Steffen Leonhardt

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/5697312/publications.pdf

Version: 2024-02-01

419 papers	8,461 citations	93792 39 h-index	81351 76 g-index
433 all docs	433 docs citations	433 times ranked	7810 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.	2.5	2
2	Investigation of Three Potential Stress Inducement Tasks During On-Road Driving. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 4823-4832.	4.7	1
3	Dynamic Parameter Identification of a Human-Exoskeleton System With the Motor Torque Data. IEEE Transactions on Medical Robotics and Bionics, 2022, 4, 206-218.	2.1	5
4	A Setup for Camera-Based Detection of Simulated Pathological States Using a Neonatal Phantom. Sensors, 2022, 22, 957.	2.1	3
5	A Novel Sensor Design for Amplitude Modulated Measurement of Capacitive ECG. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-10.	2.4	3
6	Unobtrusive Measurement of Physiological Features Under Simulated and Real Driving Conditions. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 4767-4777.	4.7	4
7	A Rotational Invariant Neural Network for Electrical Impedance Tomography Imaging without Reference Voltage: RF-REIM-NET. Diagnostics, 2022, 12, 777.	1.3	5
8	A Wearable, Multi-Frequency Device to Measure Muscle Activity Combining Simultaneous Electromyography and Electrical Impedance Myography. Sensors, 2022, 22, 1941.	2.1	9
9	Head Tracking in Automotive Environments for Driver Monitoring Using a Low Resolution Thermal Camera. Vehicles, 2022, 4, 219-233.	1.7	2
10	On the spatial phase distribution of cutaneous low-frequency perfusion oscillations. Scientific Reports, 2022, 12, 5997.	1.6	6
11	A mechatronic test-bench to investigate the impact of ventricular pulsation in hydrocephalus. Biomedical Signal Processing and Control, 2022, 75, 103579.	3.5	1
12	Determination of the Geometric Parameters of Electrode Systems for Electrical Impedance Myography: A Preliminary Study. Sensors, 2022, 22, 97.	2.1	8
13	A Way of Bionic Control Based on EI, EMG, and FMG Signals. Sensors, 2022, 22, 152.	2.1	9
14	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
15	What is new in respiratory monitoring?. Journal of Clinical Monitoring and Computing, 2022, 36, 599-607.	0.7	4
16	Real-Time Respiration Monitoring of Neonates from Thermography Images Using Deep Learning. Lecture Notes in Computer Science, 2022, , 221-232.	1.0	1
17	Continuous Monitoring of Vital Signs Using Cameras: A Systematic Review. Sensors, 2022, 22, 4097.	2.1	22
18	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.	1.0	1

#	Article	IF	Citations
19	Low Impedance-Guaranteed Gain-Scheduled GESO for Torque-Controlled VSA With Application of Exoskeleton-Assisted Sit-to-Stand. IEEE/ASME Transactions on Mechatronics, 2021, 26, 2080-2091.	3.7	14
20	Noncontact Monitoring of Heart Rate and Heart Rate Variability in Geriatric Patients Using Photoplethysmography Imaging. IEEE Journal of Biomedical and Health Informatics, 2021, 25, 1781-1792.	3.9	27
21	Wearable bioimpedance systems for home-care monitoring using BSNs. , 2021, , 519-540.		2
22	A Testable Robust Stability Framework for the Variable Impedance Control of 1-DOF Exoskeleton With Variable Stiffness Actuator. IEEE Transactions on Control Systems Technology, 2021, 29, 2728-2737.	3.2	16
23	A Deep Learning-Based Camera Approach for Vital Sign Monitoring Using Thermography Images for ICU Patients. Sensors, 2021, 21, 1495.	2.1	36
24	Surfactant Depletion Combined with Injurious Ventilation Results in a Reproducible Model of the Acute Respiratory Distress Syndrome (ARDS). Journal of Visualized Experiments, 2021, , .	0.2	4
25	Correlation between Myocardial Function and Electric Current Pulsatility of the Sputnik Left Ventricular Assist Device: In-Vitro Study. Applied Sciences (Switzerland), 2021, 11, 3359.	1.3	4
26	Accuracy of heart rate variability estimated with reflective wrist-PPG in elderly vascular patients. Scientific Reports, 2021, 11, 8123.	1.6	23
27	Design and First Operation of an Active Lower Limb Exoskeleton with Parallel Elastic Actuation. Actuators, 2021, 10, 75.	1.2	10
28	Classification of chronic venous diseases based on skin temperature patterns. Physiological Measurement, 2021, 42, 045001.	1.2	1
29	Amplitude Parameters of Electrical Impedance Myography with Different Pressure of the Electrode System Research. , 2021, , .		4
30	Optimal assistive control of a pedal-electric drive unit. Control Engineering Practice, 2021, 110, 104765.	3.2	3
31	Stand for Determining the Forearm Tissues Resistivity in-Vivo. , 2021, , .		1
32	Multi-channel bioimpedance spectroscopy based on orthogonal baseband shifting. Physiological Measurement, 2021, 42, .	1.2	2
33	Modulated ECG: Utilization of the Time-Variant Coupling in Capacitive ECG. , 2021, , .		1
34	Measurement of Electrical Impedance Tomography-Based Regional Ventilation Delay for Individualized Titration of End-Expiratory Pressure. Journal of Clinical Medicine, 2021, 10, 2933.	1.0	6
35	Detection of acute ventilatory problems via magnetic induction in a newborn animal model. Pediatric Research, 2021, , .	1.1	0
36	Copula-Based Data Augmentation on a Deep Learning Architecture for Cardiac Sensor Fusion. IEEE Journal of Biomedical and Health Informatics, 2021, 25, 2521-2532.	3.9	4

#	Article	IF	Citations
37	A model-based source separation algorithm for lung perfusion imaging using electrical impedance tomography. Physiological Measurement, 2021, 42, 084001.	1.2	10
38	Real-Time Evaluation of Optic Nerve Sheath Diameter (ONSD) in Awake, Spontaneously Breathing Patients. Journal of Clinical Medicine, 2021, 10, 3549.	1.0	5
39	Pulmonary Effects of Sustained Periods of High-G Acceleration Relevant to Suborbital Spaceflight. Aerospace Medicine and Human Performance, 2021, 92, 633-641.	0.2	6
40	Non-Contact Measurement of Heart Rate Variability in Frail Geriatric Patients: Response to Early Geriatric Rehabilitation and Comparison with Healthy Old Community-Dwelling Individuals â€“ A Pilot Study. Gerontology, 2021, , 1-13.	1.4	4
41	Dynamic lung behavior under high G acceleration monitored with electrical impedance tomography. Physiological Measurement, 2021, 42, 094001.	1.2	7
42	Spatio-temporal and -spectral feature maps in photoplethysmography imaging and infrared thermography. BioMedical Engineering OnLine, 2021, 20, 8.	1.3	5
43	A Neonatal Phantom for Vital Signs Simulation. IEEE Transactions on Biomedical Circuits and Systems, 2021, 15, 949-959.	2.7	6
44	Monitoring transcellular fluid shifts during episodes of intradialytic hypotension using bioimpedance spectroscopy. CKJ: Clinical Kidney Journal, 2021, 14, 149-155.	1.4	6
45	Automated Positive End-Expiratory Pressure Titration during Mechanical Ventilation. IFAC-PapersOnLine, 2021, 54, 412-417.	0.5	1
46	Bandwidth and Common Mode Optimization for Current and Voltage Sources in Bioimpedance Spectroscopy. Journal of Electrical Bioimpedance, 2021, 12, 135-146.	0.5	2
47	Improved estimation of left ventricular volume from electric field modeling. Journal of Electrical Bioimpedance, 2021, 12, 125-134.	0.5	0
48	Model-Based Step Length Estimation Using a Pendant-Integrated Mobility Sensor. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2021, 29, 2655-2665.	2.7	6
49	Everyday Life Tremor Signal Processing in PD Patients using BSN. , 2021, , .		0
50	Impedance-Controlled Variable Stiffness Actuator for Lower Limb Robot Applications. IEEE Transactions on Automation Science and Engineering, 2020, 17, 991-1004.	3.4	59
51	Car Seats with Capacitive ECG Electrodes Can Detect Cardiac Pacemaker Spikes. Sensors, 2020, 20, 6288.	2.1	12
52	Robust strict positive real control of variable stiffness actuators. , 2020, , .		0
53	Can mHealth Technology Help Mitigate the Effects of the COVID-19 Pandemic?. IEEE Open Journal of Engineering in Medicine and Biology, 2020, 1, 243-248.	1.7	69
54	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

