# Rajalakshmi Pachamuthu

## List of Publications by Citations



| 105 | 574 | 11 | 17 |
|---|---|---|---|
| papers | citations | h-index | g-index |
| 136 | 796 | 3.8 | 4.42 |
| ext. papers | ext. citations | avg, IF | L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 105 | A low power IoT network for smart agriculture **2018**, | | 42 |
| 104 | Adaptive rule engine based IoT enabled remote health care data acquisition and smart transmission system **2014**, | | 29 |
| 103 | . *IEEE Internet of Things Journal*, **2015**, 2, 210-220 | 10.7 | 28 |
| 102 | Computer Aided Abnormality Detection for Kidney on FPGA Based IoT Enabled Portable Ultrasound Imaging System. *Irbm*, **2016**, 37, 189-197 | 4.8 | 22 |
| 101 | WSN based power monitoring in smart grids **2011**, | | 20 |
| 100 | A Secure Phase-Encrypted IEEE 802.15.4 Transceiver Design. *IEEE Transactions on Computers*, **2017**, 66, 1421-1427 | 2.5 | 16 |
| 99 | Performance Analysis of CSMA/CA and PCA for Time Critical Industrial IoT Applications. *IEEE Transactions on Industrial Informatics*, **2018**, 14, 2281-2293 | 11.9 | 16 |
| 98 | 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 | 11.9 | 14 |
| 97 | Compressed sensing for different sensors: A real scenario for WSN and IoT **2016**, | | 14 |
| 96 | A Novel Computer-Aided Diagnosis Framework Using Deep Learning for Classification of Fatty Liver Disease in Ultrasound Imaging **2018**, | | 13 |
| 95 | Characterization of lens based photoacoustic imaging system. *Photoacoustics*, **2017**, 8, 37-47 | 9 | 11 |
| 94 | Automated quantification of ultrasonic fatty liver texture based on curvelet transform and SVD. *Biocybernetics and Biomedical Engineering*, **2018**, 38, 145-157 | 5.7 | 10 |
| 93 | Accurate and reliable 3-lead to 12-lead ECG reconstruction methodology for remote health monitoring applications **2013**, | | 10 |
| 92 | FPGA-Based Portable Ultrasound Scanning System with Automatic Kidney Detection. *Journal of Imaging*, **2015**, 1, 193-219 | 3.1 | 10 |
| 91 | FPGA based preliminary CAD for kidney on IoT enabled portable ultrasound imaging system **2014**, | | 10 |
| 90 | Wavelength reassignment algorithms for all-optical WDM backbone networks. *Optical Switching and Networking*, **2007**, 4, 147-156 | 1.6 | 10 |
| 89 | Multiview spatial compounding using lens-based photoacoustic imaging system. *Photoacoustics*, **2019**, 13, 85-94 | 9 | 9 |

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|---|---|---|---|
| 88 | 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 | 0.3 | 9 |
| 87 | A novel system architecture for brain controlled IoT enabled environments **2017**, | | 9 |
| 86 | **2011**, | | 9 |
| 85 | Novel Light Weight Compressed Data Aggregation using sparse measurements for IoT networks. *Journal of Network and Computer Applications*, **2018**, 121, 119-134 | 7.9 | 8 |
| 84 | IoT enabled smart and secure power monitor **2017**, | | 7 |
| 83 | Saturated Throughput Analysis of IEEE 802.11ad EDCA For High Data Rate 5G-IoT Applications. *IEEE Transactions on Vehicular Technology*, **2019**, 68, 4774-4785 | 6.8 | 7 |
| 82 | CR based WSAN for Field Area Network in Smart Grid **2013**, | | 7 |
| 81 | Two-sided residual refocusing for an acoustic lens-based photoacoustic imaging system. *Physics in Medicine and Biology*, **2018**, 63, 13NT03 | 3.8 | 6 |
| 80 | Real Time LiDAR Point Cloud Compression and Transmission for Intelligent Transportation System **2019**, | | 6 |
| 79 | Accurate and reliable 3-lead to 12-lead ECG reconstruction methodology for remote health monitoring applications. *Irbm*, **2014**, 35, 341-350 | 4.8 | 6 |
| 78 | Real time hardware implementable spectrum sensor for Cognitive Radio applications **2012**, | | 6 |
| 77 | 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 | 4 | 6 |
| 76 | A reliable covert channel over IEEE 802.15.4 using steganography **2016**, | | 6 |
| 75 | 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 | 10.7 | 6 |
| 74 | 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 | 5.2 | 6 |
| 73 | Reliability and Delay Analysis of Slotted Anycast Multi-Hop Wireless Networks Targeting Dense Traffic IoT Applications. *IEEE Communications Letters*, **2015**, 19, 727-730 | 3.8 | 5 |
| 72 | System Architecture for Low-Power Ubiquitously Connected Remote Health Monitoring Applications With Smart Transmission Mechanism. *IEEE Sensors Journal*, **2015**, 15, 4532-4543 | 4 | 5 |
| 71 | Neural Network Based Short Term Forecasting Engine to Optimize Energy and Big Data Storage Resources of Wireless Sensor Networks **2015**, | | 5 |

