

Mohanasankar Sivaprakasam

List of Publications by Year in descending order

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149
papers

1,923
citations

471061

17
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377514

34
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150
all docs

150
docs citations

150
times ranked

1503
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	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
3	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
4	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
5	Arterial pressure pulse wave separation analysis using a multi-Gaussian decomposition model. Physiological Measurement, 2022, 43, 055005.	1.2	4
6	Automatic 3D MRI-Ultrasound Registration for Image Guided Arthroscopy. Applied Sciences (Switzerland), 2022, 12, 5488.	1.3	2
7	Adapting The Quadruple Aim For The Benefit Of The Stakeholders In Academic Healthcare Research. , 2022, , .		1
8	A Mannequin-Based Training System With Integrated Sensors for Ophthalmic Sub-Tenon Anesthesia. IEEE Sensors Journal, 2021, 21, 3839-3848.	2.4	1
9	Comparative study of silicone membrane simulator and animal eye models for sub-Tenon's block. Journal of Clinical Monitoring and Computing, 2021, 35, 1519-1524.	0.7	0
10	An Accelerometric Sensor System With Integrated Hydrostatic Pressure Correction to Assess Carotid Arterial Stiffness. IEEE Sensors Journal, 2021, 21, 11163-11175.	2.4	4
11	Multi-Gaussian Model for Estimating Stiffness Surrogate using Arterial Diameter Waveform. , 2021, , .		0
12	Phantom Evaluation of a Time Warping Based Automated Arterial Wall Recognition and Tracking Method. , 2021, , .		0
13	IQVision: An Image-Based Evaluation Tool for Quantitative Lateral Flow Immunoassay Kits. Biosensors, 2021, 11, 211.	2.3	4
14	An Image-Free Ultrasound Device for Simultaneous Measurement of Local and Regional Arterial Stiffness Indices. , 2021, , .		2
15	A deep cascade of ensemble of dual domain networks with gradient-based T1 assistance and perceptual refinement for fast MRI reconstruction. Computerized Medical Imaging and Graphics, 2021, 91, 101942.	3.5	6
16	Association of incremental pulse wave velocity with cardiometabolic risk factors. Scientific Reports, 2021, 11, 15413.	1.6	5
17	VerSe: A Vertebrae labelling and segmentation benchmark for multi-detector CT images. Medical Image Analysis, 2021, 73, 102166.	7.0	112
18	High-Framerate A-Mode Ultrasound for Vascular Structural Assessments: In-Vivo Validation in a Porcine Model. , 2021, 2021, 5602-5605.		0

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19	Phantom Assessment of an Image-free Ultrasound Technology for Online Local Pulse Wave Velocity Measurement. , 2021, 2021, 5610-5613.		0
20	Gaussian-Mixture Modelling of A-Mode Radiofrequency Scans for the Measurement of Arterial Wall Thickness. , 2021, 2021, 5598-5601.		1
21	Local Pulse Wave Velocity: Theory, Methods, Advancements, and Clinical Applications. IEEE Reviews in Biomedical Engineering, 2020, 13, 74-112.	13.1	90
22	High-Throughput Vascular Screening by ARTSENS Pen During a Medical Camp for Early-Stage Detection of Chronic Kidney Disease. , 2020, 2020, 2752-2755.		0
23	Demonstration of Pressure-Dependent Inter and Intra-Cycle Variations in Local Pulse Wave Velocity Using Excised Bovine Carotid Artery. , 2020, 2020, 2707-2710.		0
24	HRV based Stress Assessment of Individuals in a Work Environment. , 2020, , .		6
25	Heart Rate Variability Analysis During Exercise in Hypoxia Chamber. , 2020, , .		1
26	Feasibility Study of Arterial Stiffness Monitoring based on Reflected Wave Transit Time using Carotid Acceleration Plethysmogram. , 2020, , .		1
27	A Dynamic Time Warping Method for Improved Arterial Wall-Tracking using A-mode Ultrasound Frames: A Proof-of-Concept. , 2020, , .		0
28	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
29	ARTSENS [®] Pen [®] 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
30	Semantic segmentation of microscopic neuroanatomical data by combining topological priors with encoder [®] decoder deep networks. Nature Machine Intelligence, 2020, 2, 585-594.	8.3	12
31	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
32	Deep Learning for Blood Pressure Estimation: an Approach using Local Measure of Arterial Dual Diameter Waveforms. , 2019, , .		2
33	A Sensor System to Assess the Ocular Digital Massage in an Ophthalmic Anaesthesia Training System. IEEE Sensors Journal, 2019, 19, 10812-10820.	2.4	2
34	Image-based Tracking of Immunoassay Reaction Progress in Quantitative Lateral Flow Kits. , 2019, , .		1
35	Image-Free Technique for Flow Mediated Dilation Using ARTSENS [®] Pen. , 2019, 2019, 5051-5054.		2
36	Continuous Weight Monitoring System for ICU Beds using Air-filled Mattresses/Pads: A Proof of Concept. , 2019, , .		7