#	Article	IF	Citations
55	Evaluation and Application of a Customizable Wireless Platform: A Body Sensor Network for Unobtrusive Gait Analysis in Everyday Life. Sensors, 2020, 20, 7325.	2.1	9
56	Design and Preliminary Validation of a Lower Limb Exoskeleton With Compact and Modular Actuation. IEEE Access, 2020, 8, 66338-66352.	2.6	20
57	Analysis, Design, and Preliminary Evaluation of a Parallel Elastic Actuator for Power-Efficient Walking Assistance. IEEE Access, 2020, 8, 88060-88075.	2.6	6
58	Estimation of Stride Time Variability in Unobtrusive Long-Term Monitoring Using Inertial Measurement Sensors. IEEE Journal of Biomedical and Health Informatics, 2020, 24, 1-1.	3.9	10
59	Bioimpedance Spectroscopy for the Postmastectomy Lymphedema Diagnostics. , 2020, , .		0
60	Non-contact sensing of neonatal pulse rate using camera-based imaging: a clinical feasibility study. Physiological Measurement, 2020, 41, 024001.	1.2	20
61	Segmental Bioelectrical Impedance Spectroscopy to Monitor Fluid Status in Heart Failure. Scientific Reports, 2020, 10, 3577.	1.6	19
62	Physiological Motion Artifacts in Capacitive ECG: Ballistocardiographic Impedance Distortions. IEEE Transactions on Instrumentation and Measurement, 2020, 69, 3297-3307.	2.4	11
63	Ballistocardiography Can Estimate Beat-to-Beat Heart Rate Accurately at Night in Patients After Vascular Intervention. IEEE Journal of Biomedical and Health Informatics, 2020, 24, 2230-2237.	3.9	18
64	Photoplethysmography imaging:camera performance evaluation by means of an optoelectronic skin perfusion phantom. Physiological Measurement, 2020, 41, 054001.	1.2	9
65	The dawn of physiological closed-loop ventilationâ€”a review. Critical Care, 2020, 24, 121.	2.5	34
66	Individualized Positive End-expiratory Pressure and Regional Gas Exchange in Porcine Lung Injury. Anesthesiology, 2020, 132, 808-824.	1.3	8
67	Conceptual design, modeling and control of a rigid parallel serial-elastic actuator. Automatisierungstechnik, 2020, 68, 410-422.	0.4	7
68	Implementation of LPV Hâˆž Loop-Shaping Control for a Variable Stiffness Actuator. IFAC-PapersOnLine, 2020, 53, 10129-10134.	0.5	3
69	Backstepping Control with Radial Basis Function Network for a Nonlinear Cardiopulmonary System. IFAC-PapersOnLine, 2020, 53, 16311-16316.	0.5	1
70	Assessing global and regional pulmonary function with electrical impedance tomography in pediatric patients: the EIT-derived flow-volume loops. , 2020, , .		1
71	In silico and in vitro conductivity models of the left heart ventricle. Journal of Electrical Bioimpedance, 2020, 11, 62-71.	0.5	5
72	Influence of Measurement Pattern on RAW-data in Electrical Impedance Tomography. IFMBE Proceedings, 2020, , 11-17.	0.2	0

#	Article	IF	Citations
73	Model-based sensor fusion of multimodal cardiorespiratory signals using an unscented Kalman filter. Automatisierungstechnik, 2020, 68, 933-940.	0.4	2
74	The nonlinear volume-dependent extended RIC model for Forced Oscillation Technique measurements. , 2020, , .		0
75	Multifunctional Photoplethysmography Sensor Design for Respiratory and Cardiovascular Diagnosis. IFMBE Proceedings, 2019, , 905-909.	0.2	8
76	Evaluation of a new non-invasive measurement technique based on bioimpedance spectroscopy to estimate blood alcohol content: a pilot study. Biomedizinische Technik, 2019, 64, 365-371.	0.9	1
77	Noncontact Monitoring of Respiratory Rate in Newborn Infants Using Thermal Imaging. IEEE Transactions on Biomedical Engineering, 2019, 66, 1105-1114.	2.5	62
78	Capacitive ECG Monitoring in Cardiac Patients During Simulated Driving. IEEE Transactions on Biomedical Engineering, 2019, 66, 749-758.	2.5	22
79	A Broader Look: Camera-Based Vital Sign Estimation across the Spectrum. Yearbook of Medical Informatics, 2019, 28, 102-114.	0.8	41
80	A Modified Method to Assess Tidal Recruitment by Electrical Impedance Tomography. Journal of Clinical Medicine, 2019, 8, 1161.	1.0	11
81	Object-oriented modeling of thoracic fluid balance to study cardiogenic pulmonary congestion in humans. Computer Methods and Programs in Biomedicine, 2019, 180, 104998.	2.6	5
82	Waveform Analysis for Camera-based Photoplethysmography Imaging. , 2019, 2019, 2713-2718.		3
83	Amplitude-Integrated Electroencephalography Applications and Algorithms in Neonates: A Systematic Review. IEEE Access, 2019, 7, 141766-141781.	2.6	5
84	Ballistocardiographic Coupling of Triboelectric Charges into Capacitive ECG. , 2019, , .		5
85	Hardware-in-the-loop test bench for artificial lungs. AIP Conference Proceedings, 2019, , .	0.3	4
86	Synthesis of cardiac signals using a Copula-approach. AIP Conference Proceedings, 2019, , .	0.3	0
87	Non-invasive evaluation of coronary heart disease in patients with chronic kidney disease using photoplethysmography. CKJ: Clinical Kidney Journal, 2019, 12, 538-545.	1.4	13
88	Design and Analysis of a Clutched Parallel Elastic Actuator. Actuators, 2019, 8, 67.	1.2	12
89	A Multi-Modal Sensor for a Bed-Integrated Unobtrusive Vital Signs Sensing Array. IEEE Transactions on Biomedical Circuits and Systems, 2019, 13, 529-539.	2.7	16
90	Enhanced in vitro model of the CSF dynamics. Fluids and Barriers of the CNS, 2019, 16, 11.	2.4	23

#	Article	IF	Citations
91	Reconstruction algorithm for frequency-differential EIT using absolute values. Physiological Measurement, 2019, 40, 034008.	1.2	10
92	Biomechanics, actuation, and multi-level control strategies of power-augmentation lower extremity exoskeletons: an overview. International Journal of Dynamics and Control, 2019, 7, 1462-1488.	1.5	22
93	CPG assistive motion control for variable stiffness actuators. , 2019, , .		0
94	Peak Detection Algorithm for Gait Segmentation in Long-Term Monitoring for Stride Time Estimation using Inertial Measurement Sensors. , 2019, , .		7
95	Design of the Clutched Variable Parallel Elastic Actuator (CVPEA) for Lower Limb Exoskeletons. , 2019, 2019, 4436-4439.		10
96	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.	0.5	15
97	Using a Motion Capture System as Reference for Motion Tracking in Photoplethysmography Imaging. , 2019, 2019, 3915-3918.		1
98	Comparison of two experimental ARDS models in pigs using electrical impedance tomography. PLoS ONE, 2019, 14, e0225218.	1.1	8
99	Automated Insulin Delivery for Type 1 Diabetes Mellitus Patients using Gaussian Process-based Model Predictive Control. , 2019, , .		5
100	Closed-loop positive real optimal control of variable stiffness actuators. Control Engineering Practice, 2019, 82, 142-150.	3.2	18
101	Improving sleep/wake classification with recurrence quantification analysis features. Biomedical Signal Processing and Control, 2019, 49, 78-86.	3.5	8
102	Non-invasive monitoring of blood glucose using optical methods for skin spectroscopyâ€"opportunities and recent advances. Analytical and Bioanalytical Chemistry, 2019, 411, 63-77.	1.9	60
103	Online cardiac output estimation during transvalvular left ventricular assistance. Computer Methods and Programs in Biomedicine, 2019, 171, 87-97.	2.6	8
104	Modeling photoplethysmographic signals in camera-based perfusion measurements: optoelectronic skin phantom. Biomedical Optics Express, 2019, 10, 4353.	1.5	13
105	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.	0.5	2
106	Fault Identification in a Blood Pump Using Neural Networks. IFMBE Proceedings, 2019, , 27-32.	0.2	0
107	Flowâ€volume loops measured with electrical impedance tomography in pediatric patients with asthma. Pediatric Pulmonology, 2018, 53, 636-644.	1.0	14
108	Addition of internal electrodes is beneficial for focused bioimpedance measurements in the lung. Physiological Measurement, 2018, 39, 035009.	1.2	3