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| 70 | Deployment adviser tool for wireless sensor networks **2014**, | | 5 |
| 69 | Deep scattering convolution network based features for ultrasonic fatty liver tissue characterization. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2017**, | 0.9 | 5 |
| 68 | Context predictor based sparse sensing technique and smart transmission architecture for IoT enabled remote health monitoring applications. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2014**, 2014, 4151-4 | 0.9 | 5 |
| 67 | Load balanced routing to enhance the performance of optical backbone networks **2008**, | | 5 |
| 66 | Routing wavelength and time-slot reassignment algorithms for TDM based optical WDM networks. *Computer Communications*, **2007**, 30, 3491-3497 | 5.1 | 5 |
| 65 | Reconfigurable dual mode IEEE 802.15.4 digital baseband receiver for diverse IoT applications **2016** , | | 5 |
| 64 | Classification of Nonalcoholic Fatty Liver Texture Using Convolution Neural Networks **2018**, | | 5 |
| 63 | A Novel Low-Complexity Compressed Data Aggregation Method for Energy-Constrained IoT Networks. *IEEE Transactions on Green Communications and Networking*, **2020**, 4, 717-730 | 4 | 4 |
| 62 | A Low Power Minimal Error IEEE 802.15.4 Transceiver for Heart Monitoring in IoT Applications. *Wireless Personal Communications*, **2018**, 100, 611-629 | 1.9 | 4 |
| 61 | FPGA based ultrasound backend system with image enhancement technique **2014**, | | 4 |
| 60 | Centroid based 3D localization technique using RSSI with a mobile robot **2014**, | | 4 |
| 59 | Context aware building energy management system with heterogeneous wireless network architecture **2013**, | | 4 |
| 58 | Affordable low complexity heart/brain monitoring methodology for remote health care. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2015**, 2015, 5082-5 | 0.9 | 4 |
| 57 | Effect of Relay Nodes on End-to-End Delay in Multi-hop Wireless Ad-hoc Networks **2013**, | | 4 |
| 56 | Routing Wavelength and Timeslot Reassignment Algorithms for TDM based Optical WDM Networks - Multi rate traffic demands **2006**, | | 4 |
| 55 | Smartphone based automatic abnormality detection of kidney in ultrasound images **2016**, | | 4 |
| 54 | A Novel Classification for EEG Based Four Class Motor Imagery Using Kullback-Leibler Regularized Riemannian Manifold **2018**, | | 4 |
| 53 | Energy efficient wireless sensor networks utilizing adaptive dictionary in compressed sensing **2018**, | | 4 |

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| 52 | Fast Object Segmentation Pipeline for Point Clouds Using Robot Operating System **2019**, | | 3 |
| 51 | Analytical model of adaptive CSMA-CA MAC for reliable and timely clustered wireless multi-hop communication **2014**, | | 3 |
| 50 | Mobile phone based acoustic localization for wireless sensor networks **2015**, | | 3 |
| 49 | Automatic organ validation of b-mode ultrasound images for transmission to cloud **2014**, | | 3 |
| 48 | Novel sampling algorithm for Levy-walk based mobile phone sensing **2014**, | | 3 |
| 47 | Hardware-software co-design of AES on FPGA **2012**, | | 3 |
| 46 | Analytical Performance Computation for all Optical Networks with Wavelength Conversion. *IETE Journal of Research*, **2008**, 54, 31-38 | 0.9 | 3 |
| 45 | 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 | 5.2 | 3 |
| 44 | Modeling and Analysis of IEEE 802.15.4 Multi-hop Networks for IoT Applications. *Wireless Personal Communications*, **2018**, 100, 429-448 | 1.9 | 3 |
| 43 | Mobile phone based acoustic localization using Doppler shift for wireless sensor networks **2016**, | | 3 |
| 42 | Implementation of diagnostically driven compression algorithms via WebRTC for IoT enabled tele-sonography **2016**, | | 3 |
| 41 | A comparison of transmission line voltage stability indices **2016**, | | 3 |
| 40 | Multi-modal framework for automatic detection of diagnostically important regions in nonalcoholic fatty liver ultrasonic images. *Biocybernetics and Biomedical Engineering*, **2018**, 38, 586-601 | 5.7 | 2 |
| 39 | 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 | 3.1 | 2 |
| 38 | WebRTC based invariant scattering convolution network for automated validation of ultrasonic videos for IoT enabled tele-sonography **2018**, | | 2 |
| 37 | Emotion Detection IoT enabled Edge-node for Citizen Security **2019**, | | 2 |
| 36 | Fast Region of Interest detection for fetal genital organs in B-mode ultrasound images **2014**, | | 2 |
| 35 | Random node sampling approach for energy efficient data gathering in wireless sensor networks **2017**, | | 2 |