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37	Effectiveness of a continuous patient position monitoring system in improving hospital turn protocol compliance in an ICU: A multiphase multisite study in India. <i>Journal of the Intensive Care Society</i> , 2019, 20, 309-315.	1.1	11
38	Cuffless Evaluation of Arterial Pressure Waveform using Flexible Force Sensor: A Proof of Principle. , 2019, , .		2
39	Methodological and Measurement Concerns of Local Pulse Wave Velocity Assessment. , 2019, , .		2
40	Accelerometric patch probe for cuffless blood pressure evaluation from carotid local pulse wave velocity: design, development, and <i>in vivo</i> experimental study. <i>Biomedical Physics and Engineering Express</i> , 2019, 5, 045010.	0.6	15
41	Fully Convolutional Networks for Monocular Retinal Depth Estimation and Optic Disc-Cup Segmentation. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2019, 23, 1417-1426.	3.9	49
42	Continuous Assessment of Carotid Diameter using an Accelerometer Patch Probe for Ambulatory Arterial Stiffness Monitoring. , 2019, 2019, 5038-5041.		1
43	Multi-cartridge Fluorescence Reader for Quantitative Immunoassays. , 2019, 2019, 5447-5450.		0
44	A Yellowâ€“Orange Wavelength-Based Short-Term Heart Rate Variability Measurement Scheme for Wrist-Based Wearables. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2018, 67, 1091-1101.	2.4	12
45	Arterial Blood Pressure Estimation From Local Pulse Wave Velocity Using Dual-Element Photoplethysmograph Probe. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2018, 67, 1399-1408.	2.4	46
46	Virtual Instrumentation System With Real-Time Visual Feedback and Needle Position Warning Suitable for Ophthalmic Anesthesia Training. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2018, 67, 1111-1123.	2.4	9
47	Vascular Wall Stiffness Indices Detection Using an Accelerometer-Based System. , 2018, , .		1
48	An In-Vivo Study on Intra-Day Variations in Vascular Stiffness using ARTSENS Pen. , 2018, 2018, 4575-4578.		0
49	Carotid Local Pulse Wave Velocity Measurement using Dual- Element Accelerometric Patch Probe. , 2018, 2018, 4571-4574.		0
50	Live Demonstration of ARTSENSÂ® Pen-An Image-Free Ultrasound Device for Automated Evaluation of Vascular Stiffness. , 2018, , .		0
51	Development of a Load-Cell Based Palpation Sensor Suitable for Ophthalmic Anesthesia Training. , 2018, 2018, 929-932.		3
52	Reflectance Pulse Oximetry for Blood Oxygen Saturation Measurement from Diverse Locations-A Preliminary Analysis. , 2018, , .		3
53	Self-Balancing Signal Conditioning Circuit for a Floating-Wiper Resistive Displacement Sensor. <i>IEEE Sensors Journal</i> , 2018, 18, 7544-7550.	2.4	6
54	Arterial compliance probe for cuffless evaluation of carotid pulse pressure. <i>PLoS ONE</i> , 2018, 13, e0202480.	1.1	29

