Rajni V Patel

List of Publications by Year
in descending order

237 papers	5,813 citations	108046 37 h-index	120465 65 g-index
245 all docs	245 docs citations	245 times ranked	4908 citing authors

#	Article	IF	Citations
1	Stabilization of Robot-Environment Interaction Through Generalized Scattering Techniques. IEEE Transactions on Robotics, 2022, 38, 1319-1333.	7.3	0
2	Adaptive Wave Reconstruction Through Regulated-BMFLC for Transparency-Enhanced Telerobotics Over Delayed Networks. IEEE Transactions on Robotics, 2022, 38, 2928-2942.	7.3	6
3	Haptic Feedback and Force-Based Teleoperation in Surgical Robotics. Proceedings of the IEEE, 2022, 110, 1012-1027.	16.4	27
4	Musculoskeletal Model to Predict Muscle Activity During Upper Limb Movement. IEEE Access, 2021, 9, 111472-111485.	2.6	4
5	Robotics and AI for Teleoperation, Tele-Assessment, and Tele-Training for Surgery in the Era of COVID-19: Existing Challenges, and Future Vision. Frontiers in Robotics and AI, 2021, 8, 610677.	2.0	41
6	Abnormal Vision-Based Displacement Perception in Parkinsonâ€™s Disease. Frontiers in Neuroscience, 2021, 15, 676469.	1.4	1
7	Time-Domain Passivity-based Controller with an Optimal Two-channel Lawrence Telerobotic Architecture. , 2021, , .		2
8	Texture-based Intraoperative Image Guidance for Tumor Localization in Minimally Invasive Surgery. , 2021, 2021, 3526-3530.		1
9	Editorial: Autonomy and Intelligence in Neurorehabilitation Robotic and Prosthetic Technologies. Journal of Medical Robotics Research, 2020, 05, 2002001.	1.0	0
10	Eccentric-Tube Robot (ETR) Modeling and Validation. , 2020, , .		3
11	A Multi-Functional Lower- and Upper-Limb Stroke Rehabilitation Robot. IEEE Transactions on Medical Robotics and Bionics, 2020, 2, 549-552.	2.1	25
12	Intraoperative Localization of STN During DBS Surgery Using a Data-Driven Model. IEEE Journal of Translational Engineering in Health and Medicine, 2020, 8, 1-9.	2.2	13
13	PHTNet: Characterization and Deep Mining of Involuntary Pathological Hand Tremor using Recurrent Neural Network Models. Scientific Reports, 2020, 10, 2195.	1.6	21
14	Design and Implementation of a Two-DOF Robotic System with an Adjustable Force Limiting Mechanism for Ankle Rehabilitation. , 2019, , .		3
15	HMFP-DBRNN: Real-Time Hand Motion Filtering and Prediction via Deep Bidirectional RNN. IEEE Robotics and Automation Letters, 2019, 4, 1061-1068.	3.3	11
16	A Motion Transmission Model for a Class of Tendon-Based Mechanisms With Application to Position Tracking of the daÂVinciÂInstrument. IEEE/ASME Transactions on Mechatronics, 2019, 24, 538-548.	3.7	7
17	Training of Deep Bidirectional Rnns for Hand Motion Filtering Via Multimodal Data Fusion. , 2019, , .		1
18	Differential Temporal Perception Abilities in Parkinsonâ€™s Disease Patients Based on Timing Magnitude. Scientific Reports, 2019, 9, 19638.	1.6	13