#	Article	IF	Citations
109	Lung pathologies analyzed with multi-frequency electrical impedance tomography: Pilot animal study. Respiratory Physiology and Neurobiology, 2018, 254, 1-9.	0.7	13
110	An object-oriented computational model to study cardiopulmonary hemodynamic interactions in humans. Computer Methods and Programs in Biomedicine, 2018, 159, 167-183.	2.6	13
111	Electrical impedance tomography as possible guidance for individual positioning of patients with multiple lung injury. Clinical Respiratory Journal, 2018, 12, 68-75.	0.6	10
112	Closed-loop mechanical ventilation for lung injury: a novel physiological-feedback mode following the principles of the open lung concept. Journal of Clinical Monitoring and Computing, 2018, 32, 493-502.	0.7	9
113	Realâ€Time ECG Simulation for Hybrid Mock Circulatory Loops. Artificial Organs, 2018, 42, 131-140.	1.0	3
114	Assessing regional lung mechanics by combining electrical impedance tomography and forced oscillation technique. Biomedizinische Technik, 2018, 63, 673-681.	0.9	5
115	Optimal online selection of type 1 diabetes-glucose metabolism models. Control Engineering Practice, 2018, 71, 108-119.	3.2	4
116	Heart phantom with electrical properties of heart muscle tissue. Current Directions in Biomedical Engineering, 2018, 4, 97-100.	0.2	4
117	The volume-dependent Forced Oscillation Technique. IFAC-PapersOnLine, 2018, 51, 373-377.	0.5	1
118	Selection of glucose metabolism models with an observer error metric. IFAC-PapersOnLine, 2018, 51, 288-293.	0.5	0
119	Fusing non-contact vital sign sensing modalities - first results. , 2018, 2018, 5378-5381.		2
120	Local Interval Estimation Improves Accuracy and Robustness of Heart Rate Variability Derivation from Photoplethysmography. , 2018, 2018, 3558-3561.		9
121	Active Impedance Control of Bioinspired Motion Robotic Manipulators: An Overview. Applied Bionics and Biomechanics, 2018, 2018, 1-19.	0.5	41
122	Non-Contact Remote Measurement of Heart Rate Variability using Near-Infrared Photoplethysmography Imaging. , 2018, 2018, 846-849.		6
123	Modelling and Synthesizing Motion Artifacts in Unobtrusive Multimodal Sensing using Copulas. , 2018, 2018, 6006-6009.		1
124	Infrared Thermography. , 2018, , 1-30.		5
125	Robust physiological control of rotary blood pumps for heart failure therapy. Automatisierungstechnik, 2018, 66, 767-779.	0.4	7
126	Noninvasive Monitoring of Blood Glucose Using Color-Coded Photoplethysmographic Images of the Illuminated Fingertip Within the Visible and Near-Infrared Range: Opportunities and Questions. Journal of Diabetes Science and Technology, 2018, 12, 1169-1177.	1.3	21

#	Article	IF	Citations
127	Unobtrusive Vital Sign Monitoring in Automotive Environmentsâ€"A Review. Sensors, 2018, 18, 3080.	2.1	87
128	Regional lung ventilation and perfusion by electrical impedance tomography compared to single-photon emission computed tomography. Physiological Measurement, 2018, 39, 065004.	1.2	22
129	Hybrid mock circulatory loop for training and study purposes. , 2018, , .		3
130	Motion Artifact Quantification and Sensor Fusion for Unobtrusive Health Monitoring. Sensors, 2018, 18, 38.	2.1	24
131	Monitoring of Cardiorespiratory Signals Using Thermal Imaging: A Pilot Study on Healthy Human Subjects. Sensors, 2018, 18, 1541.	2.1	35
132	Estimating Respiratory Rate in Post-Anesthesia Care Unit Patients Using Infrared Thermography: An Observational Study. Sensors, 2018, 18, 1618.	2.1	33
133	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.	1.3	32
134	Experimental Validation of a Torque-Controlled Variable Stiffness Actuator Tuned by Gain Scheduling. IEEE/ASME Transactions on Mechatronics, 2018, 23, 2109-2120.	3.7	26
135	A wearable 12-lead ECG T-shirt with textile electrodes for unobtrusive long-term monitoring â€" Evaluation of an ongoing clinical trial. IFMBE Proceedings, 2018, , 703-706.	0.2	5
136	Robust Assistance Control of Left Ventricular Assist Devices. IFMBE Proceedings, 2018, , 294-297.	0.2	1
137	Photoplethysmography Imaging and Common Optical Hybrid Imaging Modalities. , 2018, , 31-66.		1
138	Three-dimensional pulmonary monitoring using focused electrical impedance measurements. Journal of Electrical Bioimpedance, 2018, 9, 84-95.	0.5	0
139	A novel technical extension of the Forced Oscillation Technique. , 2018, , .		0
140	Multivariable friction compensation control for a variable stiffness actuator. Control Engineering Practice, 2017, 58, 298-306.	3.2	3
141	Detection of Nocturnal Slow Wave Sleep Based on Cardiorespiratory Activity in Healthy Adults. IEEE Journal of Biomedical and Health Informatics, 2017, 21, 123-133.	3.9	13
142	Estimation of Penetrated Bone Layers During Craniotomy via Bioimpedance Measurement. IEEE Transactions on Biomedical Engineering, 2017, 64, 765-774.	2.5	7
143	Optimal learning control of oxygen saturation using a policy iteration algorithm and a proof-of-concept in an interconnecting three-tank system. Control Engineering Practice, 2017, 59, 194-203.	3.2	9
144	Closed-Loop Control of Humidification for Artifact Reduction in Capacitive ECG Measurements. IEEE Transactions on Biomedical Circuits and Systems, 2017, 11, 300-313.	2.7	19