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55	Bi-Modal Arterial Compliance Probe for Calibration-Free Cuffless Blood Pressure Estimation. IEEE Transactions on Biomedical Engineering, 2018, 65, 2392-2404.	2.5	51
56	Evaluation of Local Pulse Wave Velocity using an Image Free Ultrasound Technique. , 2018, , .		6
57	Non-Invasive Assessment of Local Pulse Wave Velocity as Function of Arterial Pressure. , 2018, , .		1
58	Sparse models and recursive computations for determining arterial dynamics. Biomedical Signal Processing and Control, 2017, 38, 9-21.	3.5	0
59	A Magnetic Plethysmograph Probe for Local Pulse Wave Velocity Measurement. IEEE Transactions on Biomedical Circuits and Systems, 2017, 11, 1065-1076.	2.7	37
60	Differential effects of physical and psychological stressors on electrodermal activity. , 2017, 2017, 4549-4552.		5
61	Joint Optic Disc and Cup Segmentation Using Fully Convolutional and Adversarial Networks. Lecture Notes in Computer Science, 2017, , 168-176.	1.0	63
62	An image-free ultrasound method to estimate artery wall thickness surrogate for screening. , 2017, , .		2
63	Experimental validation of dual PPG local pulse wave velocity probe. , 2017, , .		13
64	ImageQuant: An image-based quantitative Immunoassay Analyzer. , 2017, , .		4
65	Accelerometer based system for continuous respiratory rate monitoring. , 2017, , .		28
66	Design, development and clinical validation of a novel urine output monitor. , 2017, , .		1
67	Design and implementation of a hand-to-hand multifrequency bioimpedance measurement scheme for Total Body Water estimation. , 2017, , .		1
68	A novel sensor for wrist based optical heart rate monitor. , 2017, , .		8
69	Local characterization of neovascularization and identification of proliferative diabetic retinopathy in retinal fundus images. Computerized Medical Imaging and Graphics, 2017, 55, 124-132.	3.5	35
70	High altitude study on finger reflectance SpO ₂ . , 2017, , .		2
71	PhoneQuant: A smartphone-based quantitative immunoassay analyser. , 2017, 2017, 4247-4250.		3
72	Brachial artery stiffness estimation using ARTSENS. , 2017, 2017, 262-265.		2

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73	Measurement of carotid blood pressure and local pulse wave velocity changes during cuff induced hyperemia. , 2017, 2017, 1700-1703.		4
74	System design to prevent Ventilator Associated Pneumonia. , 2017, , .		0
75	An intelligent mannequin based system with real-time view of regional ophthalmic blocks. , 2017, , .		2
76	An accelerometer probe for local pulse wave velocity measurement. , 2017, , .		9
77	ARTSENSÂ® Pen: A portable, image-free device for automated evaluation of vascular stiffness. , 2016, , .		13
78	Comparison of measurement of the augmentation index from ARTSENS and eTRACKING. Biomedical Physics and Engineering Express, 2016, 2, 015007.	0.6	2
79	ARTSENSÂ® mobile: A portable image-free platform for automated evaluation of vascular stiffness. , 2016, 2016, 5204-5207.		0
80	Printed, skin-mounted hybrid system for ECG measurements. , 2016, , .		10
81	Arterial compliance probe for calibration free pulse pressure measurement. , 2016, , .		9
82	ImQuant â€” An image based fluorescence reader for quantitative lateral flow immunoassays. , 2016, 2016, 5152-5155.		5
83	A reflectance photoplethysmography based device to detect circulatory disruptions. , 2016, , .		1
84	An image based quantitative fluorescence immunoassay reader for HbA1c testing: Calibration & repeatability study. , 2016, , .		1
85	Design, development and clinical validation of a wrist-based optical heart rate monitor. , 2016, , .		26
86	Design and preliminary analysis of a multifrequency bioimpedance measurement scheme. , 2016, , .		4
87	Single source photoplethysmograph transducer for local pulse wave velocity measurement. , 2016, 2016, 4256-4259.		13
88	A novel system to tackle hospital acquired pressure ulcers. , 2016, 2016, 4780-4783.		8
89	Wearable ECG platform for continuous cardiac monitoring. , 2016, 2016, 623-626.		37
90	A wrist worn SpO<inf>2</inf> monitor with custom finger probe for motion artifact removal. , 2016, 2016, 5777-5780.		7

