Jessica Burgner-Kahrs

List of Publications by Year
in descending order

77 papers	2,967 citations	361413 20 h-index	243625 44 g-index
77 all docs	77 docs citations	77 times ranked	1926 citing authors

#	Article	IF	Citations
1	FASâ€"A Fully Actuated Segment for Tendon-Driven Continuum Robots. Frontiers in Robotics and AI, 2022, 9, 873446.	3.2	3
2	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
3	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
4	Shape Sensing Based on Longitudinal Strain Measurements Considering Elongation, Bending, and Twisting. IEEE Sensors Journal, 2021, 21, 6712-6723.	4.7	15
5	Design of a Reconfigurable Parallel Continuum Robot With Tendon-Actuated Kinematic Chains. IEEE Robotics and Automation Letters, 2021, 6, 1272-1279.	5.1	27
6	Design of Lightweight and Extensible Tendon-Driven Continuum Robots using Origami Patterns. , 2021, , .		6
7	Tendon Actuated Continuous Structures in Planar Parallel Robots: A Kinematic Analysis. Journal of Mechanisms and Robotics, 2021, 13, .	2.2	17
8	Using Euler Curves to Model Continuum Robots. , 2021, , .		7
9	Learning-based Inverse Kinematics from Shape as Input for Concentric Tube Continuum Robots. , 2021, , .		5
10	Calibration of Concentric Tube Continuum Robots: Automatic Alignment of Precurved Elastic Tubes. IEEE Robotics and Automation Letters, 2020, 5, 103-110.	5.1	10
11	Modeling, Calibration, and Evaluation of a Tendon-Actuated Planar Parallel Continuum Robot. IEEE Robotics and Automation Letters, 2020, 5, 5811-5818.	5.1	30
12	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
13	How to Model Tendon-Driven Continuum Robots and Benchmark Modelling Performance. Frontiers in Robotics and AI, 2020, 7, 630245.	3.2	84
14	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
15	Auditory Display for Telerobotic Transnasal Surgery Using a Continuum Robot. Journal of Medical Robotics Research, 2019, 04, 1950004.	1.2	3
16	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
17	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
18	Eye-in-Hand Visual Servoing of Concentric Tube Robots. IEEE Robotics and Automation Letters, 2018, 3, 2315-2321.	5.1	38

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19	Stiffening Sheaths for Continuum Robots. Soft Robotics, 2018, 5, 291-303.	8.0	45
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	Learning the Forward and Inverse Kinematics of a 6-DOF Concentric Tube Continuum Robot in SE(3). , 2018, , .		43
22	Toward a Flexible Variable Stiffness Endoport for Single-Site Partial Nephrectomy. Annals of Biomedical Engineering, 2018, 46, 1498-1510.	2.5	19
23	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
24	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
25	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
26	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
27	On the merits of helical tendon routing in continuum robots. , 2017, , .		31
28	Toward improving path following motion: Hybrid continuum robot design. , 2017, , .		20
29	First Results on a Flexible Variable Stiffness Endoport for Single-Site Partial Nephrectomy. , 2017, , .		1
30	Toward automated cochlear implant insertion using tubular manipulators. Proceedings of SPIE, 2016, , .	0.8	3
31	Considerations for follow-the-leader motion of extensible tendon-driven continuum robots. , 2016, , .		49
32	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
33	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
34	Track R. Prosthetics and Implants. Biomedizinische Technik, 2015, 60, s367-401.	0.8	0
35	Evaluation of input devices for teleoperation of concentric tube continuum robots for surgical tasks. , 2015, , .		4
36	A tendon-driven continuum robot with extensible sections. , 2015, , .		67

