3-D Level Set Method for Joint Contrast and Shape Recovery in Microwave Imaging. IEEE Transactions on Computational Imaging, 2019, 5, 97-108.	4.4	6
103	Evaluation of SMAP Core Validation Site Representativeness Errors Using Dense Networks of In Situ Sensors and Random Forests. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2020, 13, 6457-6472.	4.9	6
104	Potential Satellite Monitoring of Surface Organic Soil Properties in Arctic Tundra From SMAP. Water Resources Research, 2022, 58, .	4.2	6
105	A Theoretical Analysis of Backscattering Enhancement Due to Surface Plasmons From Multilayer Structures With Rough Interfaces. IEEE Transactions on Antennas and Propagation, 2008, 56, 1133-1143.	5.1	5
106	A generalized radar scattering model for multispecies forests with multilayer subsurface soil. , 2012, , .		5
107	Numerical Vector Green's Function for S-Parameter Measurement With Waveport Excitation. IEEE Transactions on Antennas and Propagation, 2017, 65, 3645-3653.	5.1	5
108	Communication system design for magnetic induction-based Wireless Body Area Network. , 2017, , .		5

#	ARTICLE	IF	CITATIONS
109	Modeling and analysis of bistatic scattering from forests in support of soil moisture retrieval. , 2017, , .		5
110	Modeling and Retrieving Soil Moisture and Organic Matter Profiles in the Active Layer of Permafrost Soils From P-Band Radar Observations. , 2019, , .		5
111	Magnetic Induction-based Human Activity Recognition (MI-HAR). , 2019, , .		5
112	Polarimetric SAR Phenomenology and Inversion Techniques for Vegetated Terrain. , 0, , 79-92.		5
113	Multi-Temporal Convolutional Neural Networks for Satellite-Derived Soil Moisture Observation Enhancement. , 2020, , .		5
114	A Versatile and Shelf-Stable Dielectric Coupling Medium for Microwave Imaging. IEEE Transactions on Biomedical Engineering, 2022, 69, 2701-2712.	4.2	5
115	GNSS-R Soil Moisture Retrieval for Flat Vegetated Surfaces Using a Physics-Based Bistatic Scattering Model and Hybrid Global/Local Optimization. Remote Sensing, 2022, 14, 3129.	4.0	5
116	<title>Biomass distribution in boreal forest using SAR imagery</title>. , 1995, , .		4
117	Wetlands map of Alaska using L-Band radar satellite imagery. , 2007, , .		4
118	Microwave Remote Sensing for Land Hydrology Research and Applications: Introduction to the Special Issue. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2010, 3, 3-5.	4.9	4
119	Vector electromagnetic scattering from layered rough surfaces with buried discrete random media for subsurface and root-zone soil moisture sensing. , 2011, , .		4
120	Vector Green'S function for S-parameter measurements of the electromagnetic volume integral equation. , 2011, , .		4
121	Ripple-2. , 2012, , .		4
122	Three-and-a-half Decades of Progress in Monitoring Soils and Soil Hydraulic Properties. Procedia Environmental Sciences, 2013, 19, 384-393.	1.4	4
123	Ripple-2. Mobile Computing and Communications Review, 2013, 17, 55-60.	1.7	4
124	On the Accuracy of Averaging Radar Backscattering Coefficients for Bare Soils Using the Finite-Element Method. IEEE Geoscience and Remote Sensing Letters, 2014, 11, 1345-1349.	3.1	4
125	Experimental Verification of the Recursive T-Matrix Method Solutions at Microwave Frequencies. IEEE Transactions on Antennas and Propagation, 2015, 63, 5727-5740.	5.1	4
126	Generalized Terrain Topography in Radar Scattering Models. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 3944-3952.	6.3	4

