Panagiotis Kosmas

List of Publications by Year
in descending order

112 papers	2,272 citations	257357 24 h-index	243529 44 g-index
112 all docs	112 docs citations	112 times ranked	1372 citing authors

#	Article	IF	Citations
1	Three‐dimensional microwave imaging of realistic numerical breast phantoms via a multiple‐frequency inverse scattering technique. Medical Physics, 2010, 37, 4210-4226.	1.6	203
2	Time reversal with the FDTD method for microwave breast cancer detection. IEEE Transactions on Microwave Theory and Techniques, 2005, 53, 2317-2323.	2.9	202
3	Three-Dimensional Microwave Breast Imaging: Dispersive Dielectric Properties Estimation Using Patient-Specific Basis Functions. IEEE Transactions on Medical Imaging, 2009, 28, 969-981.	5.4	122
4	Contrast-enhanced microwave imaging of breast tumors: a computational study using 3D realistic numerical phantoms. Inverse Problems, 2010, 26, 074009.	1.0	119
5	A Glucose Sensing System Based on Transmission Measurements at Millimetre Waves using Micro strip Patch Antennas. Scientific Reports, 2017, 7, 6855.	1.6	103
6	FDTD-based time reversal for microwave breast cancer Detection-localization in three dimensions. IEEE Transactions on Microwave Theory and Techniques, 2006, 54, 1921-1927.	2.9	101
7	Multiple-Frequency DBIM-TwIST Algorithm for Microwave Breast Imaging. IEEE Transactions on Antennas and Propagation, 2017, 65, 2507-2516.	3.1	97
8	A Matched-Filter FDTD-Based Time Reversal Approach for Microwave Breast Cancer Detection. IEEE Transactions on Antennas and Propagation, 2006, 54, 1257-1264.	3.1	85
9	Microwave Medical Imaging Based on Sparsity and an Iterative Method With Adaptive Thresholding. IEEE Transactions on Medical Imaging, 2015, 34, 357-365.	5.4	69
10	FDTD simulation of TE and TM plane waves at nonzero incidence in arbitrary Layered media. IEEE Transactions on Antennas and Propagation, 2005, 53, 1721-1728.	3.1	66
11	Modeling With the FDTD Method for Microwave Breast Cancer Detection. IEEE Transactions on Microwave Theory and Techniques, 2004, 52, 1890-1897.	2.9	64
12	Experimental Validation of Microwave Tomography with the DBIM-TwIST Algorithm for Brain Stroke Detection and Classification. Sensors, 2020, 20, 840.	2.1	57
13	A Touch-Communication Framework for Drug Delivery Based on a Transient Microbot System. IEEE Transactions on Nanobioscience, 2015, 14, 397-408.	2.2	51
14	Wavelet-Based Regularization for Robust Microwave Imaging in Medical Applications. IEEE Transactions on Biomedical Engineering, 2015, 62, 1195-1202.	2.5	50
15	A Multithreshold Iterative DBIM-Based Algorithm for the Imaging of Heterogeneous Breast Tissues. IEEE Transactions on Biomedical Engineering, 2019, 66, 509-520.	2.5	50
16	Feasibility Study of Lesion Classification via Contrast-Agent-Aided UWB Breast Imaging. IEEE Transactions on Biomedical Engineering, 2010, 57, 1003-1007.	2.5	45
17	A Q-Slot Monopole for UWB Body-Centric Wireless Communications. IEEE Transactions on Antennas and Propagation, 2017, 65, 5069-5075.	3.1	41
18	An Embedded, Eight Channel, Noise Canceling, Wireless, Wearable sEMG Data Acquisition System With Adaptive Muscle Contraction Detection. IEEE Transactions on Biomedical Circuits and Systems, 2018, 12, 68-79.	2.7	40

