

Cameron N Riviere

List of Publications by Year in descending order

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96
papers

2,224
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331259

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1542
citing authors

#	ARTICLE	IF	CITATIONS
1	Feedforward Controller With Inverse Rate-Dependent Model for Piezoelectric Actuators in Trajectory-Tracking Applications. IEEE/ASME Transactions on Mechatronics, 2007, 12, 134-142.	3.7	285
2	Micron: An Actively Stabilized Handheld Tool for Microsurgery. IEEE Transactions on Robotics, 2012, 28, 195-212.	7.3	213
3	Toward active tremor canceling in handheld microsurgical instruments. IEEE Transactions on Automation Science and Engineering, 2003, 19, 793-800.	2.4	197
4	Manipulator Design and Operation of a Six-Degree-of-Freedom Handheld Tremor-Canceling Microsurgical Instrument. IEEE/ASME Transactions on Mechatronics, 2015, 20, 761-772.	3.7	96
5	Nonlinear Regression Model of a Low-Cost MEMS Accelerometer. IEEE Sensors Journal, 2007, 7, 81-88.	2.4	80
6	Feedforward Controller of Ill-Conditioned Hysteresis Using Singularity-Free Prandtl-Ishlinskii Model. IEEE/ASME Transactions on Mechatronics, 2009, 14, 598-605.	3.7	80
7	Adaptive Fourier modeling for quantification of tremor. Journal of Neuroscience Methods, 1997, 74, 77-87.	1.3	74
8	Vision-Based Control of a Handheld Surgical Micromanipulator With Virtual Fixtures. IEEE Transactions on Robotics, 2013, 29, 674-683.	7.3	65
9	Percutaneous Intracerebral Navigation by Duty-Cycled Spinning of Flexible Bevel-Tipped Needles. Neurosurgery, 2010, 67, 1117-1123.	0.6	64
10	Tracking control of hysteretic piezoelectric actuator using adaptive rate-dependent controller. Sensors and Actuators A: Physical, 2009, 150, 116-123.	2.0	61
11	A Miniature Mobile Robot for Navigation and Positioning on the Beating Heart. IEEE Transactions on Robotics, 2009, 25, 1109-1124.	7.3	57
12	Applied force during vitreoretinal microsurgery with handheld instruments. , 2004, 2004, 2771-3.		56
13	High-Speed Microscale Optical Tracking Using Digital Frequency-Domain Multiplexing. IEEE Transactions on Instrumentation and Measurement, 2009, 58, 1991-2001.	2.4	55
14	Minimally Invasive Epicardial Injections Using a Novel Semiautonomous Robotic Device. Circulation, 2008, 118, S115-S120.	1.6	43
15	Semiautomated intraocular laser surgery using handheld instruments. Lasers in Surgery and Medicine, 2010, 42, 264-273.	1.1	38
16	Preliminary evaluation of a micro-force sensing handheld robot for vitreoretinal surgery. , 2012, 2012, 4125-4130.		38
17	Compact Sensing Design of a Handheld Active Tremor Compensation Instrument. IEEE Sensors Journal, 2009, 9, 1864-1871.	2.4	35
18	Soft Miniaturized Actuation and Sensing Units for Dynamic Force Control of Cardiac Ablation Catheters. Soft Robotics, 2021, 8, 59-70.	4.6	32

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19	Toward Improving Safety in Neurosurgery with an Active Handheld Instrument. <i>Annals of Biomedical Engineering</i> , 2018, 46, 1450-1464.	1.3	29
20	Techniques for robot-aided intraocular surgery using monocular vision. <i>International Journal of Robotics Research</i> , 2018, 37, 931-952.	5.8	28
21	EyeSLAM: Real-time simultaneous localization and mapping of retinal vessels during intraocular microsurgery. <i>International Journal of Medical Robotics and Computer Assisted Surgery</i> , 2018, 14, e1848.	1.2	27
22	Robotic Retinal Surgery. , 2020, , 627-672.		24
23	Retinal vessel cannulation with an image-guided handheld robot. , 2010, 2010, 5420-3.		23
24	An Active Hand-Held Instrument for Enhanced Microsurgical Accuracy. <i>Lecture Notes in Computer Science</i> , 2000, , 878-886.	1.0	23
25	Comparative Evaluation of Handheld Robot-Aided Intraocular Laser Surgery. <i>IEEE Transactions on Robotics</i> , 2016, 32, 246-251.	7.3	22
26	Design of a Coupled Thermo-responsive Hydrogel and Robotic System for Postinfarct Biomaterial Injection Therapy. <i>Annals of Thoracic Surgery</i> , 2016, 102, 780-786.	0.7	21
27	Prototype Epicardial Crawling Device for Intrapericardial Intervention on the Beating Heart. <i>Heart Surgery Forum</i> , 2004, 7, E639-E643.	0.2	20
28	Placement of accelerometers for high sensing resolution in micromanipulation. <i>Sensors and Actuators A: Physical</i> , 2011, 167, 304-316.	2.0	19
29	Towards vision-based control of a handheld micromanipulator for retinal cannulation in an eyeball phantom. , 2012, 2012, 44-49.		19
30	Design and analysis of 6 DOF handheld micromanipulator. , 2012, 2012, 1946-4729.		19
31	Handheld micromanipulation with vision-based virtual fixtures. , 2011, 2011, 4127-4132.		18
32	Active guidance of a handheld micromanipulator using visual servoing. , 2009, 2009, 339-344.		17
33	Cell micromanipulation with an active handheld micromanipulator. , 2010, 2010, 4363-6.		17
34	Force-based puncture detection and active position holding for assisted retinal vein cannulation. , 2015, 2015, 322-327.		17
35	A Deep Learning Model for Automated Classification of Intraoperative Continuous EMG. <i>IEEE Transactions on Medical Robotics and Bionics</i> , 2021, 3, 44-52.	2.1	15
36	Synchronization of epicardial crawling robot with heartbeat and respiration for improved safety and efficiency of locomotion. <i>International Journal of Medical Robotics and Computer Assisted Surgery</i> , 2012, 8, 97-106.	1.2	14

