# I-Ming Chen

#### List of Publications by Citations

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257
papers

3,808
citations

33
h-index

49
g-index

318
ext. papers

3,6
ext. citations

3,6
avg, IF

L-index

#	Paper	IF	Citations
257	Force-closure workspace analysis of cable-driven parallel mechanisms. <i>Mechanism and Machine Theory</i> , <b>2006</b> , 41, 53-69	4	133
256	Stiffness modeling of flexure parallel mechanism. <i>Precision Engineering</i> , <b>2005</b> , 29, 467-478	2.9	131
255	Local POE model for robot kinematic calibration. <i>Mechanism and Machine Theory</i> , <b>2001</b> , 36, 1215-1239	4	116
254	Analytical and experimental investigation on the magnetic field and torque of a permanent magnet spherical actuator. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2006</b> , 11, 409-419	5.5	108
253	Design and Analysis of a Permanent Magnet Spherical Actuator. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2008</b> , 13, 239-248	5.5	92
252	Workspace generation and planning singularity-free path for parallel manipulators. <i>Mechanism and Machine Theory</i> , <b>2005</b> , 40, 776-805	4	86
251	Workspace analysis of fully restrained cable-driven manipulators. <i>Robotics and Autonomous Systems</i> , <b>2009</b> , 57, 901-912	3.5	75
250	A Wearable Sensing System for Tracking and Monitoring of Functional Arm Movement. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2011</b> , 16, 213-220	5.5	70
249	Rapid response manufacturing through a rapidly reconfigurable robotic workcell. <i>Robotics and Computer-Integrated Manufacturing</i> , <b>2001</b> , 17, 199-213	9.2	69
248	Task-based optimization of modular robot configurations: minimized degree-of-freedom approach. <i>Mechanism and Machine Theory</i> , <b>2000</b> , 35, 517-540	4	66
247	Armature Reaction Field and Inductance of Coreless Moving-Coil Tubular Linear Machine. <i>IEEE Transactions on Industrial Electronics</i> , <b>2014</b> , 61, 6956-6965	8.9	59
246	Self-Calibration of a Biologically Inspired 7 DOF Cable-Driven Robotic Arm. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2008</b> , 13, 66-75	5.5	56
245	On Algorithms for Planning S-Curve Motion Profiles. <i>International Journal of Advanced Robotic Systems</i> , <b>2008</b> , 5, 11	1.4	54
244	Kinematic design of a six-DOF parallel-kinematics Machine with decoupled-motion architecture <b>2004</b> , 20, 876-884		53
243	Enumerating the Non-Isomorphic Assembly Configurations of Modular Robotic Systems. <i>International Journal of Robotics Research</i> , <b>1998</b> , 17, 702-719	5.7	53
242	. IEEE Transactions on Automation Science and Engineering, <b>1993</b> , 9, 507-512		52
241	Development of finger-motion capturing device based on optical linear encoder. <i>Journal of Rehabilitation Research and Development</i> , <b>2011</b> , 48, 69-82		50

#### (2007-2009)

240	Kinematic design of a family of 6-DOF partially decoupled parallel manipulators. <i>Mechanism and Machine Theory</i> , <b>2009</b> , 44, 912-922	4	49	
239	Autonomous navigation of UAV by using real-time model-based reinforcement learning 2016,		46	
238	Locomotion and steering aspects in automation of colonoscopy. Part one. A literature review. <i>IEEE Engineering in Medicine and Biology Magazine</i> , <b>1997</b> , 16, 85-96		44	
237	Kinematic design of a 6-DOF parallel manipulator with decoupled translation and rotation <b>2006</b> , 22, 54	5-551	44	
236	Design and nonlinear modeling of a large-displacement XYZ flexure parallel mechanism with decoupled kinematic structure. <i>Review of Scientific Instruments</i> , <b>2006</b> , 77, 115101	1.7	41	
235	Localization and velocity tracking of human via 3 IMU sensors. <i>Sensors and Actuators A: Physical</i> , <b>2014</b> , 212, 25-33	3.9	38	
234	A General Approach to the Dynamics of Nonholonomic Mobile Manipulator Systems. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , <b>2002</b> , 124, 512-521	1.6	37	
233	Kinematic calibration of modular reconfigurable robots using product-of-exponentials formula. <i>Journal of Field Robotics</i> , <b>1997</b> , 14, 807-821		36	
232	Singularity analysis of three-legged parallel robots based on passive-joint velocities. <i>IEEE Transactions on Automation Science and Engineering</i> , <b>2001</b> , 17, 413-422		36	
231	Locomotive gait generation for inchworm-like robots using finite state approach. <i>Robotica</i> , <b>2001</b> , 19, 535-542	2.1	36	
230	3-D Localization of Human Based on an Inertial Capture System. <i>IEEE Transactions on Robotics</i> , <b>2013</b> , 29, 806-812	6.5	35	
229	Automation of colonoscopy. Part II: Visual-control aspects. <i>IEEE Engineering in Medicine and Biology Magazine</i> , <b>1998</b> , 17, 81-8		35	
228	A flexure-based electromagnetic linear actuator. <i>Nanotechnology</i> , <b>2008</b> , 19, 315501	3.4	35	
227	Geometric design optimization of an under-actuated tendon-driven robotic gripper. <i>Robotics and Computer-Integrated Manufacturing</i> , <b>2018</b> , 50, 80-89	9.2	34	
226	A large deflection and high payload flexure-based parallel manipulator for UV nanoimprint lithography: Part I. Modeling and analyses. <i>Precision Engineering</i> , <b>2014</b> , 38, 861-871	2.9	34	
225	Kinematic Design of Modular Reconfigurable In-Parallel Robots. <i>Autonomous Robots</i> , <b>2001</b> , 10, 83-89	3	34	
224	A generic approximation model for analyzing large nonlinear deflection of beam-based flexure joints. <i>Precision Engineering</i> , <b>2010</b> , 34, 607-618	2.9	33	
223	Automated geneartion of the DH parameters for configuration design of modular manipulators. <i>Robotics and Computer-Integrated Manufacturing</i> , <b>2007</b> , 23, 553-562	9.2	33	

