Rajalakshmi Pachamuthu

List of Publications by Year
in descending order

136	1,032	758635 12	839053 18
papers	citations	h-index	g-index

136	136	136	966
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A low power IoT network for smart agriculture. , 2018, , .		99
2	Computer Aided Abnormality Detection for Kidney on FPGA Based IoT Enabled Portable Ultrasound Imaging System. Irbm, 2016, 37, 189-197.	3.7	43
3	Multi-level classification: A generic classification method for medical datasets. , 2015, , .		40
4	Adaptive rule engine based IoT enabled remote health care data acquisition and smart transmission system. , 2014, , .		39
5	A Novel Computer-Aided Diagnosis Framework Using Deep Learning for Classification of Fatty Liver Disease in Ultrasound Imaging. , 2018, , .		33
6	Novel Sampling Algorithm for Human Mobility-Based Mobile Phone Sensing. IEEE Internet of Things Journal, 2015, 2, 210-220.	5.5	32
7	WSN based power monitoring in smart grids. , 2011, , .		30
8	A Secure Phase-Encrypted IEEE 802.15.4 Transceiver Design. IEEE Transactions on Computers, 2017, 66, 1421-1427.	2.4	24
9	Performance Analysis of CSMA/CA and PCA for Time Critical Industrial IoT Applications. IEEE Transactions on Industrial Informatics, 2018, 14, 2281-2293.	7.2	22
10	Compressed sensing for different sensors: A real scenario for WSN and IoT. , 2016, , .		20
11	Novel Power Management Scheme and Effects of Constrained On-Node Storage on Performance of MAC Layer for Industrial IoT Networks. IEEE Transactions on Industrial Informatics, 2018, 14, 2146-2158.	7.2	19
12	Characterization of lens based photoacoustic imaging system. Photoacoustics, 2017, 8, 37-47.	4.4	17
13	On the Development of a Sensor Module for Real-Time Pollution Monitoring. , 2011, , .		16
14	Real Time LiDAR Point Cloud Compression and Transmission for Intelligent Transportation System. , 2019, , .		16
15	Saturated Throughput Analysis of IEEE 802.11ad EDCA For High Data Rate 5G-IoT Applications. IEEE Transactions on Vehicular Technology, 2019, 68, 4774-4785.	3.9	16
16	A novel system architecture for brain controlled IoT enabled environments. , 2017, , .		15
17	Novel Light Weight Compressed Data Aggregation using sparse measurements for IoT networks. Journal of Network and Computer Applications, 2018, 121, 119-134.	5.8	15
18	Development of a Novel IoT-Enabled Power- Monitoring Architecture With Real-Time Data Visualization for Use in Domestic and Industrial Scenarios. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-14.	2.4	15

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19	FPGA-Based Portable Ultrasound Scanning System with Automatic Kidney Detection. Journal of Imaging, 2015, 1, 193-219.	1.7	14
20	Automated quantification of ultrasonic fatty liver texture based on curvelet transform and SVD. Biocybernetics and Biomedical Engineering, 2018, 38, 145-157.	3.3	14
21	Wavelength reassignment algorithms for all-optical WDM backbone networks. Optical Switching and Networking, 2007, 4, 147-156.	1.2	13
22	FPGA based preliminary CAD for kidney on IoT enabled portable ultrasound imaging system. , 2014, , .		13
23	A reliable covert channel over IEEE 802.15.4 using steganography. , 2016, , .		13
24	Re-Routing at Critical Nodes to Enhance Performance of Wavelength Reassignment in All-Optical WDM Networks Without Wavelength Conversion. Journal of Lightwave Technology, 2008, 26, 3021-3029.	2.7	12
25	Accurate and reliable 3-lead to 12-lead ECG reconstruction methodology for remote health monitoring applications. , 2013, , .		12
26	Accurate and reliable 3-lead to 12-lead ECG reconstruction methodology for remote health monitoring applications. Irbm, 2014, 35, 341-350.	3.7	12
27	IoT enabled smart and secure power monitor. , 2017, , .		12
28	Multiview spatial compounding using lens-based photoacoustic imaging system. Photoacoustics, 2019, 13, 85-94.	4.4	12
29	Real time hardware implementable spectrum sensor for Cognitive Radio applications. , 2012, , .		11
30	Effect of relay nodes and transmit power on end-to-end delay in multi-hop wireless ad hoc networks. International Journal of Space-Based and Situated Computing, 2014, 4, 26.	0.2	11
31	A Novel Low-Complexity Compressed Data Aggregation Method for Energy-Constrained IoT Networks. IEEE Transactions on Green Communications and Networking, 2020, 4, 717-730.	3.5	11
32	Deep-Learning-Based Multispectral Image Reconstruction from Single Natural Color RGB Imageâ€"Enhancing UAV-Based Phenotyping. Remote Sensing, 2022, 14, 1272.	1.8	11
33	FPGA based ultrasound backend system with image enhancement technique. , 2014, , .		10
34	Smartphone based automatic abnormality detection of kidney in ultrasound images. , 2016, , .		10
35	System Architecture for Low-Power Ubiquitously Connected Remote Health Monitoring Applications With Smart Transmission Mechanism. IEEE Sensors Journal, 2015, 15, 4532-4543.	2.4	9
36	Region of Interest and Car Detection using LiDAR data for Advanced Traffic Management System. , 2020, , .		9

