Jorge Angeles

List of Publications by Year in Descending Order

267 papers	6,653 citations	36 h-index	73 g-index
288 ext. papers	7,649 ext. citations	3 avg, IF	6.23 L-index

#	Paper	IF	Citations
267	The Cartesian elastodynamics linear model of mechanical systems with flexible links. *Mechanism and Machine Theory*, **2022**, 167, 104559	4	
266	Dual Least Squares and the Characteristic Length: Applications to Kinematic Synthesis. *Mechanisms and Machine Science*, **2021**, 104-113	0.3	
265	Stiffness Optimization of Delta Robots. *CISM International Centre for Mechanical Sciences, Courses and Lectures*, **2021**, 396-404	0.6	2
264	Workspace Analysis and Torque Optimization on a Schönflies-Motion Generator. *CISM International Centre for Mechanical Sciences, Courses and Lectures*, **2021**, 449-457	0.6	
263	A novel prosthetic finger design with high load-carrying capacity. *Mechanism and Machine Theory*, **2021**, 156, 104121	4	4
262	Receding-Horizon Vision Guidance with Smooth Trajectory Blending in the Field of View of Mobile Robots. *Applied Sciences (Switzerland)*, **2020**, 10, 676	2.6	2
261	Design and validation of a spatial two-limb 3R1T parallel manipulator with remote center-of-motion. *Mechanism and Machine Theory*, **2020**, 149, 103807	4	9
260	A class of biaxial micro/meso-scale structures for isotropic in-plane inertial sensing and actuation: design, fabrication and experiments. *Microsystem Technologies*, **2020**, 26, 2639-2648	1.7	1
259	. *IEEE Access*, **2020**, 8, 58483-58496	3.5	2
258	Kinematic Analysis of the Planar Motion of Vehicles when Traveling Along Tractrix Curves. *Journal of Mechanisms and Robotics*, **2020**, 12,	2.2	5
257	The kinematics and design for quasi-isotropy of 3U serial manipulators with reduced wrists. *Mechanism and Machine Theory*, **2020**, 154, 104035	4	2
256	Elastodynamics of a parallel Schönflies-motion generator. *Transactions of the Canadian Society for Mechanical Engineering*, **2020**, 44, 511-519	1.1	
255	Workspace Determination and Feedback Control of a Pick-and-Place Parallel Robot: Analysis and Experiments. *IEEE Robotics and Automation Letters*, **2020**, 5, 40-47	4.2	9
254	On the Modeling of Redundantly-Actuated Mechanical Systems. *Computational Methods in Applied Sciences (Springer)*, **2020**, 172-179	0.4	
253	A review of spherical motion generation using either spherical parallel manipulators or spherical motors. *Mechanism and Machine Theory*, **2019**, 140, 377-388	4	23
252	Kinematic analysis and optimum design of a novel 2PUR-2RPU parallel robot. *Mechanism and Machine Theory*, **2019**, 139, 407-423	4	17
251	A novel capacitive sensing structure for simultaneous detection of biaxial low-g acceleration in a commercial MEMS process. *Microsystem Technologies*, **2019**, 25, 4475-4481	1.7	1

250	Reflections Over the Dual Ring—Applications to Kinematic Synthesis. *Journal of Mechanical Design, Transactions of the ASME*, **2019**, 141,	3	4
249	Trajectory-Planning and Normalized-Variable Control for Parallel Pick-and-Place Robots. *Journal of Mechanisms and Robotics*, **2019**, 11,	2.2	10
248	Elastostatics of a Full-Mobility PKM with Flexible Links. *CISM International Centre for Mechanical Sciences, Courses and Lectures*, **2019**, 34-41	0.6	2
247	Fatigue exhaustion of the mitral valve tissue. *Biomechanics and Modeling in Mechanobiology*, **2019**, 18, 89-97	3.8	2