222	Numerical inverse kinematics for modular reconfigurable robots. <i>Journal of Field Robotics</i> , <b>1999</b> , 16, 213	3-225	32
221	Pictobot: A Cooperative Painting Robot for Interior Finishing of Industrial Developments. <i>IEEE Robotics and Automation Magazine</i> , <b>2018</b> , 25, 82-94	3.4	32
220	Electromechanical Modeling of a Permanent-Magnet Spherical Actuator Based on Magnetic-Dipole-Moment Principle. <i>IEEE Transactions on Industrial Electronics</i> , <b>2009</b> , 56, 1640-1648	8.9	31
219	A 6R linkage reconfigurable between the line-symmetric Bricard linkage and the Bennett linkage. <i>Mechanism and Machine Theory</i> , <b>2013</b> , 70, 278-292	4	29
218	Task-oriented configuration design for reconfigurable parallel manipulator systems. <i>International Journal of Computer Integrated Manufacturing</i> , <b>2005</b> , 18, 615-634	4.3	29
217	Automatic Model Generation for Modular Reconfigurable Robot Dynamics. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , <b>1998</b> , 120, 346-352	1.6	29
216	Decentralized Control of Nonlinear Large-Scale Systems Using Dynamic Output Feedback. <i>Journal of Optimization Theory and Applications</i> , <b>2000</b> , 104, 459-475	1.6	28
215	Accurate detection of ellipses with false detection control at video rates using a gradient analysis. <i>Pattern Recognition</i> , <b>2018</b> , 81, 112-130	7.7	27
214	Inertia sensor-based guidance system for upperlimb posture correction. <i>Medical Engineering and Physics</i> , <b>2013</b> , 35, 269-76	2.4	26
213	Human velocity and dynamic behavior tracking method for inertial capture system. <i>Sensors and Actuators A: Physical</i> , <b>2012</b> , 183, 123-131	3.9	26
212	A large deflection and high payload flexure-based parallel manipulator for UV nanoimprint lithography: Part II. Stiffness modeling and performance evaluation. <i>Precision Engineering</i> , <b>2014</b> , 38, 872	2 <del>-</del> 884	25
211	An experimental characterization of human torso motion. <i>Frontiers of Mechanical Engineering</i> , <b>2015</b> , 10, 311-325	3.3	25
210	Modeling and Iron-Effect Analysis on Magnetic Field and Torque Output of Electromagnetic Spherical Actuators With Iron Stator. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2012</b> , 17, 1080-1087	5.5	25
209	Equivolumetric partition of solid spheres with applications to orientation workspace analysis of robot manipulators <b>2006</b> , 22, 869-879		25
208	Programming a Robot for Conformance Grinding of Complex Shapes by Capturing the Tacit Knowledge of a Skilled Operator. <i>IEEE Transactions on Automation Science and Engineering</i> , <b>2017</b> , 14, 1020-1030	4.9	24
207	Uncertainty-Based IMU Orientation Tracking Algorithm for Dynamic Motions. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2019</b> , 24, 872-882	5.5	24
206	Millimeters-Stroke Nanopositioning Actuator With High Positioning and Thermal Stability. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2015</b> , 20, 2813-2823	5.5	23
205	A geometrical approach for online error compensation of industrial manipulators <b>2010</b> ,		22