#	Article	IF	Citations
145	Benefits of object-oriented models and ModeliChart: modern tools and methods for the interdisciplinary research on smart biomedical technology. Biomedizinische Technik, 2017, 62, 111-121.	0.9	5
146	Physiological closed-loop control of mechanical ventilation and extracorporeal membrane oxygenation. Biomedizinische Technik, 2017, 62, 199-212.	0.9	3
147	Effects of the nasal passage on forced oscillation lung function measurements. Biomedizinische Technik, 2017, 62, 635-642.	0.9	1
148	Chest electrical impedance tomography examination, data analysis, terminology, clinical use and recommendations: consensus statement of the TRanslational EIT developmeNt stuDy group. Thorax, 2017, 72, 83-93.	2.7	580
149	In-Ear Pulse Oximetry in High Altitude Mountaineering. , 2017, , .		4
150	Smart life support reloaded: design and control of complex therapeutic devices. Biomedizinische Technik, 2017, 62, 109-110.	0.9	0
151	Reliable glucose monitoring by ex-vivo blood microdialysis and infrared spectrometry for patients in critical care. Proceedings of SPIE, 2017, , .	0.8	1
152	A synthesizer framework for multimodal cardiorespiratory signals. Biomedical Physics and Engineering Express, 2017, 3, 035028.	0.6	13
153	Monitoring lung contusion in a porcine polytrauma model using EIT: an application study. Physiological Measurement, 2017, 38, 1542-1560.	1.2	4
154	Photoplethysmography-based in-ear sensor system for identification of increased stress arousal in everyday life. , 2017, , .		6
155	Smart bioimpedance-controlled craniotomy: Concept and first experiments. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2017, 231, 673-680.	1.0	5
156	Optimizing PEEP by Electrical Impedance Tomography in a Porcine Animal Model of ARDS. Respiratory Care, 2017, 62, 340-349.	0.8	25
157	Linearity of electrical impedance tomography during maximum effort breathing and forced expiration maneuvers. Physiological Measurement, 2017, 38, 77-86.	1.2	22
158	Decentralized safety concept for closed-loop controlled intensive care. Biomedizinische Technik, 2017, 62, 213-223.	0.9	2
159	Unobtrusive Nocturnal Heartbeat Monitoring by a Ballistocardiographic Sensor in Patients with Sleep Disordered Breathing. Scientific Reports, 2017, 7, 13175.	1.6	31
160	The PhysioBelt: A safety belt integrated sensor system for heart activity and respiration. , 2017, , .		6
161	Integration of an electromagnetic coupled sensor into a driver seat for vital sign monitoring: Initial insight. , 2017, , .		9
162	â„‹â^ž-Sliding-Mode Beobachterentwurf. Automatisierungstechnik, 2017, 65, 695-704.	0.4	0

#	Article	IF	Citations
163	Estimation of breathing rate in thermal imaging videos: a pilot study on healthy human subjects. Journal of Clinical Monitoring and Computing, 2017, 31, 1241-1254.	0.7	48
164	Active and Passive Optical Imaging Modality for Unobtrusive Cardiorespiratory Monitoring and Facial Expression Assessment. Anesthesia and Analgesia, 2017, 124, 104-119.	1.1	11
165	SensInDenTâ€"Noncontact Sensors Integrated Into Dental Treatment Units. IEEE Transactions on Biomedical Circuits and Systems, 2017, 11, 225-233.	2.7	8
166	Observer-Based Human Knee Stiffness Estimation. IEEE Transactions on Biomedical Engineering, 2017, 64, 1033-1044.	2.5	12
167	Minimizing left ventricular stroke work with iterative learning flow profile control of rotary blood pumps. Biomedical Signal Processing and Control, 2017, 31, 444-451.	3.5	21
168	The Role of a Dynamic Craniospinal Compliance in NPHâ€"A Review and Future Challenges. IEEE Reviews in Biomedical Engineering, 2017, 10, 310-322.	13.1	5
169	Gamma-variate modeling of indicator dilution curves in electrical impedance tomography. , 2017, 2017, 3596-3599.		3
170	MuSeSe - A multisensor armchair for unobtrusive vital sign estimation and motion artifact analysis. , 2017, 2017, 857-860.		4
171	Robust gain-scheduled control of variable stiffness actuators. IFAC-PapersOnLine, 2017, 50, 8804-8809.	0.5	4
172	Separation of Cardiac- and Ventilation-related Signals within Electrical Impedance Tomography Data based on Multi-dimensional Ensemble Empirical Mode Decomposition. IFAC-PapersOnLine, 2017, 50, 4436-4441.	0.5	1
173	Estimation of respiratory rate from thermal videos of preterm infants. , 2017, 2017, 3818-3821.		19
174	Gaussian process-based model predictive control of blood glucose for patients with type 1 diabetes mellitus. , 2017, , .		9
175	Approach to compensate measurement errors in electrical impedance tomography. , 2017, , .		1
176	EMG-driven model-based knee torque estimation on a variable impedance actuator orthosis. , 2017, , .		9
177	Reduced-order filtering for insulin sensitivity estimation under external disturbances. , 2017, , .		4
178	Automatic artificial ventilation therapy using the ARDSNet protocol enforcing dynamical constraints. , 2017, , .		1
179	Model-Based Estimation of Ankle Joint Stiffness. Sensors, 2017, 17, 713.	2.1	16
180	Functional modeling of the craniospinal system for in-vitro parameter studies on the pathogenesis of NPH. Current Directions in Biomedical Engineering, 2017, 3, 825-828.	0.2	2

#	Article	IF	Citations
181	Correction of the Unobtrusive ECG Using System Identification. Electronics (Switzerland), 2017, 6, 94.	1.8	1
182	The Smart Operating Room: smartOR. , 2017, , 291-315.		3
183	A Novel 12-Lead ECG T-Shirt with Active Electrodes. Electronics (Switzerland), 2016, 5, 75.	1.8	52
184	RheoStim: Development of an Adaptive Multi-Sensor to Prevent Venous Stasis. Sensors, 2016, 16, 428.	2.1	3
185	System Description and First Application of an FPGA-Based Simultaneous Multi-Frequency Electrical Impedance Tomography. Sensors, 2016, 16, 1158.	2.1	28
186	Discrete Blood Glucose Control in Diabetic GÃ¶ttingen Minipigs. Processes, 2016, 4, 22.	1.3	5
187	Global and regional lung function in cystic fibrosis measured by electrical impedance tomography. Pediatric Pulmonology, 2016, 51, 1191-1199.	1.0	26
188	Thermoregulation in premature infants: A mathematical model. Journal of Thermal Biology, 2016, 62, 159-169.	1.1	24
189	Generalized polynomial chaos-based estimation of human knee stiffness. , 2016, , .		0
190	Reducing false alarms in the ICU by quantifying self-similarity of multimodal biosignals. Physiological Measurement, 2016, 37, 1233-1252.	1.2	32
191	Active noise cancellation in headphones by digital robust feedback control. , 2016, , .		13
192	Remote vital parameter monitoring in neonatology â€“ robust, unobtrusive heart rate detection in a realistic clinical scenario. Biomedizinische Technik, 2016, 61, 631-643.	0.9	23
193	Torque Estimation in Variable Stiffness Actuators. , 2016, , .		4
194	Estimation of insulin sensitivity in diabetic GÃ¶ttingen Minipigs. Control Engineering Practice, 2016, 55, 80-90.	3.2	8
195	Quantification of respiratory sinus arrhythmia using the IPANEMA body sensor network. , 2016, , .		1
196	Design and control of a mechanical rotary variable impedance actuator. Mechatronics, 2016, 39, 226-236.	2.0	53
197	Positive real dynamic output feedback controller synthesis. , 2016, , .		0
198	Identification of isolated biomechanical parameters with a wireless body sensor network. , 2016, , .		0

#	Article	IF	Citations
199	Improved electrode positions for local impedance measurements in the lungâ€”a simulation study. Physiological Measurement, 2016, 37, 2111-2129.	1.2	7
200	Multisensor data fusion for enhanced respiratory rate estimation in thermal videos. , 2016, 2016, 1381-1384.		5
201	An object-oriented model of the cardiopulmonary system with emphasis on the gravity effect. , 2016, 2016, 2737-2740.		0
202	Hybride Modellierung intrakranieller Pulswellen unter BerÃ¼cksichtigung der kardiovaskulÃren Kopplung. Automatisierungstechnik, 2016, 64, 858-869.	0.4	1
203	Model-based optimization of adaptive external counterpulsation therapy. International Journal of Modeling, Simulation, and Scientific Computing, 2016, 07, 1650023.	0.9	1
204	Estimating actigraphy from motion artifacts in ECG and respiratory effort signals. Physiological Measurement, 2016, 37, 67-82.	1.2	11
205	Body-Sensor-Network-Based Spasticity Detection. IEEE Journal of Biomedical and Health Informatics, 2016, 20, 748-755.	3.9	27
206	Cardiovascular to Intracranial Transmission Characteristics for Hydrocephalus. Advances in Cognitive Neurodynamics, 2016, , 477-483.	0.1	1
207	Physikalisch-technische Grundlagen. , 2016, , 5-38.		0
208	Remote monitoring of breathing dynamics using infrared thermography. Biomedical Optics Express, 2015, 6, 4378.	1.5	128
209	Pulsatile cerebrospinal model with cardio-vascular coupling. IFAC-PapersOnLine, 2015, 48, 183-188.	0.5	3
210	Robust remote monitoring of breathing function by using infrared thermography. , 2015, 2015, 4250-3.		22
211	Continuous Cardiac Output Estimation Under Left Ventricular Assistance. IFAC-PapersOnLine, 2015, 48, 569-574.	0.5	5
212	Classification of spasticity affected EMG-signals. , 2015, , .		2
213	Policy Iteration Algorithm for the Control of Oxygenation. IFAC-PapersOnLine, 2015, 48, 517-522.	0.5	2
214	Friction compensation control of a novel electro-pneumatic adaptable impedance actuator. , 2015, , .		2
215	UnoViS: the MedIT public unobtrusive vital signs database. Health Information Science and Systems, 2015, 3, 2.	3.4	23
216	Periodic funnel-based control for peak inspiratory pressure. , 2015, , .		20

