# Zheng Li

## List of Publications by Year in descending order



| | | | |
|---|---|---|---|
| 113 papers | 2,606 citations | 218662 26 h-index | 243610 44 g-index |
| 115 all docs | 115 docs citations | 115 times ranked | 1644 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Design and Analysis of a Bio-Inspired Wire-Driven Multi-Section Flexible Robot. International Journal of Advanced Robotic Systems, 2013, 10, 209. | 2.1 | 140 |
| 2 | Kinematic comparison of surgical tendon-driven manipulators and concentric tube manipulators. Mechanism and Machine Theory, 2017, 107, 148-165. | 4.5 | 135 |
| 3 | A Novel Robot Fish With Wire-Driven Active Body and Compliant Tail. IEEE/ASME Transactions on Mechatronics, 2017, 22, 1633-1643. | 5.8 | 114 |
| 4 | A novel constrained wire-driven flexible mechanism and its kinematic analysis. Mechanism and Machine Theory, 2016, 95, 59-75. | 4.5 | 98 |
| 5 | Electromagnetic Positioning for Tip Tracking and Shape Sensing of Flexible Robots. IEEE Sensors Journal, 2015, 15, 4565-4575. | 4.7 | 94 |
| 6 | Robotic Glove with Soft-Elastic Composite Actuators for Assisting Activities of Daily Living. Soft Robotics, 2019, 6, 289-304. | 8.0 | 94 |
| 7 | Real-Time Shape Estimation for Wire-Driven Flexible Robots With Multiple Bending Sections Based on Quadratic BÃ©zier Curves. IEEE Sensors Journal, 2015, 15, 6326-6334. | 4.7 | 82 |
| 8 | A Review on Flexible Robotic Systems for Minimally Invasive Surgery. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2022, 52, 631-644. | 9.3 | 77 |
| 9 | Computer-Assisted Transoral Surgery with Flexible Robotics and Navigation Technologies: A Review of Recent Progress and Research Challenges. Critical Reviews in Biomedical Engineering, 2013, 41, 365-391. | 0.9 | 71 |
| 10 | Shape reconstruction for wire-driven flexible robots based on BÃ©zier curve and electromagnetic positioning. Mechatronics, 2015, 29, 28-35. | 3.3 | 71 |
| 11 | Autonomous Flexible Endoscope for Minimally Invasive Surgery With Enhanced Safety. IEEE Robotics and Automation Letters, 2019, 4, 2607-2613. | 5.1 | 61 |
| 12 | Model-based online learning and adaptive control for a â€œhuman-wearable soft robotâ€•integrated system. International Journal of Robotics Research, 2021, 40, 256-276. | 8.5 | 56 |
| 13 | Workspace analysis of cable-driven continuum manipulators based on static model. Robotics and Computer-Integrated Manufacturing, 2018, 49, 240-252. | 9.9 | 55 |
| 14 | Robotic Endoscopy. Visceral Medicine, 2018, 34, 45-51. | 1.3 | 47 |
| 15 | Design and Analysis of a Biomimetic Wire-Driven Robot Arm. , 2011, , . | | 44 |
| 16 | Shape-Reconstruction-Based Force Sensing Method for Continuum Surgical Robots With Large Deformation. IEEE Robotics and Automation Letters, 2017, 2, 1972-1979. | 5.1 | 43 |
| 17 | Central Pattern Generator (CPG) Control of a Biomimetic Robot Fish for Multimodal Swimming. Journal of Bionic Engineering, 2019, 16, 222-234. | 5.0 | 42 |
| 18 | An Experimental Study on the Fish Body Flapping Patterns by Using a Biomimetic Robot Fish. IEEE Robotics and Automation Letters, 2020, 5, 64-71. | 5.1 | 42 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | A Novel Tele-Operated Flexible Robot Targeted for Minimally Invasive Robotic Surgery. Engineering, 2015, 1, 073-078. | 6.7 | 39 |