## (2003-2006)

A Large-Displacement 3-DOF Flexure Parallel Mechanism with Decoupled Kinematics Structure <b>2006</b> ,		21
		21
Hybrid torque modeling of spherical actuators with cylindrical-shaped magnet poles. <i>Mechatronics</i> , <b>2011</b> , 21, 85-91	3	20
A direct violation correction method in numerical simulation of constrained multibody systems. <i>Computational Mechanics</i> , <b>2000</b> , 26, 52-57	4	20
Self-calibration of three-legged modular reconfigurable parallel robots based on leg-end distance errors. <i>Robotica</i> , <b>2001</b> , 19, 187-198	2.1	20
A flexure-based electromagnetic nanopositioning actuator with predictable and re-configurable open-loop positioning resolution. <i>Precision Engineering</i> , <b>2015</b> , 40, 249-260	2.9	19
Analysis and design of a 3-DOF flexure-based zero-torsion parallel manipulator for nano-alignment applications <b>2011</b> ,		19
. IEEE/ASME Transactions on Mechatronics, <b>2003</b> , 8, 469-475	5.5	19
Configuration independent kinematics for modular robots		19
MAGNETIC FIELD OF TUBULAR LINEAR MACHINES WITH DUAL HALBACH ARRAY. <i>Progress in Electromagnetics Research</i> , <b>2013</b> , 136, 283-299	3.8	18
Wearable wireless sensing system for capturing human arm motion. <i>Sensors and Actuators A: Physical</i> , <b>2011</b> , 166, 125-132	3.9	18
Effects of constraint errors on parallel manipulators with decoupled motion. <i>Mechanism and Machine Theory</i> , <b>2006</b> , 41, 912-928	4	18
A qualitative test for N-finger force-closure grasps on planar objects with applications to manipulation and finger gaits		18
Design, Modeling and Experiments of 3-DOF Electromagnetic Spherical Actuators. <i>Mechanisms and Machine Science</i> , <b>2011</b> ,	0.3	18
Real-Time Robotic Manipulation of Cylindrical Objects in Dynamic Scenarios Through Elliptic Shape Primitives. <i>IEEE Transactions on Robotics</i> , <b>2019</b> , 35, 95-113	6.5	18
A Telemanipulation-Based Human <b>R</b> obot Collaboration Method to Teach Aerospace Masking Skills. <i>IEEE Transactions on Industrial Informatics</i> , <b>2020</b> , 16, 3076-3084	11.9	18
Using a genetic algorithm to schedule the space-constrained AGV-based prefabricated bathroom units manufacturing system. <i>International Journal of Production Research</i> , <b>2018</b> , 1-17	7.8	17
Mechatronic Design and Locomotion of Amoebot Metamorphic Underwater Vehicle. <i>Journal of Field Robotics</i> , <b>2003</b> , 20, 307-314		16
	Hybrid torque modeling of spherical actuators with cylindrical-shaped magnet poles. <i>Mechatronics</i> , 2011, 21, 85-91  A direct violation correction method in numerical simulation of constrained multibody systems. <i>Computational Mechanics</i> , 2000, 26, 52-57  Self-calibration of three-legged modular reconfigurable parallel robots based on leg-end distance errors. <i>Robotica</i> , 2001, 19, 187-198  A flexure-based electromagnetic nanopositioning actuator with predictable and re-configurable open-loop positioning resolution. <i>Precision Engineering</i> , 2015, 40, 249-260  Analysis and design of a 3-DOF flexure-based zero-torsion parallel manipulator for nano-alignment applications 2011,  . <i>IEEE/ASME Transactions on Mechatronics</i> , 2003, 8, 469-475  Configuration independent kinematics for modular robots  MAGNETIC FIELD OF TUBULAR LINEAR MACHINES WITH DUAL HALBACH ARRAY. <i>Progress in Electromagnetics Research</i> , 2013, 136, 283-299  Wearable wireless sensing system for capturing human arm motion. <i>Sensors and Actuators A: Physical</i> , 2011, 166, 125-132  Effects of constraint errors on parallel manipulators with decoupled motion. <i>Mechanism and Machine Theory</i> , 2006, 41, 912-928  A qualitative test for N-finger force-closure grasps on planar objects with applications to manipulation and finger gaits  Design, Modeling and Experiments of 3-DOF Electromagnetic Spherical Actuators. <i>Mechanisms and Machine Science</i> , 2011,  Real-Time Robotic Manipulation of Cylindrical Objects in Dynamic Scenarios Through Elliptic Shape Primitives. <i>IEEE Transactions on Robotics</i> , 2019, 35, 95-113  A Telemanipulation-Based HumanRobot Collaboration Method to Teach Aerospace Masking Skills. <i>IEEE Transactions on Industrial Informatics</i> , 2020, 16, 3076-3084  Using a genetic algorithm to schedule the space-constrained AGV-based prefabricated bathroom units manufacturing system. <i>International Journal of Production Research</i> , 2018, 1-17	Hybrid torque modeling of spherical actuators with cylindrical-shaped magnet poles. Mechatronics, 2011, 21, 85-91  A direct violation correction method in numerical simulation of constrained multibody systems.  A direct violation and Mechanics, 2000, 26, 52-57  Self-calibration of three-legged modular reconfigurable parallel robots based on leg-end distance errors. Robotica, 2001, 19, 187-198  A flexure-based electromagnetic nanopositioning actuator with predictable and re-configurable open-loop positioning resolution. Precision Engineering, 2015, 40, 249-260  Analysis and design of a 3-DOF flexure-based zero-torsion parallel manipulator for nano-alignment applications 2011,  IEEE/ASME Transactions on Mechatronics, 2003, 8, 469-475  Configuration independent kinematics for modular robots  MAGNETIC FIELD OF TUBULAR LINEAR MACHINES WITH DUAL HALBACH ARRAY. Progress in Electromagnetics Research, 2013, 136, 283-299  Wearable wireless sensing system for capturing human arm motion. Sensors and Actuators A: Physical, 2011, 166, 125-132  Effects of constraint errors on parallel manipulators with decoupled motion. Mechanism and Machine Theory, 2006, 41, 912-928  A qualitative test for N-finger force-closure grasps on planar objects with applications to manipulation and finger gaits  Design, Modeling and Experiments of 3-DOF Electromagnetic Spherical Actuators. Mechanisms and Machine Science, 2011,  Real-Time Robotic Manipulation of Cylindrical Objects in Dynamic Scenarios Through Elliptic Shape Primitives. IEEE Transactions on Robotics, 2019, 35, 95-113  A Telemanipulation-Based Human®obot Collaboration Method to Teach Aerospace Masking Skills. IEEE Transactions on Industrial Informatics, 2020, 16, 3076-3084  Using a genetic algorithm to schedule the space-constrained AGV-based prefabricated bathroom units manufacturing system. International Journal of Production Research, 2018, 1-17  Mechatronic Design and Locomotion of Amoebotă. Metamorphic Underwater Vehicle. Journal of

