Jessica Burgner-Kahrs

List of Publications by Year
in descending order

77	2,967	361413	243625
papers	citations	20 h-index	44 g-index

77	77	77	1926
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Continuum Robots for Medical Applications: A Survey. IEEE Transactions on Robotics, 2015, 31, 1261-1280.	10.3	1,005
2	A Telerobotic System for Transnasal Surgery. IEEE/ASME Transactions on Mechatronics, 2014, 19, 996-1006.	5.8	231
3	A Flexure-Based Steerable Needle: High Curvature With Reduced Tissue Damage. IEEE Transactions on Biomedical Engineering, 2013, 60, 906-909.	4.2	121
4	Needle Steering in 3-D Via Rapid Replanning. IEEE Transactions on Robotics, 2014, 30, 853-864.	10.3	115
5	Debulking From Within: A Robotic Steerable Cannula for Intracerebral Hemorrhage Evacuation. IEEE Transactions on Biomedical Engineering, 2013, 60, 2567-2575.	4.2	100
6	How to Model Tendon-Driven Continuum Robots and Benchmark Modelling Performance. Frontiers in Robotics and AI, 2020, 7, 630245.	3.2	84
7	Tendon-driven continuum robots with extensible sectionsâ€"A model-based evaluation of path-following motions. International Journal of Robotics Research, 2021, 40, 7-23.	8.5	81
8	A tendon-driven continuum robot with extensible sections. , 2015, , .		67
9	Robotic surgery for the sinuses and skull base. Current Opinion in Otolaryngology and Head and Neck Surgery, 2013, 21, 11-16.	1.8	64
10	Comparison of Modeling Approaches for a Tendon Actuated Continuum Robot With Three Extensible Segments. IEEE Robotics and Automation Letters, 2019, 4, 989-996.	5.1	61
11	Design, Fabrication, and Testing of a Needle-Sized Wrist for Surgical Instruments. Journal of Medical Devices, Transactions of the ASME, 2017, 11, 0145011-145019.	0.7	59
12	A bimanual teleoperated system for endonasal skull base surgery. , 2011, , .		57
13	Considerations for follow-the-leader motion of extensible tendon-driven continuum robots. , 2016, , .		49
14	Comparison Study of Intraoperative Surface Acquisition Methods for Surgical Navigation. IEEE Transactions on Biomedical Engineering, 2013, 60, 1090-1099.	4.2	46
15	Stiffening Sheaths for Continuum Robots. Soft Robotics, 2018, 5, 291-303.	8.0	45
16	On the computational design of concentric tube robots: Incorporating volume-based objectives. , 2013, , .		44
17	Learning the Forward and Inverse Kinematics of a 6-DOF Concentric Tube Continuum Robot in SE(3). , 2018, , .		43
18	Workspace characterization for concentric tube continuum robots. , 2014, , .		38

