

Marian Walter

List of Publications by Year in descending order

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112
papers

1,784
citations

361413

20
h-index

302126

39
g-index

123
all docs

123
docs citations

123
times ranked

1931
citing authors

#	ARTICLE	IF	CITATIONS
1	Dual-Modality Volume Measurement Integrated on a Ventricular Assist Device. IEEE Transactions on Biomedical Engineering, 2022, 69, 1151-1161.	4.2	2
2	Hemolytic Performance in Two Generations of the Sputnik Left Ventricular Assist Device: A Combined Numerical and Experimental Study. Journal of Functional Biomaterials, 2022, 13, 7.	4.4	7
3	Unobtrusive Measurement of Physiological Features Under Simulated and Real Driving Conditions. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 4767-4777.	8.0	4
4	Head Tracking in Automotive Environments for Driver Monitoring Using a Low Resolution Thermal Camera. Vehicles, 2022, 4, 219-233.	3.1	2
5	Comparison of the Hemocompatibility of an Axial and a Centrifugal Left Ventricular Assist Device in an In Vitro Test Circuit. Journal of Clinical Medicine, 2022, 11, 3431.	2.4	1
6	Correlation between Myocardial Function and Electric Current Pulsatility of the Sputnik Left Ventricular Assist Device: In-Vitro Study. Applied Sciences (Switzerland), 2021, 11, 3359.	2.5	4
7	Multi-channel bioimpedance spectroscopy based on orthogonal baseband shifting. Physiological Measurement, 2021, 42, .	2.1	2
8	A model-based source separation algorithm for lung perfusion imaging using electrical impedance tomography. Physiological Measurement, 2021, 42, 084001.	2.1	10
9	Dynamic lung behavior under high G acceleration monitored with electrical impedance tomography. Physiological Measurement, 2021, 42, 094001.	2.1	7
10	Monitoring transcellular fluid shifts during episodes of intradialytic hypotension using bioimpedance spectroscopy. CKJ: Clinical Kidney Journal, 2021, 14, 149-155.	2.9	6
11	Electrodynamics of Axial-Flow Rotary Blood Pumps. IEEE Access, 2021, , 1-1.	4.2	0
12	Bandwidth and Common Mode Optimization for Current and Voltage Sources in Bioimpedance Spectroscopy. Journal of Electrical Bioimpedance, 2021, 12, 135-146.	0.9	2
13	Improved estimation of left ventricular volume from electric field modeling. Journal of Electrical Bioimpedance, 2021, 12, 125-134.	0.9	0
14	Car Seats with Capacitive ECG Electrodes Can Detect Cardiac Pacemaker Spikes. Sensors, 2020, 20, 6288.	3.8	12
15	Backstepping Control with Radial Basis Function Network for a Nonlinear Cardiopulmonary System. IFAC-PapersOnLine, 2020, 53, 16311-16316.	0.9	1
16	<i>In silico</i> and <i>in vitro</i> conductivity models of the left heart ventricle. Journal of Electrical Bioimpedance, 2020, 11, 62-71.	0.9	5
17	Influence of Measurement Pattern on RAW-data in Electrical Impedance Tomography. IFMBE Proceedings, 2020, , 11-17.	0.3	0
18	Hardware-in-the-loop test bench for artificial lungs. AIP Conference Proceedings, 2019, , .	0.4	4