246	Heuristic Algorithm for Velocity Scheduling with a Schönflies-Motion Generator. *Mechanisms and Machine Science*, **2019**, 2411-2419	0.3	3
245	The Modeling of Redundantly Actuated Mechanical Systems. *Journal of Mechanisms and Robotics*, **2019**, 11,	2.2	1
244	Kinematic properties of planar and spherical logarithmic spirals: Applications to the synthesis of involute tooth profiles. *Mechanism and Machine Theory*, **2019**, 136, 14-26	4	6
243	The translating Π-joint: Design and applications. *Mechanism and Machine Theory*, **2018**, 122, 361-370	4	15
242	The design of a 3-CPS parallel robot for maximum dexterity. *Mechanism and Machine Theory*, **2018**, 122, 279-291	4	10
241	Full-Mobility Three-CCC Parallel-Kinematics Machines: Kinematics and Isotropic Design. *Journal of Mechanisms and Robotics*, **2018**, 10,	2.2	2
240	On the use of the dual Euler—Rodrigues parameters in the numerical solution of the inverse-displacement problem. *Mechanism and Machine Theory*, **2018**, 125, 21-33	4	3
239	The design for isotropy of a class of six-dof parallel-kinematics machines. *Mechanism and Machine Theory*, **2018**, 126, 34-48	4	3
238	Full-mobility 3-CCC parallel-kinematics machines: Forward kinematics, singularity, workspace and dexterity analyses. *Mechanism and Machine Theory*, **2018**, 126, 312-328	4	7
237	An Algorithm for Rigid-Body Angular Velocity and Attitude Estimation Based on Isotropic Accelerometer Strapdowns. *Journal of Applied Mechanics, Transactions ASME*, **2018**, 85,	2.7	3
236	A Mathematical Model of Multispeed Transmissions in Electric Vehicles in the Presence of Gear Shifting. *IEEE Transactions on Vehicular Technology*, **2018**, 67, 397-408	6.8	13
235	The dynamics of a parallel Schönflies-motion generator. *Mechanism and Machine Theory*, **2018**, 119, 119-129	4	20
234	Posture Optimization of a Functionally Redundant Parallel Robot. *Springer Proceedings in Advanced Robotics*, **2018**, 101-108	0.6	4
233	Design, Analysis, and Optimization of a Multi-Speed Powertrain for Class-7 Electric Trucks. *SAE International Journal of Alternative Powertrains*, **2018**, 7, 27-42	2	7

232	Design of a biaxial high frequency-ratio low-g MEMS accelerometer. *Microsystem Technologies*, **2018**, 24, 3851-3861	1.7	1
231	Singularity-free path-planning of dexterous pointing tasks for a class of spherical parallel mechanisms. *Mechanism and Machine Theory*, **2018**, 128, 47-57	4	14
230	A two-phase control algorithm for gear-shifting in a novel multi-speed transmission for electric vehicles. *Mechanical Systems and Signal Processing*, **2018**, 104, 145-154	7.8	25
229	A topology-change model of multi-speed transmissions in electric vehicles during gear-shifting. *Mechatronics*, **2018**, 55, 151-161	3	7
228	Dynamic modeling and trajectory tracking control of unmanned tracked vehicles. *Robotics and Autonomous Systems*, **2018**, 110, 102-111	3.5	20
227	Gear-shifting in a novel modular multi-speed transmission for electric vehicles using linear quadratic integral control. *Mechanism and Machine Theory*, **2018**, 128, 359-367	4	9
226	The virtual screw: Concept, design and applications. *Mechanism and Machine Theory*, **2018**, 128, 349-358	4	7
225	The optimal gear-shifting for a multi-speed transmission system for electric vehicles. *Mechanism and Machine Theory*, **2017**, 116, 1-13	4	48
224	Contributions to the kinematics of pointing. *Mechanism and Machine Theory*, **2017**, 108, 97-109	4	6
