

Shuxin Wang

List of Publications by Year in descending order

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104
papers

1,226
citations

361413

20
h-index

501196

28
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106
all docs

106
docs citations

106
times ranked

1087
citing authors

#	ARTICLE	IF	CITATIONS
1	A High-Precision and Miniature Fiber Bragg Grating-Based Force Sensor for Tissue Palpation During Minimally Invasive Surgery. <i>Annals of Biomedical Engineering</i> , 2020, 48, 669-681.	2.5	54
2	System design and animal experiment study of a novel minimally invasive surgical robot. <i>International Journal of Medical Robotics and Computer Assisted Surgery</i> , 2016, 12, 73-84.	2.3	48
3	Motion planning for multi-HUG formation in an environment with obstacles. <i>Ocean Engineering</i> , 2011, 38, 2262-2269.	4.3	43
4	Frontiers of Robotic Gastroscopy: A Comprehensive Review of Robotic Gastrosopes and Technologies. <i>Cancers</i> , 2020, 12, 2775.	3.7	43
5	A High-Sensitivity Fiber Bragg Grating-Based Distal Force Sensor for Laparoscopic Surgery. <i>IEEE Sensors Journal</i> , 2020, 20, 2467-2475.	4.7	42
6	A Family of Remote Center of Motion Mechanisms Based on Intersecting Motion Planes. <i>Journal of Mechanical Design, Transactions of the ASME</i> , 2013, 135, .	2.9	36
7	Novel Integrated Helical Design of Single Optic Fiber for Shape Sensing of Flexible Robot. <i>IEEE Sensors Journal</i> , 2017, 17, 6627-6636.	4.7	33
8	Development of a Fiber Bragg Grating-Enabled Clamping Force Sensor Integrated on a Grasper for Laparoscopic Surgery. <i>IEEE Sensors Journal</i> , 2021, 21, 16681-16690.	4.7	32
9	Development of a novel robotic platform with controllable stiffness manipulation arms for laparoendoscopic single-site surgery (LESS). <i>International Journal of Medical Robotics and Computer Assisted Surgery</i> , 2018, 14, e1838.	2.3	31
10	Multidisciplinary design optimization of underwater glider for improving endurance. <i>Structural and Multidisciplinary Optimization</i> , 2021, 63, 2835-2851.	3.5	30
11	Optimization of a novel mechanism for a minimally invasive surgery robot. <i>International Journal of Medical Robotics and Computer Assisted Surgery</i> , 2009, 6, n/a-n/a.	2.3	29
12	Force sensing of multiple-DOF cable-driven instruments for minimally invasive robotic surgery. <i>International Journal of Medical Robotics and Computer Assisted Surgery</i> , 2014, 10, 314-324.	2.3	29
13	A Fiber-Optics-Based Body Contact Sensor for a Flexible Manipulator. <i>IEEE Sensors Journal</i> , 2015, 15, 3543-3550.	4.7	26
14	Dynamic modeling and motion analysis for a dual-buoyancy-driven full ocean depth glider. <i>Ocean Engineering</i> , 2019, 187, 106163.	4.3	26
15	A linear stepping endovascular intervention robot with variable stiffness and force sensing. <i>International Journal of Computer Assisted Radiology and Surgery</i> , 2018, 13, 671-682.	2.8	25
16	Control design and implementation of a novel master-slave surgery robot system, MicroHand A. <i>International Journal of Medical Robotics and Computer Assisted Surgery</i> , 2011, 7, 334-347.	2.3	24
17	Development of a Distal Tri-Axial Force Sensor for Minimally Invasive Surgical Palpation. <i>IEEE Transactions on Medical Robotics and Bionics</i> , 2022, 4, 145-155.	3.2	24
18	Design and evaluation of a variable stiffness manual operating platform for laparoendoscopic single site surgery (LESS). <i>International Journal of Medical Robotics and Computer Assisted Surgery</i> , 2017, 13, e1797.	2.3	23