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19	Detection and Localization of Tissue Malignancy Using Contrast-Enhanced Microwave Imaging: Exploring Information Theoretic Criteria. IEEE Transactions on Biomedical Engineering, 2012, 59, 766-776.	2.5	37
20	Design and Experimental Validation of a Multiple-Frequency Microwave Tomography System Employing the DBIM-TwIST Algorithm. Sensors, 2018, 18, 3491.	2.1	31
21	Efficient Analysis, Design, and Filter Applications of EBG Waveguide With Periodic Resonant Loads. IEEE Transactions on Microwave Theory and Techniques, 2006, 54, 3885-3892.	2.9	25
22	Multiple-Input Multiple-Output Radar for Lesion Classification in Ultrawideband Breast Imaging. IEEE Journal on Selected Topics in Signal Processing, 2010, 4, 187-201.	7.3	25
23	Detection of extremely weak NQR signals using stochastic resonance and neural network theories. Signal Processing, 2018, 142, 96-103.	2.1	25
24	Green Touchable Nanorobotic Sensor Networks. , 2016, 54, 136-142.		24
25	Feasibility Study of Enhancing Microwave Brain Imaging Using Metamaterials. Sensors, 2019, 19, 5472.	2.1	24
26	Periodic FDTD Analysis of a 2-D Leaky-Wave Planar Antenna Based on Dipole Frequency Selective Surfaces. IEEE Transactions on Antennas and Propagation, 2007, 55, 2006-2012.	3.1	23
27	Millimeter-Wave Sensing of Diabetes-Relevant Glucose Concentration Changes in Pigs. Journal of Infrared, Millimeter, and Terahertz Waves, 2018, 39, 761-772.	1.2	23
28	Detection of glucose variability in saline solutions from transmission and reflection measurements using V-band waveguides. Measurement Science and Technology, 2015, 26, 125701.	1.4	21
29	A Computational Study of Time Reversal Techniques for Ultra-Wideband Microwave Hyperthermia Treatment of Breast Cancer. , 2007, , .		20
30	A Feasibility Study for Microwave Breast Cancer Detection Using Contrast-Agent-Loaded Bacterial Microbots. International Journal of Antennas and Propagation, 2013, 2013, 1-11.	0.7	18
31	Reflection and transmission measurements using 60 GHz patch antennas in the presence of animal tissue for non-invasive glucose sensing. , 2016, , .		18
32	Detecting NQR signals severely polluted by interference. Signal Processing, 2017, 138, 256-264.	2.1	18
33	Zinc oxide nanoparticles as contrastâ€enhancing agents for microwave imaging. Medical Physics, 2018, 45, 3820-3830.	1.6	17
34	Contrast-enhanced microwave breast imaging. , 2009, , .		16
35	Fast Microwave Medical Imaging Based on Iterative Smoothed Adaptive Thresholding. IEEE Antennas and Wireless Propagation Letters, 2015, 14, 438-441.	2.4	16
36	Three-dimensional microwave imaging of realistic breast phantoms via an inexact Gauss-Newton algorithm. , 2008, , .		14

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37	Impact of Information Loss on Reconstruction Quality in Microwave Tomography for Medical Imaging. Diagnostics, 2018, 8, 52.	1.3	13
38	A Simple Absorbing Boundary Condition for FDTD Modeling of Lossy, Dispersive Media Based on the One-Way Wave Equation. IEEE Transactions on Antennas and Propagation, 2004, 52, 2476-2479.	3.1	11
39	Introduction to Special Issue on â€œElectromagnetic Technologies for Medical Diagnostics: Fundamental Issues, Clinical Applications and Perspectivesâ€. Diagnostics, 2019, 9, 19.	1.3	11
40	A novel wavelets method for cancelling time-varying interference in NQR signal detection. Signal Processing, 2019, 154, 238-249.	2.1	11
41	Conceptual design and simulations of a nano-communication model for drug delivery based on a transient microbot system. , 2014, , .		10
42	Demonstration of enhancing the transmission of 60 GHz waves through biological tissue using thin metamaterial antireflection coatings. , 2016, , .		9
43	Metasurface-Enhanced Antennas for Microwave Brain Imaging. Diagnostics, 2021, 11, 424.	1.3	9
44	<title>Three-dimensional FDTD model for GPR detection of objects buried in realistic dispersive soil</title>. , 2002, 4742, 330.		8
45	Time reversal microwave breast imaging for contrast-enhanced tumor classification. , 2010, 2010, 708-11.		8
46	Enhancing electromagnetic transmission through biological tissues at millimeter waves using subwavelength metamaterial antireflection coatings. , 2015, , .		8
47	Three-Dimensional Microwave Head Imaging with GPU-Based FDTD and the DBIM Method. Sensors, 2022, 22, 2691.	2.1	8
48	Application of the DORT technique to FDTD-based time reversal for microwave breast cancer detection. , 2007, , .		7
49	Measurement of the complex permittivity of microbubbles using a cavity perturbation technique for contrast enhanced ultra-wideband breast cancer detection. , 2010, 2010, 6733-6.		7
50	Modeling Contrast-Imaging-Assisted Optimal Targeted Drug Delivery: A Touchable Communication Channel Estimation and Waveform Design Perspective. IEEE Transactions on Nanobioscience, 2017, 16, 203-215.	2.2	7
51	Feasibility Experiments to Detect Skin Hydration Using a Bio-Impedance Sensor. , 2019, 2019, 6032-6035.		7
52	Study and Suppression of Multipath Signals in a Non-Invasive Millimeter Wave Transmission Glucose-Sensing System. IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology, 2020, 4, 187-193.	2.3	7
53	Balanced antipodal Vivaldi antenna array for microwave tomography. , 2014, , .		6
54	A novel compact Planar Inverted-F Antenna for biomedical applications in the MICS band. , 2014, , .		6

