# Steffen Leonhardt

List of Publications by Year
in descending order



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|---|---|---|---|
| 419 papers | 8,461 citations | 81889 39 h-index | 71682 76 g-index |
| 433 all docs | 433 docs citations | 433 times ranked | 7119 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 | Investigation of Three Potential Stress Inducement Tasks During On-Road Driving. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 4823-4832. | 8.0 | 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. | 3.2 | 5 |
| 4 | A Setup for Camera-Based Detection of Simulated Pathological States Using a Neonatal Phantom. Sensors, 2022, 22, 957. | 3.8 | 3 |
| 5 | A Novel Sensor Design for Amplitude Modulated Measurement of Capacitive ECG. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-10. | 4.7 | 3 |
| 6 | Unobtrusive Measurement of Physiological Features Under Simulated and Real Driving Conditions. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 4767-4777. | 8.0 | 4 |
| 7 | A Rotational Invariant Neural Network for Electrical Impedance Tomography Imaging without Reference Voltage: RF-REIM-NET. Diagnostics, 2022, 12, 777. | 2.6 | 5 |
| 8 | A Wearable, Multi-Frequency Device to Measure Muscle Activity Combining Simultaneous Electromyography and Electrical Impedance Myography. Sensors, 2022, 22, 1941. | 3.8 | 9 |
| 9 | Head Tracking in Automotive Environments for Driver Monitoring Using a Low Resolution Thermal Camera. Vehicles, 2022, 4, 219-233. | 3.1 | 2 |
| 10 | On the spatial phase distribution of cutaneous low-frequency perfusion oscillations. Scientific Reports, 2022, 12, 5997. | 3.3 | 6 |
| 11 | A mechatronic test-bench to investigate the impact of ventricular pulsation in hydrocephalus. Biomedical Signal Processing and Control, 2022, 75, 103579. | 5.7 | 1 |
| 12 | Determination of the Geometric Parameters of Electrode Systems for Electrical Impedance Myography: A Preliminary Study. Sensors, 2022, 22, 97. | 3.8 | 8 |
| 13 | A Way of Bionic Control Based on EI, EMG, and FMG Signals. Sensors, 2022, 22, 152. | 3.8 | 9 |
| 14 | Camera fusion for real-time temperature monitoring of neonates using deep learning. Medical and Biological Engineering and Computing, 2022, 60, 1787-1800. | 2.8 | 7 |
| 15 | What is new in respiratory monitoring?. Journal of Clinical Monitoring and Computing, 2022, 36, 599-607. | 1.6 | 4 |
| 16 | Real-Time Respiration Monitoring of Neonates from Thermography Images Using Deep Learning. Lecture Notes in Computer Science, 2022, , 221-232. | 1.3 | 1 |
| 17 | Continuous Monitoring of Vital Signs Using Cameras: A Systematic Review. Sensors, 2022, 22, 4097. | 3.8 | 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. | 2.4 | 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. | 5.8 | 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. | 6.3 | 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. | 5.2 | 16 |
| 23 | A Deep Learning-Based Camera Approach for Vital Sign Monitoring Using Thermography Images for ICU Patients. Sensors, 2021, 21, 1495. | 3.8 | 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, , . | 0.3 | 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. | 2.5 | 4 |
| 26 | Accuracy of heart rate variability estimated with reflective wrist-PPG in elderly vascular patients. Scientific Reports, 2021, 11, 8123. | 3.3 | 23 |
| 27 | Design and First Operation of an Active Lower Limb Exoskeleton with Parallel Elastic Actuation. Actuators, 2021, 10, 75. | 2.3 | 10 |
| 28 | Classification of chronic venous diseases based on skin temperature patterns. Physiological Measurement, 2021, 42, 045001. | 2.1 | 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. | 5.5 | 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, . | 2.1 | 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. | 2.4 | 6 |
| 35 | Detection of acute ventilatory problems via magnetic induction in a newborn animal model. Pediatric Research, 2021, , . | 2.3 | 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. | 6.3 | 4 |

