

Jayaraj Joseph

List of Publications by Year in descending order

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151
papers

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citations

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all docs

151
docs citations

151
times ranked

1104
citing authors

#	ARTICLE	IF	CITATIONS
1	A Machine Learning Pipeline for Measurement of Arterial Stiffness in A-Mode Ultrasound. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2022, 69, 106-113.	1.7	7
2	A novel time-resolved fluorescent lateral flow immunoassay for quantitative detection of the trauma brain injury biomarker-gliab fibrillary acidic protein. Sensors & Diagnostics, 2022, 1, 193-197.	1.9	5
3	Development and Evaluation of Europium-Based Quantitative Lateral Flow Immunoassay for the Chronic Kidney Disease Marker Cystatin-C. Journal of Fluorescence, 2022, 32, 419-426.	1.3	7
4	High-frame-rate A-mode ultrasound for calibration-free cuffless carotid pressure: feasibility study using lower body negative pressure intervention. Blood Pressure, 2022, 31, 19-30.	0.7	5
5	Community seroprevalence and risk factors for SARS-CoV-2 infection in different subpopulations in Vellore, India, and their implications for future prevention. International Journal of Infectious Diseases, 2022, 116, 138-146.	1.5	3
6	Image-Free Fast Ultrasound for Measurement of Local Pulse Wave Velocity: In Vitro Validation and In Vivo Feasibility. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2022, 69, 2248-2256.	1.7	4
7	Camera fusion for real-time temperature monitoring of neonates using deep learning. Medical and Biological Engineering and Computing, 2022, 60, 1787-1800.	1.6	7
8	Arterial pressure pulse wave separation analysis using a multi-Gaussian decomposition model. Physiological Measurement, 2022, 43, 055005.	1.2	4
9	Image-free ultrasound for local and regional vascular stiffness assessment: the ARTSENS Plus. Journal of Hypertension, 2022, 40, 1537-1544.	0.3	11
10	Assessment of Carotid Arterial Stiffness in Community Settings With ARTSENSÂ®. IEEE Journal of Translational Engineering in Health and Medicine, 2021, 9, 1-11.	2.2	28
11	A Cellulose Paper-Based Fluorescent Lateral Flow Immunoassay for the Quantitative Detection of Cardiac Troponin I. Biosensors, 2021, 11, 49.	2.3	28
12	Development and Evaluation of a Quantitative Fluorescent Lateral Flow Immunoassay for Cystatin-C, a Renal Dysfunction Biomarker. Sensors, 2021, 21, 3178.	2.1	15
13	An Accelerometric Sensor System With Integrated Hydrostatic Pressure Correction to Assess Carotid Arterial Stiffness. IEEE Sensors Journal, 2021, 21, 11163-11175.	2.4	4
14	Multi-Gaussian Model for Estimating Stiffness Surrogate using Arterial Diameter Waveform. , 2021, , .		0
15	Phantom Evaluation of a Time Warping Based Automated Arterial Wall Recognition and Tracking Method. , 2021, , .		0
16	IQVision: An Image-Based Evaluation Tool for Quantitative Lateral Flow Immunoassay Kits. Biosensors, 2021, 11, 211.	2.3	4
17	An Image-Free Ultrasound Device for Simultaneous Measurement of Local and Regional Arterial Stiffness Indices. , 2021, , .		2
18	Association of incremental pulse wave velocity with cardiometabolic risk factors. Scientific Reports, 2021, 11, 15413.	1.6	5