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127	Towards Multi-Frequency Soil Moisture Retrieval Using P- and L-Band Passive Microwave Sensing Technology. , 2018, , .		4
128	D-SHIELD: DISTRIBUTED SPACECRAFT WITH HEURISTIC INTELLIGENCE TO ENABLE LOGISTICAL DECISIONS. , 2020, , .		4
129	A dual polarized UHF/MHF honeycomb stacked-patch array antenna: Overview of an enabling technology for the MOSS mission. , 2008, , .		3
130	3D SAR focusing for subsurface point targets. , 2009, , .		3
131	Proposed investigations from NASA's Earth Venture-1 (EV-1) airborne science selections. , 2010, , .		3
132	Radar-radiometer soil moisture estimation with joint physics and adaptive regularization in support of SMAP. , 2014, , .		3
133	Assessment of retrieval errors of AirMOSS root-zone soil moisture products. , 2016, , .		3
134	Microwave imaging of dielectric objects using a combination of simulated annealing and multi-directional search. , 2017, , .		3
135	A Comparison of Machine Learning Classifiers for Human Activity Recognition using Magnetic Induction-based Motion signals. , 2020, , .		3
136	Remembering Prof. Mojgan Daneshmand and Prof. Pedram Mousavi [In Memoriam]. IEEE Antennas and Propagation Magazine, 2020, 62, 124-125.	1.4	3
137	Full wave vector electromagnetic scattering from two-dimensional arbitrary random rough surfaces. Digest / IEEE Antennas and Propagation Society International Symposium, 2009, , .	0.0	2
138	Electromagnetic scattering from arbitrary random rough surfaces using stabilized extended boundary condition method (SEBCM) for remote sensing of soil moisture. , 2010, , .		2
139	Stabilized extended boundary condition method for 3D electromagnetic scattering from arbitrary random rough surfaces. , 2010, , .		2
140	Investigating spatial aggregation techniques using a heterogeneous radar landscape simulator for reducing uncertainties of soil moisture retrieval from SMAP. , 2011, , .		2
141	Electromagnetic inverse scattering algorithm and experiment using absolute source characterization. , 2011, , .		2
142	Retrieval of Parameters for Three-Layer Media with Nonsmooth Interfaces for Subsurface Remote Sensing. International Journal of Antennas and Propagation, 2012, 2012, 1-12.	1.2	2
143	A radar-radiometer surface soil moisture retrieval algorithm for SMAP. , 2013, , .		2
144	Airborne Microwave Observatory of Subcanopy and Subsurface radar retrieval of root zone soil moisture: Preliminary results. , 2013, , .		2

#	ARTICLE	IF	CITATIONS
145	Joint L1-L2 regularization for inverse scattering. , 2014, , .		2
146	Generalized radar scattering model including terrain topography. , 2014, , .		2
147	Self-characterization of commercial ultrasound probes in transmission acoustic inverse scattering: transducer model and volume integral formulation. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2014, 61, 467-480.	3.0	2
148	Mitigation of Faraday rotation effect for long-wavelength synthetic spaceborne radar data. , 2014, , .		2
149	A multi-objective optimization approach to combined radar-radiometer soil moisture estimation. , 2016, , .		2
150	Microresonator for Microwave Cancer Therapy. IEEE Journal on Multiscale and Multiphysics Computational Techniques, 2016, 1, 36-39.	2.2	2
151	Comparison of downscaling techniques for high resolution soil moisture mapping. , 2017, , .		2
152	A Fast Level Set Method for Multi-Material Recovery in Microwave Imaging. IEEE Transactions on Antennas and Propagation, 2018, , 1-1.	5.1	2
153	Multi-parameter Microwave Inverse Scattering with Group Sparsity Constraints. , 2018, , .		2
154	A Novel Global Optimization Technique for Microwave Imaging Based on the Simulated Annealing and Multi -Directional Search. , 2018, , .		2
155	Relationship Between Bistatic Radar Scattering Cross Sections and GPS Reflectometry Delay-Doppler Maps Over Vegetated Land in Support of Soil Moisture Retrieval. , 2018, , .		2
156	GNSS-R Parameter Sensitivities for Soil Moisture Retrieval. , 2018, , .		2
157	Experimental Investigation of the Coupled Hydraulic and Low-Frequency Dielectric Behavior of the Arctic Permafrost Active Layer Organic Soil. , 2019, , .		2
158	Initial Investigation of a GNSS-R Multiscale Rough Surface Forward Model at San Luis Valley Calibration/Validation Sites. , 2021, , .		2
159	Wearable magnetic induction-based approach toward 3D motion tracking. Scientific Reports, 2021, 11, 18905.	3.3	2
160	Sensitivity of Multifrequency Polarimetric SAR Data to Postfire Permafrost Changes and Recovery Processes in Arctic Tundra. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-15.	6.3	2
161	Arbitrary Nonlinear FM Waveform Construction and Ultra-Wideband Synthesis. , 2020, , .		2
162	<title>Retrieval of forest canopy parameters for OTTER using an optimization technique</title>. , 1995, 2314, 549.		1