| 20 | An Accelerated Finite-Time Convergent Neural Network for Visual Servoing of a Flexible Surgical Endoscope With Physical and RCM Constraints. IEEE Transactions on Neural Networks and Learning Systems, 2020, 31, 5272-5284. | 11.3 | 39 |
| 21 | Design and Control of a Highly Redundant Rigid-flexible Coupling Robot to Assist the COVID-19 Oropharyngeal-Swab Sampling. IEEE Robotics and Automation Letters, 2022, 7, 1856-1863. | 5.1 | 39 |
| 22 | Design of a Novel Flexible Endoscopeâ€"Cardioscope. Journal of Mechanisms and Robotics, 2016, 8, . | 2.2 | 37 |
| 23 | The Role of MicroRNAS in Ankylosing Spondylitis. Medicine (United States), 2016, 95, e3325. | 1.0 | 36 |
| 24 | Statics modeling of an underactuated wire-driven flexible robotic arm. , 2014, , . | | 33 |
| 25 | Design and prototyping of a soft earthworm-like robot targeted for GI tract inspection. , 2016, , . | | 33 |
| 26 | An Accelerated Recurrent Neural Network for Visual Servo Control of a Robotic Flexible Endoscope With Joint Limit Constraint. IEEE Transactions on Industrial Electronics, 2020, 67, 10787-10797. | 7.9 | 31 |
| 27 | Designs of the Biomimetic Robotic Fishes Performing Body and/or Caudal Fin (BCF) Swimming Locomotion: A Review. Journal of Intelligent and Robotic Systems: Theory and Applications, 2021, 102, 1. | 3.4 | 31 |
| 28 | Robot fish with a novel biomimetic wire-driven flapping propulsor. Advanced Robotics, 2014, 28, 339-349. | 1.8 | 30 |
| 29 | Safety-Enhanced Motion Planning for Flexible Surgical Manipulator Using Neural Dynamics. IEEE Transactions on Control Systems Technology, 2017, 25, 1711-1723. | 5.2 | 30 |
| 30 | Soft Rehabilitation Actuator With Integrated Post-stroke Finger Spasticity Evaluation. Frontiers in Bioengineering and Biotechnology, 2020, 8, 111. | 4.1 | 29 |
| 31 | A Novel Flexible Robotic Endoscope With Constrained Tendon-Driven Continuum Mechanism. IEEE Robotics and Automation Letters, 2020, 5, 1366-1372. | 5.1 | 28 |
| 32 | A Biomimetic Soft Robot for Inspecting Pipeline with Significant Diameter Variation. , 2018, , . | | 25 |
| 33 | Optimization of the Polishing Efficiency and Torque by Using Taguchi Method and ANOVA in Robotic Polishing. Applied Sciences (Switzerland), 2020, 10, 824. | 2.5 | 25 |
| 34 | Robot Fish with Novel Wire-Driven Continuum Flapping Propulsor. Applied Mechanics and Materials, 0, 300-301, 510-514. | 0.2 | 24 |
| 35 | Future of uniportal video-assisted thoracoscopic surgeryâ€"emerging technology. Annals of Cardiothoracic Surgery, 2016, 5, 127-132. | 1.7 | 24 |
| 36 | Robot fish with two-DOF pectoral fins and a wire-driven caudal fin. Advanced Robotics, 2018, 32, 25-36. | 1.8 | 24 |

| # | Article | IF | Citations |
|---|---|---|---|
| 37 | Visual Servo Control of a Novel Magnetic Actuated Endoscope for Uniportal Video-Assisted Thoracic Surgery. IEEE Robotics and Automation Letters, 2019, 4, 3098-3105. | 5.1 | 21 |
| 38 | Path Planning under Force Control in Robotic Polishing of the Complex Curved Surfaces. Applied Sciences (Switzerland), 2019, 9, 5489. | 2.5 | 21 |
| 39 | A Probabilistic Model-Based Online Learning Optimal Control Algorithm for Soft Pneumatic Actuators. IEEE Robotics and Automation Letters, 2020, 5, 1437-1444. | 5.1 | 20 |
| 40 | Visual Servo of a 6-DOF Robotic Stereo Flexible Endoscope Based on da Vinci Research Kit (dVRK) System. IEEE Robotics and Automation Letters, 2020, 5, 820-827. | 5.1 | 20 |