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19	Unsupervised Clustering of Micro-Electrophysiological Signals for localization of Subthalamic Nucleus during DBS Surgery. , 2019, , .		2
20	Scattering-Based Stabilization of Complex Interconnections of (Q,S,R)-Dissipative Systems With Time Delays. , 2019, 3, 368-373.		4
21	WAKE: Wavelet decomposition coupled with adaptive Kalman filtering for pathological tremor extraction. Biomedical Signal Processing and Control, 2019, 48, 179-188.	3.5	19
22	Haptics-enabled Interactive NeuroRehabilitation Mechatronics: Classification, Functionality, Challenges and Ongoing Research. Mechatronics, 2019, 57, 1-19.	2.0	30
23	A Computational-Model-Based Study of Supervised Haptics-Enabled Therapist-in-the-Loop Training for Upper-Limb Poststroke Robotic Rehabilitation. IEEE/ASME Transactions on Mechatronics, 2018, 23, 563-574.	3.7	26
24	Position-Force Domain Passivity of the Human Arm in Telerobotic Systems. IEEE/ASME Transactions on Mechatronics, 2018, 23, 552-562.	3.7	32
25	A Systematic Review of Multilateral Teleoperation Systems. IEEE Transactions on Haptics, 2018, 11, 338-356.	1.8	76
26	Development of a 2-DOF Sensorized Surgical Grasper for Grasping and Axial Force Measurements. IEEE Sensors Journal, 2018, 18, 2816-2826.	2.4	46
27	Analysis of Energy-Based Metrics for Laparoscopic Skills Assessment. IEEE Transactions on Biomedical Engineering, 2018, 65, 1532-1542.	2.5	20
28	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.	1.2	6
29	Frequency response analysis of magneto-rheological clutch designs. Journal of Intelligent Material Systems and Structures, 2018, 29, 905-923.	1.4	8
30	Video Context Improves Performance in Identifying Operative Planes on Static Surgical Images. Journal of the American College of Surgeons, 2018, 227, e212.	0.2	0
31	ELECTROPHYSIOLOGICAL SIGNAL PROCESSING FOR INTRAOPERATIVE LOCALIZATION OF SUBTHALAMIC NUCLEUS DURING DEEP BRAIN STIMULATION SURGERY. , 2018, , .		3
32	Multiple-Model and Reduced-Order Kalman Filtering for Pathological Hand Tremor Extraction. , 2018, , .		0
33	Scattering-based stabilization of non-planar conic systems. Automatica, 2018, 93, 1-11.	3.0	12
34	Multimodal Sensorimotor Integration for Expert-in-the-Loop Telerobotic Surgical Training. IEEE Transactions on Robotics, 2018, 34, 1549-1564.	7.3	21
35	A grasp-based passivity signature for haptics-enabled human-robot interaction: Application to design of a new safety mechanism for robotic rehabilitation. International Journal of Robotics Research, 2017, 36, 778-799.	5.8	33
36	A Breakthrough in Tumor Localization: Combining Tactile Sensing and Ultrasound to Improve Tumor Localization in Robotics-Assisted Minimally Invasive Surgery. IEEE Robotics and Automation Magazine, 2017, 24, 54-62.	2.2	19

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37	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.	1.2	2
38	Design and Evaluation of a Sterilizable Force Sensing Instrument for Minimally Invasive Surgery. IEEE Sensors Journal, 2017, 17, 3983-3993.	2.4	15
39	Robotics-Assisted Control of Steerable Ablation Catheters Based on the Analysis of Tendon-Sheath Transmission Mechanisms. IEEE/ASME Transactions on Mechatronics, 2017, 22, 1473-1484.	3.7	22
40	Medical roboticsâ€”Regulatory, ethical, and legal considerations for increasing levels of autonomy. Science Robotics, 2017, 2, .	9.9	349
41	The role of visual and direct force feedback in roboticsâ€assisted mitral valve annuloplasty. International Journal of Medical Robotics and Computer Assisted Surgery, 2017, 13, e1787.	1.2	17
42	Development of an optical fiber-based sensor for grasping and axial force sensing. , 2017, , .		19
43	Low-Cost Disposable Tactile Sensors for Palpation in Minimally Invasive Surgery. IEEE/ASME Transactions on Mechatronics, 2017, 22, 127-137.	3.7	57
44	A Passivity-Based Approach for Stable Patientâ€“Robot Interaction in Haptics-Enabled Rehabilitation Systems: Modulated Time-Domain Passivity Control. IEEE Transactions on Control Systems Technology, 2017, 25, 991-1006.	3.2	57
45	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.	1.8	55
46	Scattering Transformation for Non-Planar Conic Systems * *The research was supported by the Discovery Grants Program of the Natural Sciences and Engineering Research Council (NSERC) of Canada through grants RGPIN-05753 (I.G. Polushin) and RGPIN-1345 (R.V. Patel). A.A. Usova was also supported by Ontario Trillium Scholarship.. IFAC-PapersOnLine, 2017, 50, 8478-8483.	0.5	1
47	Adaptive neural Preisach model and model predictive control of Shape Memory Alloy actuators. , 2017, , .		7
48	A multi-rate and auto-adjustable wavelet decomposition framework for pathological hand tremor extraction. , 2017, , .		2
49	Modeling of tendon-pulley transmission systems with application to surgical robots: A preliminary experimental validation. , 2017, , .		0
50	Energy-Based Metrics for Arthroscopic Skills Assessment. Sensors, 2017, 17, 1808.	2.1	7
51	Dynamic estimation strategy for E-BMFLC filters in analyzing pathological hand tremors. , 2017, , .		5
52	Augmented Reality System for Ultrasound Guidance of Transcatheter Aortic Valve Implantation. Innovations: Technology and Techniques in Cardiothoracic and Vascular Surgery, 2016, 11, 31-39.	0.4	0
53	Energy-based metrics for laparoscopic skills assessment. , 2016, 2016, 2648-2651.		2
54	Augmented Reality System for Ultrasound Guidance of Transcatheter Aortic Valve Implantation. Innovations: Technology and Techniques in Cardiothoracic and Vascular Surgery, 2016, 11, 31-39.	0.4	18

