# Shuxin Wang

List of Publications by Year
in descending order



| 104 | 1,226 | 361296 20 | 501076 28 |
|---|---|---|---|
| papers | citations | h-index | g-index |

| 106 | 106 | 106 | 1087 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | A High-Precision and Miniature Fiber Bragg Grating-Based Force Sensor for Tissue Palpation During Minimally Invasive Surgery. Annals of Biomedical Engineering, 2020, 48, 669-681. | 1.3 | 54 |
| 2 | System design and animal experiment study of a novel minimally invasive surgical robot. International Journal of Medical Robotics and Computer Assisted Surgery, 2016, 12, 73-84. | 1.2 | 48 |
| 3 | Motion planning for multi-HUG formation in an environment with obstacles. Ocean Engineering, 2011, 38, 2262-2269. | 1.9 | 43 |
| 4 | Frontiers of Robotic Gastroscopy: A Comprehensive Review of Robotic Gastroscopes and Technologies. Cancers, 2020, 12, 2775. | 1.7 | 43 |
| 5 | A High-Sensitivity Fiber Bragg Grating-Based Distal Force Sensor for Laparoscopic Surgery. IEEE Sensors Journal, 2020, 20, 2467-2475. | 2.4 | 42 |
| 6 | A Family of Remote Center of Motion Mechanisms Based on Intersecting Motion Planes. Journal of Mechanical Design, Transactions of the ASME, 2013, 135, . | 1.7 | 36 |
| 7 | Novel Integrated Helical Design of Single Optic Fiber for Shape Sensing of Flexible Robot. IEEE Sensors Journal, 2017, 17, 6627-6636. | 2.4 | 33 |
| 8 | Development of a Fiber Bragg Grating-Enabled Clamping Force Sensor Integrated on a Grasper for Laparoscopic Surgery. IEEE Sensors Journal, 2021, 21, 16681-16690. | 2.4 | 32 |
| 9 | Development of a novel robotic platform with controllable stiffness manipulation arms for laparoendoscopic singleâ€site surgery (LESS). International Journal of Medical Robotics and Computer Assisted Surgery, 2018, 14, e1838. | 1.2 | 31 |
| 10 | Multidisciplinary design optimization of underwater glider for improving endurance. Structural and Multidisciplinary Optimization, 2021, 63, 2835-2851. | 1.7 | 30 |
| 11 | Optimization of a novel mechanism for a minimally invasive surgery robot. International Journal of Medical Robotics and Computer Assisted Surgery, 2009, 6, n/a-n/a. | 1.2 | 29 |
| 12 | Force sensing of multiple-DOF cable-driven instruments for minimally invasive robotic surgery. International Journal of Medical Robotics and Computer Assisted Surgery, 2014, 10, 314-324. | 1.2 | 29 |
| 13 | A Fiber-Optics-Based Body Contact Sensor for a Flexible Manipulator. IEEE Sensors Journal, 2015, 15, 3543-3550. | 2.4 | 26 |
| 14 | Dynamic modeling and motion analysis for a dual-buoyancy-driven full ocean depth glider. Ocean Engineering, 2019, 187, 106163. | 1.9 | 26 |
| 15 | A linear stepping endovascular intervention robot with variable stiffness and force sensing. International Journal of Computer Assisted Radiology and Surgery, 2018, 13, 671-682. | 1.7 | 25 |
| 16 | Control design and implementation of a novel master-slave surgery robot system, MicroHand A. International Journal of Medical Robotics and Computer Assisted Surgery, 2011, 7, 334-347. | 1.2 | 24 |
| 17 | Development of a Distal Tri-Axial Force Sensor for Minimally Invasive Surgical Palpation. IEEE Transactions on Medical Robotics and Bionics, 2022, 4, 145-155. | 2.1 | 24 |
| 18 | Design and evaluation of a variable stiffness manual operating platform for laparoendoscopic single site surgery (LESS). International Journal of Medical Robotics and Computer Assisted Surgery, 2017, 13, e1797. | 1.2 | 23 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Trajectory Control Strategies for the Underwater Glider. , 2009, , . | | 22 |
| 20 | Design of an integrated masterâ€“slave robotic system for minimally invasive surgery. International Journal of Medical Robotics and Computer Assisted Surgery, 2012, 8, 77-84. | 1.2 | 22 |
| 21 | Current and emerging robotic assisted intervention for Notes. Expert Review of Medical Devices, 2016, 13, 1095-1105. | 1.4 | 22 |
| 22 | Prediction method of permissible error ranges of control parameters for underwater gliders under given operation accuracy. Applied Ocean Research, 2020, 103, 102153. | 1.8 | 22 |
| 23 | Motion control skill assessment based on kinematic analysis of robotic endâ€effector movements. International Journal of Medical Robotics and Computer Assisted Surgery, 2018, 14, e1845. | 1.2 | 21 |
| 24 | An analysis method and a compensation strategy of motion accuracy for underwater glider considering uncertain current. Ocean Engineering, 2021, 226, 108877. | 1.9 | 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. | 2.1 | 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. | 2.7 | 18 |
| 27 | Evaluation of robotic surgery skills using dynamic time warping. Computer Methods and Programs in Biomedicine, 2017, 152, 71-83. | 2.6 | 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. | 0.1 | 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. | 2.1 | 16 |
| 31 | Suturing and tying knots assisted by a surgical robot system in laryngeal MIS. Robotica, 2010, 28, 241-252. | 1.3 | 15 |
| 32 | Highly Stretchable Strain Sensor With Spiral Fiber for Curvature Sensing of a Soft Pneumatic Gripper. IEEE Sensors Journal, 2021, 21, 23880-23888. | 2.4 | 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. | 0.5 | 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. | 2.2 | 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. | 1.1 | 12 |

