Ana Luisa Trejos

List of Publications by Year
in descending order

109 papers	1,415 citations	394421 19 h-index	434195 31 g-index
109 all docs	109 docs citations	109 times ranked	1286 citing authors

#	Article	IF	Citations
1	Force sensing and its application in minimally invasive surgery and therapy: A survey. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2010, 224, 1435-1454.	2.1	147
2	Robot-assisted Tactile Sensing for Minimally Invasive Tumor Localization. International Journal of Robotics Research, 2009, 28, 1118-1133.	8.5	89
3	The Role of Direct and Visual Force Feedback in Suturing Using a 7-DOF Dual-Arm Teleoperated System. IEEE Transactions on Haptics, 2017, 10, 276-287.	2.7	55
4	Development of force-based metrics for skills assessment in minimally invasive surgery. Surgical Endoscopy and Other Interventional Techniques, 2014, 28, 2106-2119.	2.4	52
5	Development of a 2-DOF Sensorized Surgical Grasper for Grasping and Axial Force Measurements. IEEE Sensors Journal, 2018, 18, 2816-2826.	4.7	46
6	A Sensorized Instrument for Skills Assessment and Training in Minimally Invasive Surgery. Journal of Medical Devices, Transactions of the ASME, 2009, 3, .	0.7	44
7	Feasibility of locating tumours in lung via kinaesthetic feedback. International Journal of Medical Robotics and Computer Assisted Surgery, 2008, 4, 58-68.	2.3	43
8	Optimizing port placement for robot-assisted minimally invasive cardiac surgery. International Journal of Medical Robotics and Computer Assisted Surgery, 2007, 3, 355-364.	2.3	38
9	On the Feasibility of a Moving Support for Surgery on the Beating Heart. Lecture Notes in Computer Science, 1999, , 1088-1097.	1.3	35
10	Robot-assisted minimally invasive lung brachytherapy. International Journal of Medical Robotics and Computer Assisted Surgery, 2007, 3, 41-51.	2.3	32
11	Design and validation of a novel mechatronic transmission system for a wearable tremor suppression device. Robotics and Autonomous Systems, 2017, 91, 38-48.	5.1	31
12	Development of a Wearable Tremor Suppression Glove. , 2018, , .		31
13	Characterization of Parkinsonian Hand Tremor and Validation of a High-Order Tremor Estimator. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2018, 26, 1823-1834.	4.9	26
14	Rehabilitative and assistive wearable mechatronic upper-limb devices: A review. Journal of Rehabilitation and Assistive Technologies Engineering, 2020, 7, 205566832091787.	0.9	25
15	Effect of force feedback on performance of robotics-assisted suturing. , 2012, , .		23
16	The measurement and analysis of Parkinsonian hand tremor. , 2016, , .		23
17	Design of a sensorized instrument for skills assessment and training in minimally invasive surgery. , 2008, , .		22
18	User-Independent Hand Gesture Recognition Classification Models Using Sensor Fusion. Sensors, 2022, 22, 1321.	3.8	22