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19	Eye-in-Hand Visual Servoing of Concentric Tube Robots. IEEE Robotics and Automation Letters, 2018, 3, 2315-2321.	5.1	38
20	Toward Motion Coordination Control and Design Optimization for Dual-Arm Concentric Tube Continuum Robots. IEEE Robotics and Automation Letters, 2018, 3, 1793-1800.	5.1	35
21	An Autoclavable Steerable Cannula Manual Deployment Device: Design and Accuracy Analysis. Journal of Medical Devices, Transactions of the ASME, 2012, 6, 410071-410077.	0.7	33
22	Ex vivo accuracy evaluation for robot assisted laser bone ablation. International Journal of Medical Robotics and Computer Assisted Surgery, 2010, 6, 489-500.	2.3	31
23	On the merits of helical tendon routing in continuum robots. , 2017, , .		31
24	Modeling, Calibration, and Evaluation of a Tendon-Actuated Planar Parallel Continuum Robot. IEEE Robotics and Automation Letters, 2020, 5, 5811-5818.	5.1	30
25	Design of a Reconfigurable Parallel Continuum Robot With Tendon-Actuated Kinematic Chains. IEEE Robotics and Automation Letters, 2021, 6, 1272-1279.	5.1	27
26	Toward haptic/aural touchscreen display of graphical mathematics for the education of blind students. , 2011, , .		25
27	Initial Experiences Using Vibratory Touchscreens to Display Graphical Math Concepts to Students with Visual Impairments. Journal of Special Education Technology, 2014, 29, 17-25.	2.2	22
28	Robotic intracerebral hemorrhage evacuation: An in-scanner approach with concentric tube robots. , 2015, , .		22
29	Estimating Tip Contact Forces for Concentric Tube Continuum Robots Based on Backbone Deflection. IEEE Transactions on Medical Robotics and Bionics, 2020, 2, 619-630.	3.2	21
30	A study on the theoretical and practical accuracy of conoscopic holographyâ€based surface measurements: toward image registration in minimally invasive surgery. International Journal of Medical Robotics and Computer Assisted Surgery, 2013, 9, 190-203.	2.3	20
31	Toward improving path following motion: Hybrid continuum robot design. , 2017, , .		20
32	Toward a Flexible Variable Stiffness Endoport for Single-Site Partial Nephrectomy. Annals of Biomedical Engineering, 2018, 46, 1498-1510.	2.5	19
33	Computer-assisted planning for a concentric tube robotic system in neurosurgery. International Journal of Computer Assisted Radiology and Surgery, 2019, 14, 335-344.	2.8	18
34	Planning and simulation of microsurgical laser bone ablation. International Journal of Computer Assisted Radiology and Surgery, 2010, 5, 155-162.	2.8	17
35	Design of a Quadramanual Robot for Single-Nostril Skull Base Surgery. , 2012, , .		17
36	Tendon Actuated Continuous Structures in Planar Parallel Robots: A Kinematic Analysis. Journal of Mechanisms and Robotics, 2021, 13, .	2.2	17

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37	A 3-D Volume Coverage Path Planning Algorithm With Application to Intracerebral Hemorrhage Evacuation. IEEE Robotics and Automation Letters, 2016, 1, 876-883.	5.1	15
38	Shape Sensing Based on Longitudinal Strain Measurements Considering Elongation, Bending, and Twisting. IEEE Sensors Journal, 2021, 21, 6712-6723.	4.7	15
39	Toward Fluoroscopic Shape Reconstruction for Control of Steerable Medical Devices. , 2011, , .		11
40	Teleoperated tubular continuum robots for transoral surgery â€“ feasibility in a porcine larynx model. International Journal of Medical Robotics and Computer Assisted Surgery, 2018, 14, e1928.	2.3	11
41	On the Merits of Joint Space and Orientation Representations in Learning the Forward Kinematics in SE(3). , 0, , .		11
42	Minimally-invasive intracerebral hemorrhage removal using an active cannula. , 2013, , .		10
43	Calibration of Concentric Tube Continuum Robots: Automatic Alignment of Precurved Elastic Tubes. IEEE Robotics and Automation Letters, 2020, 5, 103-110.	5.1	10
44	Task-specific Design of Tubular Continuum Robots for Surgical Applications. , 2015, , 222-230.		10
45	Tracked 3D ultrasound targeting with an active cannula. , 2012, , .		9
46	Comparison of Optimization Algorithms for a Tubular Aspiration Robot for Maximum Coverage in Intracerebral Hemorrhage Evacuation. Journal of Medical Robotics Research, 2017, 02, 1750004.	1.2	9
47	Quaternion-Based Smooth Trajectory Generator for Via Poses in $oldsymbol{S;E(3)}$ Considering Kinematic Limits in Cartesian Space. IEEE Robotics and Automation Letters, 2019, 4, 4192-4199.	5.1	8
48	Implications of trajectory generation strategies for tubular continuum robots. , 2015, , .		7
49	Using Euler Curves to Model Continuum Robots. , 2021, , .		7
50	Design of Lightweight and Extensible Tendon-Driven Continuum Robots using Origami Patterns. , 2021, , .		6
51	Shape Representation and Modeling of Tendon-Driven Continuum Robots Using Euler Arc Splines. IEEE Robotics and Automation Letters, 2022, 7, 8114-8121.	5.1	6
52	End-effector calibration and registration procedure for robot assisted laser material processing: Tailored to the particular needs of short pulsed CO<inf>2</inf> laser bone ablation. , 2009, , .		5
53	Towards intra-operative monitoring of ablation using tracked 3D ultrasound elastography and internal palpation. , 2012, , .		5
54	Robot-assisted intracerebral hemorrhage evacuation: an experimental evaluation. Proceedings of SPIE, 2013, , .	0.8	5