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|---|---|---|---|
| 37 | Evaluation models and criteria of motion performance for underwater gliders. Applied Ocean Research, 2020, 102, 102286. | 1.8 | 12 |
| 38 | Fuzzy logic control of a continuum manipulator for surgical applications. , 2014, , . | | 11 |
| 39 | Modeling and evaluation of handâ€“eye coordination of surgical robotic system on task performance. International Journal of Medical Robotics and Computer Assisted Surgery, 2017, 13, e1829. | 1.2 | 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. Bioinspiration and Biomimetics, 2019, 14, 066013. | 1.5 | 10 |
| 42 | Hand-Held Instrument with Integrated Parallel Mechanism for Active Tremor Compensation During Microsurgery. Annals of Biomedical Engineering, 2020, 48, 413-425. | 1.3 | 10 |
| 43 | A Novel Capacitive-Based Flexible Pressure Sensor Based on Stretchable Composite Electrodes and a Dielectric Elastomer With Microstructures. IEEE Access, 2020, 8, 142810-142818. | 2.6 | 10 |
| 44 | A novel knotâ€tying approach for minimally invasive surgical robot systems. International Journal of Medical Robotics and Computer Assisted Surgery, 2008, 4, 268-276. | 1.2 | 9 |
| 45 | Modification of the phase change transfer model for underwater vehicles: A molecular dynamics approach. International Journal of Energy Research, 2020, 44, 11323-11344. | 2.2 | 9 |
| 46 | Mechanical analysis of endâ€toâ€end silkâ€sutured anastomosis for robotâ€assisted surgery. International Journal of Medical Robotics and Computer Assisted Surgery, 2009, 5, 444-451. | 1.2 | 8 |
| 47 | Robotic Scanning Device for Intraoperative Thyroid Gland Endomicroscopy. Annals of Biomedical Engineering, 2018, 46, 543-554. | 1.3 | 8 |
| 48 | Lateral indentation of a reinforced braided tube with tunable stiffness. Thin-Walled Structures, 2020, 149, 106608. | 2.7 | 8 |
| 49 | Multi-objective optimization for control parameters of underwater gliders considering effect of uncertain input errors. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2022, 236, 3093-3110. | 1.1 | 8 |
| 50 | A parallel network utilizing local features and global representations for segmentation of surgical instruments. International Journal of Computer Assisted Radiology and Surgery, 2022, 17, 1903-1913. | 1.7 | 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. IEEE Robotics and Automation Letters, 2020, 5, 3090-3097. | 3.3 | 7 |
| 53 | Robust Mosaicing of Endomicroscopic Videos via Context-Weighted Correlation Ratio. IEEE Transactions on Biomedical Engineering, 2021, 68, 579-591. | 2.5 | 7 |
| 54 | Design and Validation of a Miniature Fiber Bragg Grating-Enabled High-Sensitivity Torque Sensor. IEEE Sensors Journal, 2021, 21, 20027-20035. | 2.4 | 7 |