#	ARTICLE	IF	CITATIONS
19	Evaluating Muscle Activation Models for Elbow Motion Estimation. Sensors, 2018, 18, 1004.	3.8	21
20	Initial Evaluation of a Tactile/Kinesthetic Force Feedback System for Minimally Invasive Tumor Localization. IEEE/ASME Transactions on Mechatronics, 2010, , .	5.8	20
21	Analysis of Energy-Based Metrics for Laparoscopic Skills Assessment. IEEE Transactions on Biomedical Engineering, 2018, 65, 1532-1542.	4.2	20
22	Electromagnetic navigation improves minimally invasive robot-assisted lung brachytherapy. Computer Aided Surgery, 2008, 13, 114-123.	1.8	19
23	Force sensing in natural orifice transluminal endoscopic surgery. Surgical Endoscopy and Other Interventional Techniques, 2011, 25, 186-192.	2.4	19
24	Development of an optical fiber-based sensor for grasping and axial force sensing. , 2017, , .		19
25	Novel Hands-Free Pointer Improves Instruction Efficiency in Laparoscopic Surgery. Surgical Innovation, 2009, 16, 73-77.	0.9	17
26	New tactile sensing system for minimally invasive surgical tumour localization. International Journal of Medical Robotics and Computer Assisted Surgery, 2010, 6, 211-220.	2.3	17
27	The role of visual and direct force feedback in robotics‐assisted mitral valve annuloplasty. International Journal of Medical Robotics and Computer Assisted Surgery, 2017, 13, e1787.	2.3	17
28	Performance Evaluation of EEG/EMG Fusion Methods for Motion Classification. , 2019, 2019, 971-976.		17
29	Preoperative Evaluation of Patient Anatomy to Increase Success of Robotics-Assisted Bypass Surgery. Innovations: Technology and Techniques in Cardiothoracic and Vascular Surgery, 2010, 5, 335-340.	0.9	15
30	A Dual-Arm 7-Degrees-of-Freedom Haptics-Enabled Teleoperation Test Bed for Minimally Invasive Surgery. Journal of Medical Devices, Transactions of the ASME, 2014, 8, .	0.7	15
31	Design and Evaluation of a Sterilizable Force Sensing Instrument for Minimally Invasive Surgery. IEEE Sensors Journal, 2017, 17, 3983-3993.	4.7	15
32	Anatomy-Based Eligibility Measure for Robotic-Assisted Bypass Surgery. Innovations: Technology and Techniques in Cardiothoracic and Vascular Surgery, 2014, 9, 349-353.	0.9	14
33	Design of User-Independent Hand Gesture Recognition Using Multilayer Perceptron Networks and Sensor Fusion Techniques. , 2019, 2019, 1103-1108.		14
34	Port Placement for Endoscopic Cardiac Surgery Based on Robot Dexterity Optimization. , 0, , .		13
35	Experimental evaluation of robot-assisted tactile sensing for minimally invasive surgery. , 2008, , .		13
36	A device for robot-assisted minimally-invasive lung brachytherapy. , 0, , .		12

#	Article	IF	Citations
37	Evaluation of force feedback requirements for minimally invasive lung tumour localization. , 2007, , .		12
38	Design and Preliminary Performance Assessment of a Wearable Tremor Suppression Glove. IEEE Transactions on Biomedical Engineering, 2021, 68, 2846-2857.	4.2	12
39	Stiffness control of a nylon twisted coiled actuator for use in mechatronic rehabilitation devices. , 2017, 2017, 1419-1424.		11
40	Classification of Task Weight During Dynamic Motion Using EEGâ€"EMG Fusion. IEEE Sensors Journal, 2021, 21, 5012-5021.	4.7	11
41	Low-cost force-sensing arthroscopic tool using threaded fiber Bragg grating sensors. , 2014, , .		10
42	Development of an EMG-Based Muscle Health Model for Elbow Trauma Patients. Sensors, 2019, 19, 3309.	3.8	10
43	The Design of a Parkinsonâ€™s Tremor Predictor and Estimator Using a Hybrid Convolutional-Multilayer Perceptron Neural Network. , 2020, 2020, 5996-6000.		10
44	Real-Time Voluntary Motion Prediction and Parkinsonâ€™s Tremor Reduction Using Deep Neural Networks. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2021, 29, 1413-1423.	4.9	10
45	Robot-assisted thoracoscopic brachytherapy for lung cancer: Comparison of the ZEUS robot, VATS, and manual seed implantation. Computer Aided Surgery, 2007, 12, 270-277.	1.8	9
46	Robot-Assisted Minimally Invasive Brachytherapy for Lung Cancer. , 2008, , 33-52.		9
47	Toward construct validity for a novel sensorized instrument-based minimally invasive surgery simulation system. Surgical Endoscopy and Other Interventional Techniques, 2011, 25, 1439-1445.	2.4	9
48	Design and validation of a high-order weighted-frequency fourier linear combiner-based Kalman filter for parkinsonian tremor estimation. , 2016, 2016, 5893-5896.		9
49	MIRA V: An integrated system for minimally invasive robot-assisted lung brachytherapy. , 2008, , .		8
50	Integration of trans-esophageal echocardiography with magnetic tracking technology for cardiac interventions. , 2010, , .		8
51	A sterilizable force-sensing instrument for laparoscopic surgery. , 2014, , .		8
52	A multi-sensory mechatronic device for localizing tumors in minimally invasive interventions. , 2015, , .		8
53	Development of the circumduction metric for identification of cervical motion impairment. Journal of Rehabilitation and Assistive Technologies Engineering, 2018, 5, 205566831877798.	0.9	8
54	Preoperative planning of robotics-assisted minimally invasive coronary artery bypass grafting. , 2010, , .		7