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55	A Graph Separation Stability Condition for Non-Planar Conic Systems**The research was supported by the Discovery Grants Program of the Natural Sciences and Engineering Research Council (NSERC) of Canada through grants RGPIN-05753 (I.G. Polushin) and RGPIN-1345 (R.V. Patel). A.A. Usova was also supported by Ontario Trillium Scholarship.. IFAC-PapersOnLine, 2016, 49, 933-938.	0.5	0
56	Characterization of Upper-Limb Pathological Tremors: Application to Design of an Augmented Haptic Rehabilitation System. IEEE Journal on Selected Topics in Signal Processing, 2016, 10, 888-903.	7.3	30
57	Robotics-Assisted Mirror Rehabilitation Therapy: A Therapist-in-the-Loop Assist-as-Needed Architecture. IEEE/ASME Transactions on Mechatronics, 2016, 21, 1954-1965.	3.7	53
58	Design of an ultra thin strain sensor using superelastic nitinol for applications in minimally invasive surgery. , 2016, , .		6
59	Black-box modeling and control of steerable ablation catheters. , 2016, , .		1
60	Classical Preisach model of hysteretic behavior in a da Vinci instrument. , 2016, , .		8
61	Tendon-sheath analysis for modeling and control of steerable ablation catheters. , 2016, , .		6
62	An autoclavable wireless palpation instrument for minimally invasive surgery. , 2016, 2016, 6489-6492.		2
63	Haptic Feedback Manipulation During Botulinum Toxin Injection Therapy for Focal Hand Dystonia Patients: A Possible New Assistive Strategy. IEEE Transactions on Haptics, 2016, 9, 523-535.	1.8	4
64	A computational model for estimating tumor margins in complementary tactile and 3D ultrasound images. , 2016, , .		0
65	Kinematic and kinetic assessment of upper limb movements in patients with writer's cramp. Journal of NeuroEngineering and Rehabilitation, 2016, 13, 15.	2.4	6
66	Shape sensing for torsionally compliant concentric-tube robots. Proceedings of SPIE, 2016, , .	0.8	12
67	Curvature, Torsion, and Force Sensing in Continuum Robots Using Helically Wrapped FBG Sensors. IEEE Robotics and Automation Letters, 2016, 1, 1052-1059.	3.3	195
68	Sensorization of a surgical robotic instrument for force sensing. Proceedings of SPIE, 2016, , .	0.8	11
69	Predicting Improvement in Writer's Cramp Symptoms following Botulinum Neurotoxin Injection Therapy. Tremor and Other Hyperkinetic Movements, 2016, 6, 410.	1.1	4
70	A robotics-assisted catheter manipulation system for cardiac ablation with real-time force estimation. , 2015, , .		8
71	Performance evaluation of Magneto-Rheological based actuation for haptic feedback in medical applications. , 2015, , .		4
72	A six-degree-of-freedom robotic system for lower extremity rehabilitation. , 2015, , .		4

