Helge Arne Wurdemann

List of Publications by Year
in descending order

66 papers	1,722 citations	430874 18 h-index	361022 35 g-index
66 all docs	66 docs citations	66 times ranked	1689 citing authors

#	Article	IF	Citations
1	Towards a Fabric-Based Soft Hand Exoskeleton for Various Grasp Taxonomies. Biosystems and Biorobotics, 2022, , 369-373.	0.3	2
2	Soft robotic systems for endoscopic interventions. , 2022, , 61-93.		3
3	Soft, Stiffness-Controllable Sensing Tip for On-Demand Force Range Adjustment With Angled Force Direction Identification. IEEE Sensors Journal, 2022, 22, 8418-8427.	4.7	2
4	Soft Robot-Assisted Minimally Invasive Surgery and Interventions: Advances and Outlook. Proceedings of the IEEE, 2022, 110, 871-892.	21.3	15
5	Design and Characterisation of Cross-sectional Geometries for Soft Robotic Manipulators with Fibre-reinforced Chambers. , 2022, , .		5
6	Correlation between Situational Awareness and EEG signals. Neurocomputing, 2021, 432, 70-79.	5.9	25
7	A Model for In Vitro Evaluation of Overlapping Connections between Devices Used in the Endovascular Repair of Popliteal Aneurysms. Journal of Testing and Evaluation, 2021, 49, 4637-4646.	0.7	0
8	Attention Enhancement for Exoskeleton-Assisted Hand Rehabilitation Using Fingertip Haptic Stimulation. Frontiers in Robotics and AI, 2021, 8, 602091.	3.2	14
9	Adaptive Underactuated Finger With Active Rolling Surface. IEEE Robotics and Automation Letters, 2021, 6, 8253-8260.	5.1	10
10	Screw theory-based stiffness analysis for a fluidic-driven soft robotic manipulator. , 2021, , .		4
11	A Caging Inspired Gripper using Flexible Fingers and a Movable Palm. , 2021, , .		8
12	Dynamic modelling and visco-elastic parameter identification of a fibre-reinforced soft fluidic elastomer manipulator. , 2021, , .		6
13	Fluidic Haptic Interface for Mechano-Tactile Feedback. IEEE Transactions on Haptics, 2020, 13, 204-210.	2.7	13
14	Affordable passive 3D-printed prosthesis for persons with partial hand amputation. Prosthetics and Orthotics International, 2020, 44, 92-98.	1.0	21
15	Open-Loop Position Control in Collaborative, Modular Variable-Stiffness-Link (VSL) Robots. IEEE Robotics and Automation Letters, 2020, 5, 1772-1779.	5.1	22
16	Low-Cost Fabrication of Polyvinyl Alcohol-Based Personalized Vascular Phantoms for In Vitro Hemodynamic Studies: Three Applications. Journal of Engineering and Science in Medical Diagnostics and Therapy, 2020, 3, .	0.5	7
17	Modelling social interaction between humans and service robots in large public spaces. , 2020, , .		3
18	Hybrid fluidic actuation for a foam-based soft actuator. , 2020, , .		6

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19	Kinematic Control and Obstacle Avoidance for Soft Inflatable Manipulator. Lecture Notes in Computer Science, 2019, , 52-64.	1.3	5
20	Sizing the aortic annulus with a robotised, commercially available soft balloon catheter: in vitro study on idealised phantoms. , 2019, , .		8
21	Elasticity Versus Hyperelasticity Considerations in Quasistatic Modeling of a Soft Finger-Like Robotic Appendage for Real-Time Position and Force Estimation. Soft Robotics, 2019, 6, 228-249.	8.0	35
22	Actuation and stiffening in fluid-driven soft robots using low-melting-point material. , 2019, , .		18
23	Patient-Specific Aortic Phantom With Tunable Compliance. Journal of Engineering and Science in Medical Diagnostics and Therapy, 2019, 2, .	0.5	9
24	Static Kinematics for an Antagonistically Actuated Robot Based on a Beam-Mechanics-Based Model. , 2018, , .		13
25	Bio-Inspired Octopus Robot Based on Novel Soft Fluidic Actuator. , 2018, , .		27
26	Towards a Modular Suturing Catheter for Minimally Invasive Vascular Surgery. , 2018, , .		2
27	Soft Robotics. Bio-inspired Antagonistic Stiffening. Biosystems and Biorobotics, 2018, , 207-214.	0.3	7
28	AirExGlove â€" A novel pneumatic exoskeleton glove for adaptive hand rehabilitation in post-stroke patients. , 2018, , .		41
29	Real-Time Vision-Based Stiffness Mapping â€. Sensors, 2018, 18, 1347.	3.8	7
30	Highly dexterous 2â€module soft robot for intraâ€organ navigation in minimally invasive surgery. International Journal of Medical Robotics and Computer Assisted Surgery, 2018, 14, e1875.	2.3	79
31	A Novel Concept for Safe, Stiffness-Controllable Robot Links. Soft Robotics, 2017, 4, 16-22.	8.0	62
32	Variable Stiffness Link (VSL): Toward inherently safe robotic manipulators. , 2017, , .		35
33	Total mesorectal excision using a soft and flexible robotic arm: a feasibility study in cadaver models. Surgical Endoscopy and Other Interventional Techniques, 2017, 31, 264-273.	2.4	61
34	Evaluation of stiffness feedback for hard nodule identification on a phantom silicone model. PLoS ONE, 2017, 12, e0172703.	2.5	12
35	Multi-Axis Force/Torque Sensor Based on Simply-Supported Beam and Optoelectronics. Sensors, 2016, 16, 1936.	3.8	42
36	Towards safer obstacle avoidance for continuum-style manipulator in dynamic environments. , 2016, , .		7