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19	Reconstruction algorithm for frequency-differential EIT using absolute values. Physiological Measurement, 2019, 40, 034008.	2.1	10
20	Advances in Hemodynamic Analysis in Cardiovascular Diseases Investigation of Energetic Characteristics of Adult and Pediatric Sputnik Left Ventricular Assist Devices during Mock Circulation Support. Cardiology Research and Practice, 2019, 2019, 1-15.	1.1	15
21	A Novel Control Method for Rotary Blood Pumps as Left Ventricular Assist Device Utilizing Aortic Valve State Detection. BioMed Research International, 2019, 2019, 1-12.	1.9	7
22	Online cardiac output estimation during transvalvular left ventricular assistance. Computer Methods and Programs in Biomedicine, 2019, 171, 87-97.	4.7	8
23	Knee-to-knee bioimpedance measurements to monitor changes in extracellular fluid in haemodynamic-unstable patients during dialysis. Journal of Electrical Bioimpedance, 2019, 10, 55-62.	0.9	2
24	Fault Identification in a Blood Pump Using Neural Networks. IFMBE Proceedings, 2019, , 27-32.	0.3	0
25	Addition of internal electrodes is beneficial for focused bioimpedance measurements in the lung. Physiological Measurement, 2018, 39, 035009.	2.1	3
26	Real-time ECG Simulation for Hybrid Mock Circulatory Loops. Artificial Organs, 2018, 42, 131-140.	1.9	3
27	Heart phantom with electrical properties of heart muscle tissue. Current Directions in Biomedical Engineering, 2018, 4, 97-100.	0.4	4
28	Local Interval Estimation Improves Accuracy and Robustness of Heart Rate Variability Derivation from Photoplethysmography. , 2018, 2018, 3558-3561.		9
29	An algorithm of system identification for implantable rotary blood pumps. , 2018, , .		1
30	Robust physiological control of rotary blood pumps for heart failure therapy. Automatisierungstechnik, 2018, 66, 767-779.	0.8	7
31	Regional lung ventilation and perfusion by electrical impedance tomography compared to single-photon emission computed tomography. Physiological Measurement, 2018, 39, 065004.	2.1	22
32	Motion Artifact Quantification and Sensor Fusion for Unobtrusive Health Monitoring. Sensors, 2018, 18, 38.	3.8	24
33	Evaluation of electrical impedance tomography for determination of urinary bladder volume: comparison with standard ultrasound methods in healthy volunteers. BioMedical Engineering OnLine, 2018, 17, 95.	2.7	32
34	Robust Assistance Control of Left Ventricular Assist Devices. IFMBE Proceedings, 2018, , 294-297.	0.3	1
35	Three-dimensional pulmonary monitoring using focused electrical impedance measurements. Journal of Electrical Bioimpedance, 2018, 9, 84-95.	0.9	0
36	Physiological closed-loop control of mechanical ventilation and extracorporeal membrane oxygenation. Biomedizinische Technik, 2017, 62, 199-212.	0.8	3

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37	A synthesizer framework for multimodal cardiorespiratory signals. Biomedical Physics and Engineering Express, 2017, 3, 035028.	1.2	13
38	Decentralized safety concept for closed-loop controlled intensive care. Biomedizinische Technik, 2017, 62, 213-223.	0.8	2
39	SensInDen™ Noncontact Sensors Integrated Into Dental Treatment Units. IEEE Transactions on Biomedical Circuits and Systems, 2017, 11, 225-233.	4.0	8
40	Minimizing left ventricular stroke work with iterative learning flow profile control of rotary blood pumps. Biomedical Signal Processing and Control, 2017, 31, 444-451.	5.7	21
41	Gamma-variate modeling of indicator dilution curves in electrical impedance tomography. , 2017, 2017, 3596-3599.		3
42	MuSeSe - A multisensor armchair for unobtrusive vital sign estimation and motion artifact analysis. , 2017, 2017, 857-860.		4
43	Approach to compensate measurement errors in electrical impedance tomography. , 2017, , .		1
44	Automatic artificial ventilation therapy using the ARDSNet protocol enforcing dynamical constraints. , 2017, , .		1
45	Automatic Control of Venous Extracorporeal Lung Assist. Artificial Organs, 2016, 40, 992-998.	1.9	12
46	Reducing false alarms in the ICU by quantifying self-similarity of multimodal biosignals. Physiological Measurement, 2016, 37, 1233-1252.	2.1	32
47	Continuous Cardiac Output Estimation Under Left Ventricular Assistance. IFAC-PapersOnLine, 2015, 48, 569-574.	0.9	5
48	Policy Iteration Algorithm for the Control of Oxygenation. IFAC-PapersOnLine, 2015, 48, 517-522.	0.9	2
49	Periodic funnel-based control for peak inspiratory pressure. , 2015, , .		20
50	Design and Evaluation of an Automatic Extraventricular Drainage Control System. IEEE Transactions on Control Systems Technology, 2015, 23, 2283-2292.	5.2	2
51	Robust decentralised control of a hydrodynamic human circulatory system simulator. Biomedical Signal Processing and Control, 2015, 20, 35-44.	5.7	26
52	Ambient and Unobtrusive Cardiorespiratory Monitoring Techniques. IEEE Reviews in Biomedical Engineering, 2015, 8, 30-43.	18.0	128
53	A Bendable and Wearable Cardiorespiratory Monitoring Device Fusing Two Noncontact Sensor Principles. IEEE Journal of Biomedical and Health Informatics, 2015, 19, 784-793.	6.3	39
54	Automated respiratory therapy system based on the ARDSNet protocol with systemic perfusion control. Current Directions in Biomedical Engineering, 2015, 1, 314-317.	0.4	1