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19	Trajectory Control Strategies for the Underwater Glider. , 2009, , .		22
20	Design of an integrated master-slave robotic system for minimally invasive surgery. International Journal of Medical Robotics and Computer Assisted Surgery, 2012, 8, 77-84.	2.3	22
21	Current and emerging robotic assisted intervention for NOTES. Expert Review of Medical Devices, 2016, 13, 1095-1105.	2.8	22
22	Prediction method of permissible error ranges of control parameters for underwater gliders under given operation accuracy. Applied Ocean Research, 2020, 103, 102153.	4.1	22
23	Motion control skill assessment based on kinematic analysis of robotic end-effector movements. International Journal of Medical Robotics and Computer Assisted Surgery, 2018, 14, e1845.	2.3	21
24	An analysis method and a compensation strategy of motion accuracy for underwater glider considering uncertain current. Ocean Engineering, 2021, 226, 108877.	4.3	21
25	Design and Experimental Validation of a Fiber Bragg Grating-Enabled Force Sensor With an Ortho-Planar Spring-Based Flexure for Surgical Needle Insertion. IEEE Transactions on Medical Robotics and Bionics, 2021, 3, 362-371.	3.2	20
26	Kinematics analysis of the coupled tendon-driven robot based on the product-of-exponentials formula. Mechanism and Machine Theory, 2013, 60, 90-111.	4.5	18
27	Evaluation of robotic surgery skills using dynamic time warping. Computer Methods and Programs in Biomedicine, 2017, 152, 71-83.	4.7	18
28	Kinematic Design for Robot-assisted Laryngeal Surgery Systems. , 2006, , .		16
29	Observation of Internal Solitary Waves Using an Underwater Glider in the Northern South China Sea. Journal of Coastal Research, 2018, 345, 1188-1195.	0.3	16
30	Design and Optimization of a 3D Printed Distal Flexible Joint for Endoscopic Surgery. IEEE Transactions on Medical Robotics and Bionics, 2022, 4, 38-49.	3.2	16
31	Suturing and tying knots assisted by a surgical robot system in laryngeal MIS. Robotica, 2010, 28, 241-252.	1.9	15
32	Highly Stretchable Strain Sensor With Spiral Fiber for Curvature Sensing of a Soft Pneumatic Gripper. IEEE Sensors Journal, 2021, 21, 23880-23888.	4.7	15
33	Development of a novel mechanism for minimally invasive surgery. , 2010, , .		14
34	Constructing the Three-Dimensional Structure of an Anticyclonic Eddy in the South China Sea Using Multiple Underwater Gliders. Journal of Atmospheric and Oceanic Technology, 2019, 36, 2449-2470.	1.3	13
35	Ocean thermal energy utilization process in underwater vehicles: Modelling, temperature boundary analysis, and sea trail. International Journal of Energy Research, 2020, 44, 2966-2983.	4.5	13
36	Piezoelectric transducer design for an ultrasonic scalpel with enhanced dexterity for minimally invasive surgical robots. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2020, 234, 1271-1285.	2.1	12

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37	Evaluation models and criteria of motion performance for underwater gliders. <i>Applied Ocean Research</i> , 2020, 102, 102286.	4.1	12
38	Fuzzy logic control of a continuum manipulator for surgical applications. , 2014, , .		11
39	Modeling and evaluation of hand-eye coordination of surgical robotic system on task performance. <i>International Journal of Medical Robotics and Computer Assisted Surgery</i> , 2017, 13, e1829.	2.3	11
40	A Robotic System with Force Feedback for Micro-Surgery. , 0, , .		10
41	A bio-inspired self-propelling endoscopic device for inspecting the large intestine. <i>Bioinspiration and Biomimetics</i> , 2019, 14, 066013.	2.9	10
42	Hand-Held Instrument with Integrated Parallel Mechanism for Active Tremor Compensation During Microsurgery. <i>Annals of Biomedical Engineering</i> , 2020, 48, 413-425.	2.5	10
43	A Novel Capacitive-Based Flexible Pressure Sensor Based on Stretchable Composite Electrodes and a Dielectric Elastomer With Microstructures. <i>IEEE Access</i> , 2020, 8, 142810-142818.	4.2	10
44	A novel knot-tying approach for minimally invasive surgical robot systems. <i>International Journal of Medical Robotics and Computer Assisted Surgery</i> , 2008, 4, 268-276.	2.3	9
45	Modification of the phase change transfer model for underwater vehicles: A molecular dynamics approach. <i>International Journal of Energy Research</i> , 2020, 44, 11323-11344.	4.5	9
46	Mechanical analysis of end-to-end silk-sutured anastomosis for robot-assisted surgery. <i>International Journal of Medical Robotics and Computer Assisted Surgery</i> , 2009, 5, 444-451.	2.3	8
47	Robotic Scanning Device for Intraoperative Thyroid Gland Endomicroscopy. <i>Annals of Biomedical Engineering</i> , 2018, 46, 543-554.	2.5	8
48	Lateral indentation of a reinforced braided tube with tunable stiffness. <i>Thin-Walled Structures</i> , 2020, 149, 106608.	5.3	8
49	Multi-objective optimization for control parameters of underwater gliders considering effect of uncertain input errors. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2022, 236, 3093-3110.	2.1	8
50	A parallel network utilizing local features and global representations for segmentation of surgical instruments. <i>International Journal of Computer Assisted Radiology and Surgery</i> , 2022, 17, 1903-1913.	2.8	8
51	A master-slave robot system for minimally invasive laryngeal surgery. , 2009, , .		7
52	Development of Visible Manipulator With Multi-Gear Array Mechanism for Laparoscopic Surgery. <i>IEEE Robotics and Automation Letters</i> , 2020, 5, 3090-3097.	5.1	7
53	Robust Mosaicing of Endoscopic Videos via Context-Weighted Correlation Ratio. <i>IEEE Transactions on Biomedical Engineering</i> , 2021, 68, 579-591.	4.2	7
54	Design and Validation of a Miniature Fiber Bragg Grating-Enabled High-Sensitivity Torque Sensor. <i>IEEE Sensors Journal</i> , 2021, 21, 20027-20035.	4.7	7