| 41 | Deep Learning Assisted Robotic Magnetic Anchored and Guided Endoscope for Real-Time Instrument Tracking. IEEE Robotics and Automation Letters, 2021, 6, 3979-3986. | 5.1 | 20 |
| 42 | Design and analysis of a biomimetic wire-driven flapping propeller. , 2012, , . | | 19 |
| 43 | Shape Sensing of Flexible Manipulators With Visual Occlusion Based on Bezier Curve. IEEE Sensors Journal, 2018, 18, 8133-8142. | 4.7 | 19 |
| 44 | Design of a 3D Printed Soft Robotic Hand for Stroke Rehabilitation and Daily Activities Assistance. , 2019, 2019, 65-70. | | 19 |
| 45 | Accelerated Dual Neural Network Controller for Visual Servoing of Flexible Endoscopic Robot With Tracking Error, Joint Motion, and RCM Constraints. IEEE Transactions on Industrial Electronics, 2022, 69, 9246-9257. | 7.9 | 19 |
| 46 | A collaborative robot for COVID-19 oropharyngeal swabbing. Robotics and Autonomous Systems, 2022, 148, 103917. | 5.1 | 19 |
| 47 | A novel constrained tendon-driven serpentine manipulator. , 2015, , . | | 17 |
| 48 | A Novel Iterative Learning Model Predictive Control Method for Soft Bending Actuators. , 2019, , . | | 17 |
| 49 | Kinematic Modeling and Visual Servo Control of a Soft-Bodied Magnetic Anchored and Guided Endoscope. IEEE/ASME Transactions on Mechatronics, 2020, 25, 1531-1542. | 5.8 | 17 |
| 50 | Effects of a Soft Robotic Hand for Hand Rehabilitation in Chronic Stroke Survivors. Journal of Stroke and Cerebrovascular Diseases, 2021, 30, 105812. | 1.6 | 17 |
| 51 | Robot tadpole with a novel biomimetic wire-driven propulsor. , 2012, , . | | 15 |
| 52 | The design and prototyping of a wire-driven robot fish with pectoral fins. , 2013, , . | | 15 |
| 53 | Expanding workspace of underactuated flexible manipulators by actively deploying constraints. , 2014, , . | | 15 |
| 54 | A robotic flexible endoscope with shared autonomy: a study of mockup cholecystectomy. Surgical Endoscopy and Other Interventional Techniques, 2020, 34, 2730-2741. | 2.4 | 15 |

| # | Article | IF | Citations |
|---|---|---|---|
| 55 | Design and kinematic modeling of a concentric wire-driven mechanism targeted for minimally invasive surgery. , 2016, , . | | 14 |
| 56 | Shared Autonomy of a Flexible Manipulator in Constrained Endoluminal Surgical Tasks. IEEE Robotics and Automation Letters, 2019, 4, 3106-3112. | 5.1 | 14 |
| 57 | Probabilistic Model-Based Learning Control of a Soft Pneumatic Glove for Hand Rehabilitation. IEEE Transactions on Biomedical Engineering, 2022, 69, 1016-1028. | 4.2 | 14 |
| 58 | Design and Preliminary Evaluation of an Electromagnetically Actuated Soft-Tethered Colonoscope. IEEE Transactions on Medical Robotics and Bionics, 2021, 3, 402-413. | 3.2 | 14 |
| 59 | Augmented Reality-Assisted Autonomous View Adjustment of a 6-DOF Robotic Stereo Flexible Endoscope. IEEE Transactions on Medical Robotics and Bionics, 2022, 4, 356-367. | 3.2 | 14 |
| 60 | Design and Analysis of a Wire-Driven Robot Tadpole. , 2012, , . | | 11 |
| 61 | Bladderless swaying wire-driven Robot Shark. , 2015, , . | | 11 |
| 62 | Recent clinical innovations in thoracic surgery in Hong Kong. Journal of Thoracic Disease, 2016, 8, S618-S626. | 1.4 | 11 |
| 63 | Minimum sweeping area motion planning for flexible serpentine surgical manipulator with kinematic constraints. , 2015, , . | | 10 |