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55	A novel method for texture-mapping conoscopic surfaces for minimally invasive image-guided kidney surgery. International Journal of Computer Assisted Radiology and Surgery, 2016, 11, 1515-1526.	2.8	5
56	Learning-based Inverse Kinematics from Shape as Input for Concentric Tube Continuum Robots. , 2021, , .		5
57	A flexure-based wrist for needle-sized surgical robots. , 2013, , .		4
58	Evaluation of input devices for teleoperation of concentric tube continuum robots for surgical tasks. , 2015, , .		4
59	Tubular manipulators: a new concept for intracochlear positioning of an auditory prosthesis. Current Directions in Biomedical Engineering, 2015, 1, 515-518.	0.4	4
60	Additive manufacturing of patient-specific tubular continuum manipulators. Proceedings of SPIE, 2015, , .	0.8	4
61	Design of an Autoclavable Active Cannula Deployment Device. Journal of Medical Devices, Transactions of the ASME, 2011, 5, .	0.7	3
62	Intraoperative brain tumor resection cavity characterization with conoscopic holography. , 2012, , .		3
63	Can coffee improve image guidance?. Proceedings of SPIE, 2015, , .	0.8	3
64	Toward automated cochlear implant insertion using tubular manipulators. Proceedings of SPIE, 2016, , .	0.8	3
65	Toward Computer-Assisted Planning forÂInterstitial Laser Ablation of Malignant Brain Tumors Using a Tubular ContinuumÂRobot. Lecture Notes in Computer Science, 2017, , 557-565.	1.3	3
66	Auditory Display for Telerobotic Transnasal Surgery Using a Continuum Robot. Journal of Medical Robotics Research, 2019, 04, 1950004.	1.2	3
67	The Use of Teleoperated Concentric Tube Robots for Transsphenoidal Parasellar Surgery. Journal of Neurological Surgery, Part B: Skull Base, 2013, 74, .	0.8	3
68	FASâ€"A Fully Actuated Segment for Tendon-Driven Continuum Robots. Frontiers in Robotics and AI, 2022, 9, 873446.	3.2	3
69	A bimanual teleoperated system for endonasal skull base surgery. , 2011, , .		2
70	Analysis of the short-pulsed CO 2 laser ablation process for optimizing the processing performance for cutting bony tissue. Proceedings of SPIE, 2010, , .	0.8	1
71	First Results on a Flexible Variable Stiffness Endoport for Single-Site Partial Nephrectomy. , 2017, , .		1
72	Methods for end-effector coupling in robot assisted interventions. , 2008, , .		0

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73	Dependence of ablation depth on angle of incidence for hard tissue ablation using pulsed CO 2 laser. Proceedings of SPIE, 2011, , .	0.8	0
74	Track R. Prosthetics and Implants. Biomedizinische Technik, 2015, 60, s367-401.	0.8	0
75	Dependence of ablation depth on angle of incidence for hard tissueablation using pulsed CO_2 laser. , 2011, , .		0
76	Manual Active Cannula Deployment: Experimental Accuracy Evaluation in Free Space. Journal of Medical Devices, Transactions of the ASME, 2012, 6, .	0.7	0
77	How Can the Characteristics of Continuum Robots Be Optimized for a Specific Medical Application?. Latest Thinking, 0, , .	0.0	0