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73	Tissue compliance determination using a da Vinci instrument. , 2015, , .		8
74	A new passivity-based control technique for safe patient-robot interaction in haptics-enabled rehabilitation systems. , 2015, , .		11
75	Suitability of Small-Scale Magnetorheological Fluid-Based Clutches in Haptic Interfaces for Improved Performance. IEEE/ASME Transactions on Mechatronics, 2015, 20, 1863-1874.	3.7	29
76	Projection-Based Force-Reflection Algorithms With Frequency Separation for Bilateral Teleoperation. IEEE/ASME Transactions on Mechatronics, 2015, 20, 143-154.	3.7	31
77	Modeling and Estimation of Tip Contact Force for Steerable Ablation Catheters. IEEE Transactions on Biomedical Engineering, 2015, 62, 1404-1415.	2.5	66
78	Cooperative Teleoperation With Projection-Based Force Reflection for MIS. IEEE Transactions on Control Systems Technology, 2015, 23, 1411-1426.	3.2	29
79	Robot-assisted, ultrasound-guided minimally invasive navigation tool for brachytherapy and ablation therapy: initial assessment. Proceedings of SPIE, 2015, , .	0.8	1
80	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.	1.3	6
81	A Chance-Constrained Programming Approach to Preoperative Planning of Robotic Cardiac Surgery Under Task-Level Uncertainty. IEEE Journal of Biomedical and Health Informatics, 2015, 19, 612-622.	3.9	7
82	Therapist-in-the-Loop robotics-assisted mirror rehabilitation therapy: An Assist-as-Needed framework. , 2015, , .		3
83	Design and Performance Evaluation of a Prototype MRF-based Haptic Interface for Medical Applications. IEEE/ASME Transactions on Mechatronics, 2015, , 1-1.	3.7	34
84	A multi-sensory mechatronic device for localizing tumors in minimally invasive interventions. , 2015, , .		8
85	Computer Vision Based Autonomous Robotic System for 3D Plant Growth Measurement. , 2015, , .		12
86	Magneto-Rheological actuators for haptic devices: Design, modeling, control, and validation of a prototype clutch. , 2015, , .		9
87	Articulating minimally invasive ultrasonic tool for robotics-assisted surgery. , 2015, , .		4
88	Novel Cooperative Teleoperation Framework: Multi-Master/Single-Slave System. IEEE/ASME Transactions on Mechatronics, 2015, 20, 1668-1679.	3.7	36
89	Visual servoing in medical robotics: a survey. Part II: tomographic imaging modalities - techniques and applications. International Journal of Medical Robotics and Computer Assisted Surgery, 2015, 11, 67-79.	1.2	17
90	Performance Evaluation of a Sensorized Arthroscopic Grasper. , 2015, , .		0

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91	Robotics-assisted catheter manipulation for improving cardiac ablation efficiency. , 2014, , .		6
92	Estimating contact force for steerable ablation catheters based on shape analysis. , 2014, , .		20
93	Quasi-static modeling of the da Vinci instrument. , 2014, , .		17
94	Real-time trajectory tracking for externally loaded concentric-tube robots. , 2014, , .		9
95	Cooperative teleoperation with projection-based force reflection for MIS. , 2014, , .		2
96	A framework for supervised robotics-assisted mirror rehabilitation therapy. , 2014, , .		9
97	Anatomy-Based Eligibility Measure for Robotic-Assisted Bypass Surgery. Innovations: Technology and Techniques in Cardiothoracic and Vascular Surgery, 2014, 9, 349-353.	0.4	14
98	Simultaneous arm joint angles and force changes in writer's cramp. , 2014, , .		0
99	An expertise-oriented training framework for robotics-assisted surgery. , 2014, , .		16
100	Development of force-based metrics for skills assessment in minimally invasive surgery. Surgical Endoscopy and Other Interventional Techniques, 2014, 28, 2106-2119.	1.3	52
101	Kinematic instability in concentric-tube robots: Modeling and analysis. , 2014, , .		22
102	A sterilizable force-sensing instrument for laparoscopic surgery. , 2014, , .		8
103	Involuntary movement during haptics-enabled robotic rehabilitation: Analysis and control design. , 2014, , .		5
104	Low-cost force-sensing arthroscopic tool using threaded fiber Bragg grating sensors. , 2014, , .		10
105	Application of Magneto-Rheological Fluid based clutches for improved performance in haptic interfaces. , 2014, , .		11
106	A parallel Remote Center of Motion mechanism for needle-based medical interventions. , 2014, , .		3
107	Networked dual-user teleoperation with time-varying authority adjustment: A wave variable approach. , 2014, , .		4
108	Visual servoing in medical robotics: a survey. Part I: endoscopic and direct vision imaging - techniques and applications. International Journal of Medical Robotics and Computer Assisted Surgery, 2014, 10, 263-274.	1.2	63