#	Article	IF	Citations
217	Multi-Sensor Calibration of Low-Cost Magnetic, Angular Rate and Gravity Systems. Sensors, 2015, 15, 25919-25936.	2.1	16
218	Heartbeat Cycle Length Detection by a Ballistocardiographic Sensor in Atrial Fibrillation and Sinus Rhythm. BioMed Research International, 2015, 2015, 1-10.	0.9	22
219	Feasibility of Bioelectrical Impedance Spectroscopy Measurement before and after Thoracentesis. BioMed Research International, 2015, 2015, 1-9.	0.9	7
220	Design and Evaluation of an Automatic Extraventricular Drainage Control System. IEEE Transactions on Control Systems Technology, 2015, 23, 2283-2292.	3.2	2
221	Development of a wearable multi-frequency impedance cardiography device. Journal of Medical Engineering and Technology, 2015, 39, 131-137.	0.8	19
222	Reglerbasierte Insulintherapie von Patienten mit Typ-1-Diabetes mellitus. Automatisierungstechnik, 2015, 63, 32-46.	0.4	1
223	In-ear photoplethysmography for mobile cardiorespiratory monitoring and alarming. , 2015, , .		10
224	Determining the connection between capacitively coupled electrocardiography data and the ground truth. , 2015, , .		2
225	Capacitive ECG recording and beat-to-beat interval estimation after major cardiac event. , 2015, 2015, 7614-7.		8
226	The effect of triggered endocardial neuromodulation decreasing elevated heart rate. , 2015, , .		4
227	Reducing false arrhythmia alarms using robust interval estimation and machine learning. , 2015, , .		9
228	Detection of heart beats in multimodal data: a robust beat-to-beat interval estimation approach. Physiological Measurement, 2015, 36, 1679-1690.	1.2	20
229	A novel ultra-wideband 80 GHz FMCW radar system for contactless monitoring of vital signs. , 2015, 2015, 4978-81.		62
230	Electrical Bioimpedance-Controlled Surgical Instrumentation. IEEE Transactions on Biomedical Circuits and Systems, 2015, 9, 743-750.	2.7	7
231	Recurrence quantification analysis across sleep stages. Biomedical Signal Processing and Control, 2015, 20, 107-116.	3.5	15
232	OrientierungsschÃtzung mit einem Sliding Mode-Beobachter auf Basis Body Sensor Network-integrierter Inertialsensorik. Automatisierungstechnik, 2015, 63, 14-22.	0.4	2
233	Ex-vivo glucose sensors using micro-dialysis: importance of on-line recovery rate determination by multi-analyte infrared spectrometry. , 2015, , .		4
234	A shape-based quality evaluation and reconstruction method for electrical impedance tomography. Physiological Measurement, 2015, 36, 1161-1177.	1.2	9

#	Article	IF	Citations
235	Unobtrusive and comprehensive health screening using an intelligent toilet system. Biomedizinische Technik, 2015, 60, 17-29.	0.9	5
236	Robust decentralised control of a hydrodynamic human circulatory system simulator. Biomedical Signal Processing and Control, 2015, 20, 35-44.	3.5	26
237	Ambient and Unobtrusive Cardiorespiratory Monitoring Techniques. IEEE Reviews in Biomedical Engineering, 2015, 8, 30-43.	13.1	128
238	A Bendable and Wearable Cardiorespiratory Monitoring Device Fusing Two Noncontact Sensor Principles. IEEE Journal of Biomedical and Health Informatics, 2015, 19, 784-793.	3.9	39
239	Artificial intelligence for closed-loop ventilation therapy with hemodynamic control using the open lung concept. International Journal of Intelligent Computing and Cybernetics, 2015, 8, 50-68.	1.6	16
240	Beat-to-beat heart rate estimation fusing multimodal video and sensor data. Biomedical Optics Express, 2015, 6, 2895.	1.5	31
241	Automated respiratory therapy system based on the ARDSNet protocol with systemic perfusion control. Current Directions in Biomedical Engineering, 2015, 1, 314-317.	0.2	1
242	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.	1.6	16
243	An efficient method for facial component detection in thermal images. Proceedings of SPIE, 2015, , .	0.8	2
244	A robust parameterization approach for impedance control. , 2015, , .		1
245	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.	2.7	2
246	Improvement of Force-Sensor-Based Heart Rate Estimation Using Multichannel Data Fusion. IEEE Journal of Biomedical and Health Informatics, 2015, 19, 227-235.	3.9	47
247	A Thorax Simulator for Complex Dynamic Bioimpedance Measurements With Textile Electrodes. IEEE Transactions on Biomedical Circuits and Systems, 2015, 9, 412-420.	2.7	6
248	Development of a real-time, semi-capacitive impedance phlebography device. Journal of Electrical Bioimpedance, 2015, 6, 2-9.	0.5	8
249	Control of Adjustable Compliant Actuators. Machines, 2014, 2, 134-157.	1.2	5
250	USING PHOTOPLETHYSMOGRAPHY IMAGING FOR OBJECTIVE CONTACTLESS PAIN ASSESSMENT. Acta Polytechnica, 2014, 54, 275-280.	0.3	6
251	Design of an adaptive gait trajectory controller based on a hybrid two-legged robot model. , 2014, , .		1
252	Bladder volume estimation from electrical impedance tomography. Physiological Measurement, 2014, 35, 1813-1823.	1.2	46

#	Article	IF	Citations
253	Decentralised control of an electro-pneumatic adjustable impedance actuator. Automatisierungstechnik, 2014, 62, 877-890.	0.4	5
254	The MAIN Shirt: A Textile-Integrated Magnetic Induction Sensor Array. Sensors, 2014, 14, 1039-1056.	2.1	72
255	A survey on robotic devices for upper limb rehabilitation. Journal of NeuroEngineering and Rehabilitation, 2014, 11, 3.	2.4	820
256	Frequency-selective quantification of skin perfusion behavior during allergic testing using photoplethysmography imaging. , 2014, , .		4
257	Intelligent neonatal monitoring based on a virtual thermal sensor. BMC Medical Imaging, 2014, 14, 9.	1.4	32
258	Contact-free monitoring of circulation and perfusion dynamics based on the analysis of thermal imagery. Biomedical Optics Express, 2014, 5, 1075.	1.5	37
259	The IMPACT shirt: textile integrated and portable impedance cardiography. Physiological Measurement, 2014, 35, 1181-1196.	1.2	36
260	Automatic protective ventilation using the ARDSNet protocol with the additional monitoring of electrical impedance tomography. Critical Care, 2014, 18, R128.	2.5	23
261	Usefulness of Bioimpedance Spectroscopy for Detection of Hypotensive Episode during Dialysis. ASAIO Journal, 2014, 60, 570-575.	0.9	4
262	Recent Advances in and Limitations of Cardiac Output Monitoring by Means of Electrical Impedance Tomography. Anesthesia and Analgesia, 2014, 119, 76-83.	1.1	35
263	Hybrid optical imaging technology for long-term remote monitoring of skin perfusion and temperature behavior. Journal of Biomedical Optics, 2014, 19, 1.	1.4	43
264	Monitoring of lobectomy in cystic fibrosis with electrical impedance tomography â€“ a new diagnostic tool. Biomedizinische Technik, 2014, 59, 545-8.	0.9	8
265	Analysis and modelling of glucose metabolism in diabetic GÃ¶ttingen minipigs. Biomedical Signal Processing and Control, 2014, 13, 132-141.	3.5	13
266	A mathematical model for carbon dioxide elimination: an insight for tuning mechanical ventilation. European Journal of Applied Physiology, 2014, 114, 165-175.	1.2	11
267	Application of internal electrodes to the oesophageal and tracheal tube in an animal trial: evaluation of its clinical and technical potentiality in electrical impedance tomography. Journal of Clinical Monitoring and Computing, 2014, 28, 299-308.	0.7	11
268	A mobile and wireless approach for cardiac output monitoring. , 2014, , .		0
269	Influence of physiological sources on the impedance cardiogram analyzed using 4D FEM simulations. Physiological Measurement, 2014, 35, 1451-1468.	1.2	15
270	A Bendable and Wearable Cardiorespiratory Monitoring Device Fusing Two Noncontact Sensor Principles. , 2014, , .		4