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37	LiDAR-INS/GNSS-Based Real-Time Ground Removal, Segmentation, and Georeferencing Framework for Smart Transportation. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-11.	2.4	9
38	Context aware building energy management system with heterogeneous wireless network architecture. , 2013, , .		8
39	Reconfigurable dual mode IEEE 802.15.4 digital baseband receiver for diverse IoT applications. , 2016, , .		8
40	A comparison of transmission line voltage stability indices. , 2016, , .		8
41	A Low Power Minimal Error IEEE 802.15.4 Transceiver for Heart Monitoring in IoT Applications. Wireless Personal Communications, 2018, 100, 611-629.	1.8	8
42	Classification of Nonalcoholic Fatty Liver Texture Using Convolution Neural Networks. , 2018, , .		8
43	Fast Object Segmentation Pipeline for Point Clouds Using Robot Operating System. , 2019, , .		8
44	Geo-referencing system for locating objects globally in LiDAR point cloud. , 2020, , .		8
45	Hardware-software co-design of AES on FPGA. , 2012, , .		7
46	CR based WSAN for Field Area Network in Smart Grid. , 2013, , .		7
47	Reliability and Delay Analysis of Slotted Anycast Multi-Hop Wireless Networks Targeting Dense Traffic IoT Applications. IEEE Communications Letters, 2015, 19, 727-730.	2.5	7
48	Deep scattering convolution network based features for ultrasonic fatty liver tissue characterization. , 2017, 2017, 1982-1985.		7
49	A Novel Classification for EEG Based Four Class Motor Imagery Using Kullback-Leibler Regularized Riemannian Manifold. , 2018, , .		7
50	Two-sided residual refocusing for an acoustic lens-based photoacoustic imaging system. Physics in Medicine and Biology, 2018, 63, 13NT03.	1.6	7
51	Discrimination of filled and unfilled grains of rice panicles using thermal and RGB images. Journal of Cereal Science, 2020, 95, 103037.	1.8	7
52	Routing wavelength and time-slot reassignment algorithms for TDM based optical WDM networks. Computer Communications, 2007, 30, 3491-3497.	3.1	6
53	Load balanced routing to enhance the performance of optical backbone networks. , 2008, , .		6
54	Effect of Relay Nodes on End-to-End Delay in Multi-hop Wireless Ad-hoc Networks. , 2013, , .		6

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55	Context predictor based sparse sensing technique and smart transmission architecture for IoT enabled remote health monitoring applications. , 2014, 2014, 4151-4.		6
56	Novel sampling algorithm for Levy-walk based mobile phone sensing. , 2014, , .		6
57	Deployment adviser tool for wireless sensor networks. , 2014, , .		6
58	Centroid based 3D localization technique using RSSI with a mobile robot. , 2014, , .		6
59	Energy efficient wireless sensor networks utilizing adaptive dictionary in compressed sensing. , 2018, , .		6
60	A Residual Phase Noise Compensation Method for IEEE 802.15.4 Compliant Dual-Mode Receiver for Diverse Low Power IoT Applications. IEEE Internet of Things Journal, 2019, 6, 3437-3447.	5.5	6
61	A deep learning based approach for classification of abdominal organs using ultrasound images. Biocybernetics and Biomedical Engineering, 2021, 41, 779-791.	3.3	6
62	Routing Wavelength and Timeslot Reassignment Algorithms for TDM based Optical WDM Networks - Multi rate traffic demands. , 2006, , .		5
63	Analytical model of adaptive CSMA-CA MAC for reliable and timely clustered wireless multi-hop communication. , 2014, , .		5
64	Neural Network Based Short Term Forecasting Engine to Optimize Energy and Big Data Storage Resources of Wireless Sensor Networks. , 2015, , .		5
65	Implementation of diagnostically driven compression algorithms via WebRTC for IoT enabled tele-sonography. , 2016, , .		5
66	WebRTC based invariant scattering convolution network for automated validation of ultrasonic videos for IoT enabled tele-sonography. , 2018, , .		5
67	An Analytical Model for Wavelength-Convertible Optical Networks. , 2007, , .		4
68	Analytical Performance Computation for all Optical Networks with Wavelength Conversion. IETE Journal of Research, 2008, 54, 31-38.	1.8	4
69	Low complex, programmable FPGA based 8-channel ultrasound transmitter for medical imaging researches. , 2014, , .		4
70	Affordable low complexity heart/brain monitoring methodology for remote health care. , 2015, 2015, 5082-5.		4
71	Mobile phone based acoustic localization for wireless sensor networks. , 2015, , .		4
72	Duration of stay based weighted scheduling framework for mobile phone sensor data collection in opportunistic crowd sensing. Peer-to-Peer Networking and Applications, 2016, 9, 721-730.	2.6	4