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91	Carotid and Jugular Classification in ARTSENS. IEEE Journal of Biomedical and Health Informatics, 2016, 20, 440-449.	3.9	15
92	A Novel GMR-Based Eddy Current Sensing Probe With Extended Sensing Range. IEEE Transactions on Magnetism, 2016, 52, 1-12.	1.2	12
93	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
94	Cataract surgery in mobile eye surgical unit: Safe and viable alternative. Indian Journal of Ophthalmology, 2016, 64, 835.	0.5	12
95	Technical Validation of ARTSENS – 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
96	Automatic Measurement of End-Diastolic Arterial Lumen Diameter in ARTSENS. Journal of Medical Devices, Transactions of the ASME, 2015, 9, .	0.4	42
97	Image based quantitative reader for Lateral flow immunofluorescence assay. , 2015, 2015, 1223-6.		7
98	A simple measurement scheme for multiple capacitors and its application to an ophthalmic anesthesia training system. , 2015, , .		1
99	An Eye Toward Improving: A new training approach in ophthalmic anesthesia provides qualitative and quantitative feedback.. IEEE Pulse, 2015, 6, 20-25.	0.1	2
100	Arterial compliance probe for local blood pulse wave velocity measurement. , 2015, 2015, 5712-5.		11
101	Sparse models for determining arterial dynamics. , 2015, , .		1
102	Computer-assisted identification of proliferative diabetic retinopathy in color retinal images. , 2015, 2015, 5642-5.		4
103	Computer-assisted grading of diabetic macular edema on retinal color fundus images. , 2015, 2015, 4330-3.		6
104	ARTSENSTouch - A portable device for evaluation of carotid artery stiffness. , 2015, 2015, 3755-8.		6
105	A Multi-Electrode Electric Field Based Sensing System For Ophthalmic Anesthesia Training. IEEE Transactions on Biomedical Circuits and Systems, 2015, 9, 431-440.	2.7	5
106	Evaluation of an Ophthalmic Anesthesia Simulation System for Regional Block Training. Ophthalmology, 2015, 122, 2578-2580.	2.5	10
107	An ocular compression device for reduction of elevated post anesthetic intraocular pressure. , 2014, 2014, 4819-22.		0
108	Ultrasound signal quality parameterization for image-free evaluation of arterial stiffness. , 2014, 2014, 2326-9.		14