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37	A new miniaturised multi-axis force/torque sensors based on optoelectronic technology and simply-supported beam. , 2016, , .		6
38	Stiffness-based modelling of a hydraulically-actuated soft robotics manipulator. , 2016, , .		21
39	Real-time pose estimation and obstacle avoidance for multi-segment continuum manipulator in dynamic environments. , 2016, , .		15
40	Image-Based Optical Miniaturized Three-Axis Force Sensor for Cardiac Catheterization. IEEE Sensors Journal, 2016, 16, 7924-7932.	4.7	47
41	Analysis of comfort and ergonomics for clinical work environments. , 2016, 2016, 1894-1897.		8
42	Three-Axis Fiber-Optic Body Force Sensor for Flexible Manipulators. IEEE Sensors Journal, 2016, 16, 1641-1651.	4.7	20
43	Tendon-Based Stiffening for a Pneumatically Actuated Soft Manipulator. IEEE Robotics and Automation Letters, 2016, 1, 632-637.	5.1	148
44	Evaluation of Pseudo-Haptic Interactions with Soft Objects in Virtual Environments. PLoS ONE, 2016, 11, e0157681.	2.5	13
45	REACTIVE MOTION PLANNING FOR MOBILE CONTINUUM ARM IN DYNAMIC INDUSTRIAL ENVIRONMENT. , 2016, , 178-185.		0
46	Using visual cues to enhance haptic feedback for palpation on virtual model of soft tissue. Medical and Biological Engineering and Computing, 2015, 53, 1177-1186.	2.8	33
47	A Neural Network Clamping Force Model for Bolt Tightening of Wind Turbine Hubs. , 2015, , .		1
48	Tendon and pressure actuation for a bio-inspired manipulator based on an antagonistic principle. , 2015, , .		73
49	Embedded electro-conductive yarn for shape sensing of soft robotic manipulators. , 2015, 2015, 8026-9.		37
50	Accurate Bolt Tightening Using Model-Free Fuzzy Control for Wind Turbine Hub Bearing Assembly. IEEE Transactions on Control Systems Technology, 2015, 23, 1-12.	5.2	33
51	Lecture Notes in Computer Science: An Antagonistic Actuation Technique for Simultaneous Stiffness and Position Control. Lecture Notes in Computer Science, 2015, , 164-174.	1.3	15
52	A three-axial body force sensor for flexible manipulators. , 2014, , .		41
53	Statistical identification and macroscopic transitional model between disorder and order. , 2014, , .		0
54	A continuum body force sensor designed for flexible surgical robotics devices. , 2014, 2014, 3711-4.		9

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55	Multi-fingered haptic palpation utilizing granular jamming stiffness feedback actuators. Smart Materials and Structures, 2014, 23, 095007.	3.5	54
56	Control Design for Interval Type-2 Fuzzy Systems Under Imperfect Premise Matching. IEEE Transactions on Industrial Electronics, 2014, 61, 956-968.	7.9	301
57	Intra-operative tumour localisation in robot-assisted minimally invasive surgery: A review. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2014, 228, 509-522.	1.8	24
58	Robot guided bolt tensioning tool with adaptive process control for the automated assembly of wind turbine rotor blade bearings. Production Engineering, 2014, 8, 755-764.	2.3	6
59	Magnetic Resonance-Compatible Tactile Force Sensor Using Fiber Optics and Vision Sensor. IEEE Sensors Journal, 2014, 14, 829-838.	4.7	54
60	Shrinkable, stiffness-controllable soft manipulator based on a bio-inspired antagonistic actuation principle. , 2014, , .		93
61	DEXDEB â€" Application of DEXtrous Robotic Hands for DEBoning Operation. Springer Tracts in Advanced Robotics, 2014, , 217-235.	0.4	0
62	Feature extraction of non-uniform food products using RGB and RGB-D data combined with shape models. , 2011, , .		3
63	Category-based food ordering processes. Trends in Food Science and Technology, 2011, 22, 14-20.	15.1	20
64	SLAM Using 3D Reconstruction via a Visual RGB and RGB-D Sensory Input. , 2011, , .		2
65	Introducing a new 3D ordering process for discrete food products using food categorisation. Industrial Robot, 2010, 37, 562-570.	2.1	3
66	A new algorithm for pickâ€andâ€place operation. Industrial Robot, 2010, 37, 527-531.	2.1	6