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55	Microwave imaging based on compressed sensing using adaptive thresholding. , 2014, , .		6
56	An advanced beamforming approach based on two-channel echo-train system to cancel interference within an NQR signal resonance spectrum. Signal Processing, 2019, 154, 136-147.	2.1	6
57	Nanomaterials responding to microwaves: an emerging field for imaging and therapy. Nanoscale Advances, 2021, 3, 3417-3429.	2.2	6
58	Enhancing the Accuracy of Non-Invasive Glucose Sensing in Aqueous Solutions Using Combined Millimeter Wave and Near Infrared Transmission. Sensors, 2021, 21, 3275.	2.1	6
59	Experimental Validation of the DBIM-TwIST Algorithm for Brain Stroke Detection and Differentiation Using a Multi-Layered Anatomically Complex Head Phantom. IEEE Open Journal of Antennas and Propagation, 2022, 3, 274-286.	2.5	6
60	Use of the FDTD method for time reversal: application to microwave breast cancer detection. , 2004, , .		5
61	Detection of varying glucose concentrations in water solutions using a prototype biomedical device for millimeter-wave non-invasive glucose sensing. , 2016, , .		5
62	Application of the DBIM-TwIST algorithm to experimental microwave imaging data. , 2017, , .		5
63	Towards a microwave imaging prototype based on the DBIM-TwIST algorithm and a custom-made transceiver system. , 2017, , .		5
64	Development of a Low-Cost, Portable NQR Spectrometer for RDX Explosives Detection. IEEE Sensors Journal, 2021, 21, 6922-6929.	2.4	5
65	Enhanced FEM-Based DBIM Approach for Two-Dimensional Microwave Imaging. IEEE Transactions on Antennas and Propagation, 2021, 69, 5187-5192.	3.1	5
66	Glucose Sensing in Saline Solutions using V-Band Waveguides. , 2014, , .		5
67	The Use of Metasurfaces to Enhance Microwave Imaging: Experimental Validation for Tomographic and Radar-Based Algorithms. IEEE Open Journal of Antennas and Propagation, 2022, 3, 89-100.	2.5	5
68	Short-Pulse Three-Dimensional Scattering From Moderately Rough Surfaces: A Comparison Between Narrow-Waisted Gaussian Beam Algorithms and FDTD. IEEE Transactions on Antennas and Propagation, 2006, 54, 157-167.	3.1	4
69	Dielectric permittivity of human blood of different lactate levels measured at millimeter waves. , 2019, 2019, 1183-1186.		4
70	Motion Artifact Sensor Using Strain Gauges. , 2019, 3, 1-4.		4
71	Preliminary Experimental Validation of Radar Imaging for Stroke Detection with Phantoms. , 2019, , .		4
72	Performance assessment of microwave tomography and radar imaging using an anthropomorphic brain phantom. , 2020, , .		4