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109	Dynamics of Translational Friction in Needleâ€“Tissue Interaction During Needle Insertion. Annals of Biomedical Engineering, 2014, 42, 73-85.	1.3	43
110	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, .	0.4	15
111	Anatomy-Based Eligibility Measure for Robotic-Assisted Bypass Surgery. Innovations: Technology and Techniques in Cardiothoracic and Vascular Surgery, 2014, 9, 349-353.	0.4	3
112	Integration of Force Reflection with Tactile Sensing for Minimally Invasive Robotics-Assisted Tumor Localization. IEEE Transactions on Haptics, 2013, 6, 217-228.	1.8	57
113	Effect of kinesthetic force feedback and visual sensory input on writer's cramp. , 2013, , .		1
114	Sensory manipulation in writer's cramp: Possibilities for rehabilitation. , 2013, , .		2
115	A Semi-Infinite Programming Approach to Preoperative Planning of Robotic Cardiac Surgery Under Geometric Uncertainty. IEEE Journal of Biomedical and Health Informatics, 2013, 17, 172-182.	3.9	12
116	Projection-based force reflection algorithms for teleoperated rehabilitation therapy. , 2013, , .		15
117	Frequency separation in projection-based force reflection algorithms for bilateral teleoperators. , 2013, , .		2
118	Robot-assisted lung motion compensation during needle insertion. , 2013, , .		10
119	A small gain framework for networked cooperative force-reflecting teleoperation. Automatica, 2013, 49, 338-348.	3.0	69
120	A Navigation Platform for Guidance of Beating Heart Transapical Mitral Valve Repair. IEEE Transactions on Biomedical Engineering, 2013, 60, 1034-1040.	2.5	18
121	A dual-user teleoperated system with Virtual Fixtures for robotic surgical training. , 2013, , .		28
122	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.	0.4	5
123	A pseudo-rigid-body 3R model for a steerable ablation catheter. , 2013, , .		29
124	Position control of concentric-tube continuum robots using a modified Jacobian-based approach. , 2013, , .		47
125	Model-Based Force Control of a Steerable Ablation Catheter with a Custom-Designed Strain Sensor. , 2013, , .		9
126	The application of force sensing to skills assessment in Minimally Invasive Surgery. , 2013, , .		4

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127	A knee arthroscopy simulator: Design and validation. , 2013, 2013, 5715-8.		4
128	An active handheld device for compensation of physiological tremor using an ionic polymer metallic composite actuator. , 2013, , .		18
129	Analysis of needle-tissue friction during vibration-assisted needle insertion. , 2013, , .		14
130	Sensing Physiological Tremor in a Hand-Held Microsurgical Instrument. , 2013, , .		0
131	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.	0.4	0
132	Effect of force feedback on performance of robotics-assisted suturing. , 2012, , .		23
133	Modeling of a steerable catheter based on beam theory. , 2012, , .		31
134	Development of a hands-free pointer for instruction during minimally invasive surgery. , 2012, , .		0
135	Compensation for relative velocity between needle and soft tissue for friction modeling in needle insertion. , 2012, 2012, 960-3.		6
136	The role of three-dimensional visualization in robotics-assisted cardiac surgery. , 2012, , .		0
137	Predicting target vessel location on robot-assisted coronary artery bypass graft using CT to ultrasound registration. Medical Physics, 2012, 39, 1579-1587.	1.6	3
138	Networked teleoperation with non-passive environment: Application to tele-rehabilitation. , 2012, , .		34
139	Systematic design of an ultrasonic horn profile for high displacement amplification. , 2012, , .		2
140	Design of a Minimally Invasive Lung Tumor Localization Device. , 2012, , .		1
141	A Novel Force Modeling Scheme for Needle Insertion Using Multiple Kalman Filters. IEEE Transactions on Instrumentation and Measurement, 2012, 61, 429-438.	2.4	36
142	The WHaSP: A Wireless Hands-Free Surgical Pointer for Minimally Invasive Surgery. IEEE/ASME Transactions on Mechatronics, 2012, 17, 434-442.	3.7	5
143	Robotic Techniques for Minimally Invasive Tumor Localization. , 2011, , 469-496.		1
144	Small gain design of cooperative teleoperator system with projection-based force reflection. , 2011, , .		0

