Shing Shin Cheng

List of Publications by Year
in descending order

34	876	759233 12	552781 26
papers	citations	h-index	g-index

34	34	34	604
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Design, modeling and evaluation of a millimeter-scale SMA bending actuator with variable length. Journal of Intelligent Material Systems and Structures, 2022, 33, 942-957.	2.5	4
2	A Novel Coding Scheme for Large-Scale Point Cloud Sequences Based on Clustering and Registration. IEEE Transactions on Automation Science and Engineering, 2022, 19, 2384-2396.	5.2	4
3	A Variable Length, Variable Stiffness Flexible Instrument for Transoral Robotic Surgery. IEEE Robotics and Automation Letters, 2022, 7, 3835-3842.	5.1	6
4	Type synthesis of 2R1T remote center of motion parallel mechanisms with a passive limb for minimally invasive surgical robot. Mechanism and Machine Theory, 2022, 172, 104766.	4.5	9
5	Editorial: Flexible Surgical Robotics: Design, Modeling, Sensing and Control. Frontiers in Robotics and AI, 2022, 9, 854024.	3.2	2
6	Fuzzy-Based Adaptive Optimization of Unknown Discrete-Time Nonlinear Markov Jump Systems With Off-Policy Reinforcement Learning. IEEE Transactions on Fuzzy Systems, 2022, 30, 5276-5290.	9.8	10
7	Hybrid-Structure Hand-Held Robotic Endoscope for Sinus Surgery With Enhanced Distal Dexterity. IEEE/ASME Transactions on Mechatronics, 2022, 27, 1863-1872.	5.8	6
8	Numerical analysis of large deflection of the cantilever beam subjected to a force pointing at a fixed point. Applied Mathematical Modelling, 2021, 92, 719-730.	4.2	8
9	Towards a Wristed Percutaneous Robot With Variable Stiffness for Pericardiocentesis. IEEE Robotics and Automation Letters, 2021, 6, 2993-3000.	5.1	5
10	Needle Tip Tracking in 2D Ultrasound Based on Improved Compressive Tracking and Adaptive Kalman Filter. IEEE Robotics and Automation Letters, 2021, 6, 3224-3231.	5.1	17
11	Modeling a Symmetrically-Notched Continuum Neurosurgical Robot With Non-Constant Curvature and Superelastic Property. IEEE Robotics and Automation Letters, 2021, 6, 6489-6496.	5.1	17
12	Towards Safe Control of Continuum Manipulator Using Shielded Multiagent Reinforcement Learning. IEEE Robotics and Automation Letters, 2021, 6, 7461-7468.	5.1	19
13	Motion Coupling Analysis for the Decoupled Design of a Two-segment Notched Continuum Robot. , 2021, , .		1
14	Towards a Multi-imager Compatible Continuum Robot with Improved Dynamics Driven by Modular SMA. , 2021, , .		8
15	Tele-Operated Oropharyngeal Swab (TOOS) Robot Enabled by TSS Soft Hand for Safe and Effective Sampling. IEEE Transactions on Medical Robotics and Bionics, 2021, 3, 1040-1053.	3.2	18
16	A Model-Driven Scheme to Compensate the Strain-Based Non-Intrusive Dynamic Pressure Measurement for Hydraulic Pipe. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-12.	4.7	314
17	Mechanical Design and Evaluation of a Selectively-actuated MRI-compatible Continuum Neurosurgical Robot. , 2021, , .		2
18	Bio-inspired Soft (BIS) Hand for Tele-operated COVID-19 Oropharyngeal (OP) Swab Sampling. , 2021, , .		3

#	Article	IF	Citations
19	Design, Modeling, and Control of a Compact SMA-Actuated MR-Conditional Steerable Neurosurgical Robot. IEEE Robotics and Automation Letters, 2020, 5, 1381-1388.	5.1	11
20	Modular FBG Bending Sensor for Continuum Neurosurgical Robot. IEEE Robotics and Automation Letters, 2019, 4, 1424-1430.	5.1	30
21	Shock Absorber Mechanism Based on an SMA Spring for Lightweight Exoskeleton Applications. International Journal of Precision Engineering and Manufacturing, 2019, 20, 1533-1541.	2.2	7
22	Toward Patient-Specific 3D-Printed Robotic Systems for Surgical Interventions. IEEE Transactions on Medical Robotics and Bionics, 2019, 1, 77-87.	3.2	23
23	Design, Analysis, and Evaluation of a Remotely Actuated MRI-Compatible Neurosurgical Robot. IEEE Robotics and Automation Letters, 2018, 3, 2144-2151.	5.1	11
24	Active Stiffness Tuning of a Spring-Based Continuum Robot for MRI-Guided Neurosurgery. IEEE Transactions on Robotics, 2018, 34, 18-28.	10.3	59
25	Towards Real-Time SMA Control for a Neurosurgical Robot: MINIR-II. Springer Proceedings in Advanced Robotics, 2018, , 187-200.	1.3	4
26	FLEXIBLE MESO-SCALE ROBOTS FOR SURGERY. , 2018, , 245-280.		0
27	Modeling and characterization of shape memory alloy springs with water cooling strategy in a neurosurgical robot. Journal of Intelligent Material Systems and Structures, 2017, 28, 2167-2183.	2.5	45
28	New Actuation Mechanism for Actively Cooled SMA Springs in a Neurosurgical Robot. IEEE Transactions on Robotics, 2017, 33, 986-993.	10.3	47
29	Toward the Development of a Flexible Mesoscale MRI-Compatible Neurosurgical Continuum Robot. IEEE Transactions on Robotics, 2017, 33, 1386-1397.	10.3	92
30	Design and analysis of a remotely-actuated cable-driven neurosurgical robot. , 2017, , .		11
31	Towards high frequency actuation of SMA spring for the neurosurgical robot - MINIR-II. , 2015, , .		6
32	Towards the development of a spring-based continuum robot for neurosurgery. Proceedings of SPIE, 2015, , .	0.8	10
33	Design, development, and evaluation of an MRI-guided SMA spring-actuated neurosurgical robot. International Journal of Robotics Research, 2015, 34, 1147-1163.	8.5	54
34	Towards a Robotic Hand Rehabilitation Exoskeleton for Stroke Therapy. , 2014, , .		13