186	Determining task optimal modular robot assembly configurations		16
185	Reconfigurable mechanism generated from the network of Bennett linkages. <i>Mechanism and Machine Theory</i> , <b>2015</b> , 88, 49-62	4	15
184	QuicaBot: Quality Inspection and Assessment Robot. <i>IEEE Transactions on Automation Science and Engineering</i> , <b>2019</b> , 16, 506-517	4.9	15
183	Evaluation of resolution of flexure parallel mechanisms for ultraprecision manipulation. <i>Review of Scientific Instruments</i> , <b>2004</b> , 75, 3016-3024	1.7	15
182	Singularity-free path planning of parallel manipulators using clustering algorithm and line geometry		15
181	Simultaneous base and tool calibration for self-calibrated parallel robots. <i>Robotica</i> , <b>2002</b> , 20, 367-374	2.1	15
180	A geometrical method for the singularity analysis of 3-RRR planar parallel robots with different actuation schemes		15
179	Optimal facility layout planning for AGV-based modular prefabricated manufacturing system. <i>Automation in Construction</i> , <b>2019</b> , 98, 310-321	9.6	15
178	Transfer learning on convolutional activation feature as applied to a building quality assessment robot. <i>International Journal of Advanced Robotic Systems</i> , <b>2017</b> , 14, 172988141771262	1.4	14
177	A Three Degree-of-Freedom Optical Orientation Measurement Method for Spherical Actuator Applications. <i>IEEE Transactions on Automation Science and Engineering</i> , <b>2011</b> , 8, 319-326	4.9	14
176	Magnetic field modeling of a dual-magnet configuration. <i>Journal of Applied Physics</i> , <b>2007</b> , 102, 074924	2.5	14
175	Planning algorithms for s-curve trajectories <b>2007</b> ,		14
174	Micro-motion selective-actuation X Y Z flexure parallel mechanism: design and modeling. <i>Journal of Micromechatronics</i> , <b>2005</b> , 3, 51-73		14
173	D-Type learning control for nonlinear time-varying systems with unknown initial states and inputs. <i>Transactions of the Institute of Measurement and Control</i> , <b>2001</b> , 23, 69-82	1.8	14
172	Fast Ellipse Detection via Gradient Information for Robotic Manipulation of Cylindrical Objects. <i>IEEE Robotics and Automation Letters</i> , <b>2018</b> , 3, 2754-2761	4.2	14
171	Equivalent energized coil model for magnetic field of permanent-magnet spherical actuators. <i>Sensors and Actuators A: Physical</i> , <b>2015</b> , 229, 68-76	3.9	13
170	Inverse kinematics for modular reconfigurable robots		13
169	An orientation measurement method based on Hall-effect sensors for permanent magnet spherical actuators with 3D magnet array. <i>Scientific Reports</i> , <b>2014</b> , 4, 6756	4.9	12

## (2014-2010)

168	Analysis of Pole Configurations of Permanent-Magnet Spherical Actuators. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2010</b> ,	5.5	12
167	A generic tension-closure analysis method for fully-constrained cable-driven parallel manipulators <b>2009</b> ,		12
166	Numerical Orientation Workspace Analysis with Different Parameterization Methods 2006,		12
165	Workspace evaluation of manipulators through finite-partition of SE(3). <i>Robotics and Computer-Integrated Manufacturing</i> , <b>2011</b> , 27, 850-859	9.2	11
164	Design and kinematic analysis of modular reconfigurable parallel robots		11
163	Strategy-based robotic item picking from shelves <b>2016</b> ,		11
162	Magnetic field modeling based on geometrical equivalence principle for spherical actuator with cylindrical shaped magnet poles. <i>Aerospace Science and Technology</i> , <b>2016</b> , 49, 17-25	4.9	10
161	Capturing the tacit knowledge of the skilled operator to program tool paths and tool orientations for robot belt grinding. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2017</b> , 91, 1599-10	518 <sup>.2</sup>	10
160	Novel permanent magnet linear motor with isolated movers: analytical, numerical and experimental study. <i>Review of Scientific Instruments</i> , <b>2014</b> , 85, 105007	1.7	10
159	SLAC: 3D localization of human based on kinetic human movement capture <b>2011</b> ,		10
158	Building Hand Motion-Based Character Animation: The Case of Puppetry <b>2010</b> ,		10
157	A novel approach for positional sensing of a spherical geometry. <i>Sensors and Actuators A: Physical</i> , <b>2011</b> , 168, 328-334	3.9	10
156	A low cost wearable optical-based goniometer for human joint monitoring. <i>Frontiers of Mechanical Engineering in China</i> , <b>2010</b> , 6, 13		10
155	Many strings attached: from conventional to robotic marionette manipulation. <i>IEEE Robotics and Automation Magazine</i> , <b>2005</b> , 12, 59-74	3.4	10
154	Modular Robots <b>2016</b> , 531-542		10
153	Numerical inverse kinematics for modular reconfigurable robots <b>1999</b> , 16, 213		10
152	Enabling grasp action: Generalized quality evaluation of grasp stability via contact stiffness from contact mechanics insight. <i>Mechanism and Machine Theory</i> , <b>2019</b> , 134, 625-644	4	9
151	Kinematic Study of the Original and Revised General Line-Symmetric Bricard 6R Linkages. <i>Journal of Mechanisms and Robotics</i> , <b>2014</b> , 6,	2.2	9