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145	Small-gain design of networked cooperative bilateral teleoperators. , 2011, , .		4
146	Measurement of Lung Hyperelastic Properties Using Inverse Finite Element Approach. IEEE Transactions on Biomedical Engineering, 2011, 58, 2852-2859.	2.5	26
147	Investigating Perioperative Heart Migration during Robot-Assisted Coronary Artery Bypass Grafting Interventions. Innovations: Technology and Techniques in Cardiothoracic and Vascular Surgery, 2011, 6, 323-330.	0.4	1
148	Sliding-mode control of nonlinear discrete-input pneumatic actuators. , 2011, , .		5
149	CT image construction of a totally deflated lung using deformable model extrapolation. Medical Physics, 2011, 38, 872-883.	1.6	12
150	Estimation of Lung's Air Volume and Its Variations Throughout Respiratory CT Image Sequences. IEEE Transactions on Biomedical Engineering, 2011, 58, 152-158.	2.5	11
151	Robot-Assisted Needle Steering Using a Control Theoretic Approach. Journal of Intelligent and Robotic Systems: Theory and Applications, 2011, 62, 397-418.	2.0	17
152	Force sensing in natural orifice transluminal endoscopic surgery. Surgical Endoscopy and Other Interventional Techniques, 2011, 25, 186-192.	1.3	19
153	Lung Cancer Brachytherapy: Robotics-Assisted Minimally Invasive Approach. Current Respiratory Medicine Reviews, 2011, 7, 340-353.	0.1	5
154	A framework for preoperative planning of robotics-assisted minimally invasive cardiac surgery (RAMICS) under geometric uncertainty. , 2011, , .		4
155	A distributed model for needle-tissue friction in percutaneous interventions. , 2011, , .		22
156	An analytical model for deflection of flexible needles during needle insertion. , 2011, , .		25
157	Data fusion for catheter tracking using Kalman filtering: applications in robot-assisted catheter insertion. , 2011, , .		4
158	A totally deflated lung's CT image construction by means of extrapolated deformable registration. Proceedings of SPIE, 2011, , .	0.8	0
159	Effects of deflated lung's geometry simplifications on the biomechanical model of its tumor motion: a phantom study. , 2011, , .		0
160	Intraoperative 3D stereo visualization for image-guided cardiac ablation. , 2011, , .		6
161	A chance-constrained approach to preoperative planning of robotics-assisted interventions. , 2011, 2011, 2127-30.		1
162	Optimization-based dosimetry planning for brachytherapy. , 2011, 2011, 5569-72.		1

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163	An analytical model for deflection of flexible needles during needle insertion. , 2011, , .		4
164	A software architecture for cell manipulation. , 2011, , .		0
165	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.	0.4	15
166	Image processing techniques in computer-assisted patch clamping. , 2010, , .		2
167	Initial Evaluation of a Tactile/Kinesthetic Force Feedback System for Minimally Invasive Tumor Localization. IEEE/ASME Transactions on Mechatronics, 2010, , .	3.7	20
168	Suitability of Three Saws for Minimally Invasive Bone Cutting. Surgical Innovation, 2010, 17, 5-10.	0.4	1
169	Integration of trans-esophageal echocardiography with magnetic tracking technology for cardiac interventions. , 2010, , .		8
170	Force/position-based modular system for minimally invasive surgery. , 2010, , .		6
171	Position control of a spherical joint using feedback linearization for SMA wire actuators. , 2010, , .		0
172	Computer-assisted patch clamping. , 2010, , .		3
173	Accelerated needle steering using partitioned value iteration. , 2010, , .		3
174	On constrained manipulation in robotics-assisted minimally invasive surgery. , 2010, , .		47
175	Preoperative planning of robotics-assisted minimally invasive coronary artery bypass grafting. , 2010, , .		7
176	A 7-DOF haptics-enabled teleoperated robotic system: Kinematic modeling and experimental verification. , 2010, , .		6
177	Image-guided robot-assisted microscope objective lens positioning: Application in patch clamping. , 2010, , .		4
178	Palpation system for minimally invasive localization of occult tumors. , 2010, , .		3
179	A Manipulator for Medical Applications: Design and Control. Journal of Medical Devices, Transactions of the ASME, 2010, 4, .	0.4	6
180	A compact dynamic force model for needle-tissue interaction. , 2010, 2010, 2292-5.		20