#	Article	IF	Citations
55	A wearable mechatronic brace for arm rehabilitation. , 2014, , .		7
56	Energy-Based Metrics for Arthroscopic Skills Assessment. Sensors, 2017, 17, 1808.	3.8	7
57	Thermal Modeling and Characterization of Twisted Coiled Actuators for Upper Limb Wearable Devices. IEEE/ASME Transactions on Mechatronics, 2021, 26, 966-977.	5.8	7
58	Evaluating Convolutional Neural Networks as a Method of EEGâ€"EMG Fusion. Frontiers in Neurorobotics, 2021, 15, 692183.	2.8	7
59	Force/position-based modular system for minimally invasive surgery. , 2010, , .		6
60	A 7-DOF haptics-enabled teleoperated robotic system: Kinematic modeling and experimental verification. , 2010, , .		6
61	Randomized control trial for evaluation of a hands-free pointer for surgical instruction during laparoscopic cholecystectomy. Surgical Endoscopy and Other Interventional Techniques, 2015, 29, 3655-3665.	2.4	6
62	Impact of suppressed tremor: Is suppression of proximal joints sufficient?. , 2018, , .		6
63	Development of a physical shoulder simulator for the training of basic arthroscopic skills. International Journal of Medical Robotics and Computer Assisted Surgery, 2018, 14, e1868.	2.3	6
64	A Wearable Mechatronic Glove for Resistive Hand Therapy Exercises. , 2019, 2019, 1097-1102.		6
65	Kinematic Modeling and Characterization of a Wearable Tremor Suppression Device for Pathological Tremor Reduction. , 2020, , .		6
66	Preoperative Evaluation of Patient Anatomy to Increase Success of Robotics-Assisted Bypass Surgery. Innovations: Technology and Techniques in Cardiothoracic and Vascular Surgery, 2010, 5, 335-340.	0.9	6
67	Lung Cancer Brachytherapy: Robotics-Assisted Minimally Invasive Approach. Current Respiratory Medicine Reviews, 2011, 7, 340-353.	0.2	5
68	The WHaSP: A Wireless Hands-Free Surgical Pointer for Minimally Invasive Surgery. IEEE/ASME Transactions on Mechatronics, 2012, 17, 434-442.	5.8	5
69	Evaluating the Effect of Three-Dimensional Visualization on Force Application and Performance Time during Robotics-Assisted Mitral Valve Repair. Innovations: Technology and Techniques in Cardiothoracic and Vascular Surgery, 2013, 8, 199-205.	0.9	5
70	Design of an Active Cooling System for Thermally Activated Soft Actuators. , 2019, 2019, 368-373.		5
71	Analysis of the Effect of Common Disturbances on the Safety of a Wearable Tremor Suppression Device. IEEE Robotics and Automation Letters, 2021, 6, 2846-2853.	5.1	5
72	Implementing Machine Learning Algorithms to Classify Postures and Forecast Motions When Using a Dynamic Chair. Sensors, 2022, 22, 400.	3.8	5