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55	Development of a Hybrid Force-Displacement Sensor Based on Fiber Bragg Grating for Radial Artery Pulse Waveform Measurement. <i>IEEE Sensors Journal</i> , 2021, 21, 20045-20054.	4.7	7
56	Twisting Knot Tying Method of Suture --A Novel Method for Robotic Knot Tying. , 2007, , .		6
57	Conceptual design of a novel multi-DOF manual instrument for laparoscopic surgery. <i>International Journal of Medical Robotics and Computer Assisted Surgery</i> , 2013, 9, 75-82.	2.3	6
58	Direct manipulation of tool-like masters for controlling a master-slave surgical robotic system. <i>International Journal of Medical Robotics and Computer Assisted Surgery</i> , 2014, 10, 427-437.	2.3	6
59	Using motion parallax for laparoscopic surgery. <i>International Journal of Medical Robotics and Computer Assisted Surgery</i> , 2016, 12, 399-409.	2.3	6
60	A HYBRID TUBULAR BRAID WITH IMPROVED LONGITUDINAL STIFFNESS FOR MEDICAL CATHETER. <i>Journal of Mechanics in Medicine and Biology</i> , 2019, 19, 1950003.	0.7	6
61	A foldable manipulator with tunable stiffness based on braided structure. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2020, 108, 316-325.	3.4	6
62	Steady motion of underwater gliders and stability analysis. <i>Nonlinear Dynamics</i> , 2022, 107, 515-531.	5.2	6
63	Preform Design of Powder Metallurgy Turbine Disks Using Equi-Potential Line Method. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2006, 128, 677-682.	2.2	5
64	Test and evaluation of a moored microstructure recorder. <i>Chinese Journal of Oceanology and Limnology</i> , 2014, 32, 201-209.	0.7	5
65	Water-jet outer sheath with braided shape memory polymer tubes for upper gastrointestinal tract screening. <i>International Journal of Medical Robotics and Computer Assisted Surgery</i> , 2018, 14, e1944.	2.3	5
66	Self-Forcing Mechanism of the Braided Tube as a Robotic Gripper. <i>Journal of Mechanisms and Robotics</i> , 2019, 11, .	2.2	5
67	Pneumatic Soft Arm Based on Spiral Balloon Weaving and Shape Memory Polymer Backbone. <i>Journal of Mechanical Design, Transactions of the ASME</i> , 2019, 141, .	2.9	5
68	Multi-manipulation with a metamorphic instrumental hand for robot-assisted minimally invasive surgery. , 2011, , .		4
69	Setup optimization for MIS robots with two-passive joints. , 2011, , .		4
70	A hand-held device with 3-DOF haptic feedback mechanism for microsurgery. <i>International Journal of Medical Robotics and Computer Assisted Surgery</i> , 2019, 15, e2025.	2.3	4
71	Optimization of hydrodynamic parameters for underwater glider based on the electromagnetic velocity sensor. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2019, 233, 5019-5032.	2.1	4
72	Modular Robotic Scanning Device for Real-Time Gastric Endomicroscopy. <i>Annals of Biomedical Engineering</i> , 2019, 47, 563-575.	2.5	4

