Mirko Meboldt

List of Publications by Year
in descending order

109 papers	1,909 citations	304743 22 h-index	315739 38 g-index
114 all docs	114 docs citations	114 times ranked	1846 citing authors

#	Article	IF	Citations
1	Internet on animals: Wiâ€Fiâ€enabled devices provide a solution for big data transmission in biologging. Methods in Ecology and Evolution, 2023, 14, 87-102.	5.2	17
2	An algorithmic approach to determine expertise development using object-related gaze pattern sequences. Behavior Research Methods, 2022, 54, 493-507.	4.0	3
3	Dual-Modality Volume Measurement Integrated on a Ventricular Assist Device. IEEE Transactions on Biomedical Engineering, 2022, 69, 1151-1161.	4.2	2
4	Pressure and Bernoulli-Based Flow Measurement via a Tapered Inflow VAD Cannula. IEEE Transactions on Biomedical Engineering, 2022, 69, 1620-1629.	4.2	3
5	The HEV Ventilator: at the interface between particle physics and biomedical engineering. Royal Society Open Science, 2022, 9, 211519.	2.4	1
6	Cytotoxic and Inflammatory Effects of Electronic and Traditional Cigarettes on Oral Gingival Cells Using a Novel Automated Smoking Instrument: An In Vitro Study. Toxics, 2022, 10, 179.	3.7	7
7	Automated Design Workflow for Structural Nodes of Space Frame Structures. Procedia CIRP, 2022, 109, 419-424.	1.9	0
8	Increased Longevity and Pumping Performance of an Injection Molded Soft Total Artificial Heart. Soft Robotics, 2021, 8, 588-593.	8.0	9
9	A Novel Hybrid Membrane VAD as First Step Toward Hemocompatible Blood Propulsion. Annals of Biomedical Engineering, 2021, 49, 716-731.	2.5	9
10	Eye Tracking Supported Human Factors Testing Improving Patient Training. Journal of Medical Systems, 2021, 45, 55.	3.6	6
11	Real-Time Ventricular Volume Measured Using the Intracardiac Electromyogram. ASAIO Journal, 2021, 67, 1312-1320.	1.6	3
12	Comparing the effectiveness of augmented reality-based and conventional instructions during single ECMO cannulation training. International Journal of Computer Assisted Radiology and Surgery, 2021, 16, 1171-1180.	2.8	22
13	Cardiac Output Estimation: Online Implementation for Left Ventricular Assist Device Support. IEEE Transactions on Biomedical Engineering, 2021, 68, 1990-1998.	4.2	3
14	Transcatheter Mitral Valve Repair Simulator Equipped with Eye Tracking Based Performance Assessment Capabilities: A Pilot Study. Cardiovascular Engineering and Technology, 2021, 12, 530-538.	1.6	3
15	In Vitro Testing and Comparison of Additively Manufactured Polymer Impellers for the CentriMag Blood Pump. ASAIO Journal, 2021, 67, 306-313.	1.6	12
16	Building Block Synthesis of Self-Supported Three-Dimensional Compliant Elements for Metallic Additive Manufacturing. Journal of Mechanical Design, Transactions of the ASME, 2021, 143, .	2.9	7
17	Improving design engineersâ€™ performance through novelly structured design guidelines: aÂstudy in and with industry. Forschung Im Ingenieurwesen/Engineering Research, 2020, 84, 11-19.	1.6	1
18	Blood trauma potential of the HeartWare Ventricular Assist Device in pediatric patients. Journal of Thoracic and Cardiovascular Surgery, 2020, 159, 1519-1527.e1.	0.8	24