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37	Positioning Accuracy of Neurosurgeons. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 206-9.	0.5	13
38	Miniaturized Robotic End-Effector With Piezoelectric Actuation and Fiber Optic Sensing for Minimally Invasive Cardiac Procedures. IEEE Sensors Journal, 2018, 18, 4961-4968.	2.4	13
39	Optical coherence tomography scanning with a handheld vitreoretinal micromanipulator. , 2012, 2012, 948-51.		12
40	Handheld Automated microsurgical instrumentation for intraocular laser surgery. Lasers in Surgery and Medicine, 2015, 47, 658-668.	1.1	12
41	Hybrid position/force control of an active handheld micromanipulator for membrane peeling. International Journal of Medical Robotics and Computer Assisted Surgery, 2016, 12, 85-95.	1.2	12
42	Real-time retinal vessel mapping and localization for intraocular surgery. , 2013, , 5360-5365.		11
43	Parallel Force/Position Control of an Epicardial Parallel Wire Robot. IEEE Robotics and Automation Letters, 2016, 1, 1186-1191.	3.3	11
44	Percutaneous Subxiphoid Access to the Epicardium Using a Miniature Crawling Robotic Device. Innovations: Technology and Techniques in Cardiothoracic and Vascular Surgery, 2006, 1, 227-231.	0.4	10
45	Toward monocular camera-guided retinal vein cannulation with an actively stabilized handheld robot. , 2017, 2017, 2951-2956.		10
46	Handheld micromanipulator for robot-assisted stapes footplate surgery. , 2012, 2012, 1422-5.		9
47	A parallel wire robot for epicardial interventions. , 2014, 2014, 6155-8.		9
48	Vision-based retinal membrane peeling with a handheld robot. , 2012, 2012, 1075-1080.		8
49	A micro motion sensing system for micromanipulation tasks. Sensors and Actuators A: Physical, 2012, 173, 254-266.	2.0	8
50	Toward automated intraocular laser surgery using a handheld micromanipulator. , 2014, 2014, 1302-1307.		8
51	Algorithm for three-dimensional control of needle steering via duty-cycled rotation. , 2013, , .		7
52	Improvement of optical coherence tomography using active handheld micromanipulator in vitreoretinal surgery. , 2013, 2013, 5674-7.		7
53	Robotic Assistance for Intraocular Microsurgery: Challenges and Perspectives. Proceedings of the IEEE, 2022, 110, 893-908.	16.4	7
54	<title>Active handheld instrument for error compensation in microsurgery</title>. , 1998, , .		6