150	Adaptive centroid-finding algorithm for freeform surface measurements. <i>Applied Optics</i> , <b>2013</b> , 52, D75	-8 <sub>137</sub>	9
149	Reference-free Shack-Hartmann wavefront sensor. <i>Optics Letters</i> , <b>2011</b> , 36, 2752-4	3	9
148	Torque Modeling of Spherical Actuators with Double-layer Poles 2006,		9
147	Instantaneous kinematics and singularity analysis of three-legged parallel manipulators. <i>Robotica</i> , <b>2004</b> , 22, 189-203	2.1	9
146	A novel method for 3D reconstruction: Division and merging of overlapping B-spline surfaces. <i>CAD Computer Aided Design</i> , <b>2016</b> , 81, 14-23	2.9	8
145	A tubular linear machine with dual Halbach array. <i>Engineering Computations</i> , <b>2014</b> , 31, 177-200	1.4	8
144	Compact piezoelectric micromotor with a single bulk lead zirconate titanate stator. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 134106	3.4	8
143	☐eft Arm Up!☐nteractive Yoga training in virtual environment <b>2011</b> ,		8
142	Intuitive vibro-tactile feedback for human body movement guidance 2009,		8
141	Management of parallel-manipulator singularities using joint-coupling. <i>Advanced Robotics</i> , <b>2007</b> , 21, 58		
	Promogeniene of paraket manipolacor singularicies asing joine edepung, Maraneca Mosciles, <b>200</b> 1, 21, 50	3 <del>16,0</del> 0	8
140	High Torque Density Torque Motor With Hybrid Magnetization Pole Arrays for Jet Pipe Servo Valve.  IEEE Transactions on Industrial Electronics, 2020, 67, 2133-2142	3.16 <del>,0</del> 00 8.9	8
140	High Torque Density Torque Motor With Hybrid Magnetization Pole Arrays for Jet Pipe Servo Valve.	,	
ŕ	High Torque Density Torque Motor With Hybrid Magnetization Pole Arrays for Jet Pipe Servo Valve. <i>IEEE Transactions on Industrial Electronics</i> , <b>2020</b> , 67, 2133-2142	,	8
139	High Torque Density Torque Motor With Hybrid Magnetization Pole Arrays for Jet Pipe Servo Valve.  **IEEE Transactions on Industrial Electronics, 2020, 67, 2133-2142*  A Robust Robot Design for Item Picking 2018,  Grasp analysis and optimal design of robotic fingertip for two tendon-driven fingers. **Mechanism**	8.9	8
139	High Torque Density Torque Motor With Hybrid Magnetization Pole Arrays for Jet Pipe Servo Valve.  **IEEE Transactions on Industrial Electronics*, 2020, 67, 2133-2142*  A Robust Robot Design for Item Picking 2018,  Grasp analysis and optimal design of robotic fingertip for two tendon-driven fingers. **Mechanism and Machine Theory*, 2018*, 130, 447-462*	8.9	8 8 8
139 138	High Torque Density Torque Motor With Hybrid Magnetization Pole Arrays for Jet Pipe Servo Valve. <i>IEEE Transactions on Industrial Electronics</i> , <b>2020</b> , 67, 2133-2142  A Robust Robot Design for Item Picking <b>2018</b> ,  Grasp analysis and optimal design of robotic fingertip for two tendon-driven fingers. <i>Mechanism and Machine Theory</i> , <b>2018</b> , 130, 447-462  Design and analysis of a cable-driven manipulator with variable stiffness <b>2013</b> ,  Flux Field Formulation and Back-Iron Analysis of Tubular Linear Machines. <i>IEEE Transactions on</i>	8.9	8 8 8 7
139 138 137	High Torque Density Torque Motor With Hybrid Magnetization Pole Arrays for Jet Pipe Servo Valve.  IEEE Transactions on Industrial Electronics, 2020, 67, 2133-2142  A Robust Robot Design for Item Picking 2018,  Grasp analysis and optimal design of robotic fingertip for two tendon-driven fingers. Mechanism and Machine Theory, 2018, 130, 447-462  Design and analysis of a cable-driven manipulator with variable stiffness 2013,  Flux Field Formulation and Back-Iron Analysis of Tubular Linear Machines. IEEE Transactions on Magnetics, 2012, 48, 2617-2626	8.9	8 8 8 7 7

Vision-Based Measurement and Prediction of Object Trajectory for Robotic Manipulation in 132 Dynamic and Uncertain Scenarios. *IEEE Transactions on Instrumentation and Measurement*, **2020**, 69, 8939 $\frac{3}{2}$ 8952 $\frac{7}{2}$ Flexible telemanipulation based handy robot teaching on tape masking with complex geometry. 131 9.2 6 Robotics and Computer-Integrated Manufacturing, **2020**, 66, 101990 Robust ellipse detection via arc segmentation and classification 2017, 6 130 Automatic robot taping: system integration 2015, 6 129 A method for capturing the tacit knowledge in the surface finishing skill by demonstration for 128 6 programming a robot 2014, Motion Control of a Robotic Puppet through a Hybrid Motion Capture Device 2007, 6 127 126 Automatic Modeling for Modular Reconfigurable Robotic Systems: Theory and Practice 2006, 6 2016, 6 125 An agile robot taping system Imodeling, tool design, planning and execution. Industrial Robot, 6 124 1.4 **2016**, 43, 503-512 Marionette: From Traditional Manipulation to Robotic Manipulation 2004, 119-133 6 123 A 3-DOF quick-action parallel manipulator based on four linkage mechanisms with high-speed cam. 122 4 5 Mechanism and Machine Theory, **2017**, 115, 168-196 Quantitative Assessment at Task-Level for Performance of Robotic Configurations and Task Plans. 121 2.9 Journal of Intelligent and Robotic Systems: Theory and Applications, 2019, 96, 439-456 Spatial Representation of a Virtual Room Space: Perspective and Vertical Movement. International 3.6 120 5 Journal of Human-Computer Interaction, 2010, 26, 661-674 Motion generation methodology of a permanent magnet spherical actuator 2009, 119 Robust control of XYZ flexure-based micromanipulator with large motion. Frontiers of Mechanical 118 5 Engineering in China, 2009, 4, 25-34 Spatial learning in a virtual multilevel building: Evaluating three exocentric view aids. International 4.6 5 117 Journal of Human Computer Studies, 2010, 68, 746-759 A novel kinematic calibration algorithm for reconfigurable robotic systems 116 5 2008, 115