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|---|---|---|---|
| 55 | Development of a Hybrid Force-Displacement Sensor Based on Fiber Bragg Grating for Radial Artery Pulse Waveform Measurement. IEEE Sensors Journal, 2021, 21, 20045-20054. | 2.4 | 7 |
| 56 | Twisting Knot Tying Method of Suture --A Novel Method for Robotic Knot Tying. , 2007, , . | | 6 |
| 57 | Conceptual design of a novel multiâ€DoF manual instrument for laparoscopic surgery. International Journal of Medical Robotics and Computer Assisted Surgery, 2013, 9, 75-82. | 1.2 | 6 |
| 58 | Direct manipulation of tool-like masters for controlling a master-slave surgical robotic system. International Journal of Medical Robotics and Computer Assisted Surgery, 2014, 10, 427-437. | 1.2 | 6 |
| 59 | Using motion parallax for laparoscopic surgery. International Journal of Medical Robotics and Computer Assisted Surgery, 2016, 12, 399-409. | 1.2 | 6 |
| 60 | A HYBRID TUBULAR BRAID WITH IMPROVED LONGITUDINAL STIFFNESS FOR MEDICAL CATHETER. Journal of Mechanics in Medicine and Biology, 2019, 19, 1950003. | 0.3 | 6 |
| 61 | A foldable manipulator with tunable stiffness based on braided structure. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2020, 108, 316-325. | 1.6 | 6 |
| 62 | Steady motion of underwater gliders and stability analysis. Nonlinear Dynamics, 2022, 107, 515-531. | 2.7 | 6 |
| 63 | Preform Design of Powder Metallurgy Turbine Disks Using Equi-Potential Line Method. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2006, 128, 677-682. | 1.3 | 5 |
| 64 | Test and evaluation of a moored microstructure recorder. Chinese Journal of Oceanology and Limnology, 2014, 32, 201-209. | 0.7 | 5 |
| 65 | Water-jet outer sheath with braided shape memory polymer tubes for upper gastrointestinal tract screening. International Journal of Medical Robotics and Computer Assisted Surgery, 2018, 14, e1944. | 1.2 | 5 |
| 66 | Self-Forcing Mechanism of the Braided Tube as a Robotic Gripper. Journal of Mechanisms and Robotics, 2019, 11, . | 1.5 | 5 |
| 67 | Pneumatic Soft Arm Based on Spiral Balloon Weaving and Shape Memory Polymer Backbone. Journal of Mechanical Design, Transactions of the ASME, 2019, 141, . | 1.7 | 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 handâ€held device with 3â€DOF haptic feedback mechanism for microsurgery. International Journal of Medical Robotics and Computer Assisted Surgery, 2019, 15, e2025. | 1.2 | 4 |
| 71 | Optimization of hydrodynamic parameters for underwater glider based on the electromagnetic velocity sensor. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2019, 233, 5019-5032. | 1.1 | 4 |
| 72 | Modular Robotic Scanning Device for Real-Time Gastric Endomicroscopy. Annals of Biomedical Engineering, 2019, 47, 563-575. | 1.3 | 4 |

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| 73 | A Variable-Dimension Overtube for Natural Orifice Transluminal Endoscopic Surgery. IEEE Access, 2020, 8, 42720-42733. | 2.6 | 4 |
| 74 | Design and implementation of a handâ€held robotâ€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. | 1.2 | 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. | 1.2 | 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, . | 0.4 | 4 |
| 77 | Denoising method for shear probe signal based on wavelet thresholding. Transactions of Tianjin University, 2012, 18, 135-140. | 3.3 | 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. | 2.6 | 3 |
| 80 | Path Planning for Underwater Gliders with Motion Constraints. Lecture Notes in Electrical Engineering, 2017, , 3-10. | 0.3 | 3 |
| 81 | A Bionic Flexible-bodied Underwater Glider with Neutral Buoyancy. Journal of Bionic Engineering, 2021, 18, 1073-1085. | 2.7 | 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, . | 1.3 | 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. | 3.3 | 2 |
| 89 | Adaptive Digital Disturbance Rejection Controller Design for Underwater Thermal Vehicles. Journal of Marine Science and Engineering, 2021, 9, 406. | 1.2 | 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. | 1.8 | 2 |

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|---|---|---|---|
| 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. | 3.3 | 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. | 1.2 | 1 |
| 95 | A Specimen Extraction Instrument Based on Braided Fiber Tube for Natural Orifice Translumenal Endoscopic Surgery. Journal of Medical Devices, Transactions of the ASME, 2018, 12, . | 0.4 | 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. | 1.7 | 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. | 1.2 | 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 Masterâ€“Slave Minimally Invasive Surgical Robot. Transactions of Tianjin University, 2018, 24, 375-386. | 3.3 | 0 |
| 102 | A Variable Stiffness Springâ€“Sponge Composite Tube with Fast Response and Shape Recovery. Macromolecular Materials and Engineering, 2018, 303, 1800185. | 1.7 | 0 |
| 103 | A Compact High-Speed Image-Based Method for Measuring the Longitudinal Motion of Living Tissues. Sensors, 2020, 20, 4573. | 2.1 | 0 |
| 104 | A Novel Ultrasonic Scalpel Rod with Multi-Stage Gain and Minification Structures for Minimally Invasive Surgery. , 2020, , . | | 0 |