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19	Novel augmented physical simulator for the training of transcatheter cardiovascular interventions. Catheterization and Cardiovascular Interventions, 2020, 95, 1202-1209.	1.7	13
20	Performance of modern syringe infusion pump assemblies at low infusion rates in the perioperative setting. British Journal of Anaesthesia, 2020, 124, 173-182.	3.4	21
21	Visual Behaviour Strategies of Operators during Catheter-Based Cardiovascular Interventions. Journal of Medical Systems, 2020, 44, 12.	3.6	7
22	Performance comparison of prediction filters for respiratory motion tracking in radiotherapy. Medical Physics, 2020, 47, 643-650.	3.0	20
23	Assessment of the Flow Field in the HeartMate 3 Using Three-Dimensional Particle Tracking Velocimetry and Comparison to Computational Fluid Dynamics. ASAIO Journal, 2020, 66, 173-182.	1.6	15
24	Advancing empirical evidence of iteration stereotypes in the fuzzy front end of product development processes. Procedia CIRP, 2020, 91, 61-70.	1.9	4
25	Quantification of Avoidable Radiation Exposure in Interventional Fluoroscopy With Eye Tracking Technology. Investigative Radiology, 2020, Publish Ahead of Print, 457-462.	6.2	7
26	Exploring how design guidelines benefit design engineers: an international and global perspective. Design Science, 2020, 6, .	2.1	2
27	Ultrasound-based prediction of interventricular septum positioning during left ventricular supportâ€”an experimental study. Journal of Cardiovascular Translational Research, 2020, 13, 1055-1064.	2.4	4
28	Design Automation and Additive Manufacturing for Anatomically Diversified Medical Simulators. Procedia CIRP, 2020, 91, 458-463.	1.9	0
29	Mapping value clusters of additive manufacturing on design strategies to support part identification and selection. Rapid Prototyping Journal, 2020, 26, 1797-1807.	3.2	14
30	Continuous Heart Volume Monitoring by Fully Implantable Soft Strain Sensor. Advanced Healthcare Materials, 2020, 9, e2000855.	7.6	27
31	Computational design synthesis of additive manufactured multi-flow nozzles. Additive Manufacturing, 2020, 35, 101231.	3.0	15
32	Flow irregularities from syringe infusion pumps caused by syringe stiction. Paediatric Anaesthesia, 2020, 30, 885-891.	1.1	2
33	Posture related in-vitro characterization of a flow regulated MEMS CSF valve. Biomedical Microdevices, 2020, 22, 21.	2.8	4
34	Wearable Inertial Measurement Units for Assessing Gait in Real-World Environments. Frontiers in Physiology, 2020, 11, 90.	2.8	46
35	Control of ventricular unloading using an electrocardiogramâ€synchronized pulsatile ventricular assist device under high stroke ratios. Artificial Organs, 2020, 44, E394-E405.	1.9	4
36	Value of Eye-Tracking Data for Classification of Information Processingâ€“Intensive Handling Tasks: Quasi-Experimental Study on Cognition and User Interface Design. JMIR Human Factors, 2020, 7, e15581.	2.0	3

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37	Analyse von Trends in der Implementierung der Additiven Fertigung anhand aktueller industrieller Anwendungen. , 2020, , 37-53.		0
38	Visual assessment of digital ulcers in systemic sclerosis analysed by eye tracking: implications for wound assessment. Clinical and Experimental Rheumatology, 2020, 38 Suppl 125, 137-139.	0.8	0
39	Fluid Dynamics in the HeartMate 3: Influence of the Artificial Pulse Feature and Residual Cardiac Pulsation. Artificial Organs, 2019, 43, 363-376.	1.9	72
40	Evaluation of a novel flowâ€controlled syringe infusion pump for precise and continuous drug delivery at low flow rates: a laboratory study. Anaesthesia, 2019, 74, 1425-1431.	3.8	11
41	Rethinking automated skin fabrication for regeneration: adapting to commercial challenges. Current Opinion in Biomedical Engineering, 2019, 10, 165-173.	3.4	2
42	High-frequency operation of pulsatile ventricular assist devices: A computational study on circular and elliptically shaped pumps. International Journal of Artificial Organs, 2019, 42, 725-734.	1.4	2
43	A long-term mechanical cavopulmonary support device for patients with Fontan circulation. Medical Engineering and Physics, 2019, 70, 9-18.	1.7	18
44	The ideal couch tracking systemâ€"Requirements and evaluation of current systems. Journal of Applied Clinical Medical Physics, 2019, 20, 152-159.	1.9	5
45	Design and manufacture of hybrid metal composite structures using functional tooling made by additive manufacturing. Design Science, 2019, 5, .	2.1	1
46	A comparison of how novice and experienced design engineers benefit from design guidelines. Design Studies, 2019, 63, 204-223.	3.1	11
47	Shortâ€term physiological response to highâ€frequencyâ€actuated pVAD support. Artificial Organs, 2019, 43, 1170-1181.	1.9	5
48	Acute changes in preload and the QRS amplitude in advanced heart failure patients. Biomedical Physics and Engineering Express, 2019, 5, 045015.	1.2	2
49	SAT0264â€…GAZE PATTERN ANALYSIS IN THE ASSESSMENT OF DIGITAL ULCERS IN PATIENTS WITH SYSTEMIC SCLEROSIS. , 2019, , .		0
50	Corporate makerspaces as innovation driver in companies: a literature review-based framework. Journal of Manufacturing Technology Management, 2019, 31, 91-123.	6.4	17
51	Individualized lightweight structures for biomedical applications using additive manufacturing and carbon fiber patched composites. Design Science, 2019, 5, .	2.1	7
52	Evaluating Patient Safety And Ease Of Use Of A Novel Connection-Assist Device For Peritoneal Dialysis . Patient Preference and Adherence, 2019, Volume 13, 1785-1790.	1.8	7
53	A Versatile Hybrid Mock Circulation for Hydraulic Investigations of Active and Passive Cardiovascular Implants. ASAIO Journal, 2019, 65, 495-502.	1.6	19
54	Toward a new age of patient centricity? The application of eye-tracking to the development of connected self-injection systems. Expert Opinion on Drug Delivery, 2019, 16, 163-175.	5.0	11