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73	A Variable-Dimension Overtube for Natural Orifice Transluminal Endoscopic Surgery. IEEE Access, 2020, 8, 42720-42733.	4.2	4
74	Design and implementation of a hand-held robot-assisted minimally invasive surgical device with enhanced intuitive manipulability and stable grip force. International Journal of Medical Robotics and Computer Assisted Surgery, 2021, 17, e2286.	2.3	4
75	Design of a dexterous robotic surgical instrument with a novel bending mechanism. International Journal of Medical Robotics and Computer Assisted Surgery, 2022, 18, e2334.	2.3	4
76	Full-Dimensional Intuitive Motion Mapping Strategy for Minimally Invasive Surgical Robot With Redundant Passive Joints. Journal of Medical Devices, Transactions of the ASME, 2021, 15, .	0.7	4
77	Denosing method for shear probe signal based on wavelet thresholding. Transactions of Tianjin University, 2012, 18, 135-140.	6.4	3
78	Mechanism design of controllable wings for autonomous underwater gliders. , 2014, , .		3
79	System Design of a Novel Minimally Invasive Surgical Robot That Combines the Advantages of MIS Techniques and Robotic Technology. IEEE Access, 2020, 8, 41147-41161.	4.2	3
80	Path Planning for Underwater Gliders with Motion Constraints. Lecture Notes in Electrical Engineering, 2017, , 3-10.	0.4	3
81	A Bionic Flexible-bodied Underwater Glider with Neutral Buoyancy. Journal of Bionic Engineering, 2021, 18, 1073-1085.	5.0	3
82	Error modeling and simulation analysis on CNC gear shaper. , 2004, , .		2
83	Haptic Device with Gripping Force Feedback. , 0, , .		2
84	Evaluations of a novel robotics assisted surgery system —MicroHand A. , 2010, , .		2
85	Modeling of Single-Sided Piercing Riveting Process. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2010, 132, .	2.2	2
86	Kinematic analysis of a novel 3-DoF manipulator for a laparoscopic surgery robot. , 2011, , .		2
87	Observing an anticyclonic eddy in the South China Sea using multiple underwater gliders. , 2018, , .		2
88	Creating a Soft Tactile Skin Employing Fluorescence Based Optical Sensing. IEEE Robotics and Automation Letters, 2020, 5, 3375-3381.	5.1	2
89	Adaptive Digital Disturbance Rejection Controller Design for Underwater Thermal Vehicles. Journal of Marine Science and Engineering, 2021, 9, 406.	2.6	2
90	Novel shape-lockable self-propelling robot with a helical mechanism and tactile sensing for inspecting the large intestine. Smart Materials and Structures, 2021, 30, 125023.	3.5	2

#	ARTICLE	IF	CITATIONS
91	Safety oriented evaluation (SOE) of robot-assisted minimally invasive surgery (MIS) performance skill. , 2014, , .		1
92	Optimization algorithm for operation comfortability of master manipulator of minimally invasive surgery robot. Transactions of Tianjin University, 2016, 22, 95-104.	6.4	1
93	Improvement of working pattern for thermal underwater glider. , 2016, , .		1
94	Modeling the convergence accommodation of stereo vision for binocular endoscopy. International Journal of Medical Robotics and Computer Assisted Surgery, 2018, 14, e1866.	2.3	1
95	A Specimen Extraction Instrument Based on Braided Fiber Tube for Natural Orifice Transluminal Endoscopic Surgery. Journal of Medical Devices, Transactions of the ASME, 2018, 12, .	0.7	1
96	A Novel Master Manipulator with Force Feedback for Robot-Assisted Natural Orifice Transluminal Endoscopic Surgery. , 2019, , .		1
97	A variable baseline stereoscopic camera with fast deployable structure for natural orifice transluminal endoscopic surgery. International Journal of Computer Assisted Radiology and Surgery, 2022, 17, 27-39.	2.8	1
98	A Braided Skeleton Surgical Manipulator with Tunable Diameter. , 2020, , .		1
99	Multi-objective optimization of end-to-end sutured anastomosis for robot-assisted surgery. International Journal of Medical Robotics and Computer Assisted Surgery, 2010, 6, 368-375.	2.3	0
100	A class of 1 DOF planar RCM mechanism based on motion-reproduce method. , 2015, , .		0
101	Method for Latency Measurement of Visual Feedback-Based Master-Slave Minimally Invasive Surgical Robot. Transactions of Tianjin University, 2018, 24, 375-386.	6.4	0
102	A Variable Stiffness Spring-Sponge Composite Tube with Fast Response and Shape Recovery. Macromolecular Materials and Engineering, 2018, 303, 1800185.	3.6	0
103	A Compact High-Speed Image-Based Method for Measuring the Longitudinal Motion of Living Tissues. Sensors, 2020, 20, 4573.	3.8	0
104	A Novel Ultrasonic Scalpel Rod with Multi-Stage Gain and Minification Structures for Minimally Invasive Surgery. , 2020, , .		0