223	A Novel Three-Loop Parallel Robot With Full Mobility: Kinematics, Singularity, Workspace, and Dexterity Analysis. *Journal of Mechanisms and Robotics*, **2017**, 9,	2.2	25
222	Design, modelling and estimation of a novel modular multi-speed transmission system for electric vehicles. *Mechatronics*, **2017**, 45, 119-129	3	21
221	An innovative tooth root profile for spur gears and its effect on service life. *Meccanica*, **2017**, 52, 1825-1841	2.1	8
220	From the McGill pepper-mill carrier to the Kindai ATARIGI Carrier: A novel two limbs six-dof parallel robot with kinematic and actuation redundancy **2017**,		3
219	Dual Cayley-Klein parameters and Möbius transform: Theory and applications. *Mechanism and Machine Theory*, **2016**, 106, 50-67	4	10
218	A Spatial Version of Octoidal Gears Via the Generalized Camus Theorem. *Journal of Mechanisms and Robotics*, **2016**, 8,	2.2	7
217	Base curves of involute cylindrical gears via Aronhold's first theorem. *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*, **2016**, 230, 1233-1242	1.3	4
216	Off-line programming of six-axis robots for optimum five-dimensional tasks. *Mechanism and Machine Theory*, **2016**, 100, 155-169	4	28
215	Mobility evaluation of wheeled robots on soft terrain: Effect of internal force distribution. *Mechanism and Machine Theory*, **2016**, 100, 259-282	4	16

214	Mobility Assessment of Wheeled Robots Operating on Soft Terrain. *Springer Tracts in Advanced Robotics*, **2016**, 331-344	0.5	2
213	DESIGN OF A PITCH-ROLL JOYSTICK BASED ON A THREE-LOBE SPHERICAL CAM MECHANISM. *Transactions of the Canadian Society for Mechanical Engineering*, **2016**, 40, 113-124	1.1	
212	MECHATRONICS DESIGN OF AN X-BY-WIRE PROTOTYPE OF AN ELECTRIC VEHICLE. *Transactions of the Canadian Society for Mechanical Engineering*, **2016**, 40, 231-242	1.1	
211	Design of a Modular Swift-shift Multi-speed Transmission with Double Dual Clutches for Electric Vehicles. *World Electric Vehicle Journal*, **2016**, 8, 184-195	2.5	1
210	DESIGN OF A SPHERICAL CAM-ROLLER MECHANISM FOR AN AUTOMOTIVE DIFFERENTIAL. *Transactions of the Canadian Society for Mechanical Engineering*, **2016**, 40, 243-252	1.1	
209	The Synthesis of the Axodes of RCCC Linkages. *Journal of Mechanisms and Robotics*, **2016**, 8,	2.2	19
208	A Multibody Dynamics Framework for Simulation of Rovers on Soft Terrain. *Journal of Computational and Nonlinear Dynamics*, **2015**, 10,	1.4	5
207	Elastodynamics of a two-limb Schönflies motion generator. *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*, **2015**, 229, 751-764	1.3	4
206	The role of the rotation matrix in the teaching of planar kinematics. *Mechanism and Machine Theory*, **2015**, 89, 28-37	4	6
205	Coupler-curve synthesis of four-bar linkages via a novel formulation. *Mechanism and Machine Theory*, **2015**, 94, 177-187	4	38
204	Identification of error sources in a five-axis machine tool using FFT analysis. *International Journal of Advanced Manufacturing Technology*, **2015**, 76, 1353-1363	3.2	16
203	A novel concept for analysis and performance evaluation of wheeled rovers. *Mechanism and Machine Theory*, **2015**, 83, 137-151	4	8
202	The decoupling of the Cartesian stiffness matrix in the design of microaccelerometers. *Multibody System Dynamics*, **2015**, 34, 1-21	2.8	3
201	Synthesis of RCCC Linkages to Visit Four Given Poses. *Journal of Mechanisms and Robotics*, **2015**, 7,	2.2	11