| 64 | Innovative surgical endoscopes in video-assisted thoracic surgery. Journal of Thoracic Disease, 2018, 10, S749-S755. | 1.4 | 10 |
| 65 | A Novel Soft Robotic Glove for Daily Life Assistance. , 2018, , . | | 10 |
| 66 | Real-Time Deformation Sensing for Flexible Manipulators With Bending and Twisting. IEEE Sensors Journal, 2018, 18, 6412-6422. | 4.7 | 10 |
| 67 | A Semi-Autonomous Stereotactic Brain Biopsy Robot With Enhanced Safety. IEEE Robotics and Automation Letters, 2020, 5, 1405-1412. | 5.1 | 10 |
| 68 | Verification of Finger Joint Stiffness Estimation Method With Soft Robotic Actuator. Frontiers in Bioengineering and Biotechnology, 2020, 8, 592637. | 4.1 | 9 |
| 69 | FlexiVision: Teleporting the Surgeonâ€™s Eyes via Robotic Flexible Endoscope and Head-Mounted Display. , 2020, , . | | 9 |
| 70 | A Surgeon Preference-Guided Autonomous Instrument Tracking Method With a Robotic Flexible Endoscope Based on dVRK Platform. IEEE Robotics and Automation Letters, 2022, 7, 2250-2257. | 5.1 | 9 |
| 71 | 6-D Spatial Localization of Wireless Magnetically Actuated Capsule Endoscopes Based on the Fusion of Hall Sensor Array and IMU. IEEE Sensors Journal, 2022, 22, 13424-13433. | 4.7 | 9 |
| 72 | A novel tele-operated flexible surgical arm with optimal trajectory tracking aiming for minimally invasive neurosurgery. , 2015, , . | | 8 |

| # | Article | IF | Citations |
|---|---|---|---|
| 73 | Latest technology in minimally invasive thoracic surgery. Annals of Translational Medicine, 2019, 7, 35-35. | 1.7 | 8 |
| 74 | Design and Implementation of a Novel, Intrinsically Safe Rigid-Flexible Coupling Manipulator for COVID-19 Oropharyngeal Swab Sampling. , 2021, , . | | 8 |
| 75 | An Autonomous Robotic Flexible Endoscope System with a DNA-inspired Continuum Mechanism. , 2021, , . | | 8 |
| 76 | Design and modeling of a novel DNA-inspired helix-based continuum mechanism (DHCM). Mechanism and Machine Theory, 2022, 171, 104702. | 4.5 | 8 |
| 77 | Flying Octopus â€" A LTAV With Wire-Driven Flapping Wings. , 2012, , . | | 7 |
| 78 | Static modeling and analysis of continuum surgical robots. , 2016, , . | | 7 |
| 79 | Design and Motion Control of Biomimetic Soft Crawling Robot for GI Tract Inspection. , 2018, , . | | 7 |
| 80 | A Biarc Method for Kinematics and Configuration Planning of Concentric Wire-Driven Manipulators. IEEE Access, 2019, 7, 151439-151448. | 4.2 | 7 |
| 81 | A Novel Biomimic Soft Snail Robot Aiming for Gastrointestinal (GI) Tract Inspection. , 2020, , . | | 7 |
| 82 | Optimal teleoperation control of a constrained tendon-driven serpentine manipulator. , 2015, , . | | 6 |
| 83 | A Spatial Biarc Method for Inverse Kinematics and Configuration Planning of Concentric Cable-Driven Manipulators. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2022, 52, 4177-4186. | 9.3 | 6 |
| 84 | Orientation Control of an Electromagnetically Actuated Soft-Tethered Colonoscope Based on 2OR Pseudo-Rigid-Body Model. , 2021, , . | | 6 |
| 85 | A novel underactuated wire-driven robot fish with vector propulsion. , 2013, , . | | 5 |
| 86 | Design of a Novel Flexible Endoscope-Cardioscope. , 2015, , . | | 5 |
| 87 | Design and prototyping of a soft magnetic anchored and guidance endoscope system. , 2017, , . | | 5 |
| 88 | Design and Modeling of a Biomimetic Gastropod-like Soft Robot with Wet Adhesive Locomotion. , 2021, , . | | 5 |