#	Article	IF	Citations
271	Robust Sensor Fusion of Unobtrusively Measured Heart Rate. IEEE Journal of Biomedical and Health Informatics, 2014, 18, 654-660.	3.9	29
272	Model-Based Verification of a Non-Linear Separation Scheme for Ballistocardiography. IEEE Journal of Biomedical and Health Informatics, 2014, 18, 174-182.	3.9	28
273	Control of an Electromechanical Hydrocephalus Shuntâ€"a New Approach. IEEE Transactions on Biomedical Engineering, 2014, 61, 2379-2388.	2.5	11
274	A power consumption optimized reflective in-ear pulse oximeter for mobile health monitoring. , 2014, , .		2
275	An adaptive Kalman filter approach for cardiorespiratory signal extraction and fusion of non-contacting sensors. BMC Medical Informatics and Decision Making, 2014, 14, 37.	1.5	19
276	Robustness, Specificity, and Reliability of an In-Ear Pulse Oximetric Sensor in Surgical Patients. IEEE Journal of Biomedical and Health Informatics, 2014, 18, 1178-1185.	3.9	23
277	Bioelectrical impedance spectroscopy as a fluid management system in heart failure. Physiological Measurement, 2014, 35, 917-930.	1.2	41
278	A switching hybrid control method for automatic blood glucose regulation in diabetic GÃ¶ttingen minipigs. Biomedical Signal Processing and Control, 2014, 13, 237-246.	3.5	5
279	Individualized biomonitoring in heart failure â€“ Biomon-HF â€œKeep an eye on heart failure â€“ especially at nightâ€. Biomedizinische Technik, 2014, 59, 103-11.	0.9	6
280	Setting ventilation parameters guided by electrical impedance tomography in an animal trial of acute respiratory distress syndrome. Proceedings of SPIE, 2014, , .	0.8	1
281	EPAIA: Design, modelling and control of a novel electro-pneumatic adaptable impedance actuator. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 6599-6605.	0.4	3
282	Switching Hybrid Control of Blood Glucose in Diabetic GÃ¶ttingen Minipigs. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 10156-10161.	0.4	1
283	Body sensor network-based spasticity detection. , 2014, , .		1
284	A Novel Algorithm for the Calibration of Inertial/Magnetic Sensors: Application to a Body Sensor Network. Acta Mechanica Slovaca, 2014, 18, 42-49.	0.1	0
285	Robust inter-beat interval estimation in cardiac vibration signals. Physiological Measurement, 2013, 34, 123-138.	1.2	161
286	High spatial and temporal resolution 4D FEM simulation of the thoracic bioimpedance using MRI scans. Journal of Physics: Conference Series, 2013, 434, 012074.	0.3	1
287	Body sensor network-based strapdown orientation estimation: Application to human locomotion. , 2013, 2013, 6650480.		3
288	Electrical neurostimulation of isolated sympathetic nervous rat cells of the superior cervical ganglia. , 2013, , .		2

#	Article	IF	Citations
289	Automatic Detection of Atrial Fibrillation in Cardiac Vibration Signals. IEEE Journal of Biomedical and Health Informatics, 2013, 17, 162-171.	3.9	101
290	Bootstrap aggregating decision tree for motion classification based on a textile-integrated and wearable sensorarray. , 2013, , .		0
291	How speech processing can help with beat-to-beat heart rate estimation in ballistocardiograms. , 2013, , .		18
292	Impedance Measurement System for Determination of Capacitive Electrode Coupling. IEEE Transactions on Biomedical Circuits and Systems, 2013, 7, 682-689.	2.7	20
293	Blood glucose control algorithms for type 1 diabetic patients: A methodological review. Biomedical Signal Processing and Control, 2013, 8, 107-119.	3.5	101
294	A feasibility study evaluating innovative in-ear pulse oximetry for unobtrusive cardiovascular homecare monitoring during sleep. , 2013, , .		6
295	Noncontact Monitoring of Cardiorespiratory Activity by Electromagnetic Coupling. IEEE Transactions on Biomedical Engineering, 2013, 60, 2142-2152.	2.5	57
296	Simulation of a current source with a cole-cole load for multi-frequency electrical impedance tomography. , 2013, 2013, 6445-8.		9
297	Evaluating Innovative In-Ear Pulse Oximetry for Unobtrusive Cardiovascular and Pulmonary Monitoring During Sleep. IEEE Journal of Translational Engineering in Health and Medicine, 2013, 1, 2700208-2700208.	2.2	39
298	Modellierung und Regelung eines hydraulischen HIL-Simulators zum Test von HerzunterstÃ¼tzungssystemen / Modeling and Control of a Hydraulic Simulator for Ventricular Assist Device Testing. Automatisierungstechnik, 2013, 61, 645-655.	0.4	2
299	Automatisierungstechnische Methoden fÃ¼r die Medizin. Automatisierungstechnik, 2013, 61, 619-620.	0.4	0
300	Evaluation of a 433 MHz Band Body Sensor Network for Biomedical Applications. Sensors, 2013, 13, 898-917.	2.1	25
301	Infrared thermography for detailed registration of thermoregulation in premature infants. Journal of Perinatal Medicine, 2013, 41, 613-620.	0.6	35
302	Bladder volume estimation from electrical impedance tomography. , 2013, 2013, 6441-4.		8
303	Robust Control of Intracranial Pressure with an Electromechanical Extra-ventricular Drainage. , 2013, , .		1
304	Closed-Loop Ventilation of Oxygenation and End-Tidal CO2. , 2013, , .		2
305	Closed Loop Control of Spontaneous Breathing During Long Term Sedation. Biomedizinische Technik, 2013, 58 Suppl 1, .	0.9	0
306	In-Vitro Evaluation of a Drainage Catheter with Integrated Bioimpedance Electrodes to Determine Ventricular Size. Biomedizinische Technik, 2013, 58 Suppl 1, .	0.9	0