200	The Role of the Orthogonal Helicoid in the Generation of the Tooth Flanks of Involute-Gear Pairs With Skew Axes. *Journal of Mechanisms and Robotics*, **2015**, 7,	2.2	13
199	A Solution to the Approximate Spherical Burmester Problem. *Mechanisms and Machine Science*, **2015**, 521-529	0.3	1
198	Fundamentals of Robotic Mechanical Systems. *Mechanical Engineering Series*, **2014**,	0.3	72
197	Optimum structural design of a two-limb Schönflies motion generator. *Mechanism and Machine Theory*, **2014**, 80, 125-141	4	3

196	The Synthesis of Spherical Motion Generators in the Presence of an Incomplete Set of Attitudes. *Journal of Mechanisms and Robotics*, **2014**, 6,	2.2	2
195	KINEMATICS AND SINGULARITY ANALYSIS OF A CRRHHRRC PARALLEL SCHÖNFLIES MOTION GENERATOR. *Transactions of the Canadian Society for Mechanical Engineering*, **2014**, 38, 173-183	1.1	6
194	Isotropic Accelerometer Strapdowns and Related Algorithms for Rigid-Body Pose and Twist Estimation. *Journal of Applied Mechanics, Transactions ASME*, **2014**, 81,	2.7	5
193	Design and optimization of a drivetrain with two-speed transmission for electric delivery step van **2014**,		14
192	Optimization of Tooth Root Profile of Spur Gears for Maximum Load-Carrying Capacity **2014**,		4
191	Effect of normal force dispersion on the mobility of wheeled robots operating on soft soil **2014**,		2
190	The development of an innovative two-DOF cylindrical drive: Design, analysis and preliminary tests **2014**,		8
189	Design Specifications for Biaxial Navigation-Grade MEMS Accelerometers **2014**,		2
188	On the synthesis of spatial cycloidal gears. *Meccanica*, **2013**, 48, 1239-1249	2.1	4
187	Wheel-Soil Interaction Model for Rover Simulation and Analysis Using Elastoplasticity Theory. *IEEE Transactions on Robotics*, **2013**, 29, 1271-1288	6.5	20
186	Parameter identification of the testbed of a novel gearless pitch-roll wrist. *Mechanical Systems and Signal Processing*, **2013**, 41, 71-85	7.8	2
185	Constraint-wrench analysis of robotic manipulators. *Multibody System Dynamics*, **2013**, 29, 139-168	2.8	5
184	Optimum design of a spherical quasi-homokinetic linkage for motion transmission between orthogonal axes. *Mechanism and Machine Theory*, **2013**, 59, 107-118	4	3
183	On Martin Disteli's spatial cycloidal gearing. *Mechanism and Machine Theory*, **2013**, 60, 73-89	4	13
182	Design of Isotropic Accelerometer Strapdowns for Rigid-Body Pose-and-Twist Estimation **2013**,		2
181	Design Challenges in the Development of Fast Pick-and-place Robots. *CISM International Centre for Mechanical Sciences, Courses and Lectures*, **2013**, 61-68	0.6	1
180	The Jacobian condition number as a dexterity index in 6R machining robots. *Robotics and Computer-Integrated Manufacturing*, **2012**, 28, 694-699	9.2	40
179	Posture optimization in robot-assisted machining operations. *Mechanism and Machine Theory*, **2012**, 51, 74-86	4	50

178	Viscoelastic modeling of the contact interaction between a tactile sensor and an atrial tissue. *IEEE Transactions on Biomedical Engineering*, **2012**, 59, 1727-38	5	13
177	On the reduction of the normality conditions in equality-constrained optimization problems in mechanics. *Meccanica*, **2012**, 47, 755-768	2.1	2
176	Kinematics simulation and control design of the Agile Wrist in a Dual-arm robotic mechanical systems **2012**,		3