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19	Separation of Forward-Backward Waves in the Arterial System using Multi-Gaussian Approach from Single Pulse Waveform. , 2021, 2021, 5547-5550.		4
20	Evaluation of Vascular Pulse Contour Indices over the Physiological Blood Pressure Ranges in an Anesthetized Porcine Model. , 2021, 2021, 5594-5597.		1
21	High-Framerate A-Mode Ultrasound for Vascular Structural Assessments: In-Vivo Validation in a Porcine Model. , 2021, 2021, 5602-5605.		0
22	Phantom Assessment of an Image-free Ultrasound Technology for Online Local Pulse Wave Velocity Measurement. , 2021, 2021, 5610-5613.		0
23	Gaussian-Mixture Modelling of A-Mode Radiofrequency Scans for the Measurement of Arterial Wall Thickness. , 2021, 2021, 5598-5601.		1
24	Single M-Line Is as Reliable as Multiple M-Line Ultrasound for Carotid Artery Screening. Frontiers in Physiology, 2021, 12, 787083.	1.3	1
25	Local Pulse Wave Velocity: Theory, Methods, Advancements, and Clinical Applications. IEEE Reviews in Biomedical Engineering, 2020, 13, 74-112.	13.1	90
26	RPnet: A Deep Learning approach for robust R Peak detection in noisy ECG. , 2020, 2020, 345-348.		38
27	Robust Modelling of Reflectance Pulse Oximetry for SpO2 Estimation. , 2020, 2020, 374-377.		3
28	High-Throughput Vascular Screening by ARTSENS Pen During a Medical Camp for Early-Stage Detection of Chronic Kidney Disease. , 2020, 2020, 2752-2755.		0
29	Repeatability Study of Local Vascular Stiffness Measurement Using Carotid Surface Acceleration Plethysmogram. , 2020, 2020, 2699-2702.		0
30	Demonstration of Pressure-Dependent Inter and Intra-Cycle Variations in Local Pulse Wave Velocity Using Excised Bovine Carotid Artery. , 2020, 2020, 2707-2710.		0
31	Blood Pressure Estimation using Arterial Diameter: Exploring Different Machine Learning Methods. , 2020, , .		1
32	HRV based Stress Assessment of Individuals in a Work Environment. , 2020, , .		6
33	iQPrep Kit: A milli-fluidic test kit for immunodiagnostics. , 2020, , .		1
34	Carotid Stiffness Variations in the Presence of Established Risk Factors: Observations from a Clinical Study Using ARTSENS. , 2020, , .		1
35	A Bi-modal Probe Integrated with A-mode Ultrasound and Force Sensor for Single-site Assessment of Arterial Pressure-Diameter Loop. , 2020, , .		5
36	Feasibility Study of Arterial Stiffness Monitoring based on Reflected Wave Transit Time using Carotid Acceleration Plethysmogram. , 2020, , .		1

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37	A Dynamic Time Warping Method for Improved Arterial Wall-Tracking using A-mode Ultrasound Frames: A Proof-of-Concept. , 2020, , .		0
38	Fast body part segmentation and tracking of neonatal video data using deep learning. Medical and Biological Engineering and Computing, 2020, 58, 3049-3061.	1.6	14
39	iQuant Auto: Automated Rapid Test Platform for Immunodiagnosics. , 2020, 2020, 6131-6134.		1
40	Cuffless Blood Pressure Estimation Using Features Extracted from Carotid Dual-Diameter Waveforms. , 2020, 2020, 2719-2722.		2
41	Interpreting Deep Neural Networks for Single-Lead ECG Arrhythmia Classification. , 2020, 2020, 300-303.		16
42	A Study on the Subject and Location Specificity in Reflectance based SpO2 Estimation using R-value based Calibration Curve. , 2020, , .		1
43	Non-contact sensing of neonatal pulse rate using camera-based imaging: a clinical feasibility study. Physiological Measurement, 2020, 41, 024001.	1.2	20
44	ARTSENS [®] Penâ€™ portable easy-to-use device for carotid stiffness measurement: technology validation and clinical-utility assessment. Biomedical Physics and Engineering Express, 2020, 6, 025013.	0.6	27
45	Automated measurement of compression-decompression in arterial diameter and wall thickness by image-free ultrasound. Computer Methods and Programs in Biomedicine, 2020, 194, 105557.	2.6	12
46	Deep Learning for Blood Pressure Estimation: an Approach using Local Measure of Arterial Dual Diameter Waveforms. , 2019, , .		2
47	Image-based Tracking of Immunoassay Reaction Progress in Quantitative Lateral Flow Kits. , 2019, , .		1
48	Fall Detection Using Kinematic Features from a Wrist-Worn Inertial Sensor. , 2019, , .		0
49	Analytic Phase Based Approach for Arterial Diameter Evaluation Using A-Mode Ultrasound Frames. , 2019, , .		0
50	RespNet: A deep learning model for extraction of respiration from photoplethysmogram. , 2019, 2019, 5556-5559.		36
51	Polyp Segmentation using Generative Adversarial Network. , 2019, 2019, 7201-7204.		14
52	Image-Free Technique for Flow Mediated Dilation Using ARTSENS [®] Pen. , 2019, 2019, 5051-5054.		2
53	Arterial Stiffness in Elastic and Muscular Arteries: Measurement using ARTSENS Pen. , 2019, , .		1
54	Continuous Weight Monitoring System for ICU Beds using Air-filled Mattresses/Pads: A Proof of Concept. , 2019, , .		7