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73	Multi-modal framework for automatic detection of diagnostically important regions in nonalcoholic fatty liver ultrasonic images. Biocybernetics and Biomedical Engineering, 2018, 38, 586-601.	3.3	4
74	Modeling and Analysis of IEEE 802.15.4 Multi-hop Networks for IoT Applications. Wireless Personal Communications, 2018, 100, 429-448.	1.8	4
75	Analytical Tool to Achieve Wavelength Conversion Performance in No Wavelength Conversion Optical WDM Networks. , 2007, , .		3
76	Automatic organ validation of b-mode ultrasound images for transmission to cloud. , 2014, , .		3
77	Portable ultrasound scanner for remote diagnosis. , 2015, , .		3
78	Integrated 16-Channel Transmit and Receive Beamforming ASIC for Ultrasound Imaging. , 2015, , .		3
79	Mobile phone based acoustic localization using Doppler shift for wireless sensor networks. , 2016, , .		3
80	A 1.5mA, 2.4GHz ZigBee/BLE QLMVF Receiver Frond End with Split TCAs in 180nm CMOS. , 2016, , .		3
81	Random node sampling approach for energy efficient data gathering in wireless sensor networks. , 2017, , .		3
82	Emotion Detection IoT enabled Edge-node for Citizen Security. , 2019, , .		3
83	LoRa-based Alert System for Public-safety. , 2019, , .		3
84	Quantitative Comparison of LiDAR Point Cloud Segmentation for Autonomous Vehicles. , 2021, , .		3
85	Design of feature extraction circuit for speech recognition applications. , 2012, , .		2
86	EEDF-MAC: An energy efficient MAC protocol for wireless sensor networks. , 2013, , .		2
87	Compression techniques for IoT enabled handheld ultrasound imaging system. , 2014, , .		2
88	Fast Region of Interest detection for fetal genital organs in B-mode ultrasound images. , 2014, , .		2
89	A low complexity on-chip ECG data compression methodology targeting remote health-care applications. , 2014, 2014, 5944-7.		2
90	IEEE 802.15.4-PHY Packet Detection and Transmission System With Differential Encoding For Low Power IoT Networks. , 2015, , .		2

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91	Distributed compressed sensing for photo-acoustic imaging. , 2015, , .		2
92	Sparseland model for speckle suppression of B-mode ultrasound images. , 2015, , .		2
93	Smartphone based automatic organ validation in ultrasound video. , 2017, 2017, 4289-4292.		2
94	Subjective liver ultrasound video quality assessment of internet based videophone services for real-time telesonography. , 2017, , .		2
95	A novel system architecture for real-time, robust and accurate step detection for PDR based indoor localization. , 2018, , .		2
96	A Real-Time Health 4.0 Framework with Novel Feature Extraction and Classification for Brain-Controlled IoT-Enabled Environments. Neural Computation, 2019, 31, 1915-1944.	1.3	2
97	Nonalcoholic Fatty Liver Texture Characterization based on Transfer Deep Scattering Convolution Network and Ensemble Subspace KNN classifier. , 2019, , .		2
98	CIG based Stress Identification Method for Maize Crop using UAV based Remote Sensing. , 2020, , .		2
99	Comparative Run Time Analysis of LiDAR Point Cloud Processing with GPU and CPU. , 2020, , .		2
100	Optimal Parameter Selection for UAV Based Pushbroom Hyperspectral Imaging. , 2021, , .		2
101	Levy walk based multi-hop data forwarding protocol for Opportunistic Mobile Phone Sensor Networks. , 2013, , .		1
102	A novel audio steg for secret communication. , 2014, , .		1
103	FPGA based implementation of low complex adaptive speckle suppression filter for B-mode medical ultrasound images. , 2014, , .		1
104	System Architecture for Smart Ubiquitous Health Monitoring System with Area Optimization in Multiple On-chip Radios Scenario. , 2014, , .		1
105	Performance analysis of hybrid multiple radio IoT architecture for ubiquitous connectivity. , 2015, , .		1
106	Compressive sensing ultrasound beamformed imaging in time and frequency domain. , 2015, , .		1
107	3D localization technique with mobile robot for improving operability of remote-control devices. , 2015, , .		1
108	Real Time Power Capping with Smart Circuit Breaker to Maximize Power Utilization of Local Generator. , 2015, , .		1