175	On the elastostatic analysis of mechanical systems. *Mechanism and Machine Theory*, **2012**, 58, 202-216	4	29
174	Dynamic Response of Linear Mechanical Systems. *Mechanical Engineering Series*, **2012**,	0.3	17
173	A Robust Solution of the Spatial Burmester Problem. *Journal of Mechanisms and Robotics*, **2012**, 4,	2.2	13
172	The Dual Generalized Inverses and Their Applications in Kinematic Synthesis **2012**, 1-10		5
171	A Novel Paradigm for the Qualitative Synthesis of Simple Kinematic Chains Based on Complexity Measures. *Journal of Mechanisms and Robotics*, **2011**, 3,	2.2	5
170	Decoupling of the Cartesian Stiffness Matrix: A Case Study on Accelerometer Design **2011**,		1
169	Derivation of the Mass Matrix for the McGill Schönflies Motion Generator. *Mechanics Based Design of Structures and Machines*, **2011**, 39, 159-178	1.7	3
168	The robust design of parallel spherical robots. *Mechanism and Machine Theory*, **2011**, 46, 335-343	4	33
167	Robustness to algorithmic singularities and sensitivity in computational kinematics. *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*, **2011**, 225, 987-999	1.3	
166	Synthesis of the Pitch Cones of N-Lobed Elliptical Bevel Gears. *Journal of Mechanical Design, Transactions of the ASME*, **2011**, 133,	3	19
165	Terrain modelling in simulation-based performance evaluation of rovers. *Canadian Aeronautics and Space Journal*, **2011**, 57, 24-33		11
164	Simulation of n-dof Systems. *Mechanical Engineering Series*, **2011**, 419-454	0.3	
163	The rule-based conceptual design of the architecture of serial Schönflies-motion generators. *Mechanism and Machine Theory*, **2010**, 45, 251-260	4	34
162	Kinetostatic and Inertial Conditioning of the McGill Schönflies-Motion Generator. *Advances in Mechanical Engineering*, **2010**, 2, 186203	1.2	15
161	Optimum Design of a Pan-Tilt Drive for Parallel Robots **2010**, 169-176		1

160	PATH PLANNING FOR ROBOT-ASSISTED RAPID PROTOTYPING OF ICE STRUCTURES. *Transactions of the Canadian Society for Mechanical Engineering*, **2009**, 33, 689-700	1.1	6
159	The dynamics of parallel Schönflies motion generators: The case of a two-limb system. *Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering*, **2009**, 223, 29-52	1	9
158	The design of spherical multilobe-cam mechanisms. *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*, **2009**, 223, 473-482	1.3	12
157	A robust forward-displacement analysis of spherical parallel robots. *Mechanism and Machine Theory* , **2009**, 44, 2204-2216	4	66
156	Robot-assisted Rapid Prototyping for ice structures **2009**,		11
155	Experimental Validation of an Underactuated Two-Wheeled Mobile Robot. *IEEE/ASME Transactions on Mechatronics*, **2009**, 14, 252-257	5.5	35
154	The Computational Fundamentals of Spatial Cycloidal Gearing **2009**, 375-384		3
153	Generalization of the Energetic Coefficient of Restitution for Contacts in Multibody Systems. *Journal of Computational and Nonlinear Dynamics*, **2008**, 3,	1.4	15
152	Estimating the angular velocity of a rigid body moving in the plane from tangential and centripetal acceleration measurements. *Multibody System Dynamics*, **2008**, 19, 383-406	2.8	13
151	. *Journal of Microelectromechanical Systems*, **2008**, 17, 948-961	2.5	7
150	The Synthesis of Dyads With One Prismatic Joint. *Journal of Mechanical Design, Transactions of the ASME*, **2008**, 130,	3	5
149	A COMPREHENSIVE SOLUTION OF THE CLASSIC BURMESTER PROBLEM. *Transactions of the Canadian Society for Mechanical Engineering*, **2008**, 32, 137-154	1.1	2