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55	Hydraulic Characterization of Implantable Rotary Blood Pumps. IEEE Transactions on Biomedical Engineering, 2019, 66, 1618-1627.	4.2	27
56	ELPHA: Dynamically deformable liver phantom for realâ€time motionâ€adaptive radiotherapy treatments. Medical Physics, 2019, 46, 839-850.	3.0	21
57	Body motion during dynamic couch tracking with healthy volunteers. Physics in Medicine and Biology, 2019, 64, 015001.	3.0	3
58	Ultrasonic sensor concept to fit a ventricular assist device cannula evaluated using geometrically accurate heart phantoms. Artificial Organs, 2019, 43, 467-477.	1.9	17
59	Value-driven clustering of industrial additive manufacturing applications. Journal of Manufacturing Technology Management, 2019, 30, 366-390.	6.4	34
60	Long-Term Performance of a Pneumatically Actuated Soft Pump Manufactured by Rubber Compression Molding. Soft Robotics, 2019, 6, 206-213.	8.0	9
61	Minimally invasive method for the point-of-care quantification of lymphatic vessel function. JCI Insight, 2019, 4, .	5.0	19
62	ConVes: The Sutureless Aortic Graft Anastomotic Device. Annals of Thoracic Surgery, 2018, 105, 1558-1562.	1.3	1
63	Viscosity Prediction in a Physiologically Controlled Ventricular Assist Device. IEEE Transactions on Biomedical Engineering, 2018, 65, 2355-2364.	4.2	6
64	Design and manufacturing of high-performance prostheses with additive manufacturing and fiber-reinforced polymers. Production Engineering, 2018, 12, 203-213.	2.3	20
65	Investigation of the Axial Gap Clearance in a Hydrodynamicâ€Passive Magnetically Levitated Rotary Blood Pump Using Xâ€Ray Radiography. Artificial Organs, 2018, 42, 510-515.	1.9	22
66	Virtual surgical planning, flow simulation, and 3-dimensional electrospinning of patient-specific grafts to optimize Fontan hemodynamics. Journal of Thoracic and Cardiovascular Surgery, 2018, 155, 1734-1742.	0.8	41
67	Cavopulmonary mechanical circulatory support in Fontan patients and the need for physiologic control: A computational study with a closed-loop exercise model. International Journal of Artificial Organs, 2018, 41, 261-268.	1.4	15
68	Control of the Fluid Viscosity in a Mock Circulation. Artificial Organs, 2018, 42, 68-77.	1.9	28
69	Blood Pump Design Variations and Their Influence on Hydraulic Performance and Indicators of Hemocompatibility. Annals of Biomedical Engineering, 2018, 46, 417-428.	2.5	64
70	Selection of High-Variety Components for Selective Laser Sintering: An Industrial Case Study. , 2018, , 238-251.		4
71	Evolution of Design Guidelines for Additive Manufacturing - Highlighting Achievements and Open Issues by Revisiting an Early SLM Aircraft Bracket. , 2018, , 3-13.		8
72	Standardized Comparison of Selected Physiological Controllers for Rotary Blood Pumps: In Vitro Study. Artificial Organs, 2018, 42, E29-E42.	1.9	42