114	Kinematics, workspace and static analyses of 2-DOF flexure parallel mechanism		5
113	Learning sampling distribution for motion planning with local reconstruction-based self-organizing incremental neural network. <i>Neural Computing and Applications</i> , <b>2019</b> , 31, 9185-9205	4.8	4
112	Developing and benchmarking show & tell robotic puppet for preschool education 2015,		4
111	Object Pose Estimation via Pruned Hough Forest With Combined Split Schemes for Robotic Grasp. <i>IEEE Transactions on Automation Science and Engineering</i> , <b>2020</b> , 1-8	4.9	4
110	Strategy for robot motion and path planning in robot taping. <i>Frontiers of Mechanical Engineering</i> , <b>2016</b> , 11, 195-203	3.3	4
109	System and keyword dependent fusion for spoken term detection <b>2014</b> ,		4
108	Surface-to-surface calibration of acoustic emission sensors. <i>Sensors and Actuators A: Physical</i> , <b>2012</b> , 174, 16-23	3.9	4
107	Automatic robot taping: Auto-path planning and manipulation 2015,		4
106	Automated construction quality assessment: A review 2015,		4
105	Automatic generation of dynamics for modular robots with hybrid geometry		4
105	Automatic generation of dynamics for modular robots with hybrid geometry  Structure synthesis and singularity analysis of a parallel manipulator based on selective actuation 2004,		4
	Structure synthesis and singularity analysis of a parallel manipulator based on selective actuation		
104	Structure synthesis and singularity analysis of a parallel manipulator based on selective actuation <b>2004</b> ,	0.6	4
104	Structure synthesis and singularity analysis of a parallel manipulator based on selective actuation 2004,  Dynamic analysis of a 3-DOF flexure parallel micromanipulator  Innovations in Infrastructure Service Robots. CISM International Centre for Mechanical Sciences,	o.6 5·5	4
104	Structure synthesis and singularity analysis of a parallel manipulator based on selective actuation 2004,  Dynamic analysis of a 3-DOF flexure parallel micromanipulator  Innovations in Infrastructure Service Robots. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2016, 3-16  Real-Time Avoidance Strategy of Dynamic Obstacles via Half Model-Free Detection and Tracking		4 4
104 103 102	Structure synthesis and singularity analysis of a parallel manipulator based on selective actuation 2004,  Dynamic analysis of a 3-DOF flexure parallel micromanipulator  Innovations in Infrastructure Service Robots. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2016, 3-16  Real-Time Avoidance Strategy of Dynamic Obstacles via Half Model-Free Detection and Tracking With 2D Lidar for Mobile Robots. IEEE/ASME Transactions on Mechatronics, 2021, 26, 2215-2225  Robust Output Feedback Tracking Control for Flexible-Joint Robots Based on CTSMC Technique.	5.5	4 4
104 103 102 101	Structure synthesis and singularity analysis of a parallel manipulator based on selective actuation 2004,  Dynamic analysis of a 3-DOF flexure parallel micromanipulator  Innovations in Infrastructure Service Robots. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2016, 3-16  Real-Time Avoidance Strategy of Dynamic Obstacles via Half Model-Free Detection and Tracking With 2D Lidar for Mobile Robots. IEEE/ASME Transactions on Mechatronics, 2021, 26, 2215-2225  Robust Output Feedback Tracking Control for Flexible-Joint Robots Based on CTSMC Technique. IEEE Transactions on Circuits and Systems II: Express Briefs, 2021, 68, 1982-1986	5.5	4 4 4

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96	Design and analysis of an improved Halbach tubular linear motor with non-ferromagnetic mover tube for direct-driven EHA <b>2014</b> ,		3
95	Interactive robots as social partner for communication care 2014,		3
94	Planar jumping with stable landing through foot orientation design and ankle joint control. <i>Frontiers of Mechanical Engineering</i> , <b>2012</b> , 7, 100-108	3.3	3
93	Method to calibrate the skeleton model using orientation sensors 2013,		3
92	. IEEE/ASME Transactions on Mechatronics, <b>2011</b> , 16, 401-410	5.5	3
91	The development of a real-time wearable motion replication platform with spatial sensing and tactile feedback <b>2010</b> ,		3
90	A body sensor network for tracking and monitoring of functional arm motion 2009,		3
89	Strategies in vibrotactile feedback for improved upper arm posture mapping and replication using inertia sensors <b>2011</b> ,		3
88	Optimization of scanning strategy of digital Shack-Hartmann wavefront sensing. <i>Applied Optics</i> , <b>2012</b> , 51, 121-5	1.7	3
87	A novel two degree-of-freedom ultrasonic planar motor driven by single stator <b>2012</b> ,		3
86	A compact 3-DOF compliant serial mechanism for trajectory tracking with flexures made by rapid prototyping <b>2012</b> ,		3
85	A wearable, self-calibrating, wireless sensor network for body motion processing 2008,		3
84	Task-based configuration design for 3-legged modular parallel robots using simplex methods		3
83	Torque Modeling of a Spherical Actuator Based on Lorentz Force Law		3
82	Workspace analysis and singularity representation of three-legged parallel manipulators		3
81	Robust control for a class of modified Duffing equations. <i>Transactions of the Institute of Measurement and Control</i> , <b>2002</b> , 24, 263-275	1.8	3
80	Gait generation for inchworm-like robot locomotion using finite state model		3
79	Nonprehensile Manipulation:A Trajectory-Planning Perspective. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2020</b> , 1-1	5.5	3