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109	A 2μW biomedical frontend with ΣΔ ADC for self-powered U-healthcare devices in 0.18μm CMOS technology. , 2015, , .		1
110	Novel architecture for wireless transducer based ultrasound imaging system. , 2016, , .		1
111	Performance analysis of IEEE 802.15.4 MAC layer: Prospect for multi-hop networks. , 2016, , .		1
112	Compact and Programmable Ultrasound Front-End Processing Module for Research Activities. , 2018, 2018, 921-924.		1
113	A Novel Feature Extraction Framework for Four Class Motor Imagery Classification using Log Determinant Regularized Riemannian Manifold. , 2019, 2019, 6754-6757.		1
114	A Novel Web Application Framework for Ubiquitous Classification of Fatty Liver Using Ultrasound Images. , 2019, , .		1
115	Smartphone Based Acoustic Navigation Tool for IoT Networks. Wireless Personal Communications, 2019, 108, 1547-1569.	1.8	1
116	Enhanced LoRa Data Rate through PATCH. , 2020, , .		1
117	Detection and Counting of Tassels for Maize Crop Monitoring using Multispectral Images. , 2020, , .		1
118	Novel technique for Multi Sensor Calibration of a UAV. , 2020, , .		1
119	CNN Based Water Stress Detection in Chickpea Using UAV Based Hyperspectral Imaging. , 2021, , .		1
120	IoT enabled communication device with mixer less low complex QPSK based transmitter architecture for low frequency applications. , 2014, , .		0
121	A neural network control approach to voltage stability enhancement. , 2014, , .		0
122	Wavelet domain frequency interpolation for photo-acoustic tomography. , 2014, , .		0
123	Novel energy model to analyze the effect of MAC and network parameters on asynchronous IEEE 802.15.4 multi-hop wireless networks lifetime. , 2014, , .		0
124	Bi-scale temporal sampling strategy for traffic-induced pollution data with Wireless Sensor Networks. , 2014, , .		0
125	A reconfigurable medically cohesive biomedical front-end with Î£Î” ADC in 0.18Âµm CMOS. , 2015, 2015, 833-6.		0
126	2π rotated Key2 shuffling and scrambling - a cryptic track. , 2015, , .		0

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127	Real Time Net Zero Energy Building Energy Manager with Heterogeneous Wireless Ad hoc Network Adaptable To IoT Architectures. , 2015, , .		0
128	A simple and accurate matrix for model based photoacoustic imaging. , 2016, , .		0
129	Non-local means kernel regression based despeckling of B-mode ultrasound images. , 2016, , .		0
130	Improved Energy Efficient Architecture for Wireless Sensor Networks with Mobile Sinks. , 2018, , .		0
131	Exploring cyclic prefix for secret data transmission over LTE networks. , 2018, , .		0
132	On building a smarter ecosystem using the internet of intelligent things: progress and future challenges. CSI Transactions on ICT, 2019, 7, 243-250.	0.7	0
133	CNN based framework for representative detection of liver images for CAD and tele-sonography applications. CSI Transactions on ICT, 2019, 7, 131-135.	0.7	0
134	Coarse Object Tracking Technique for Point Clouds. , 2020, , .		0
135	Efficient Processing Methodology for UAV Flight Path Detection. , 2020, , .		0
136	A SoC-Based Programmable Portable Ultrasound Scanning System for Point-of-Care Applications and Clinical Research Activities. SN Computer Science, 2022, 3, .	2.3	0