Jacob Rosen

List of Publications by Year
in descending order

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65 papers	3,714 citations	257101 24 h-index	243296 44 g-index
66 all docs	66 docs citations	66 times ranked	3182 citing authors

#	Article	IF	Citations
1	Semi-Automated Extraction of Lens Fragments Via a Surgical Robot Using Semantic Segmentation of OCT Images With Deep Learning - Experimental Results in Ex Vivo Animal Model. IEEE Robotics and Automation Letters, 2021, 6, 5261-5268.	3.3	4
2	Sensor Reduction, Estimation, and Control of an Upper-Limb Exoskeleton. IEEE Robotics and Automation Letters, 2021, 6, 1012-1019.	3.3	15
3	SCADE: Simultaneous Sensor Calibration and Deformation Estimation of FBG-Equipped Unmodeled Continuum Manipulators. IEEE Transactions on Robotics, 2020, 36, 222-239.	7.3	26
4	Upper Limb Exoskeleton Systemsâ€"Overview. , 2020, , 1-22.		12
5	EXO-UL Upper Limb Robotic Exoskeleton System Series: From 1 DOF Single-Arm to (7+1) DOFs Dual-Arm. , 2020, , 91-103.		1
6	Admittance Control Scheme Comparison of EXO-UL8: A Dual-Arm Exoskeleton Robotic System. , 2019, 2019, 611-617.		10
7	Asymmetric Dual Arm Approach For Post Stroke Recovery Of Motor Functions Utilizing The EXO-UL8 Exoskeleton System: A Pilot Study. , 2018, 2018, 1701-1707.		16
8	From reaching to reach-to-grasp: the arm posture difference and its implications on human motion control strategy. Experimental Brain Research, 2017, 235, 1627-1642.	0.7	6
9	Roboscope: A flexible and bendable surgical robot for single portal Minimally Invasive Surgery. , 2017, , .		21
10	Autonomous suturing via surgical robot: An algorithm for optimal selection of needle diameter, shape, and path. , 2017, , .		47
11	Upper limb redundancy resolution under gravitational loading conditions: Arm postural stability index based on dynamic manipulability analysis. , 2017, , .		7
12	Design of a Multi-Arm Surgical Robotic System for Dexterous Manipulation. Journal of Mechanisms and Robotics, 2016, 8, .	1.5	10
13	Upper limb bilateral symmetric training with robotic assistance and clinical outcomes for stroke. International Journal of Intelligent Computing and Cybernetics, 2016, 9, 83-104.	1.6	14
14	Autonomous Operation in Surgical Robotics. Mechanical Engineering, 2015, 137, S15-S18.	0.0	6
15	InÂvitro evaluation of accuracy and precision of automated robotic tooth preparation system for porcelain laminate veneers. Journal of Prosthetic Dentistry, 2015, 114, 229-235.	1.1	30
16	Spatial Map of Synthesized Criteria for the Redundancy Resolution of Human Arm Movements. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2015, 23, 1020-1030.	2.7	11
17	Predicting Redundancy of a 7 DOF Upper Limb Exoskeleton Toward Improved Transparency between Human and Robot. Journal of Intelligent and Robotic Systems: Theory and Applications, 2015, 80, 99-119.	2.0	31
18	The joint coordination in reach-to-grasp movements. , 2014, , .		6

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19	Task-relevance of grasping-related degrees of freedom in reach-to-grasp movements. , 2014, 2014, 6903-6.		3
20	Stroke-induced synergistic phase shifting and its possible implications for recovery mechanisms. Experimental Brain Research, 2014, 232, 3489-3499.	0.7	6
21	Upper Limb Joint Space Modeling of Stroke Induced Synergies Using Isolated and Voluntary Arm Perturbations. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2014, 22, 491-500.	2.7	12
22	Rhythmic affects on stroke-induced joint synergies across a range of speeds. Experimental Brain Research, 2013, 229, 517-524.	0.7	11
23	Neural PID Control of Robot Manipulators With Application to an Upper Limb Exoskeleton. IEEE Transactions on Cybernetics, 2013, 43, 673-684.	6.2	138
24	Kinematic Data Analysis for Post-Stroke Patients Following Bilateral Versus Unilateral Rehabilitation With an Upper Limb Wearable Robotic System. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2013, 21, 153-164.	2.7	106
25	Chronic stroke survivors achieve comparable outcomes following virtual task specific repetitive training guided by a wearable robotic orthosis (UL-EXO7) and actual task specific repetitive training guided by a physical therapist. Journal of Hand Therapy, 2013, 26, 343-352.	0.7	55
26	Kinematic analysis of 7 degrees of freedom upper-limb exoskeleton robot with tilted shoulder abduction. International Journal of Precision Engineering and Manufacturing, 2013, 14, 69-76.	1.1	21
27	Synthesizing Redundancy Resolution Criteria of the Human Arm Posture in Reaching Movements. Lecture Notes in Electrical Engineering, 2013, , 201-240.	0.3	7
28	Raven-II: An Open Platform for Surgical Robotics Research. IEEE Transactions on Biomedical Engineering, 2013, 60, 954-959.	2.5	304
29	Constant Visual and Haptic Time Delays in Simulated Bilateral Teleoperation: Quantifying the Human Operator Performance. Presence: Teleoperators and Virtual Environments, 2013, 22, 271-290.	0.3	3
30	Resolving the redundancy of a seven DOF wearable robotic system based on kinematic and dynamic constraint. , 2012, , .		18
31	Robotic Rehabilitation Game Design for Chronic Stroke. Games for Health Journal, 2012, 1, 422-430.	1.1	20
32	Redundancy Resolution of the Human Arm and an Upper Limb Exoskeleton. IEEE Transactions on Biomedical Engineering, 2012, 59, 1770-1779.	2.5	68
33	PID admittance control for an upper limb exoskeleton. , 2011, , .		29
34	Redundancy and joint limits of a seven degree of freedom upper limb exoskeleton. , 2011, 2011, 8154-7.		9
35	Redundancy resolution of a human arm for controlling a seven DOF wearable robotic system. , 2011, 2011, 3471-4.		20
36	Maximizing dexterous workspace and optimal port placement of a multi-arm surgical robot. , 2011, , .		10