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| 37 | A model-based source separation algorithm for lung perfusion imaging using electrical impedance tomography. Physiological Measurement, 2021, 42, 084001. | 2.1 | 10 |
| 38 | Real-Time Evaluation of Optic Nerve Sheath Diameter (ONSD) in Awake, Spontaneously Breathing Patients. Journal of Clinical Medicine, 2021, 10, 3549. | 2.4 | 5 |
| 39 | Pulmonary Effects of Sustained Periods of High-G Acceleration Relevant to Suborbital Spaceflight. Aerospace Medicine and Human Performance, 2021, 92, 633-641. | 0.4 | 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. | 2.8 | 4 |
| 41 | Dynamic lung behavior under high G acceleration monitored with electrical impedance tomography. Physiological Measurement, 2021, 42, 094001. | 2.1 | 7 |
| 42 | Spatio-temporal and -spectral feature maps in photoplethysmography imaging and infrared thermography. BioMedical Engineering OnLine, 2021, 20, 8. | 2.7 | 5 |
| 43 | A Neonatal Phantom for Vital Signs Simulation. IEEE Transactions on Biomedical Circuits and Systems, 2021, 15, 949-959. | 4.0 | 6 |
| 44 | Monitoring transcellular fluid shifts during episodes of intradialytic hypotension using bioimpedance spectroscopy. CKJ: Clinical Kidney Journal, 2021, 14, 149-155. | 2.9 | 6 |
| 45 | Automated Positive End-Expiratory Pressure Titration during Mechanical Ventilation. IFAC-PapersOnLine, 2021, 54, 412-417. | 0.9 | 1 |
| 46 | Bandwidth and Common Mode Optimization for Current and Voltage Sources in Bioimpedance Spectroscopy. Journal of Electrical Bioimpedance, 2021, 12, 135-146. | 0.9 | 2 |
| 47 | Improved estimation of left ventricular volume from electric field modeling. Journal of Electrical Bioimpedance, 2021, 12, 125-134. | 0.9 | 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. | 4.9 | 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. | 5.2 | 59 |
| 51 | Car Seats with Capacitive ECG Electrodes Can Detect Cardiac Pacemaker Spikes. Sensors, 2020, 20, 6288. | 3.8 | 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. | 2.3 | 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. | 2.8 | 14 |

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| 55 | Evaluation and Application of a Customizable Wireless Platform: A Body Sensor Network for Unobtrusive Gait Analysis in Everyday Life. Sensors, 2020, 20, 7325. | 3.8 | 9 |
| 56 | Design and Preliminary Validation of a Lower Limb Exoskeleton With Compact and Modular Actuation. IEEE Access, 2020, 8, 66338-66352. | 4.2 | 20 |
| 57 | Analysis, Design, and Preliminary Evaluation of a Parallel Elastic Actuator for Power-Efficient Walking Assistance. IEEE Access, 2020, 8, 88060-88075. | 4.2 | 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. | 6.3 | 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. | 2.1 | 20 |
| 61 | Segmental Bioelectrical Impedance Spectroscopy to Monitor Fluid Status in Heart Failure. Scientific Reports, 2020, 10, 3577. | 3.3 | 19 |
| 62 | Physiological Motion Artifacts in Capacitive ECG: Ballistocardiographic Impedance Distortions. IEEE Transactions on Instrumentation and Measurement, 2020, 69, 3297-3307. | 4.7 | 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. | 6.3 | 18 |
| 64 | Photoplethysmography imaging:camera performance evaluation by means of an optoelectronic skin perfusion phantom. Physiological Measurement, 2020, 41, 054001. | 2.1 | 9 |
| 65 | The dawn of physiological closed-loop ventilationâ€”a review. Critical Care, 2020, 24, 121. | 5.8 | 34 |
| 66 | Individualized Positive End-expiratory Pressure and Regional Gas Exchange in Porcine Lung Injury. Anesthesiology, 2020, 132, 808-824. | 2.5 | 8 |
| 67 | Conceptual design, modeling and control of a rigid parallel serial-elastic actuator. Automatisierungstechnik, 2020, 68, 410-422. | 0.8 | 7 |
| 68 | Implementation of LPV Hâˆž Loop-Shaping Control for a Variable Stiffness Actuator. IFAC-PapersOnLine, 2020, 53, 10129-10134. | 0.9 | 3 |
| 69 | Backstepping Control with Radial Basis Function Network for a Nonlinear Cardiopulmonary System. IFAC-PapersOnLine, 2020, 53, 16311-16316. | 0.9 | 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. | 0.9 | 5 |
| 72 | Influence of Measurement Pattern on RAW-data in Electrical Impedance Tomography. IFMBE Proceedings, 2020, , 11-17. | 0.3 | 0 |

