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	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
2	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
3	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
4	Three-Dimensional Microwave Head Imaging with GPU-Based FDTD and the DBIM Method. Sensors, 2022, 22, 2691.	2.1	8
5	Effect of Varying Prior Information in Axillary 2D Microwave Tomography. , 2022, , .		2
6	Nanomaterials responding to microwaves: an emerging field for imaging and therapy. Nanoscale Advances, 2021, 3, 3417-3429.	2.2	6
7	Development of a Solid and Flexible Matching Medium for Microwave Medical Diagnostic Systems. Diagnostics, 2021, 11, 550.	1.3	3
8	Comparison of 2-D and 3-D DBIM-TwIST for Brain Stroke Detection and Differentiation. , 2021, , .		3
9	A New Metasurface-Enhanced Microstrip Patch Antenna for Haemorrhagic Stroke Detection. , 2021, , .		3
10	Metasurface-Enhanced Antennas for Microwave Brain Imaging. Diagnostics, 2021, 11, 424.	1.3	9
11	Development of a Low-Cost, Portable NQR Spectrometer for RDX Explosives Detection. IEEE Sensors Journal, 2021, 21, 6922-6929.	2.4	5
12	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
13	Differentiation of brain stroke type by using microwave-based machine learning classification. , 2021, , .		1
14	Enhanced FEM-Based DBIM Approach for Two-Dimensional Microwave Imaging. IEEE Transactions on Antennas and Propagation, 2021, 69, 5187-5192.	3.1	5
15	Evaluation of prior information in microwave tomography experiments for brain stroke detection. , 2021, , .		0
16	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
17	Tools for the efficient implementation of the DBIM algorithm in microwave imaging experiments. , 2020, , .		1
18	Limited-view Prototype Design for Radar-based Fruit Imaging. , 2020, , .		2

#	Article	IF	Citations
19	Image Improvement Through Metamaterial Technology for Brain Stroke Detection. , 2020, , .		3
20	Assessing Changes in Dielectric Properties Due to Nanomaterials Using a Two-Port Microwave System. Sensors, 2020, 20, 6228.	2.1	3
21	Experimental Validation of Microwave Tomography with the DBIM-TwIST Algorithm for Brain Stroke Detection and Classification. Sensors, 2020, 20, 840.	2.1	57
22	Performance assessment of microwave tomography and radar imaging using an anthropomorphic brain phantom. , 2020, , .		4
23	Preliminary Study on the Feasibility of Reconstructing Anatomically Complex Numerical Brain Phantoms with Limited Prior Information. , 2020, , .		0
24	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
25	Feasibility Experiments to Detect Skin Hydration Using a Bio-Impedance Sensor. , 2019, 2019, 6032-6035.		7
26	Dielectric permittivity of human blood of different lactate levels measured at millimeter waves. , 2019, 2019, 1183-1186.		4
27	Motion Artifact Sensor Using Strain Gauges. , 2019, 3, 1-4.		4
28	Introduction to Special Issue on â€œElectromagnetic Technologies for Medical Diagnostics: Fundamental Issues, Clinical Applications and Perspectivesâ€• Diagnostics, 2019, 9, 19.	1.3	11
29	Non-linear Microwave Imaging Using Fast Iterative Shrinkage Thresholding. , 2019, , .		2
30	Portable Microwave Imaging Head Scanners for Intracranial Haemorrhagic Detection. , 2019, , .		3
31	Preliminary Experimental Validation of Radar Imaging for Stroke Detection with Phantoms. , 2019, , .		4
32	Finite Element Analysis of a Wideband Microwave Tomography System for Potential Medical Imaging. , 2019, , .		1
33	Experimental Comparison of Two Printed Monopole Antenna Designs for Microwave Tomography. , 2019, , .		1
34	Metamaterial Designs to Enhance Microwave Imaging Applications. , 2019, , .		3
35	Feasibility Study of Enhancing Microwave Brain Imaging Using Metamaterials. Sensors, 2019, 19, 5472.	2.1	24
36	A novel wavelets method for cancelling time-varying interference in NQR signal detection. Signal Processing, 2019, 154, 238-249.	2.1	11