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55	Modeling a healthy and a person with heart failure conditions using the object-oriented modeling environment Dymola. Medical and Biological Engineering and Computing, 2015, 53, 1049-1068.	2.8	16
56	Monte-Carlo Simulation and Automated Test Bench for Developing a Multichannel NIR-Based Vital-Signs Monitor. IEEE Transactions on Biomedical Circuits and Systems, 2015, 9, 421-430.	4.0	2
57	A Thorax Simulator for Complex Dynamic Bioimpedance Measurements With Textile Electrodes. IEEE Transactions on Biomedical Circuits and Systems, 2015, 9, 412-420.	4.0	6
58	Pulsatile Ansteuerung einer Diagonalblutpumpe. Atp Magazin, 2015, 57, 52.	0.5	0
59	USING PHOTOPLETHYSMOGRAPHY IMAGING FOR OBJECTIVE CONTACTLESS PAIN ASSESSMENT. Acta Polytechnica, 2014, 54, 275-280.	0.6	6
60	Bladder volume estimation from electrical impedance tomography. Physiological Measurement, 2014, 35, 1813-1823.	2.1	46
61	The MAIN Shirt: A Textile-Integrated Magnetic Induction Sensor Array. Sensors, 2014, 14, 1039-1056.	3.8	72
62	The IMPACT shirt: textile integrated and portable impedance cardiography. Physiological Measurement, 2014, 35, 1181-1196.	2.1	36
63	Usefulness of Bioimpedance Spectroscopy for Detection of Hypotensive Episode during Dialysis. ASAIO Journal, 2014, 60, 570-575.	1.6	4
64	Analysis and modelling of glucose metabolism in diabetic Göttingen minipigs. Biomedical Signal Processing and Control, 2014, 13, 132-141.	5.7	13
65	A mobile and wireless approach for cardiac output monitoring. , 2014, , .		0
66	Influence of physiological sources on the impedance cardiogram analyzed using 4D FEM simulations. Physiological Measurement, 2014, 35, 1451-1468.	2.1	15
67	A Bendable and Wearable Cardiorespiratory Monitoring Device Fusing Two Noncontact Sensor Principles. , 2014, , .		4
68	Robust Sensor Fusion of Unobtrusively Measured Heart Rate. IEEE Journal of Biomedical and Health Informatics, 2014, 18, 654-660.	6.3	29
69	Control of an Electromechanical Hydrocephalus Shunt—a New Approach. IEEE Transactions on Biomedical Engineering, 2014, 61, 2379-2388.	4.2	11
70	A switching hybrid control method for automatic blood glucose regulation in diabetic Göttingen minipigs. Biomedical Signal Processing and Control, 2014, 13, 237-246.	5.7	5
71	Impedance Ratio Method for Urine Conductivity-Invariant Estimation of Bladder Volume. Journal of Electrical Bioimpedance, 2014, 5, 48-54.	0.9	19
72	Bootstrap aggregating decision tree for motion classification based on a textile-integrated and wearable sensorarray. , 2013, , .		0