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163	Two-dimensional full-wave scattering from discrete random media in layered rough surfaces. , 2007, , .		1
164	Two-dimensional full-wave scattering from discrete random media in layered rough surfaces. , 2007, , .		1
165	Comparison of Gaussian and Rayleigh noise models in inversion of subsurface parameters of layered rough surfaces using simulated annealing. , 2009, , .		1
166	Multipole and S-parameter based antenna model. , 2010, , .		1
167	Radar retrieval of subsurface parameters for layered media with nonsmooth interfaces. , 2010, , .		1
168	Retrieval of soil moisture and vegetation canopy parameters with L-band radar for a range of boreal forests. , 2011, , .		1
169	Ongoing development of microwave breast imaging system components. , 2011, , .		1
170	ADvances in radar forward and inverse scattering models of subsurface and subcanopy soil moisture and their role for the AirMOSS mission. , 2012, , .		1
171	GPU accelerated 3D nonlinear time domain inversion of realistic breast phantoms with multiparameter optimization. , 2013, , .		1
172	A preclinical system for focused microwave thermal therapy with integrated real-time 3D microwave thermal monitoring. , 2014, , .		1
173	Exploring the effect of forest spatial heterogeneity using coherent three-dimensional radar backscattering model. , 2016, , .		1
174	The importance of forest spatial heterogeneity: Exploring the effect of mix scenes using coherence three-dimension radar backscattering model. , 2016, , .		1
175	Retrieval of AirMOSS root-zone soil moisture profile with a richards' equation-based approach. , 2017, , .		1
176	P-Band Radar Retrieval of Permafrost Active Layer Properties: Time-Series Approach and Validation with In-Situ Observations. , 2018, , .		1
177	Analysis of Permafrost Active Layer Soil Heterogeneity in Support of Radar Retrievals. , 2018, , .		1
178	Contributions of Geophysical and C-Band SAR Data for Estimation of Field Scale Soil Moisture. , 2018, , .		1
179	Retrieval of Subsurface Properties of Layered Dielectric Structures Using Hybrid Global and Local Optimization. , 2019, , .		1
180	Retrieval of Subsurface Soil Moisture Profiles from L-Band and P-Band Reflectometry. , 2019, , .		1

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181	Bistatic Scattering Forward Model Validation Using GNSS-R Observations. , 2019, , .		1
182	Secret Sauce Of Success [Women in Engineering]. IEEE Antennas and Propagation Magazine, 2021, 63, 144-145.	1.4	1
183	Characterization of Clock Phase Errors for Distributed Wireless Synchronization Protocol. , 2021, , .		1
184	Maps of Active Layer Thickness on the North Slope of Alaska by Upscaling P-Band Polarimetric SAR Retrievals. , 2021, , .		1
185	Recovery of Soil Moisture Active Passive (SMAP) Instrument's Active Measurements via Coupled Dictionary Learning. IS&T International Symposium on Electronic Imaging, 2018, 30, 229-1-2296.	0.4	1
186	Mapping Tree Canopy Cover and Canopy Height with L-Band SAR Using LiDAR Data and Random Forests. , 2020, , .		1
187	Joint Retrieval of Soil Moisture and Permafrost Active Layer Thickness Using L-Band Insar and P-Band Polsar. , 2020, , .		1
188	Soil Moisture Smart Sensor Web Concept Using Data Assimilation and Optimal Control. , 2007, , .		0
189	Inversion of a layered rough surface model: maximizing the number of retrievable parameters for the design of future subsurface sensing radar systems. , 2007, , .		0
190	Electromagnetic scattering from multilayer rough surfaces with arbitrary dielectric profiles for remote sensing of subsurface soil moisture. , 2007, , .		0
191	A novel multi-frequency inversion algorithm for the retrieval of the subsurface properties of layered soil media. , 2007, , .		0
192	Guest EditorialSpecial Section on the 2007 International Conference on Near-Field Imaging and Characterization (ICONIC'07). IEEE Transactions on Instrumentation and Measurement, 2008, 57, 2390-2391.	4.7	0
193	A Soil Moisture Smart Sensor Web using Data Assimilation and Optimal Control: Formulation and First Laboratory Demonstration. , 2008, , .		0
194	3D nonlinear time-domain inversion technique for medical imaging. , 2008, , .		0
195	Sensitivity Analysis of the Simulated Annealing Method to Measurement Noise for the Inversion of Subsurface Parameters of Two Layer Rough Surfaces. , 2008, , .		0
196	A method for large, low-contrast acoustic inverse scattering with Born iterations. Digest / IEEE Antennas and Propagation Society International Symposium, 2009, , .	0.0	0
197	Planning for a Soil Moisture Satellite Mission: SMAP Algorithms & Cal/Val Workshop; Oxnard, California, 9-11 June 2009. Eos, 2009, 90, 300-300.	0.1	0
198	2-port calibration without a through connection using 1-port switched loads. , 2010, , .		0