#	Article	IF	Citations
37	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
38	Detection of extremely weak NQR signals using stochastic resonance and neural network theories. Signal Processing, 2018, 142, 96-103.	2.1	25
39	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
40	Preliminary Assessment of a Microwave System to Detect Contrast Enhancing Agents. , 2018, 2018, 937-940.		1
41	An sEMG-based method to adaptively reject the effect of contraction on spectral analysis for fatigue tracking. , 2018, , .		3
42	Microwave and Induced Thermoacoustic Dual Imaging for Potential Breast Cancer Detection. , 2018, , .		0
43	Design and Experimental Validation of a Multiple-Frequency Microwave Tomography System Employing the DBIM-TwIST Algorithm. Sensors, 2018, 18, 3491.	2.1	31
44	Impact of Information Loss on Reconstruction Quality in Microwave Tomography for Medical Imaging. Diagnostics, 2018, 8, 52.	1.3	13
45	Zinc oxide nanoparticles as contrast‐enhancing agents for microwave imaging. Medical Physics, 2018, 45, 3820-3830.	1.6	17
46	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
47	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
48	Multiple-Frequency DBIM-TwIST Algorithm for Microwave Breast Imaging. IEEE Transactions on Antennas and Propagation, 2017, 65, 2507-2516.	3.1	97
49	Exploiting wavelet decomposition to enhance sparse recovery in microwave imaging. , 2017, , .		1
50	Detecting NQR signals severely polluted by interference. Signal Processing, 2017, 138, 256-264.	2.1	18
51	A Q-Slot Monopole for UWB Body-Centric Wireless Communications. IEEE Transactions on Antennas and Propagation, 2017, 65, 5069-5075.	3.1	41
52	A Glucose Sensing System Based on Transmission Measurements at Millimetre Waves using Micro strip Patch Antennas. Scientific Reports, 2017, 7, 6855.	1.6	103
53	Application of the DBIM-TwIST algorithm to experimental microwave imaging data. , 2017, , .		5
54	Antenna design by using specialist tool for the 3D EM simulation of high frequency components. , 2017, , .		0

#	Article	IF	Citations
55	Touchable computation: Computing-inspired bio-detection. , 2017, , .		3
56	Characterisation of ZnO NPs as contrast agents for MWI. , 2017, , .		2
57	Towards a microwave imaging prototype based on the DBIM-TwIST algorithm and a custom-made transceiver system. , 2017, , .		5
58	Detection of varying glucose concentrations in water solutions using a prototype biomedical device for millimeter-wave non-invasive glucose sensing. , 2016, , .		5
59	Reflection and transmission measurements using 60 GHz patch antennas in the presence of animal tissue for non-invasive glucose sensing. , 2016, , .		18
60	Green Touchable Nanorobotic Sensor Networks. , 2016, 54, 136-142.		24
61	Demonstration of enhancing the transmission of 60 GHz waves through biological tissue using thin metamaterial antireflection coatings. , 2016, , .		9
62	Canceling strong and complex interference in NQR-based landmine detection. , 2016, , .		1
63	Evaluation of the sensitivity of transmission measurements at millimeter waves using patch antennas for non-invasive glucose sensing. , 2016, , .		3
64	Development of a slotted triangular patch antenna for microwave tomography. , 2016, , .		1
65	Tumour Classification. Biological and Medical Physics Series, 2016, , 75-129.	0.3	2
66	Enhancing electromagnetic transmission through biological tissues at millimeter waves using subwavelength metamaterial antireflection coatings. , 2015, , .		8
67	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
68	Wavelet-Based Regularization for Robust Microwave Imaging in Medical Applications. IEEE Transactions on Biomedical Engineering, 2015, 62, 1195-1202.	2.5	50
69	Fast Microwave Medical Imaging Based on Iterative Smoothed Adaptive Thresholding. IEEE Antennas and Wireless Propagation Letters, 2015, 14, 438-441.	2.4	16
70	A Touch-Communication Framework for Drug Delivery Based on a Transient Microbot System. IEEE Transactions on Nanobioscience, 2015, 14, 397-408.	2.2	51
71	A touchable molecular communication model of targeted contrast agent delivery. , 2015, , .		1
72	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