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73	Empirical study on innovation motivators and inhibitors of Internet of Things applications for industrial manufacturing enterprises. Journal of Innovation and Entrepreneurship, 2018, 7, .	4.0	9
74	Improving Usage Metrics for Pay-per-Use Pricing with IoT Technology and Machine Learning. Research Technology Management, 2018, 61, 32-40.	0.8	22
75	Comparison of Flow Estimators for Rotary Blood Pumps: An In Vitro and In Vivo Study. Annals of Biomedical Engineering, 2018, 46, 2123-2134.	2.5	12
76	Promoting user-centricity in short-term ideation workshops. International Journal of Design Creativity and Innovation, 2018, 6, 130-145.	1.2	7
77	Development of VariLeg, an exoskeleton with variable stiffness actuation: first results and user evaluation from the CYBATHLON 2016. Journal of NeuroEngineering and Rehabilitation, 2018, 15, 18.	4.6	42
78	Additive Manufacturing of Structural Cores and Washout Tooling for Autoclave Curing of Hybrid Composite Structures. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2018, 140, .	2.2	10
79	3D Printing of Functional Assemblies with Integrated Polymer-Bonded Magnets Demonstrated with a Prototype of a Rotary Blood Pump. Applied Sciences (Switzerland), 2018, 8, 1275.	2.5	39
80	Mechanical characterization of 3D printed polymers for fiber reinforced polymers processing. Materials and Design, 2017, 118, 256-265.	7.0	133
81	Response of a physiological controller for ventricular assist devices during acute patho-physiological events: an in vitro study. Biomedizinische Technik, 2017, 62, 623-633.	0.8	4
82	In Vivo Evaluation of Physiologic Control Algorithms for Left Ventricular Assist Devices Based on Left Ventricular Volume or Pressure. ASAIO Journal, 2017, 63, 568-577.	1.6	34
83	Composites Part Production with Additive Manufacturing Technologies. Procedia CIRP, 2017, 66, 306-311.	1.9	38
84	Automated interpretation of eyeâ€“hand coordination in mobile eye tracking recordings. KI - Kunstliche Intelligenz, 2017, 31, 331-337.	3.2	11
85	Performance behavior of prediction filters for respiratory motion compensation in radiotherapy. Current Directions in Biomedical Engineering, 2017, 3, 429-432.	0.4	1
86	A Soft Total Artificial Heartâ€”First Concept Evaluation on a Hybrid Mock Circulation. Artificial Organs, 2017, 41, 948-958.	1.9	67
87	Benchmark of the Compactness Potential of Adjustable Stiffness Mechanisms. Journal of Mechanisms and Robotics, 2017, 9, .	2.2	4
88	A Novel Multi-objective Physiological Control System for Rotary Left Ventricular Assist Devices. Annals of Biomedical Engineering, 2017, 45, 2899-2910.	2.5	27
89	Unconscious physiological response of healthy volunteers to dynamic respiration-synchronized couch motion. Radiation Oncology, 2017, 12, 189.	2.7	2
90	Left Ventricular Assist Devices: Challenges Toward Sustaining Long-Term Patient Care. Annals of Biomedical Engineering, 2017, 45, 1836-1851.	2.5	42

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91	High-frequency operation of a pulsatile VAD â€“ a simulation study. Biomedizinische Technik, 2017, 62, 161-170.	0.8	7
92	CURRENT CHALLENGES IN PRODUCT DEVELOPMENT PROCESSES OF SWISS SMEs. International Journal of Innovation Management, 2016, 20, 1640009.	1.2	2
93	The Integration of Quantitative Biometric Measures and Experimental Design Research. , 2016, , 97-112.		7
94	Modeling and performance evaluation of a robotic treatment couch for tumor tracking. Biomedizinische Technik, 2016, 61, 557-566.	0.8	6
95	Iteration-based Performance Measurement in the Fuzzy Front End of PDPs. Procedia CIRP, 2016, 50, 14-19.	1.9	15
96	Multilevel Design Education for Innovation Competencies. Procedia CIRP, 2016, 50, 759-764.	1.9	18
97	Combining Additive Manufacturing with Advanced Composites for Highly Integrated Robotic Structures. Procedia CIRP, 2016, 50, 402-407.	1.9	26
98	Design Guidelines for Additive Manufactured Snap-Fit Joints. Procedia CIRP, 2016, 50, 264-269.	1.9	45
99	Considering Part Orientation in Design for Additive Manufacturing. Procedia CIRP, 2016, 50, 408-413.	1.9	82
100	A Physiological Controller for Turbodynamic Ventricular Assist Devices Based on Left Ventricular Systolic Pressure. Artificial Organs, 2016, 40, 842-855.	1.9	22
101	Work density analysis of adjustable stiffness mechanisms. , 2016, , .		2
102	Conceptualizing Ideation Workshops for SMEs. Procedia CIRP, 2015, 36, 248-253.	1.9	5
103	Design Strategies for the Process of Additive Manufacturing. Procedia CIRP, 2015, 36, 230-235.	1.9	136
104	Increasing the Power Density of e-motors by Innovative Winding Design. Procedia CIRP, 2015, 36, 236-241.	1.9	6
105	Skimming and Scrutinizing: Quantifying Two Basic Patterns of Visual Behavior in Design. Smart Innovation, Systems and Technologies, 2015, , 479-489.	0.6	1
106	Design for Additive Manufacturing â€“ Supporting the Substitution of Components in Series Products. Procedia CIRP, 2014, 21, 138-143.	1.9	106
107	Anthropomorphic and Linear Arm Models for Mechanical Power Tool Testing. , 2013, , .		0
108	Automated Knowledgeâ€Based Design for Additive Manufacturing: A Case Study with Flow Manifolds. Chemie-Ingenieur-Technik, 0, , .	0.8	3

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109	Physiologic Data-Driven Iterative Learning Control for Left Ventricular Assist Devices. Frontiers in Cardiovascular Medicine, 0, 9, .	2.4	2