#	ARTICLE	IF	CITATIONS
199	Recent theoretical and experimental advances in electromagnetic sensing of subsurface profiles. , 2010, , .		0
200	Electromagnetic scattering models of layered random rough surfaces and their role in addressing some of the grand challenges of climate research. , 2011, , .		0
201	Correction to "X band model of Venus atmosphere permittivity". Radio Science, 2011, 46, n/a-n/a.	1.6	0
202	An integrated active-passive soil moisture retrieval algorithm for SMAP for bare surfaces. , 2012, , .		0
203	Coherent scattering of electromagnetic waves from layered rough surfaces within the Kirchhoff regime. , 2013, , .		0
204	Scaling analysis of heterogeneity in support of soil moisture retrieval at landscape level for low-frequency radars. , 2013, , .		0
205	Report on the 2012 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting July 8-14, 2012, Chicago, IL, USA. IEEE Antennas and Propagation Magazine, 2013, 55, 178-180.	1.4	0
206	A radar-radiometer soil moisture estimation framework with adaptive regularization and joint physics. , 2014, , .		0
207	An optimized GPU-accelerated FDTD method for microwave imaging using a fast nonlinear inverse scattering algorithm. , 2014, , .		0
208	IGARSS in Quebec July 14-18, 2014 Impressions from the First Days [Conference Report]. IEEE Geoscience and Remote Sensing Magazine, 2014, 2, 58-65.	9.6	0
209	Advances in real-time non-contact monitoring of medical thermal treatment through multistatic array microwave imaging. , 2015, , .		0
210	GRSS Publications Awards and Special Awards Presented at IGARSS 2015 Banquet [Conference Reports]. IEEE Geoscience and Remote Sensing Magazine, 2015, 3, 41-53.	9.6	0
211	Spheres...the Primal Frontier [Editor's Comments]. IEEE Antennas and Propagation Magazine, 2015, 57, 4-4.	1.4	0
212	IEEE Journal on Multiscale and Multiphysics Computational Techniques (JMMCT) Call for Papers. IEEE Antennas and Propagation Magazine, 2015, 57, 9-9.	1.4	0
213	IGARSS in Milan July 26-31, 2015 Impressions from the First Days [Conference Reports]. IEEE Geoscience and Remote Sensing Magazine, 2015, 3, 139-147.	9.6	0
214	[Editor's Comments]. IEEE Antennas and Propagation Magazine, 2015, 57, 10-10.	1.4	0
215	Multitasking Antennas [Editor's Comments]. IEEE Antennas and Propagation Magazine, 2015, 57, 4-126.	1.4	0
216	FDTD based numerical Green's function for S-parameter measurement in inverse scattering problems. , 2015, , .		0

#	ARTICLE	IF	CITATIONS
217	The Next Frontier in Wireless Information Transmittal [Editor's Comments]. IEEE Antennas and Propagation Magazine, 2015, 57, 4-4.	1.4	0
218	Antennas in Our Daily Life [Editor's Comments]. IEEE Antennas and Propagation Magazine, 2015, 57, 4-4.	1.4	0
219	Case study on the reliability of unattended outdoor wireless sensor systems. , 2015, , .		0
220	Pinching the Energy Penny [Editor's Comments]. IEEE Antennas and Propagation Magazine, 2016, 58, 4-4.	1.4	0
221	Holiday Cheer...with Echo? [Editor's Comments]. IEEE Antennas and Propagation Magazine, 2016, 58, 4-4.	1.4	0
222	Theoretical derivation of RIP-less compressive sensing for inverse scattering. , 2016, , .		0
223	Resonance [Editor's Comments]. IEEE Antennas and Propagation Magazine, 2016, 58, 4-4.	1.4	0
224	Joint-physics emission-scattering model for improved active-passive soil moisture estimation. , 2016, , .		0
225	Building a Better Scanner [Editor's Comments]. IEEE Antennas and Propagation Magazine, 2016, 58, 4-4.	1.4	0
226	The Penetration and Propagation of Wireless Signals [Editor's Comments]. IEEE Antennas and Propagation Magazine, 2016, 58, 4-4.	1.4	0
227	IGARSS in Beijing: Impressions from the First Days [Conference Reports]. IEEE Geoscience and Remote Sensing Magazine, 2016, 4, 61-68.	9.6	0
228	USNC-URSI 2016 NRSM Held 6-9 January [National Radio Science Meeting Report]. IEEE Antennas and Propagation Magazine, 2016, 58, 6-9.	1.4	0
229	Closing the Loop [Editor's Comments]. IEEE Antennas and Propagation Magazine, 2016, 58, 4-4.	1.4	0
230	Role of computational EM in radar remote sensing of water resources. , 2017, , .		0
231	The Case for SmallSats [Editor's Comments]. IEEE Antennas and Propagation Magazine, 2017, 59, 4-4.	1.4	0
232	Martian Antennas [Editor's Comments]. IEEE Antennas and Propagation Magazine, 2017, 59, 4-4.	1.4	0
233	Antenna: Don't Drone Without It [Editor's Comments]. IEEE Antennas and Propagation Magazine, 2017, 59, 4-4.	1.4	0
234	Matrix norm based method for recovery of high contrast and sparse objects in microwave imaging. , 2017, , .		0