#	Article	IF	Citations
73	The application of force sensing to skills assessment in Minimally Invasive Surgery. , 2013, , .		4
74	A knee arthroscopy simulator: Design and validation. , 2013, 2013, 5715-8.		4
75	Versatile smart hip implant technology using 3D metal printing. , 2016, , .		4
76	Development and Validation of a Finger Tremor Simulator. , 2018, , .		4
77	An experimental test-bed for robot-assisted image-guided minimally invasive lung brachytherapy. , 2007, , .		3
78	Palpation system for minimally invasive localization of occult tumors. , 2010, , .		3
79	Postoperative healing patterns in elbow using electromyography: Towards the development of a wearable mechatronic elbow brace. , 2017, 2017, 1395-1400.		3
80	Characterisation and Control of a Woven Biomimetic Actuator for Wearable Neurorehabilitative Devices. Actuators, 2021, 10, 37.	2.3	3
81	Parkinson's Tremor Onset Detection and Active Tremor Classification Using a Multilayer Perceptron. , 2020, , .		3
82	Anatomy-Based Eligibility Measure for Robotic-Assisted Bypass Surgery. Innovations: Technology and Techniques in Cardiothoracic and Vascular Surgery, 2014, 9, 349-353.	0.9	3
83	Energy-based metrics for laparoscopic skills assessment. , 2016, 2016, 2648-2651.		2
84	Development of an EMG-driven control system for a wearable mechatronic elbow brace. , 2016, , .		2
85	Extension of the WearME framework for EMG-driven control of a wearable assistive exoskeleton. , 2016, , .		2
86	Mastery Learning â€" does the method of learning make a difference in skills acquisition for robotic surgery?. International Journal of Medical Robotics and Computer Assisted Surgery, 2017, 13, e1828.	2.3	2
87	Development and Evaluation of Dielectric Elastomer Actuators for Assistive Wearable Devices. , 2018, , .		2
88	A Commercially Available Capacitive Stretch-Sensitive Sensor for Measurement of Rotational Neck Movement in Healthy People: Proof of Concept. , 2019, 2019, 163-168.		2
89	Frequency Response Analysis of Actively Cooled Nylon Twisted Coiled Actuators for Use in Wrist Rehabilitation Devices. , 2020, , .		2
90	A Control Software Framework for Wearable Mechatronic Devices. Journal of Intelligent and Robotic Systems: Theory and Applications, 2020, 99, 757-771.	3.4	2

#	Article	IF	Citations
91	Suitability of Three Saws for Minimally Invasive Bone Cutting. Surgical Innovation, 2010, 17, 5-10.	0.9	1
92	Robotic Techniques for Minimally Invasive Tumor Localization. , 2011, , 469-496.		1
93	Design of a Minimally Invasive Lung Tumor Localization Device. , 2012, , .		1
94	A sensorized glove for therapist skill performance assessment during neck manipulation. , 2017, , .		1
95	Computational Fluid Dynamics Study of a Soft Actuator for Use in Wearable Mechatronic Devices. , 2018, , .		1
96	Enhancing the Therapist–Device Relationship: Software Requirements for Digital Collection and Analysis of Patient Data. , 2019, 2019, 1091-1096.		1
97	Robot-assisted thoracoscopic brachytherapy for lung cancer: Comparison of the ZEUS robot, VATS, and manual seed implantation. Computer Aided Surgery, 2007, 12, 270-277.	1.8	1
98	Computer integrated system for minimally invasive lung brachytherapy. Studies in Health Technology and Informatics, 2008, 132, 296-301.	0.3	1
99	Survey-based identification of design requirements and constraints for a wearable tremor suppression device. Journal of Rehabilitation and Assistive Technologies Engineering, 2022, 9, 205566832210944.	0.9	1
100	Effect of velocity control on kinesthetic lung tumour localization. Canadian Conference on Electrical and Computer Engineering, 2008, , .	0.0	0
101	608 Measurement of forces applied by the davinci robot during ex vivo robotics-assisted porcine mitral valve annuloplasty. Canadian Journal of Cardiology, 2011, 27, S283.	1.7	0
102	Development of a hands-free pointer for instruction during minimally invasive surgery. , 2012, , .		0
103	The role of three-dimensional visualization in robotics-assisted cardiac surgery. , 2012, , .		0
104	Development and evaluation of a sensorized shoulder simulator. , 2017, , .		0
105	Evaluating the Effect of Three-Dimensional Visualization on Force Application and Performance Time during Robotics-Assisted Mitral Valve Repair. Innovations: Technology and Techniques in Cardiothoracic and Vascular Surgery, 2013, 8, 199-205.	0.9	0
106	Performance Evaluation of a Sensorized Arthroscopic Grasper. , 2015, , .		0
107	TRAINING AND SKILL ASSESSMENT FOR ROBOTIC-ASSISTED MINIMALLY INVASIVE SURGERY â€" PART 1: HISTORICAL PERSPECTIVE AND CHALLENGES. , 2018, , 375-390.		0
108	Low-cost and scalable fabrication of wearable soft sensor for neck mobility measurement. , 2019, , .		0

#	Article	IF	Citations
109	Electromagnetic navigation improves minimally invasive robot-assisted lung brachytherapy. Computer Aided Surgery, 2008, 13, 114-123.	1.8	0