| 89 | A Novel Magnetic Anchored and Steered Camera Robot for Single Port Access Surgery. , 2018, , . | | 4 |
| 90 | Design and Evaluation of a Soft-Bodied Magnetic Anchored and Guided Endoscope. Journal of Medical Robotics Research, 2018, 03, 1841007. | 1.2 | 4 |

| # | Article | IF | Citations |
|---|---|---|---|
| 91 | Dynamic Modeling of a Novel Kind of Rigid-Soft Coupling Biomimetic Robotic Fish. Journal of Intelligent and Robotic Systems: Theory and Applications, 2022, 105, . | 3.4 | 4 |
| 92 | A novel double-hull boat with biomimetic wire-driven flapping propulsors. , 2014, , . | | 3 |
| 93 | Will the robot take over endoscopy?. Endoscopy, 2015, 47, 773-774. | 1.8 | 3 |
| 94 | External Force Estimation of Impedance-Type Driven Mechanism for Surgical Robot with Kalman Filter. , 2018, , . | | 3 |
| 95 | A Coaxial Vision Assembly Algorithm for Un-centripetal Holes on Large-scale Stereo Workpiece Using Multiple-DOF Robot. , 2018, , . | | 3 |
| 96 | The future of thoracoscopes. Video-Assisted Thoracic Surgery, 0, 4, 6-6. | 0.1 | 3 |
| 97 | A Novel Design of a Wall-Climbing Robot and Experimental Study on Magnetic Wheels. , 2021, , . | | 3 |
| 98 | Analytical Modeling of the Interaction Between Soft Balloon-Like Actuators and Soft Tubular Environment for Gastrointestinal Inspection. Soft Robotics, 2022, 9, 386-398. | 8.0 | 3 |
| 99 | A Kinematic Modeling and Control Scheme for Different Robotic Endoscopes: A Rudimentary Research Prototype. IEEE Robotics and Automation Letters, 2022, 7, 8885-8892. | 5.1 | 3 |
| 100 | A compact continuum manipulator system with enhanced steering abilities for robot-assisted surgery. , 2016, , . | | 2 |
| 101 | A Novel Tele-operated Flexible Manipulator Based on the da-Vinci Research Kit. , 2018, , . | | 2 |
| 102 | Modeling and Experimental Validation of the Chaotic Behavior of a Robot Whip. Journal of Mechanics, 2020, 36, 373-394. | 1.4 | 2 |
| 103 | Static Model Assisted Stereo-Visual Shape Sensing of Flexible Manipulators. IEEE Sensors Journal, 2021, 21, 11684-11691. | 4.7 | 2 |
| 104 | A Combined Planning Method Based on Biarc Curve and BÃ©zier Curve for Concentric Cable-Driven Manipulators Working in Confined Environments. IEEE/ASME Transactions on Mechatronics, 2022, 27, 4475-4486. | 5.8 | 2 |
| 105 | Editorial: Flexible Surgical Robotics: Design, Modeling, Sensing and Control. Frontiers in Robotics and AI, 2022, 9, 854024. | 3.2 | 2 |
| 106 | Design and Analysis of a Long-range Magnetic Actuated and Guided Endoscope for Uniport VATS. , 2022, , . | | 2 |
| 107 | Design and prototyping of a concentric wire-driven manipulator. , 2016, , . | | 1 |
| 108 | Innovations in surgical scopesâ€”wireless steerable endoscopes and magnetic cameras. Shanghai Chest, 0, 1, 64-64. | 0.3 | 1 |

| # | Article | IF | Citations |
|---|---|---|---|
| 109 | Trans-diaphragmatic chest surgery: Bringing owls to Athens?. Journal of Thoracic and Cardiovascular Surgery, 2018, 155, 1300-1301. | 0.8 | 1 |
| 110 | Achieving Position Synchronization in Passive Bilateral Teleoperation. , 2018, , . | | 1 |
| 111 | Future Development and Technologies. , 2019, , 283-289. | | 1 |
| 112 | Robotic Polishing of the Thin Plate Eyeglasses frame Under Effective Path Planning and Stable Force. , 2020, , . | | 0 |
| 113 | Configuration, Layout, and Pose Optimization of Surgical Robotic System. , 2021, , . | | 0 |