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37	Robotic intracerebral hemorrhage evacuation: An in-scanner approach with concentric tube robots. , 2015, , .		22
38	Continuum Robots for Medical Applications: A Survey. IEEE Transactions on Robotics, 2015, 31, 1261-1280.	10.3	1,005
39	Implications of trajectory generation strategies for tubular continuum robots. , 2015, , .		7
40	Tubular manipulators: a new concept for intracochlear positioning of an auditory prosthesis. Current Directions in Biomedical Engineering, 2015, 1, 515-518.	0.4	4
41	Additive manufacturing of patient-specific tubular continuum manipulators. Proceedings of SPIE, 2015, , .	0.8	4
42	Can coffee improve image guidance?. Proceedings of SPIE, 2015, , .	0.8	3
43	Task-specific Design of Tubular Continuum Robots for Surgical Applications. , 2015, , 222-230.		10
44	Workspace characterization for concentric tube continuum robots. , 2014, , .		38
45	Needle Steering in 3-D Via Rapid Replanning. IEEE Transactions on Robotics, 2014, 30, 853-864.	10.3	115
46	A Telerobotic System for Transnasal Surgery. IEEE/ASME Transactions on Mechatronics, 2014, 19, 996-1006.	5.8	231
47	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
48	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
49	Minimally-invasive intracerebral hemorrhage removal using an active cannula. , 2013, , .		10
50	Comparison Study of Intraoperative Surface Acquisition Methods for Surgical Navigation. IEEE Transactions on Biomedical Engineering, 2013, 60, 1090-1099.	4.2	46
51	A Flexure-Based Steerable Needle: High Curvature With Reduced Tissue Damage. IEEE Transactions on Biomedical Engineering, 2013, 60, 906-909.	4.2	121
52	Debulking From Within: A Robotic Steerable Cannula for Intracerebral Hemorrhage Evacuation. IEEE Transactions on Biomedical Engineering, 2013, 60, 2567-2575.	4.2	100
53	Robot-assisted intracerebral hemorrhage evacuation: an experimental evaluation. Proceedings of SPIE, 2013, , .	0.8	5
54	A flexure-based wrist for needle-sized surgical robots. , 2013, , .		4

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55	Robotic surgery for the sinuses and skull base. Current Opinion in Otolaryngology and Head and Neck Surgery, 2013, 21, 11-16.	1.8	64
56	On the computational design of concentric tube robots: Incorporating volume-based objectives. , 2013, , .		44
57	The Use of Teleoperated Concentric Tube Robots for Transsphenoidal Parasellar Surgery. Journal of Neurological Surgery, Part B: Skull Base, 2013, 74, .	0.8	3
58	Tracked 3D ultrasound targeting with an active cannula. , 2012, , .		9
59	Intraoperative brain tumor resection cavity characterization with conoscopic holography. , 2012, , .		3
60	Design of a Quadramanual Robot for Single-Nostril Skull Base Surgery. , 2012, , .		17
61	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
62	Towards intra-operative monitoring of ablation using tracked 3D ultrasound elastography and internal palpation. , 2012, , .		5
63	Manual Active Cannula Deployment: Experimental Accuracy Evaluation in Free Space. Journal of Medical Devices, Transactions of the ASME, 2012, 6, .	0.7	0
64	Design of an Autoclavable Active Cannula Deployment Device. Journal of Medical Devices, Transactions of the ASME, 2011, 5, .	0.7	3
65	A bimanual teleoperated system for endonasal skull base surgery. , 2011, , .		2
66	Dependence of ablation depth on angle of incidence for hard tissue ablation using pulsed CO 2 laser. Proceedings of SPIE, 2011, , .	0.8	0
67	Toward Fluoroscopic Shape Reconstruction for Control of Steerable Medical Devices. , 2011, , .		11
68	A bimanual teleoperated system for endonasal skull base surgery. , 2011, , .		57
69	Toward haptic/aural touchscreen display of graphical mathematics for the education of blind students. , 2011, , .		25
70	Dependence of ablation depth on angle of incidence for hard tissueablation using pulsed CO_2 laser. , 2011, , .		0
71	Planning and simulation of microsurgical laser bone ablation. International Journal of Computer Assisted Radiology and Surgery, 2010, 5, 155-162.	2.8	17
72	<i>Ex vivo</i> accuracy evaluation for robot assisted laser bone ablation. International Journal of Medical Robotics and Computer Assisted Surgery, 2010, 6, 489-500.	2.3	31

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73	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
74	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
75	Methods for end-effector coupling in robot assisted interventions. , 2008, , .		0
76	How Can the Characteristics of Continuum Robots Be Optimized for a Specific Medical Application?. Latest Thinking, 0, , .	0.0	0
77	On the Merits of Joint Space and Orientation Representations in Learning the Forward Kinematics in SE(3). , 0, , .		11