#	ARTICLE	IF	CITATIONS
235	WPCT CFP. IEEE Antennas and Propagation Magazine, 2017, 59, 156-157.	1.4	0
236	Free Waves [Editor's Comments]. IEEE Antennas and Propagation Magazine, 2017, 59, 4-4.	1.4	0
237	Real-time tracking of metallic treatment probe in interstitial thermal therapy. , 2017, , .		0
238	Antennas for Autonomy [Editor's Comments]. IEEE Antennas and Propagation Magazine, 2018, 60, 4-4.	1.4	0
239	Will OAM Antennas Work at Radio Frequencies? [Editor's Comments]. IEEE Antennas and Propagation Magazine, 2018, 60, 4-4.	1.4	0
240	We Want It All [Editor's Comments]. IEEE Antennas and Propagation Magazine, 2018, 60, 4-4.	1.4	0
241	Not Your Parents' Antennas [Editor's Comments]. IEEE Antennas and Propagation Magazine, 2018, 60, 4-4.	1.4	0
242	Ultrawideband Used to Be Impossible [Editor's Comments]. IEEE Antennas and Propagation Magazine, 2018, 60, 4-4.	1.4	0
243	New Beginnings [Editor's Comments]. IEEE Antennas and Propagation Magazine, 2019, 61, 4-4.	1.4	0
244	Developing A Soil Inversion Model Framework for Regional Permafrost Monitoring. , 2019, , .		0
245	Duty-Cycled, Sub-GHz Wake-up Radio with -95dBm Sensitivity and Addressing Capability for Environmental Monitoring Applications. , 2019, , .		0
246	Convergence of Disciplines [Editor's Comments]. IEEE Antennas and Propagation Magazine, 2019, 61, 4-4.	1.4	0
247	Autonomous Moisture Continuum Sensing Network: Intelligent and Energy Efficient in Situ Wireless Sensor Networks in Support of Remote Sensing Missions. , 2019, , .		0
248	What Is Our Long Play? [President's Message]. IEEE Antennas and Propagation Magazine, 2020, 62, 6-6.	1.4	0
249	A Tradition of Giving [President's Message]. IEEE Antennas and Propagation Magazine, 2020, 62, 6-6.	1.4	0
250	Remembering Tapan Sarkar [In Memoriam]. IEEE Antennas and Propagation Magazine, 2021, 63, 156-157.	1.4	0
251	Matrix Element-Based Theory of Compressive Sensing and Its Application to Electromagnetic Imaging. IEEE Access, 2021, 9, 129337-129346.	4.2	0
252	Deep multi-modal satellite and in-situ observation fusion for Soil Moisture retrieval. , 2021, , .		0

#	ARTICLE	IF	CITATIONS
253	Permafrost Dynamics Observatory: Retrieval of Active Layer Thickness and Soil Moisture from Airborne Insar and Polsar Data. , 2021, , .		0
254	Emerging Technologies, Sensor Web. Encyclopedia of Earth Sciences Series, 2014, , 190-196.	0.1	0
255	Ready for 5G? [Editor's Comments]. IEEE Antennas and Propagation Magazine, 2017, 59, 4-4.	1.4	0
256	Do You Know Your Branch Cuts? [Editor's Comments]. IEEE Antennas and Propagation Magazine, 2018, 60, 4-4.	1.4	0
257	A Culture Shift Toward Equity and Parity [President's Message]. IEEE Antennas and Propagation Magazine, 2020, 62, 6-6.	1.4	0
258	SPCTOR: Sensing Policy Controller and Optimizer. , 2020, , .		0
259	"Collective Intelligence" for Electromagnetics Education [President's Message]. IEEE Antennas and Propagation Magazine, 2020, 62, 6-6.	1.4	0
260	Embedded Temporal Convolutional Networks for Essential Climate Variables Forecasting. Sensors, 2022, 22, 1851.	3.8	0