#	Article	IF	Citations
307	First Results of a New Electromechanical Controlled External Ventricular Drainage in a Porcine Model. Biomedizinische Technik, 2013, 58 Suppl 1, .	0.9	0
308	A GREIT-type linear reconstruction algorithm for EIT using eigenimages. Journal of Physics: Conference Series, 2013, 434, 012073.	0.3	0
309	A model-based approach for analysis of intracellular resistance variations due to body posture on bioimpedance measurements. Journal of Physics: Conference Series, 2013, 434, 012003.	0.3	0
310	Effect of electrode arrangements on bladder volume estimation by electrical impedance tomography. Journal of Physics: Conference Series, 2013, 434, 012080.	0.3	12
311	ROBUST CONTROL OF END-TIDAL CO₂ USING THE H_∞ LOOP-SHAPING APPROACH. Acta Polytechnica, 2013, 53, 895-900.	0.3	6
312	Close-to-reality evaluation of a PID control algorithm for blood glucose regulation in diabetic Goettingen minipigs. , 2013, , .		2
313	QUANTIFICATION OF RESPIRATORY SINUS ARRHYTHMIA WITH HIGH-FRAMERATE ELECTRICAL IMPEDANCE TOMOGRAPHY. Acta Polytechnica, 2013, 53, 854-861.	0.3	0
314	Multi-channel optical sensor-array for measuring ballistocardiograms and respiratory activity in bed. , 2012, 2012, 5042-5.		33
315	Magnetic induction measurements with a six channel coil array for vital parameter monitoring. , 2012, 2012, 602-4.		1
316	Non-contact monitoring techniques - Principles and applications. , 2012, 2012, 1302-5.		19
317	A neonatal thorax phantom for contact-less magnetic induction vitalparameter monitoring. , 2012, 2012, 1161-4.		0
318	Case study of relevant pressures for an implanted hydrocephalus valve in everyday life. , 2012, 2012, 1635-8.		2
319	A full digital magnetic induction measurement device for non-contact vital parameter monitoring (MONTOS). , 2012, 2012, 582-5.		3
320	A portable magnetic induction measurement system (PIMS). Biomedizinische Technik, 2012, 57, 131-8.	0.9	7
321	Respiratory Mechanics, Gas Transport and Perfusion during exercise. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 131-136.	0.4	1
322	Tidal recruitment assessed by electrical impedance tomography and computed tomography in a porcine model of lung injury*. Critical Care Medicine, 2012, 40, 903-911.	0.4	128
323	The Reliability and Accuracy of a Noncontact Electrocardiograph System for Screening Purposes. Anesthesia and Analgesia, 2012, 114, 322-327.	1.1	15
324	Modeling of Glucose-Insulin System Dynamics in Diabetic Goettingen Minipigs. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 414-419.	0.4	5

#	Article	IF	Citations
325	A Multisensor Implant for Continuous Monitoring of Intracranial Pressure Dynamics. IEEE Transactions on Biomedical Circuits and Systems, 2012, 6, 356-365.	2.7	9
326	Automatic Parameter Extraction from Capacitive ECG Measurements. Cardiovascular Engineering and Technology, 2012, 3, 319-332.	0.7	3
327	Electrical impedance tomography: the holy grail of ventilation and perfusion monitoring?. Intensive Care Medicine, 2012, 38, 1917-1929.	3.9	153
328	On the road to predictive smart alarms based on a networked operating room. , 2012, , .		2
329	The “music” within thoracic cavity using wavelet filtering. , 2012, , .		1
330	Transcutaneous Energy Transfer System Incorporating a Datalink for a Wearable Autonomous Implant. , 2012, , .		4
331	Multivariable control design for artificial blood-gas exchange with heart-lung machine support. , 2012, , .		4
332	Control strategies for mechanical heart assist systems. , 2012, , .		2
333	Evaluation of Bioimpedance Spectroscopy for the Monitoring of the Fluid Status in an Animal Model. , 2012, , .		1
334	Glucose-insulin model of glucose metabolism in acute diabetic swine based on Luenberger observer. , 2012, , .		2
335	Analysis of regional compliance in a porcine model of acute lung injury. Respiratory Physiology and Neurobiology, 2012, 184, 16-26.	0.7	10
336	Neonatal infrared thermography imaging: Analysis of heat flux during different clinical scenarios. Infrared Physics and Technology, 2012, 55, 538-548.	1.3	32
337	Electrical Impedance Tomography for hemodynamic monitoring. , 2012, 2012, 122-5.		8
338	Automatic electrode selection in unobtrusive capacitive ECG measurements. , 2012, , .		8
339	Acute Pain Therapy in Postanesthesia Care Unit Directed by Skin Conductance: A Randomized Controlled Trial. PLoS ONE, 2012, 7, e41758.	1.1	10
340	Development of a test-bench for bio-inspired actuator systems in rehabilitation robotics. Biomedizinische Technik, 2012, 57, .	0.9	0
341	Accelerometer-assisted PPG Measurement During Physical Exercise Using the LAVIMO Sensor System. Acta Polytechnica, 2012, 52, .	0.3	10
342	Femoral Test Bed for Impedance Controlled Surgical Instrumentation. Acta Polytechnica, 2012, 52, .	0.3	2

#	Article	IF	Citations
343	Hydrostatic fluid pressure in the vestibular organ of the guinea pig. European Archives of Oto-Rhino-Laryngology, 2012, 269, 1755-1758.	0.8	12
344	Advances in Reflective Oxygen Saturation Monitoring With a Novel In-Ear Sensor System: Results of a Human Hypoxia Study. IEEE Transactions on Biomedical Engineering, 2012, 59, 2003-2010.	2.5	65
345	Neonatal Infrared Thermography Monitoring. , 2012, , 84-124.		6
346	Evaluation of Bioelectrical Impedance Spectroscopy for the Assessment of Extracellular Body Water. Acta Polytechnica, 2012, 52, .	0.3	1
347	Capacitive electrocardiogram measurement system in the driver seat. ATZ Worldwide, 2011, 113, 50-55.	0.1	13
348	Hirndruckmodellierung und Regelung einer neuen mechatronischen externen Ventrikeldrainage. Automatisierungstechnik, 2011, 59, 613-621.	0.4	7
349	Effect of PEEP on regional ventilation during laparoscopic surgery monitored by electrical impedance tomography. Acta Anaesthesiologica Scandinavica, 2011, 55, 878-886.	0.7	65
350	Triboelectricity in Capacitive Biopotential Measurements. IEEE Transactions on Biomedical Engineering, 2011, 58, 1268-1277.	2.5	68
351	ECG on the Road: Robust and Unobtrusive Estimation of Heart Rate. IEEE Transactions on Biomedical Engineering, 2011, 58, 3112-3120.	2.5	105
352	Distributed Intelligent Sensor Network for the Rehabilitation of Parkinson's Patients. IEEE Transactions on Information Technology in Biomedicine, 2011, 15, 268-276.	3.6	22
353	Adaptive Beat-to-Beat Heart Rate Estimation in Ballistocardiograms. IEEE Transactions on Information Technology in Biomedicine, 2011, 15, 778-786.	3.6	163
354	Real-time image composition of bladder mosaics in fluorescence endoscopy. Computer Science - Research and Development, 2011, 26, 51-64.	2.7	29
355	The smart car seat: personalized monitoring of vital signs in automotive applications. Personal and Ubiquitous Computing, 2011, 15, 707-715.	1.9	106
356	Neonatal non-contact respiratory monitoring based on real-time infrared thermography. BioMedical Engineering OnLine, 2011, 10, 93.	1.3	167
357	Electric impedance tomography for monitoring volume and size of the urinary bladder. Biomedizinische Technik, 2011, 56, 301-307.	0.9	53
358	Development of a device for measuring the sensitivity area of coil arrays for magnetic induction measurements. , 2011, 2011, 4959-62.		1
359	Monitoring Change of Body Fluid during Physical Exercise using Bioimpedance Spectroscopy and Finite Element Simulations. Journal of Electrical Bioimpedance, 2011, 2, 79-85.	0.5	13
360	Intelligent Toilet System for Health Screening. Lecture Notes in Computer Science, 2011, , 152-160.	1.0	0