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55	Accuracy Enhancement of Total Force by Capacitive Insoles. , 2019, , .		7
56	Cuffless Evaluation of Arterial Pressure Waveform using Flexible Force Sensor: A Proof of Principle. , 2019, , .		2
57	Methodological and Measurement Concerns of Local Pulse Wave Velocity Assessment. , 2019, , .		2
58	A paper microfluidics-based fluorescent lateral flow immunoassay for point-of-care diagnostics of non-communicable diseases. Analyst, The, 2019, 144, 6291-6303.	1.7	19
59	Accelerometric patch probe for cuffless blood pressure evaluation from carotid local pulse wave velocity: design, development, and <i>in vivo</i> experimental study. Biomedical Physics and Engineering Express, 2019, 5, 045010.	0.6	15
60	Continuous Assessment of Carotid Diameter using an Accelerometer Patch Probe for Ambulatory Arterial Stiffness Monitoring. , 2019, 2019, 5038-5041.		1
61	A Motion Free Image Based TRF Reader for Quantitative Immunoassay. , 2019, , .		5
62	Multi-cartridge Fluorescence Reader for Quantitative Immunoassays. , 2019, 2019, 5447-5450.		0
63	Multimodal Image-Free Ultrasound Technique for Evaluation of Arterial Viscoelastic Properties: A Feasibility Study. , 2019, 2019, 5034-5037.		1
64	Deep Network for Capacitive ECG Denoising. , 2019, , .		9
65	A Portable Colorimetric Reader for Early and Rapid Diagnosis of Sepsis. , 2019, , .		0
66	Machine Learning based SpO2 Computation Using Reflectance Pulse Oximetry. , 2019, 2019, 482-485.		10
67	PPGnet: Deep Network for Device Independent Heart Rate Estimation from Photoplethysmogram. , 2019, 2019, 1899-1902.		17
68	Psi-Net: Shape and boundary aware joint multi-task deep network for medical image segmentation. , 2019, 2019, 7223-7226.		75
69	Pre-surgery Stress Monitoring Using Heart Rate Variability Measures. , 2019, 2019, 4592-4595.		5
70	Conv-MCD: A Plug-and-Play Multi-task Module for Medical Image Segmentation. Lecture Notes in Computer Science, 2019, , 292-300.	1.0	3
71	Deep detection and classification of mitotic figures. , 2019, , .		2
72	Arterial Blood Pressure Estimation From Local Pulse Wave Velocity Using Dual-Element Photoplethysmograph Probe. IEEE Transactions on Instrumentation and Measurement, 2018, 67, 1399-1408.	2.4	46

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73	Vascular Wall Stiffness Indices Detection Using an Accelerometer-Based System. , 2018, , .		1
74	An Improved System for Quantitative Immunoassay Measurement in ImageQuant. , 2018, , .		3
75	An In-Vivo Study on Intra-Day Variations in Vascular Stiffness using ARTSENS Pen. , 2018, 2018, 4575-4578.		0
76	Carotid Local Pulse Wave Velocity Measurement using Dual- Element Accelerometric Patch Probe. , 2018, 2018, 4571-4574.		0
77	Clinical Validation of a Wearable Respiratory Rate Device for Neonatal Monitoring. , 2018, 2018, 1628-1631.		2
78	Live Demonstration of ARTSENS [®] Pen-An Image-Free Ultrasound Device for Automated Evaluation of Vascular Stiffness. , 2018, , .		0
79	Local Evaluation of Variation in Pulse Wave Velocity over the Cardiac Cycle using Single-Element Ultrasound Transducer. , 2018, 2018, 4560-4563.		1
80	Reflectance Pulse Oximetry for Blood Oxygen Saturation Measurement from Diverse Locations-A Preliminary Analysis. , 2018, , .		3
81	Dry Electrode Optimization for Wrist-based Electrodermal Activity Monitoring. , 2018, , .		8
82	Measurement of Left Ventricular Parameters using Ultrasound Transducer “ a preliminary study. , 2018, , .		0
83	Arterial compliance probe for cuffless evaluation of carotid pulse pressure. PLoS ONE, 2018, 13, e0202480.	1.1	29
84	Physiological signal based work stress detection using unobtrusive sensors. Biomedical Physics and Engineering Express, 2018, 4, 065001.	0.6	39
85	ECGNet: Deep Network for Arrhythmia Classification. , 2018, , .		43
86	Bi-Modal Arterial Compliance Probe for Calibration-Free Cuffless Blood Pressure Estimation. IEEE Transactions on Biomedical Engineering, 2018, 65, 2392-2404.	2.5	51
87	Evaluation of Local Pulse Wave Velocity using an Image Free Ultrasound Technique. , 2018, , .		6
88	Measurement of Arterial Young's Elastic Modulus using ARTSENS Pen. , 2018, , .		0
89	Non-Invasive Assessment of Local Pulse Wave Velocity as Function of Arterial Pressure. , 2018, , .		1
90	Electrodermal Activity based Classification of Induced Stress in a Controlled Setting. , 2018, , .		14