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109	Magnetic plethysmograph transducers for local blood pulse wave velocity measurement. , 2014, 2014, 1953-6.		18
110	An Ophthalmic Anesthesia Training System Using Integrated Capacitive and Hall Effect Sensors. IEEE Transactions on Instrumentation and Measurement, 2014, 63, 1153-1162.	2.4	15
111	Automatic estimation of carotid arterial pressure in ARTSENS. , 2014, , .		4
112	Packaging and evaluation of an online tool for locating metal shrapnel during surgery. , 2014, , .		0
113	Axonal transport velocity estimation from kymographs based on curvilinear feature extraction and spline fitting. , 2014, 2014, 4240-3.		1
114	An improved method for detection of carotid walls in ARTSENS. , 2014, 2014, 1957-60.		14
115	A study on the use of PPG in quantifying circulatory disruptions. , 2014, 2014, 1739-42.		1
116	Vascular compliance probe with integrated ECG for image-free evaluation of arterial stiffness. , 2014, , .		1
117	Evaluation of the algorithm for automatic identification of the common carotid artery in ARTSENS. Physiological Measurement, 2014, 35, 1299-1317.	1.2	24
118	Image-free evaluation of carotid artery stiffness using ARTSENS: A repeatability study. , 2014, 2014, 4799-802.		9
119	A New Inductive Proximity Sensor Based Guiding Tool to Locate Metal Shrapnel During Surgery. IEEE Transactions on Instrumentation and Measurement, 2014, 63, 2940-2949.	2.4	8
120	Locating metal shrapnel in human body using GMR sensors. , 2014, , .		0
121	Computer assisted analysis of axonal transport velocities from kymographs. , 2014, , .		0
122	Local Pulse Wave Velocity estimation using Magnetic Plethysmograph. , 2013, 2013, 2287-90.		2
123	A syringe injection rate detector employing a dual Hall-effect sensor configuration. , 2013, 2013, 4734-7.		4
124	An efficient capacitive sensing scheme for an ophthalmic regional anesthesia training system. , 2013, 2013, 894-7.		2
125	An intelligent ophthalmic regional anesthesia training system based on capacitive sensing. , 2013, , .		5
126	A new inductive proximity sensor as a guiding tool for removing metal shrapnel during surgery. , 2013, , .		5

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127	A GMR sensor based guiding tool for location of metal shrapnel during surgery. , 2013, , .		3
128	ARTSENS - An image-free system for noninvasive evaluation of arterial compliance. , 2013, 2013, 4054-7.		18
129	Automatic measurement of lumen diameter of carotid artery in A-Mode ultrasound. , 2013, 2013, 3873-6.		11
130	A Hall Effect sensor based syringe injection rate detector. , 2012, , .		3
131	Automated system for imageless evaluation of arterial compliance. , 2012, 2012, 227-31.		39
132	A novel magnetic plethysmograph for non-invasive evaluation of arterial compliance. , 2012, 2012, 1169-72.		7
133	A capacitive array sensing based training system for ophthalmic anesthesia. , 2011, , .		3
134	A 128-Channel 6mW Wireless Neural Recording IC with On-the-Fly Spike Sorting and UWB Tansmitter. , 2008, , .		95
135	Design Optimization for Integrated Neural Recording Systems. IEEE Journal of Solid-State Circuits, 2008, 43, 1931-1939.	3.5	102
136	Application of MEMS technology and engineering in medicine: a new paradigm for facial muscle reanimation. Expert Review of Medical Devices, 2008, 5, 371-381.	1.4	10
137	A 4-channel wearable wireless neural recording system. , 2008, , .		12
138	Systems design of a high resolution retinal prosthesis. , 2008, , .		7
139	Challenges in System and Circuit Design for High Density Retinal Prosthesis. , 2006, , .		0
140	A Dual Band Wireless Power and Data Telemetry for Retinal Prosthesis. , 2006, 2006, 4392-5.		83
141	Towards a Modular 32 x 32 Pixel Stimulator for Retinal Prosthesis. , 2006, , .		2
142	A Transcutaneous Data Telemetry System Tolerant to Power Telemetry Interference. , 2006, 2006, 5884-7.		11
143	A Transcutaneous Data Telemetry System Tolerant to Power Telemetry Interference. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0
144	A Dual Band Wireless Power and Data Telemetry for Retinal Prosthesis. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0

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145	Implantable biomimetic microelectronic systems design. IEEE Engineering in Medicine and Biology Magazine, 2005, 24, 66-74.	1.1	51
146	A Programmable Discharge Circuitry With Current Limiting Capability for a Retinal Prosthesis. , 2005, 2005, 5234-7.		2
147	Architecture Tradeoffs in High Density Microstimulators for Retinal Prosthesis. , 2005, , .		18
148	A variable range bi-phasic current stimulus driver circuitry for an implantable retinal prosthetic device. IEEE Journal of Solid-State Circuits, 2005, 40, 763-771.	3.5	137
149	Electronic Visual Prosthesis. Artificial Organs, 2003, 27, 986-995.	1.0	39