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55	Test of Tracing Performance with an Active Handheld Micromanipulator. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 3638-41.	0.5	5
56	State estimation and feedforward tremor suppression for a handheld micromanipulator with a Kalman filter. , 2011, 2011, 5160-5165.		5
57	Comparative evaluation of monocular augmented-reality display for surgical microscopes. , 2012, 2012, 1409-12.		5
58	Needle insertion with duty-cycled rotation into multiple media. , 2012, 2012, 916-9.		5
59	Inexpensive monocular pico-projector-based augmented reality display for surgical microscope. , 2012, 2012, 1-6.		5
60	Toward hybrid position/force control for an active handheld micromanipulator. , 2014, 2014, 772-777.		5
61	Monocular Vision-Based Retinal Membrane Peeling With a Handheld Robot. Journal of Medical Devices, Transactions of the ASME, 2021, 15, 031014.	0.4	5
62	Position estimation of an epicardial crawling robot on the beating heart by modeling of physiological motion. , 2011, 2011, 4522-4527.		4
63	Performance of a 6-degree-of-freedom active microsurgical manipulator in handheld tasks. , 2013, 2013, 5670-3.		4
64	Physiological motion modeling for organ-mounted robots. International Journal of Medical Robotics and Computer Assisted Surgery, 2017, 13, e1805.	1.2	4
65	Techniques for epicardial mapping and ablation with a miniature robotic walker. Robotic Surgery (Auckland), 2017, Volume 4, 25-31.	1.3	4
66	EyeSAM: graph-based localization and mapping of retinal vasculature during intraocular microsurgery. International Journal of Computer Assisted Radiology and Surgery, 2019, 14, 819-828.	1.7	4
67	Real-time vessel segmentation and reconstruction for virtual fixtures for an active handheld microneurosurgical instrument. International Journal of Computer Assisted Radiology and Surgery, 2022, 17, 1069-1077.	1.7	4
68	Reducing operating time of a crawling robot for epicardial surgery. , 2010, , .		3
69	Application of the HeartLander crawling robot for injection of a thermally sensitive anti-remodeling agent for myocardial infarction therapy. , 2010, 2010, 5428-31.		3
70	Transfer Function Compensation in Gyroscope-Free Inertial Measurement Units for Accurate Angular Motion Sensing. IEEE Sensors Journal, 2012, 12, 1207-1208.	2.4	3
71	Robot assisted stapedotomy ex vivo with an active handheld instrument. , 2015, 2015, 4879-82.		3
72	Toward hybrid force/position control for the Cerberus epicardial robot. , 2015, 2015, 7776-9.		3

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73	Multirate Kalman filter rejects impulse noise in frequency-domain-multiplexed tracker measurements. , 2017, 2017, .		3
74	Tip design for safety of steerable needles for robot-controlled brain insertion. Robotic Surgery (Auckland), 2017, Volume 4, 107-114.	1.3	3
75	Design and control considerations for safe needle steering in brain tissue. , 2012, , .		2
76	Electromagnetic tracker for active handheld robotic systems. , 2016, 2016, .		2
77	Beatingâ€heart registration for organâ€mounted robots. International Journal of Medical Robotics and Computer Assisted Surgery, 2018, 14, e1905.	1.2	2
78	Real-Time Incremental Estimation of Retinal Surface Using Laser Aiming Beam. , 2019, , .		2
79	A Soft Resistive Sensor with a Semicircular Cross-Sectional Channel for Soft Cardiac Catheter Ablation. Sensors, 2021, 21, 4130.	2.1	2
80	Coronary vessel detection methods for organâ€mounted robots. International Journal of Medical Robotics and Computer Assisted Surgery, 2021, 17, e2297.	1.2	2
81	Fourier modeling of porcine heartbeat and respiration in vivo for synchronization of HeartLander robot locomotion. , 2011, 2011, 7041-4.		1
82	Improved locomotion for the HeartLander robot for injection of an anti-remodeling hydrogel. , 2012, , .		1
83	Performance of a Six-Axis Handheld Microsurgical Robot With Ultrasonic Linear Motors. , 2012, , .		1
84	Towards localizing on the surface of the beating heart. , 2012, 2012, 1413-6.		1
85	Toward onboard estimation of physiological phase for an epicardial crawling robot. , 2012, 2012, 6290716.		1
86	Space-time localization and registration on the beating heart. , 2012, 2012, 3792-3797.		1
87	Automatic Steering of Manually Inserted Needles. , 2013, , 1488-1493.		1
88	Auto-calibration for a planar epicardial wire robot. , 2015, 2015, .		1
89	Techniques for Avoidance of Coronary Vasculature during Epicardial Needle Insertions with a Miniature Robotic Walker. , 2017, , .		1
90	Introducer Design Concepts for an Epicardial Parallel Wire Robot. Robotic Surgery (Auckland), 2021, Volume 8, 21-38.	1.3	1

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91	Stairs-ascending/descending assist for a lower-limb power-assist robot considering ZMP. , 2011, , .		1
92	Evaluation in vitro of a treatment planning algorithm for an epicardial crawling robot. , 2010, 2010, 2275-8.		0
93	Improved synchronization of HeartLander locomotion with physiological cycles. , 2011, , .		0
94	Organ-mounted robot localization via function approximation. International Journal of Medical Robotics and Computer Assisted Surgery, 2019, 15, e1971.	1.2	0
95	Percutaneous Subxiphoid Access to the Epicardium Using a Miniature Crawling Robotic Device. Innovations: Technology and Techniques in Cardiothoracic and Vascular Surgery, 2006, 1, 227-231.	0.4	0
96	Error recognition for rehabilitation and microsurgery. , 1998, , .		0