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| 73 | Model-based sensor fusion of multimodal cardiorespiratory signals using an unscented Kalman filter. Automatisierungstechnik, 2020, 68, 933-940. | 0.8 | 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. | 0.3 | 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. | 0.8 | 1 |
| 77 | Noncontact Monitoring of Respiratory Rate in Newborn Infants Using Thermal Imaging. IEEE Transactions on Biomedical Engineering, 2019, 66, 1105-1114. | 4.2 | 62 |
| 78 | Capacitive ECG Monitoring in Cardiac Patients During Simulated Driving. IEEE Transactions on Biomedical Engineering, 2019, 66, 749-758. | 4.2 | 22 |
| 79 | A Broader Look: Camera-Based Vital Sign Estimation across the Spectrum. Yearbook of Medical Informatics, 2019, 28, 102-114. | 1.0 | 41 |
| 80 | A Modified Method to Assess Tidal Recruitment by Electrical Impedance Tomography. Journal of Clinical Medicine, 2019, 8, 1161. | 2.4 | 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. | 4.7 | 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. | 4.2 | 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, , . | 0.4 | 4 |
| 86 | Synthesis of cardiac signals using a Copula-approach. AIP Conference Proceedings, 2019, , . | 0.4 | 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. | 2.9 | 13 |
| 88 | Design and Analysis of a Clutched Parallel Elastic Actuator. Actuators, 2019, 8, 67. | 2.3 | 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. | 4.0 | 16 |
| 90 | Enhanced in vitro model of the CSF dynamics. Fluids and Barriers of the CNS, 2019, 16, 11. | 5.0 | 23 |

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| 91 | Reconstruction algorithm for frequency-differential EIT using absolute values. Physiological Measurement, 2019, 40, 034008. | 2.1 | 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. | 2.5 | 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. | 1.1 | 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. | 2.5 | 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. | 5.5 | 18 |
| 101 | Improving sleep/wake classification with recurrence quantification analysis features. Biomedical Signal Processing and Control, 2019, 49, 78-86. | 5.7 | 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. | 3.7 | 60 |
| 103 | Online cardiac output estimation during transvalvular left ventricular assistance. Computer Methods and Programs in Biomedicine, 2019, 171, 87-97. | 4.7 | 8 |
| 104 | Modeling photoplethysmographic signals in camera-based perfusion measurements: optoelectronic skin phantom. Biomedical Optics Express, 2019, 10, 4353. | 2.9 | 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. | 0.9 | 2 |
| 106 | Fault Identification in a Blood Pump Using Neural Networks. IFMBE Proceedings, 2019, , 27-32. | 0.3 | 0 |
| 107 | Flowâ€volume loops measured with electrical impedance tomography in pediatric patients with asthma. Pediatric Pulmonology, 2018, 53, 636-644. | 2.0 | 14 |
| 108 | Addition of internal electrodes is beneficial for focused bioimpedance measurements in the lung. Physiological Measurement, 2018, 39, 035009. | 2.1 | 3 |

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| 109 | Lung pathologies analyzed with multi-frequency electrical impedance tomography: Pilot animal study. Respiratory Physiology and Neurobiology, 2018, 254, 1-9. | 1.6 | 13 |
| 110 | An object-oriented computational model to study cardiopulmonary hemodynamic interactions in humans. Computer Methods and Programs in Biomedicine, 2018, 159, 167-183. | 4.7 | 13 |
| 111 | Electrical impedance tomography as possible guidance for individual positioning of patients with multiple lung injury. Clinical Respiratory Journal, 2018, 12, 68-75. | 1.6 | 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. | 1.6 | 9 |
| 113 | Realâ€Time ECG Simulation for Hybrid Mock Circulatory Loops. Artificial Organs, 2018, 42, 131-140. | 1.9 | 3 |
| 114 | Assessing regional lung mechanics by combining electrical impedance tomography and forced oscillation technique. Biomedizinische Technik, 2018, 63, 673-681. | 0.8 | 5 |
| 115 | Optimal online selection of type 1 diabetes-glucose metabolism models. Control Engineering Practice, 2018, 71, 108-119. | 5.5 | 4 |
| 116 | Heart phantom with electrical properties of heart muscle tissue. Current Directions in Biomedical Engineering, 2018, 4, 97-100. | 0.4 | 4 |
| 117 | The volume-dependent Forced Oscillation Technique. IFAC-PapersOnLine, 2018, 51, 373-377. | 0.9 | 1 |
| 118 | Selection of glucose metabolism models with an observer error metric. IFAC-PapersOnLine, 2018, 51, 288-293. | 0.9 | 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. | 1.1 | 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. | 0.8 | 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. | 2.2 | 21 |