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73	Blood glucose control algorithms for type 1 diabetic patients: A methodological review. Biomedical Signal Processing and Control, 2013, 8, 107-119.	5.7	101
74	Noncontact Monitoring of Cardiorespiratory Activity by Electromagnetic Coupling. IEEE Transactions on Biomedical Engineering, 2013, 60, 2142-2152.	4.2	57
75	Modellierung und Regelung eines hydraulischen HIL-Simulators zum Test von Herzunterstützungssystemen / Modeling and Control of a Hydraulic Simulator for Ventricular Assist Device Testing. Automatisierungstechnik, 2013, 61, 645-655.	0.8	2
76	Evaluation of a 433 MHz Band Body Sensor Network for Biomedical Applications. Sensors, 2013, 13, 898-917.	3.8	25
77	Human motion classification based on a textile integrated and wearable sensor array. Physiological Measurement, 2013, 34, 963-975.	2.1	19
78	Robust Control of Intracranial Pressure with an Electromechanical Extra-ventricular Drainage. , 2013, , .		1
79	Closed-Loop Ventilation of Oxygenation and End-Tidal CO ₂ . , 2013, , .		2
80	Closed Loop Control of Spontaneous Breathing During Long Term Sedation. Biomedizinische Technik, 2013, 58 Suppl 1, .	0.8	0
81	First Results of a New Electromechanical Controlled External Ventricular Drainage in a Porcine Model. Biomedizinische Technik, 2013, 58 Suppl 1, .	0.8	0
82	L1 adaptive control of end-tidal CO ₂ by optimizing the muscular power for mechanically ventilated patients. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 259-264.	0.4	2
83	ROBUST CONTROL OF END-TIDAL CO ₂ USING THE H _∞ LOOP-SHAPING APPROACH. Acta Polytechnica, 2013, 53, 895-900.	0.6	6
84	Close-to-reality evaluation of a PID control algorithm for blood glucose regulation in diabetic Goettingen minipigs. , 2013, , .		2
85	Respiratory Mechanics, Gas Transport and Perfusion during exercise. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 131-136.	0.4	1
86	The Reliability and Accuracy of a Noncontact Electrocardiograph System for Screening Purposes. Anesthesia and Analgesia, 2012, 114, 322-327.	2.2	15
87	A Multisensor Implant for Continuous Monitoring of Intracranial Pressure Dynamics. IEEE Transactions on Biomedical Circuits and Systems, 2012, 6, 356-365.	4.0	9
88	Automatic Parameter Extraction from Capacitive ECG Measurements. Cardiovascular Engineering and Technology, 2012, 3, 319-332.	1.6	3
89	Control strategies for mechanical heart assist systems. , 2012, , .		2
90	Evaluation of Bioimpedance Spectroscopy for the Monitoring of the Fluid Status in an Animal Model. , 2012, , .		1

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91	Glucose-insulin model of glucose metabolism in acute diabetic swine based on Luenberger observer. , 2012, , .		2
92	Automatic electrode selection in unobtrusive capacitive ECG measurements. , 2012, , .		8
93	Hirndruckmodellierung und Regelung einer neuen mechatronischen externen Ventrikeldrainage. Automatisierungstechnik, 2011, 59, 613-621.	0.8	7
94	Triboelectricity in Capacitive Biopotential Measurements. IEEE Transactions on Biomedical Engineering, 2011, 58, 1268-1277.	4.2	68
95	ECG on the Road: Robust and Unobtrusive Estimation of Heart Rate. IEEE Transactions on Biomedical Engineering, 2011, 58, 3112-3120.	4.2	105
96	An electrochemical impedance spectroscopy (EIS) assay measuring the calcification inhibition capacity in biological fluids. Biosensors and Bioelectronics, 2011, 26, 4702-4707.	10.1	11
97	The smart car seat: personalized monitoring of vital signs in automotive applications. Personal and Ubiquitous Computing, 2011, 15, 707-715.	2.8	106
98	Model-based correction of the influence of body position on continuous segmental and hand-to-foot bioimpedance measurements. Medical and Biological Engineering and Computing, 2010, 48, 531-541.	2.8	11
99	Clinical proof of practicability for an ECG device without any conductive contact. Biomedizinische Technik, 2010, 55, 291-300.	0.8	12
100	A capacitive ECG array with visual patient feedback. , 2010, 2010, 6539-42.		9
101	Automatisierung und Fehlerdiagnose bei der extrakorporalen Membranoxygenierung. Automatisierungstechnik, 2010, 58, 277-285.	0.8	5
102	Characterization of textile electrodes and conductors using standardized measurement setups. Physiological Measurement, 2010, 31, 233-247.	2.1	262
103	An RFID Communication System for Medical Applications. , 2010, , .		3
104	A physiological model for extracorporeal oxygenation controller design. , 2010, 2010, 434-7.		6
105	Automation of long term extracorporeal oxygenation systems. , 2009, , .		7
106	A versatile Body Sensor Network for health care applications. , 2009, , .		5
107	Dynamic Hardware-in-the-Loop Test Stand for Total Artificial Hearts. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 262-265.	0.4	0
108	Control applications in artificial ventilation. , 2007, , .		12

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109	Automatisierungstechnik für die Medizin (Automation in Medicine). Automatisierungstechnik, 2005, 53, 571-572.	0.8	0
110	A Model for Intracranial Hydrodynamics. , 2005, 2005, 5603-6.		10
111	Methoden zur automatisierten Lungenfunktionsdiagnose bei Säuglingen. Automatisierungstechnik, 1998, 46, 444-451.	0.8	0
112	Fusing QRS Detection, Waveform Features, and Robust Interval Estimation with a Random Forest to Classify Atrial Fibrillation. , 0, , .		9