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37	Raven: Developing a Surgical Robot from a Concept to a Transatlantic Teleoperation Experiment. , 2011, , 159-197.		22
38	Macro and Micro Soft-Tissue Biomechanics and Tissue Damage: Application in Surgical Robotics. , 2011, , 583-618.		1
39	Freeing the Serial Mechanism Designer from Inverse Kinematic Solvability Constraints. Applied Bionics and Biomechanics, 2010, 7, 209-216.	0.5	5
40	A novel linear PID controller for an upper limb exoskeleton. , 2010, , .		66
41	Plugfest 2009: Global interoperability in Telerobotics and telemedicine. , 2010, 2010, 1733-1738.		26
42	Comparison of multi-sensor admittance control in joint space and task space for a seven degree of freedom upper limb exoskeleton. , 2010, , .		35
43	Isotropy of an Upper Limb Exoskeleton and the Kinematics and Dynamics of the Human Arm. Applied Bionics and Biomechanics, 2009, 6, 175-191.	0.5	33
44	Isotropy of an upper limb exoskeleton and the kinematics and dynamics of the human arm. Applied Bionics and Biomechanics, 2009, 6, 175-191.	0.5	23
45	The RAVEN: Design and Validation of a Telesurgery System. International Journal of Robotics Research, 2009, 28, 1183-1197.	5.8	209
46	Teleoperation in surgical robotics – network latency effects on surgical performance. , 2009, 2009, 6860-3.		44
47	Biomechanical Properties of Abdominal Organs In Vivo and Postmortem Under Compression Loads. Journal of Biomechanical Engineering, 2008, 130, 021020.	0.6	185
48	Evaluation of Unmanned Airborne Vehicles and Mobile Robotic Telesurgery in an Extreme Environment. Telemedicine Journal and E-Health, 2008, 14, 539-544.	1.6	56
49	Objective assessment of telesurgical robot systems: Telerobotic FLS. Studies in Health Technology and Informatics, 2008, 132, 263-5.	0.2	10
50	UPPER LIMB POWERED EXOSKELETON. International Journal of Humanoid Robotics, 2007, 04, 529-548.	0.6	64
51	Assessment of Tissue Damage due to Mechanical Stresses. International Journal of Robotics Research, 2007, 26, 1159-1171.	5.8	102
52	Automated Tool Handling for the Trauma Pod Surgical Robot. , 2007, , .		13
53	Upper-Limb Powered Exoskeleton Design. IEEE/ASME Transactions on Mechatronics, 2007, 12, 408-417.	3.7	788
54	Generalized Approach for Modeling Minimally Invasive Surgery as a Stochastic Process Using a Discrete Markov Model. IEEE Transactions on Biomedical Engineering, 2006, 53, 399-413.	2.5	195

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55	Optimization of a Spherical Mechanism for a Minimally Invasive Surgical Robot: Theoretical and Experimental Approaches. IEEE Transactions on Biomedical Engineering, 2006, 53, 1440-1445.	2.5	156
56	Real-Time Myoprocessors for a Neural Controlled Powered Exoskeleton Arm. IEEE Transactions on Biomedical Engineering, 2006, 53, 2387-2396.	2.5	202
57	Spherical mechanism analysis of a surgical robot for minimally invasive surgery -- analytical and experimental approaches. Studies in Health Technology and Informatics, 2005, 111, 422-8.	0.2	8
58	Quantifying surgeon grasping mechanics in laparoscopy using the Blue DRAGON system. Studies in Health Technology and Informatics, 2004, 98, 34-6.	0.2	19
59	Modeling the Human Body/Seat System in a Vibration Environment. Journal of Biomechanical Engineering, 2003, 125, 223-231.	0.6	27
60	In-vivo and in-situ compressive properties of porcine abdominal soft tissues. Studies in Health Technology and Informatics, 2003, 94, 26-32.	0.2	26
61	Minimally invasive surgery task decomposition--etymology of endoscopic suturing. Studies in Health Technology and Informatics, 2003, 94, 295-301.	0.2	5
62	Task Decomposition of Laparoscopic Surgery for Objective Evaluation of Surgical Residents' Learning Curve Using Hidden Markov Model. Computer Aided Surgery, 2002, 7, 49-61.	1.8	106
63	Task decomposition of laparoscopic surgery for objective evaluation of surgical residents' learning curve using hidden Markov model. Computer Aided Surgery, 2002, 7, 49-61.	1.8	39
64	The Blue DRAGON--a system for monitoring the kinematics and the dynamics of endoscopic tools in minimally invasive surgery for objective laparoscopic skill assessment. Studies in Health Technology and Informatics, 2002, 85, 412-8.	0.2	26
65	Performances of Hill-Type and Neural Network Muscle Modelsâ€"Toward a Myosignal-Based Exoskeleton. Journal of Biomedical Informatics, 1999, 32, 415-439.	0.7	107