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|---|---|---|---|
| 127 | Unobtrusive Vital Sign Monitoring in Automotive Environmentsâ€"A Review. Sensors, 2018, 18, 3080. | 3.8 | 87 |
| 128 | Regional lung ventilation and perfusion by electrical impedance tomography compared to single-photon emission computed tomography. Physiological Measurement, 2018, 39, 065004. | 2.1 | 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. | 3.8 | 24 |
| 131 | Monitoring of Cardiorespiratory Signals Using Thermal Imaging: A Pilot Study on Healthy Human Subjects. Sensors, 2018, 18, 1541. | 3.8 | 35 |
| 132 | Estimating Respiratory Rate in Post-Anesthesia Care Unit Patients Using Infrared Thermography: An Observational Study. Sensors, 2018, 18, 1618. | 3.8 | 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. | 2.7 | 32 |
| 134 | Experimental Validation of a Torque-Controlled Variable Stiffness Actuator Tuned by Gain Scheduling. IEEE/ASME Transactions on Mechatronics, 2018, 23, 2109-2120. | 5.8 | 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. | 0.3 | 5 |
| 136 | Robust Assistance Control of Left Ventricular Assist Devices. IFMBE Proceedings, 2018, , 294-297. | 0.3 | 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. | 0.9 | 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. | 5.5 | 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. | 6.3 | 13 |
| 142 | Estimation of Penetrated Bone Layers During Craniotomy via Bioimpedance Measurement. IEEE Transactions on Biomedical Engineering, 2017, 64, 765-774. | 4.2 | 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. | 5.5 | 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. | 4.0 | 19 |

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|---|---|---|---|
| 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. | 0.8 | 5 |
| 146 | Physiological closed-loop control of mechanical ventilation and extracorporeal membrane oxygenation. Biomedizinische Technik, 2017, 62, 199-212. | 0.8 | 3 |
| 147 | Effects of the nasal passage on forced oscillation lung function measurements. Biomedizinische Technik, 2017, 62, 635-642. | 0.8 | 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. | 5.6 | 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. | 0.8 | 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. | 1.2 | 13 |
| 153 | Monitoring lung contusion in a porcine polytrauma model using EIT: an application study. Physiological Measurement, 2017, 38, 1542-1560. | 2.1 | 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. | 1.8 | 5 |
| 156 | Optimizing PEEP by Electrical Impedance Tomography in a Porcine Animal Model of ARDS. Respiratory Care, 2017, 62, 340-349. | 1.6 | 25 |
| 157 | Linearity of electrical impedance tomography during maximum effort breathing and forced expiration maneuvers. Physiological Measurement, 2017, 38, 77-86. | 2.1 | 22 |
| 158 | Decentralized safety concept for closed-loop controlled intensive care. Biomedizinische Technik, 2017, 62, 213-223. | 0.8 | 2 |
| 159 | Unobtrusive Nocturnal Heartbeat Monitoring by a Ballistocardiographic Sensor in Patients with Sleep Disordered Breathing. Scientific Reports, 2017, 7, 13175. | 3.3 | 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„‹âˆ’Sliding-Mode Beobachterentwurf. Automatisierungstechnik, 2017, 65, 695-704. | 0.8 | 0 |

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| 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. | 1.6 | 48 |
| 164 | Active and Passive Optical Imaging Modality for Unobtrusive Cardiorespiratory Monitoring and Facial Expression Assessment. Anesthesia and Analgesia, 2017, 124, 104-119. | 2.2 | 11 |
| 165 | SensInDenTâ€"Noncontact Sensors Integrated Into Dental Treatment Units. IEEE Transactions on Biomedical Circuits and Systems, 2017, 11, 225-233. | 4.0 | 8 |
| 166 | Observer-Based Human Knee Stiffness Estimation. IEEE Transactions on Biomedical Engineering, 2017, 64, 1033-1044. | 4.2 | 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. | 5.7 | 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. | 18.0 | 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. | 0.9 | 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. | 0.9 | 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. | 3.8 | 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. | 0.4 | 2 |

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