#	Article	IF	Citations
73	Electromagnetics in Biomedical Applications. International Journal of Antennas and Propagation, 2014, 2014, 1-1.	0.7	1
74	Novel inversion tools to improve performance of the DBIM algorithm for microwave medical imaging. , 2014, , .		3
75	Balanced antipodal Vivaldi antenna array for microwave tomography. , 2014, , .		6
76	Conceptual design and simulations of a nano-communication model for drug delivery based on a transient microbot system. , 2014, , .		10
77	A novel compact Planar Inverted-F Antenna for biomedical applications in the MICS band. , 2014, , .		6
78	Microwave imaging based on compressed sensing using adaptive thresholding. , 2014, , .		6
79	Glucose Sensing in Saline Solutions using V-Band Waveguides. , 2014, , .		5
80	Hybrid microstrip and carbon nanotubes based patch antenna for wireless applications. , 2013, , .		2
81	Path planning of magnetotactic bacteria in biorobots-assisted microwave medical imaging. , 2013, , .		1
82	Microwave breast tumor detection and size estimation using contrast-agent-loaded magnetotactic bacteria. , 2013, 2013, 5481-4.		3
83	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
84	Possibilities for microwave breast tumor sensing via contrast-agent-loaded nanorobots. , 2012, , .		3
85	Microwave breast tumor sensing and targeting using multiswarm contrast-agent-loaded bacterial nanorobots. , 2012, , .		2
86	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
87	Feasibility study of tumor size classification via contrast-enhanced UWB breast imaging â€" A complex-domain analysis. , 2011, , .		0
88	Towards an integrated medical imaging-sensing-therapeutic platform using electromagnetically-controlled nanomachines. , 2011, , .		1
89	Feasibility Study of Lesion Classification via Contrast-Agent-Aided UWB Breast Imaging. IEEE Transactions on Biomedical Engineering, 2010, 57, 1003-1007.	2.5	45
90	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

#	Article	IF	Citations
91	Contrast-enhanced microwave imaging of breast tumors: a computational study using 3D realistic numerical phantoms. Inverse Problems, 2010, 26, 074009.	1.0	119
92	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
93	FDTD-based analysis of basic propagation mechanisms in urban environments. , 2010, , .		0
94	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
95	Time reversal microwave breast imaging for contrast-enhanced tumor classification. , 2010, 2010, 708-11.		8
96	Contrast-enhanced microwave breast imaging. , 2009, , .		16
97	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
98	Three-dimensional microwave imaging of realistic breast phantoms via an inexact Gauss-Newton algorithm. , 2008, , .		14
99	A Computational Study of Time Reversal Techniques for Ultra-Wideband Microwave Hyperthermia Treatment of Breast Cancer. , 2007, , .		20
100	Application of the DORT technique to FDTD-based time reversal for microwave breast cancer detection. , 2007, , .		7
101	Review of an FDTD TF/SF Formulation Based on Auxiliary 1-D grids. , 2007, , .		3
102	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
103	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
104	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
105	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
106	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
107	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
108	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

#	Article	IF	Citations
109	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
110	Modeling With the FDTD Method for Microwave Breast Cancer Detection. IEEE Transactions on Microwave Theory and Techniques, 2004, 52, 1890-1897.	2.9	64
111	Use of the FDTD method for time reversal: application to microwave breast cancer detection. , 2004, , .		5
112	<title>Three-dimensional FDTD model for GPR detection of objects buried in realistic dispersive soil</title>. , 2002, 4742, 330.		8