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91	Post-Stroke Rehabilitation Monitoring Using Wireless Surface Electromyography: A Case Study. , 2018, , .		3
92	Sparse models and recursive computations for determining arterial dynamics. Biomedical Signal Processing and Control, 2017, 38, 9-21.	3.5	0
93	A Magnetic Plethysmograph Probe for Local Pulse Wave Velocity Measurement. IEEE Transactions on Biomedical Circuits and Systems, 2017, 11, 1065-1076.	2.7	37
94	Differential effects of physical and psychological stressors on electrodermal activity. , 2017, 2017, 4549-4552.		5
95	An image-free ultrasound method to estimate artery wall thickness surrogate for screening. , 2017, , .		2
96	Experimental validation of dual PPG local pulse wave velocity probe. , 2017, , .		13
97	ImageQuant: An image-based quantitative Immunoassay Analyzer. , 2017, , .		4
98	Accelerometer based system for continuous respiratory rate monitoring. , 2017, , .		28
99	Design, development and clinical validation of a novel urine output monitor. , 2017, , .		1
100	Design and implementation of a hand-to-hand multifrequency bioimpedance measurement scheme for Total Body Water estimation. , 2017, , .		1
101	iQuantâ„¢ Analyser: A rapid quantitative immunoassay reader. , 2017, 2017, 3732-3736.		7
102	High altitude study on finger reflectance SpO ₂ . , 2017, , .		2
103	PhoneQuant: A smartphone-based quantitative immunoassay analyser. , 2017, 2017, 4247-4250.		3
104	Brachial artery stiffness estimation using ARTSENS. , 2017, 2017, 262-265.		2
105	ARTSENSÂ® orientation navigation system: A study towards faster arterial stiffness measurements. , 2017, 2017, 1380-1384.		0
106	Measurement of carotid blood pressure and local pulse wave velocity changes during cuff induced hyperemia. , 2017, 2017, 1700-1703.		4
107	System design to prevent Ventilator Associated Pneumonia. , 2017, , .		0
108	An accelerometer probe for local pulse wave velocity measurement. , 2017, , .		9