78	Efficient Pose Estimation from Single RGB-D Image via Hough Forest with Auto-Context 2018,		3
77	Guest Editorial Special Section on Emerging Information Sharing and Design Technologies on Robotics and Mechatronics Systems for Intelligent Manufacturing. <i>IEEE Transactions on Industrial Informatics</i> , <b>2019</b> , 15, 1643-1646	11.9	2
76	Flux Field and Thrust Analysis of Permanent-Magnet Linear Machines With Isolated Movers. <i>IEEE Transactions on Magnetics</i> , <b>2015</b> , 51, 1-8	2	2
75	Analytical and Numerical Investigation on the Magnetic Field of Novel PM Spherical Actuator with Outer Rotor <b>2014</b> ,		2
74	Human velocity tracking and localization using 3 IMU sensors 2013,		2
73	Visual marker-guided mobile robot solution for automated item picking in a warehouse 2017,		2
72	Task-orientated robot teleoperation using wearable IMUs 2017,		2
71	A novel building post-construction quality assessment robot: Design and prototyping <b>2017</b> ,		2
70	Novel tubular switched reluctance motor with double excitation windings: Design, modeling, and experiments. <i>Review of Scientific Instruments</i> , <b>2015</b> , 86, 125004	1.7	2
69	Analysis of kinematics and dynamics of snake-like robot with joints of 4-DOF <b>2015</b> ,		2
68	Design and modeling of tubular flux-switching permanent magnet linear motor 2014,		2
67	Design and modeling of three-phase tubular linear flux-switching permanent magnet motor <b>2014</b> ,		2
66	A low cost wearable wireless sensing system for upper limb home rehabilitation 2010,		2
65	Empirical formulation of torque output for spherical actuators with low-cost rotor poles 2009,		2
64	Directional vs non-directional modes of vibrotactile feedback for arm posture replication 2012,		2
63	Visual Cue and Vibrotactile in Series Configuration: Multimodal Feedback Design for Arm Posture Correction. <i>Journal of Medical Imaging and Health Informatics</i> , <b>2012</b> , 2, 430-437	1.2	2
62	Personalized biomedical devices & systems for healthcare applications. <i>Frontiers of Mechanical Engineering in China</i> , <b>2010</b> , 6, 3		2
61	Torque modeling of a permanent magnet spherical actuator based on magnetic dipole moment principle <b>2008</b> ,		2

60	Experimental Investigation on the Magnetic Field of a Permanent Magnet Spherical Actuator		2
59	Interactive-motion control of modular reconfigurable manipulators		2
58	Mechanical design & numerical electromagnetic analysis of a DC spherical actuator		2
57	Singularity management of 2DOF planar manipulator using coupled kinematics		2
56	Design expressive behaviors for robotic puppet		2
55	Design and Analysis of a Modular Hybrid Parallel-Serial Manipulator for Robotised Deburring Applications <b>2008</b> , 167-188		2
54	Portable Posture Guiding System With Visual, Verbal Feedback for Upper Extremity. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2013, 127-134	0.6	2
53	Singularity analysis of three-legged, six-DOF platform manipulators with RRRS legs		2
52	An Innovative Robotics Stowing Strategy For Inventory Replenishment In Automated Storage And Retrieval System <b>2018</b> ,		2
51	Continuous Terminal Sliding-Mode Control for FJR Subject to Matched/Mismatched Disturbances. <i>IEEE Transactions on Cybernetics</i> , <b>2021</b> , PP,	10.2	2
50	Automatic robot taping system with compliant force control. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2018</b> , 94, 4105-4113	3.2	1
49	Accuracy enhancement of the spherical actuator with a two-level geometric calibration method. <i>Chinese Journal of Aeronautics</i> , <b>2014</b> , 27, 328-337	3.7	1
48	Designing modular robotic architecture for e-commerce bin picking task fulfillment 2017,		1
47	Modeling of magnetic field and design optimization for permanent-magnet spherical actuator in three dimensional space <b>2015</b> ,		1
46	Design and modeling of tubular double excitation windings linear switched reluctance motor 2015,		1
45	Reference-free beam-sampling system for freeform surface measurements. <i>Applied Optics</i> , <b>2014</b> , 53, H20-6	1.7	1
44	Analysis of magnet layout in circumferential and axial direction for halbach PM arrays 2014,		1
43	Force formulation of a three-phase tubular linear machine with dual Halbach array <b>2012</b> ,		1