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181	CT-Enhanced Ultrasound Image of a Totally Deflated Lung for Image-Guided Minimally Invasive Tumor Ablative Procedures. IEEE Transactions on Biomedical Engineering, 2010, 57, 2627-2630.	2.5	16
182	Predicting Target Vessel Location for Improved Planning of Robot-Assisted CABG Procedures. Lecture Notes in Computer Science, 2010, 13, 205-212.	1.0	5
183	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.	0.4	6
184	CT image reconstruction of a totally deflated lung using extrapolated deformable registration. , 2010, , .		0
185	CT image construction of the lung in a totally deflated mode. , 2009, , .		4
186	Novel Hands-Free Pointer Improves Instruction Efficiency in Laparoscopic Surgery. Surgical Innovation, 2009, 16, 73-77.	0.4	17
187	Robot-assisted Active Catheter Insertion: Algorithms and Experiments. International Journal of Robotics Research, 2009, 28, 1101-1117.	5.8	66
188	Teleoperated masterâ€“slave needle insertion. International Journal of Medical Robotics and Computer Assisted Surgery, 2009, 5, 398-405.	1.2	14
189	A Robust Position and Force Control Strategy for 7-DOF Redundant Manipulators. IEEE/ASME Transactions on Mechatronics, 2009, 14, 575-589.	3.7	54
190	Robot-assisted Tactile Sensing for Minimally Invasive Tumor Localization. International Journal of Robotics Research, 2009, 28, 1118-1133.	5.8	89
191	A Novel Manipulator for Percutaneous Needle Insertion: Design and Experimentation. IEEE/ASME Transactions on Mechatronics, 2009, 14, 746-761.	3.7	66
192	Preâ€clinical remote telesurgery trial of a da Vinci telesurgery prototype. International Journal of Medical Robotics and Computer Assisted Surgery, 2008, 4, 304-309.	1.2	47
193	Stability and performance in delayed bilateral teleoperation: Theory and experiments. Control Engineering Practice, 2008, 16, 1329-1343.	3.2	46
194	Dynamic 3-D Virtual Fixtures for Minimally Invasive Beating Heart Procedures. IEEE Transactions on Medical Imaging, 2008, 27, 1061-1070.	5.4	89
195	Modeling and Control of Shape Memory Alloy Actuators. IEEE Transactions on Control Systems Technology, 2008, 16, 279-287.	3.2	117
196	Experimental evaluation of robot-assisted tactile sensing for minimally invasive surgery. , 2008, , .		13
197	Real-time parametric curved needle segmentation in 3D ultrasound images. , 2008, , .		34
198	Design of a sensorized instrument for skills assessment and training in minimally invasive surgery. , 2008, , .		22