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73	Review of an FDTD TF/SF Formulation Based on Auxiliary 1-D grids. , 2007, , .		3
74	Possibilities for microwave breast tumor sensing via contrast-agent-loaded nanorobots. , 2012, , .		3
75	Microwave breast tumor detection and size estimation using contrast-agent-loaded magnetotactic bacteria. , 2013, 2013, 5481-4.		3
76	Novel inversion tools to improve performance of the DBIM algorithm for microwave medical imaging. , 2014, , .		3
77	Evaluation of the sensitivity of transmission measurements at millimeter waves using patch antennas for non-invasive glucose sensing. , 2016, , .		3
78	Touchable computation: Computing-inspired bio-detection. , 2017, , .		3
79	An sEMG-based method to adaptively reject the effect of contraction on spectral analysis for fatigue tracking. , 2018, , .		3
80	Portable Microwave Imaging Head Scanners for Intracranial Haemorrhagic Detection. , 2019, , .		3
81	Metamaterial Designs to Enhance Microwave Imaging Applications. , 2019, , .		3
82	Image Improvement Through Metamaterial Technology for Brain Stroke Detection. , 2020, , .		3
83	Assessing Changes in Dielectric Properties Due to Nanomaterials Using a Two-Port Microwave System. Sensors, 2020, 20, 6228.	2.1	3
84	Development of a Solid and Flexible Matching Medium for Microwave Medical Diagnostic Systems. Diagnostics, 2021, 11, 550.	1.3	3
85	Comparison of 2-D and 3-D DBIM-TwIST for Brain Stroke Detection and Differentiation. , 2021, , .		3
86	A New Metasurface-Enhanced Microstrip Patch Antenna for Haemorrhagic Stroke Detection. , 2021, , .		3
87	Microwave breast tumor sensing and targeting using multiswarm contrast-agent-loaded bacterial nanorobots. , 2012, , .		2
88	Hybrid microstrip and carbon nanotubes based patch antenna for wireless applications. , 2013, , .		2
89	Characterisation of ZnO NPs as contrast agents for MWI. , 2017, , .		2
90	Non-linear Microwave Imaging Using Fast Iterative Shrinkage Thresholding. , 2019, , .		2

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91	Limited-view Prototype Design for Radar-based Fruit Imaging. , 2020, , .		2
92	Tumour Classification. Biological and Medical Physics Series, 2016, , 75-129.	0.3	2
93	Effect of Varying Prior Information in Axillary 2D Microwave Tomography. , 2022, , .		2
94	Towards an integrated medical imaging-sensing-therapeutic platform using electromagnetically-controlled nanomachines. , 2011, , .		1
95	Path planning of magnetotactic bacteria in biorobots-assisted microwave medical imaging. , 2013, , .		1
96	Electromagnetics in Biomedical Applications. International Journal of Antennas and Propagation, 2014, 2014, 1-1.	0.7	1
97	A touchable molecular communication model of targeted contrast agent delivery. , 2015, , .		1
98	Canceling strong and complex interference in NQR-based landmine detection. , 2016, , .		1
99	Development of a slotted triangular patch antenna for microwave tomography. , 2016, , .		1
100	Exploiting wavelet decomposition to enhance sparse recovery in microwave imaging. , 2017, , .		1
101	Preliminary Assessment of a Microwave System to Detect Contrast Enhancing Agents. , 2018, 2018, 937-940.		1
102	Finite Element Analysis of a Wideband Microwave Tomography System for Potential Medical Imaging. , 2019, , .		1
103	Experimental Comparison of Two Printed Monopole Antenna Designs for Microwave Tomography. , 2019, , .		1
104	Tools for the efficient implementation of the DBIM algorithm in microwave imaging experiments. , 2020, , .		1
105	Improving Detection of a Portable NQR System for Humanitarian Demining Using Machine Learning. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-11.	2.7	1
106	Differentiation of brain stroke type by using microwave-based machine learning classification. , 2021, , .		1
107	FDTD-based analysis of basic propagation mechanisms in urban environments. , 2010, , .		0
108	Feasibility study of tumor size classification via contrast-enhanced UWB breast imaging â€" A complex-domain analysis. , 2011, , .		0

#	ARTICLE	IF	CITATIONS
109	Antenna design by using specialist tool for the 3D EM simulation of high frequency components. , 2017, , .		0
110	Microwave and Induced Thermoacoustic Dual Imaging for Potential Breast Cancer Detection. , 2018, , .		0
111	Preliminary Study on the Feasibility of Reconstructing Anatomically Complex Numerical Brain Phantoms with Limited Prior Information. , 2020, , .		0
112	Evaluation of prior information in microwave tomography experiments for brain stroke detection. , 2021, , .		0