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109	ARTSENSÂ® Pen: A portable, image-free device for automated evaluation of vascular stiffness. , 2016, , .		13
110	Comparison of measurement of the augmentation index from ARTSENS and eTRACKING. Biomedical Physics and Engineering Express, 2016, 2, 015007.	0.6	2
111	ARTSENSÂ® mobile: A portable image-free platform for automated evaluation of vascular stiffness. , 2016, 2016, 5204-5207.		0
112	Printed, skin-mounted hybrid system for ECG measurements. , 2016, , .		10
113	Arterial compliance probe for calibration free pulse pressure measurement. , 2016, , .		9
114	ImQuant â€” An image based fluorescence reader for quantitative lateral flow immunoassays. , 2016, 2016, 5152-5155.		5
115	A reflectance photoplethysmography based device to detect circulatory disruptions. , 2016, , .		1
116	An image based quantitative fluorescence immunoassay reader for HbA1c testing: Calibration & repeatability study. , 2016, , .		1
117	Design, development and clinical validation of a wrist-based optical heart rate monitor. , 2016, , .		26
118	Design and preliminary analysis of a multifrequency bioimpedance measurement scheme. , 2016, , .		4
119	Single source photoplethysmograph transducer for local pulse wave velocity measurement. , 2016, 2016, 4256-4259.		13
120	A novel system to tackle hospital acquired pressure ulcers. , 2016, 2016, 4780-4783.		8
121	Wearable ECG platform for continuous cardiac monitoring. , 2016, 2016, 623-626.		37
122	A wrist worn SpO<inf>2</inf> monitor with custom finger probe for motion artifact removal. , 2016, 2016, 5777-5780.		7
123	Carotid and Jugular Classification in ARTSENS. IEEE Journal of Biomedical and Health Informatics, 2016, 20, 440-449.	3.9	15
124	An Imageless Ultrasound Device to Measure Local and Regional Arterial Stiffness. IEEE Transactions on Biomedical Circuits and Systems, 2016, 10, 200-208.	2.7	15
125	Cataract surgery in mobile eye surgical unit: Safe and viable alternative. Indian Journal of Ophthalmology, 2016, 64, 835.	0.5	12
126	Technical Validation of ARTSENSâ€”An Image Free Device for Evaluation of Vascular Stiffness. IEEE Journal of Translational Engineering in Health and Medicine, 2015, 3, 1-13.	2.2	50

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127	Automatic Measurement of End-Diastolic Arterial Lumen Diameter in ARTSENS. Journal of Medical Devices, Transactions of the ASME, 2015, 9, .	0.4	42
128	Image based quantitative reader for Lateral flow immunofluorescence assay. , 2015, 2015, 1223-6.		7
129	Arterial compliance probe for local blood pulse wave velocity measurement. , 2015, 2015, 5712-5.		11
130	Sparse models for determining arterial dynamics. , 2015, , .		1
131	ARTSENSTouch - A portable device for evaluation of carotid artery stiffness. , 2015, 2015, 3755-8.		6
132	Ultrasound signal quality parameterization for image-free evaluation of arterial stiffness. , 2014, 2014, 2326-9.		14
133	Magnetic plethysmograph transducers for local blood pulse wave velocity measurement. , 2014, 2014, 1953-6.		18
134	An improved method for detection of carotid walls in ARTSENS. , 2014, 2014, 1957-60.		14
135	A study on the use of PPC in quantifying circulatory disruptions. , 2014, 2014, 1739-42.		1
136	Vascular compliance probe with integrated ECG for image-free evaluation of arterial stiffness. , 2014, , .		1
137	Evaluation of the algorithm for automatic identification of the common carotid artery in ARTSENS. Physiological Measurement, 2014, 35, 1299-1317.	1.2	24
138	Image-free evaluation of carotid artery stiffness using ARTSENS: A repeatability study. , 2014, 2014, 4799-802.		9
139	Local Pulse Wave Velocity estimation using Magnetic Plethysmograph. , 2013, 2013, 2287-90.		2
140	ARTSENS - An image-free system for noninvasive evaluation of arterial compliance. , 2013, 2013, 4054-7.		18
141	Automatic measurement of lumen diameter of carotid artery in A-Mode ultrasound. , 2013, 2013, 3873-6.		11
142	Automated system for imageless evaluation of arterial compliance. , 2012, 2012, 227-31.		39
143	A novel magnetic plethysmograph for non-invasive evaluation of arterial compliance. , 2012, 2012, 1169-72.		7
144	Non-invasive estimation of arterial compliance. , 2011, , .		3

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145	A Virtual Instrument for Automated Measurement of Arterial Compliance. Journal of Medical Devices, Transactions of the ASME, 2010, 4, .	0.4	35
146	Magnetic sensor for non-invasive detection of blood pulse and estimation of arterial compliance. , 2010, , .		9
147	On the use of concurrent high frequency excitation during a short circuit test in a power transformer. , 2009, , .		1
148	A PC based system for non-invasive measurement of carotid artery compliance. , 2009, , .		13
149	An improved echo tracking algorithm for arterial distensibility measurements. , 2009, , .		6
150	Measurements for proof of concept validation of a twin unidirectional turbine wave energy plant. , 2009, , .		1
151	A virtual instrument for real time in vivo measurement of carotid artery compliance. , 2008, 2008, 2281-4.		9