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199	Transparent Time-Delayed Bilateral Teleoperation Using Wave Variables. IEEE Transactions on Control Systems Technology, 2008, 16, 548-555.	3.2	102
200	Robot-Assisted Minimally Invasive Brachytherapy for Lung Cancer. , 2008, , 33-52.		9
201	Autonomous Image-Guided Robot-Assisted Active Catheter Insertion. , 2008, 24, 858-871.		72
202	MIRA V: An integrated system for minimally invasive robot-assisted lung brachytherapy. , 2008, , .		8
203	Modified Newton's method applied to potential field-based navigation for nonholonomic robots in dynamic environments. Robotica, 2008, 26, 117-127.	1.3	27
204	Modified Newton's method applied to potential field based navigation for nonholonomic robots in dynamic environments. Robotica, 2008, 26, 285-294.	1.3	8
205	An Ultrasound Probe Holder for Image-Guided Surgery. Journal of Medical Devices, Transactions of the ASME, 2008, 2, .	0.4	4
206	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
207	Needle control along desired tracks in robotic prostate brachytherapy. , 2007, , .		11
208	An experimental test-bed for robot-assisted image-guided minimally invasive lung brachytherapy. , 2007, , .		3
209	Optimal Remote Center-of-Motion Location for Robotics-Assisted Minimally-Invasive Surgery. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	60
210	A Potential Field Model Using Generalized Sigmoid Functions. IEEE Transactions on Systems, Man, and Cybernetics, 2007, 37, 477-484.	5.5	57
211	High-Fidelity Bilateral Teleoperation Systems and the Effect of Multimodal Haptics. IEEE Transactions on Systems, Man, and Cybernetics, 2007, 37, 1512-1528.	5.5	127
212	Evaluation of force feedback requirements for minimally invasive lung tumour localization. , 2007, , .		12
213	An Ultrasound Probe Holder for Image-Guided Robot-Assisted Prostate Brachytherapy. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	2
214	Effects of Different Insertion Methods on Reducing Needle Deflection. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 491-4.	0.5	27
215	Multimode Control of a Large-Scale Robotic Manipulator. , 2007, 23, 1264-1270.		4
216	Minimization of needle deflection in robotâ€assisted percutaneous therapy. International Journal of Medical Robotics and Computer Assisted Surgery, 2007, 3, 140-148.	1.2	99

#	Article	IF	Citations
217	Friction Identification and Compensation in Robotic Manipulators. IEEE Transactions on Instrumentation and Measurement, 2007, 56, 2346-2353.	2.4	78
218	Needle insertion into soft tissue: A survey. Medical Engineering and Physics, 2007, 29, 413-431.	0.8	605
219	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
220	Stable identification of nonlinear systems using neural networks: theory and experiments. IEEE/ASME Transactions on Mechatronics, 2006, 11, 488-495.	3.7	45
221	A Stable Neural Network-Based Observer With Application to Flexible-Joint Manipulators. IEEE Transactions on Neural Networks, 2006, 17, 118-129.	4.8	215
222	A Fuzzyâ€“Braitenberg Navigation Strategy for Differential Drive Mobile Robots. Journal of Intelligent and Robotic Systems: Theory and Applications, 2006, 47, 101-124.	2.0	34
223	Methods and mechanisms for contact feedback in a robot-assisted minimally invasive environment. Surgical Endoscopy and Other Interventional Techniques, 2006, 20, 1570-1579.	1.3	63
224	A Macro-Robot Manipulator for Medical Applications. , 2006, , .		9
225	Deflection of a Flexible Needle during Insertion into Soft Tissue. , 2006, 2006, 3858-61.		50
226	Control of soft tissue deformation during robotic needle insertion. Minimally Invasive Therapy and Allied Technologies, 2006, 15, 165-176.	0.6	58
227	Stable Motion Planning for Dynamic Nonholonomic Mobile Robots. , 2006, , .		1
228	A haptics based simulator for laparoscopic pyeloplasty. Studies in Health Technology and Informatics, 2006, 119, 583-5.	0.2	2
229	A collision-avoidance scheme for redundant manipulators: Theory and experiments. Journal of Field Robotics, 2005, 22, 737-757.	0.7	50
230	A Layered Goal-Oriented Fuzzy Motion Planning Strategy for Mobile Robot Navigation. IEEE Transactions on Systems, Man, and Cybernetics, 2005, 35, 1214-1224.	5.5	93
231	Haptic interaction in robot-assisted endoscopic surgery: a sensorized end-effector. International Journal of Medical Robotics and Computer Assisted Surgery, 2005, 01, 53.	1.2	5
232	Parameter selection and control design for vibration suppression using piezoelectric transducers. Control Engineering Practice, 2004, 12, 1005-1015.	3.2	38
233	An inverse dynamics control strategy for tip position tracking of flexible multi-link manipulators. Journal of Field Robotics, 1997, 14, 649-658.	0.7	54
234	The mechanical design of a seven-axes manipulator with kinematic isotropy. Journal of Intelligent and Robotic Systems: Theory and Applications, 1995, 14, 21-41.	2.0	47

#	Article	IF	Citations
235	Impact reduction for redundant manipulators using augmented impedance control. Journal of Field Robotics, 1995, 12, 301-313.	0.7	27
236	Modelling and gain scheduled control of shape memory alloy actuators. , 0, , .		16
237	Friction identification in robotic manipulators: case studies. , 0, , .		3