#	Article	IF	Citations
361	A Novel Bioimpedance Technique to Monitor Fluid Volume State During Hemodialysis Treatment. ASAIO Journal, 2010, 56, 215-220.	0.9	21
362	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.	1.6	11
363	Analysis of Tidal Breathing Flow Volume Loops for Automated Lung-Function Diagnosis in Infants. IEEE Transactions on Biomedical Engineering, 2010, 57, 1945-1953.	2.5	12
364	Transmission infrared spectroscopy of whole blood â€“ complications for quantitative analysis from leucocyte adhesion during continuous monitoring. Journal of Biophotonics, 2010, 3, 567-578.	1.1	13
365	Clinical proof of practicability for an ECG device without any conductive contact. Biomedizinische Technik, 2010, 55, 291-300.	0.9	12
366	A capacitive ECG array with visual patient feedback. , 2010, 2010, 6539-42.		9
367	Applying machine learning to detect individual heart beats in ballistocardiograms. , 2010, 2010, 1926-9.		27
368	A multi-threaded mosaicking algorithm for fast image composition of fluorescence bladder images. , 2010, , .		8
369	Automatisierung und Fehlerdiagnose bei der extrakorporalen Membranoxygenierung. Automatisierungstechnik, 2010, 58, 277-285.	0.4	5
370	Characterization of textile electrodes and conductors using standardized measurement setups. Physiological Measurement, 2010, 31, 233-247.	1.2	262
371	An RFID Communication System for Medical Applications. , 2010, , .		3
372	Respiration monitoring based on magnetic induction using a single coil. , 2010, , .		11
373	Bedside measurement of changes in lung impedance to monitor alveolar ventilation in dependent and non-dependent parts by electrical impedance tomography during a positive end-expiratory pressure trial in mechanically ventilated intensive care unit patients. Critical Care, 2010, 14, R100.	2.5	61
374	On the Road to a Textile Integrated Bioimpedance Early Warning System for Lung Edema. , 2010, , .		13
375	A physiological model for extracorporeal oxygenation controller design. , 2010, 2010, 434-7.		6
376	Automation of long term extracorporeal oxygenation systems. , 2009, , .		7
377	Breathing detection with a portable impedance measurement system: First measurements. , 2009, 2009, 2767-70.		1
378	Modeling and simulation of the cardiovascular system: a review of applications, methods, and potentials / Modellierung und Simulation des Herz-Kreislauf-Systems: ein Ãœberblick zu Anwendungen, Methoden und Perspektiven. Biomedizinische Technik, 2009, 54, 233-244.	0.9	18

#	Article	IF	Citations
379	Smart Life Support: modellbasierte Entwicklung und Automatisierung von lebensunterstÃ¼tzenden Systemen / Smart life support: model-based design and control of life-supporting systems. Biomedizinische Technik, 2009, 54, 229-231.	0.9	3
380	Methods of design, simulation, and control for the development of new VAD/TAH concepts / Methoden zur Konstruktion, Simulation und Regelung fÃ¼r die Entwicklung von neuen VAD/TAH-Konzepten. Biomedizinische Technik, 2009, 54, 269-281.	0.9	8
381	In-Ear Vital Signs Monitoring Using a Novel Microoptic Reflective Sensor. IEEE Transactions on Information Technology in Biomedicine, 2009, 13, 882-889.	3.6	51
382	Lung volume calculated from electrical impedance tomography in ICU patients at different PEEP levels. Intensive Care Medicine, 2009, 35, 1362-1367.	3.9	91
383	Experimental case report: development of a pneumothorax monitored by electrical impedance tomography. Clinical Physiology and Functional Imaging, 2009, 29, 159-162.	0.5	15
384	A versatile Body Sensor Network for health care applications. , 2009, , .		5
385	Characterization of textile conductors for Bioimpedance Spectroscopy. IFMBE Proceedings, 2009, , 2244-2247.	0.2	0
386	Validating the Reliability of Five Ventricular Fibrillation Detecting Algorithms. IFMBE Proceedings, 2009, , 26-29.	0.2	3
387	Assessment of regional lung recruitment and derecruitment during aÂPEEP trial based on electrical impedance tomography. Intensive Care Medicine, 2008, 34, 543-550.	3.9	191
388	Reply to the Editor-in-Chief. Intensive Care Medicine, 2008, 34, 583-583.	3.9	0
389	Reply to the comment by Dr. Borges. Intensive Care Medicine, 2008, 34, 585-586.	3.9	0
390	Modeling of Fluid Shifts in the Human Thorax for Electrical Impedance Tomography. IEEE Transactions on Magnetics, 2008, 44, 1450-1453.	1.2	17
391	A system for assessing motion artifacts in the signal of a micro-optic in-ear vital signs sensor. , 2008, 2008, 510-3.		9
392	Non-contact ECG monitoring for automotive application. , 2008, , .		58
393	Influence of contact pressure and moisture on the signal quality of a newly developed textile ECG sensor shirt. , 2008, , .		26
394	Rolf Isermann wird 70. Automatisierungstechnik, 2008, 56, 453-453.	0.4	0
395	Dynamic separation of pulmonary and cardiac changes in electrical impedance tomography. Physiological Measurement, 2008, 29, S1-S14.	1.2	93
396	Multichannel simultaneous magnetic induction measurement system (MUSIMITOS). Physiological Measurement, 2008, 29, S291-S306.	1.2	20

#	Article	IF	Citations
397	Introduction to Special Section From the BSN2007 Workshop. IEEE Transactions on Biomedical Circuits and Systems, 2007, 1, 234-234.	2.7	1
398	Protective ventilation using electrical impedance tomography. Physiological Measurement, 2007, 28, S247-S260.	1.2	105
399	Optimal electrode placement and frequency range selection for the detection of lung water using Bioimpedance Spectroscopy. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 2685-8.	0.5	40
400	Optimierung der automatisierten Beatmung bei akutem Lungenversagen mit Hilfe der elektrischen Impedanztomographie (Enhancement of Automated Protective Ventilation Strategies in Respiratory) Tj ETQq0 0 0 rgBT /Overlock 10 Tf		
401	Automatisierungstechnik fÃ¼r die kÃ¼nstliche Beatmung â€“ eine Standortbestimmung (Automatic) Tj ETQq1 1 0.784314 rgBT /Over	0.4	3
402	Mobile Noncontact Monitoring of Heart and Lung Activity. IEEE Transactions on Biomedical Circuits and Systems, 2007, 1, 250-257.	2.7	99
403	Control applications in artificial ventilation. , 2007, , .		12
404	In-Ear Heart Rate Monitoring Using a Micro-Optic Reflective Sensor. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 1375-8.	0.5	19
405	Development of the Multichannel Simultaneous Magnetic Induction Measurement System Musimitos. , 2007, , 448-451.		1
406	Novel Features for Automated Lung Function Diagnosis in Spontaneously Breathing Infants. Lecture Notes in Computer Science, 2007, , 195-199.	1.0	1
407	Magnetic and Capacitive Monitoring of Heart and Lung Activity as an Example for Personal Healthcare. , 2006, , .		7
408	SMART MECHATRONIC DEVICE TO ASSIST HEART FUNCTION. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 7-11.	0.4	2
409	Electrical impedance tomography: changes in distribution of pulmonary ventilation during laparoscopic surgery in a porcine model. Langenbeck's Archives of Surgery, 2006, 391, 383-389.	0.8	15
410	Review of Current Actuator Suitability for Use in Medical Implants. , 2006, 2006, 5956-9.		12
411	Personal Healthcare Devices. Philips Research, 2006, , 349-370.	0.2	38
412	Review of Current Actuator Suitability for Use in Medical Implants. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	2
413	A Model for Intracranial Hydrodynamics. , 2005, 2005, 5603-6.		10
414	Modellbildung und Regelung des Hirndrucks (Modeling and Control of Intracranial Pressure). Automatisierungstechnik, 2000, 48, 86.	0.4	2

#	Article	IF	Citations
415	Optimierung der Beatmung beim akuten Lungenversagen durch Identifikation physiologischer KenngrÃ¶Ãen. Automatisierungstechnik, 1998, 46, 532-539.	0.4	14
416	Fusing QRS Detection, Waveform Features, and Robust Interval Estimation with a Random Forest to Classify Atrial Fibrillation. , 0, , .		9
417	Signal-Level Fusion With Convolutional Neural Networks for Capacitively Coupled ECG in the Car. , 0, , .		1
418	Nonnegative Matrix Factorization and Random Forest for Classification of Heart Sound Recordings in the Spectral Domain. , 0, , .		4
419	On the Performance of Bed-Integrated Ballistocardiography in Long-Term Heart Rate Monitoring of Vascular Patients. , 0, , .		2