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| 34 | Subjective liver ultrasound video quality assessment of internet based videophone services for real-time telesonography **2017**, | | 2 |
| 33 | Compression techniques for IoT enabled handheld ultrasound imaging system **2014**, | | 2 |
| 32 | Low complex, programmable FPGA based 8-channel ultrasound transmitter for medical imaging researches **2014**, | | 2 |
| 31 | An Analytical Model for Wavelength-Convertible Optical Networks **2007**, | | 2 |
| 30 | Analytical Tool to Achieve Wavelength Conversion Performance in No Wavelength Conversion Optical WDM Networks **2007**, | | 2 |
| 29 | Discrimination of filled and unfilled grains of rice panicles using thermal and RGB images. *Journal of Cereal Science*, **2020**, 95, 103037 | 3.8 | 2 |
| 28 | Geo-referencing system for locating objects globally in LiDAR point cloud **2020**, | | 2 |
| 27 | Deep-Learning-Based Multispectral Image Reconstruction from Single Natural Color RGB Image Enhancing UAV-Based Phenotyping. *Remote Sensing*, **2022**, 14, 1272 | 5 | 2 |
| 26 | Smartphone based automatic organ validation in ultrasound video. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2017**, 2017, 4289-4292 | 0.9 | 1 |
| 25 | LoRa-based Alert System for Public-safety **2019**, | | 1 |
| 24 | Smartphone Based Acoustic Navigation Tool for IoT Networks. *Wireless Personal Communications*, **2019**, 108, 1547-1569 | 1.9 | 1 |
| 23 | Integrated 16-Channel Transmit and Receive Beamforming ASIC for Ultrasound Imaging **2015**, | | 1 |
| 22 | Sparseland model for speckle suppression of B-mode ultrasound images **2015**, | | 1 |
| 21 | Enhanced LoRa Data Rate through PATCH **2020**, | | 1 |
| 20 | Performance analysis of IEEE 802.15.4 MAC layer: Prospect for multi-hop networks **2016**, | | 1 |
| 19 | 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 | 2.9 | 1 |
| 18 | A Novel Feature Extraction Framework for Four Class Motor Imagery Classification using Log Determinant Regularized Riemannian Manifold. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2019**, 2019, 6754-6757 | 0.9 | 1 |
| 17 | A low complexity on-chip ECG data compression methodology targeting remote health-care applications. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2014**, 2014, 5944-7 | 0.9 | 1 |

# List of Publications

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| 16 | Performance analysis of hybrid multiple radio IoT architecture for ubiquitous connectivity **2015**, | | 1 |
| 15 | Portable ultrasound scanner for remote diagnosis **2015**, | | 1 |
| 14 | Multi-level classification: A generic classification method for medical datasets **2015**, | | 1 |
| 13 | Compressive sensing ultrasound beamformed imaging in time and frequency domain **2015**, | | 1 |
| 12 | 3D localization technique with mobile robot for improving operability of remote-control devices **2015**, | | 1 |
| 11 | Real Time Power Capping with Smart Circuit Breaker to Maximize Power Utilization of Local Generator **2015**, | | 1 |
| 10 | Distributed compressed sensing for photo-acoustic imaging **2015**, | | 1 |
| 9 | Design of feature extraction circuit for speech recognition applications **2012**, | | 1 |
| 8 | Region of Interest and Car Detection using LiDAR data for Advanced Traffic Management System **2020**, | | 1 |
| 7 | CIG based Stress Identification Method for Maize Crop using UAV based Remote Sensing **2020**, | | 1 |
| 6 | A 1.5mA, 2.4GHz ZigBee/BLE QLMVF Receiver Frond End with Split TCAs in 180nm CMOS **2016**, | | 1 |
| 5 | A deep learning based approach for classification of abdominal organs using ultrasound images. *Biocybernetics and Biomedical Engineering*, **2021**, 41, 779-791 | 5.7 | 0 |
| 4 | CNN based framework for representative detection of liver images for CAD and tele-sonography applications. *CSI Transactions on ICT*, **2019**, 7, 131-135 | 0.4 | |
| 3 | On building a smarter ecosystem using the internet of intelligent things: progress and future challenges. *CSI Transactions on ICT*, **2019**, 7, 243-250 | 0.4 | |
| 2 | A reconfigurable medically cohesive biomedical front-end with ΔΣADC in 0.18μm CMOS. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2015**, 2015, 833-6 | 0.9 | |
| 1 | Compact and Programmable Ultrasound Front-End Processing Module for Research Activities. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2018**, 2018, 921-924 | 0.9 | |