42	Design and validation of a multi-finger sensing device based on Optical linear encoder 2010,		1
41	Synthesis and stiffness modeling of XYZ flexure parallel mechanisms with large-motion and decoupled kinematic structure. <i>Frontiers of Mechanical Engineering in China</i> , <b>2009</b> , 4, 160-172		1
40	A multi-degree-of-freedom orientation measurement methodology with laser detection 2009,		1
39	A virtual reality system for arm and hand rehabilitation. <i>Frontiers of Mechanical Engineering in China</i> , <b>2010</b> , 6, 23		1
38	A novel 3-DOF sensing methodology for spherical actuator <b>2007</b> ,		1
37	Kinematics analysis of a 6-DOF selectively actuated parallel manipulator		1
36	Nonlinear Modeling Method of a Large-Displacement and Decoupled XYZ Flexure Parallel Mechanism <b>2006</b> ,		1
35	Design and analysis of a permanent magnet spherical actuator <b>2005</b> ,		1
34	Singularity analysis of three-legged parallel robots based on passive-joint velocities		1
33	A piezo-on-slider type linear ultrasonic motor for the application of positioning stages <b>1999</b> ,		1
32	Simultaneous Localization and Capture with velocity information		1
31	Repelling-screw-based geometrical interpretation of dualities of compliant mechanisms. <i>Mechanism and Machine Theory</i> , <b>2022</b> , 169, 104636	4	1
30	Gait Generation and Mechatronic Design of Planar Walker <b>2002</b> , 431-443		1
29	Compliant Manipulators <b>2015</b> , 2229-2300		1
28	A Method for Comparing Human Postures from Motion Capture Data. <i>CISM International Centre for Mechanical Sciences, Courses and Lectures</i> , <b>2010</b> , 441-448	0.6	1
27	Design of a Novel Self-Balancing Mechanism on AGV for Stable Stair Climbing 2020,		1
26	Autonomous mapping between motions and labels <b>2016</b> ,		1
25	A Mirrored Motion Remapping Method in Telemanipulation-based Face-to-Face Dual-arm Robot Teaching <b>2019</b> ,		1

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24	Applications of Light-Weight Wearable Devices to Online Programming of Industrial Dual-Arm Robots. <i>Unmanned Systems</i> , <b>2020</b> , 08, 211-219	3	1
23	Finite element-based grasp analysis using contact pressure maps of a robotic gripper. <i>Journal of the Brazilian Society of Mechanical Sciences and Engineering</i> , <b>2021</b> , 43, 1	2	1
22	Learning with Corrosion Feature: For Automated Quantitative Risk Analysis of Corrosion Mechanism <b>2018</b> ,		1
21	Torque optimization of a novel reaction sphere actuator based on support vector machines 2018,		1
20	Analytical models of electromagnetic field and torques in a novel reaction sphere actuator 2018,		1
19	Finite-time disturbance observer-based trajectory tracking control for flexible-joint robots. <i>Nonlinear Dynamics</i> , <b>2021</b> , 106, 459-471	5	1
18	Development and Simulation of an Automated Twistlock Handling Robot System. <i>Mechanisms and Machine Science</i> , <b>2015</b> , 145-153	0.3	О
17	Algorithms of wavefront generation for aspheric surface measurement. <i>Measurement: Journal of the International Measurement Confederation</i> , <b>2014</b> , 47, 465-474	4.6	O
16	Integrated design of legged mechatronic system. <i>Frontiers of Mechanical Engineering in China</i> , <b>2009</b> , 4, 264		О
15	A Flexure-Based Electromagnetic Linear Actuator for Nano-Positioning <b>2006</b> , 371-378		O
14	Puppet Playing: An Interactive Character Animation System with Hand Motion Control. <i>Lecture Notes in Computer Science</i> , <b>2011</b> , 19-35	0.9	О
13	On the Disturbance Rejection Control of Flexible-joint Robot: A GPIO-based Approach. <i>International Journal of Control, Automation and Systems</i> , <b>2021</b> , 19, 2910-2920	2.9	O
12	Key Parameters Optimization of a Novel Tubular Double Excitation Windings Linear Switched Reluctance Motor. <i>Mechanisms and Machine Science</i> , <b>2015</b> , 201-206	0.3	
11	Large-deflection statics analysis of active cardiac catheters through co-rotational modelling. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2016</b> , 2016, 2133-2136	0.9	
10	Simulation of the sensing performance of a Shack-Hartmann wavefront sensor related to the lenslet array. <i>Physics Procedia</i> , <b>2011</b> , 19, 188-191		
9	Integrating Route and Survey Learning in Complex Virtual Environments: Using a 3D Map. <i>Proceedings of the Human Factors and Ergonomics Society</i> , <b>2010</b> , 54, 2393-2397	0.4	
8	A high-dexterity low-degree-of-freedom hybrid manipulator structure for robotic lion dance. <i>Journal of Zhejiang University: Science A</i> , <b>2010</b> , 11, 240-249	2.1	
7	Fiber-Optic Vibration Measurement for Low Refractive-Index Media Using Wavefront Splitting Interferometry. <i>International Journal of Optomechatronics</i> , <b>2008</b> , 2, 32-41	3.5	

6 Kinematic analysis and self-calibration of three-legged modular parallel robots 1999, 3839, 224

5	Graph Wasserstein Autoencoder-Based Asymptotically Optimal Motion Planning With Kinematic Constraints for Robotic Manipulation. <i>IEEE Transactions on Automation Science and Engineering</i> , <b>2022</b> , 1-14	4.9
4	Spatial Navigation in a Virtual Multilevel Building: The Role of Exocentric View in Acquiring Survey Knowledge. <i>Lecture Notes in Computer Science</i> , <b>2009</b> , 60-69	0.9
3	Measurement of Arm and Hand Motion in Performing Activities of Daily Living (ADL) of Healthy and Post-Stroke Subjects Preliminary Results. <i>Lecture Notes in Electrical Engineering</i> , <b>2014</b> , 1155-1162	0.2
2	Kinematic Uncertainties in Human Motion Tracking and Interaction. <i>Mechanisms and Machine Science</i> , <b>2014</b> , 491-499	0.3
1	Automatic Robot Taping: Strategy and Enhancement. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2016, 439-448	0.6