148	A unified input–output analysis of four-bar linkages. *Mechanism and Machine Theory*, **2008**, 43, 240-251	4	34
147	A novel family of linkages for advanced motion synthesis. *Mechanism and Machine Theory*, **2008**, 43, 882-890	4	20
146	Impacts in multibody systems: modeling and experiments. *Multibody System Dynamics*, **2008**, 20, 163-176	2.8	23
145	Optimization of a Test Trajectory for SCARA Systems **2008**, 225-234		21
144	Simplectic Architectures for True Multi-axial Accelerometers: A Novel Application of Parallel Robots. *Proceedings - IEEE International Conference on Robotics and Automation*, **2007**,		8
143	Generalized transmission index and transmission quality for spatial linkages. *Mechanism and Machine Theory*, **2007**, 42, 1225-1237	4	107

#	Reference		
142	The mechanical design of a novel Schönflies-motion generator. *Robotics and Computer-Integrated Manufacturing*, **2007**, 23, 82-93	9.2	15
141	The stiffness matrix in elastically articulated rigid-body systems. *Multibody System Dynamics*, **2007**, 18, 169-184	2.8	58
140	A new look at the Ball–Disteli diagram and its relevance to spatial gearing. *Mechanism and Machine Theory*, **2007**, 42, 1362-1375	4	20
139	Design and Implementation of a Quasiholonomic Mobile Robot. *Proceedings - IEEE International Conference on Robotics and Automation*, **2007**,		1
138	Energy Analysis and Decoupling in Three-Dimensional Impacts of Multibody Systems. *Journal of Applied Mechanics, Transactions ASME*, **2007**, 74, 845-851	2.7	8
137	A Distance Metric for Finite Sets of Rigid-Body Displacements via the Polar Decomposition. *Journal of Mechanical Design, Transactions of the ASME*, **2007**, 129, 883-886	3	20
136	Optimum Kinetimatics Design of Drives for Wheeled Mobile Robots Based on Cam-Roller Pairs. *Journal of Mechanical Design, Transactions of the ASME*, **2007**, 129, 7-16	3	7
135	Virtual-Power Flow and Mechanical Gear-Mesh Power Losses of Epicyclic Gear Trains. *Journal of Mechanical Design, Transactions of the ASME*, **2007**, 129, 107-113	3	56
134	A New Family of Two-Wheeled Mobile Robots: Modeling and Controllability **2007**, 23, 169-173		66
133	Fundamentals of Robotic Mechanical Systems. *Mechanical Engineering Series*, **2007**,	0.3	132
132	Management of parallel-manipulator singularities using joint-coupling. *Advanced Robotics*, **2007**, 21, 583-600		8
131	Is there a characteristic length of a rigid-body displacement?. *Mechanism and Machine Theory*, **2006**, 41, 884-896	4	69
130	The Kinetostatic Optimization of Robotic Manipulators: The Inverse and the Direct Problems. *Journal of Mechanical Design, Transactions of the ASME*, **2006**, 128, 168-178	3	91
129	Kinetostatic Design of an Innovative Schönflies-Motion Generator. *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*, **2006**, 220, 935-943	1.3	61
128	UNDERCUTTING ON CAM PROFILES. *Transactions of the Canadian Society for Mechanical Engineering*, **2006**, 30, 443-457	1.1	
127	The Synthesis of the Pitch Surfaces of Internal and External Skew-Gears and Their Racks. *Journal of Mechanical Design, Transactions of the ASME*, **2006**, 128, 794-802	3	15
126	The pure-rolling cam-equivalent of the Geneva mechanism. *Mechanism and Machine Theory*, **2006**, 41, 1320-1335	4	16
125	Stratégies de conception pour optimiser la transmission Slide-o-Cam. *Mecanique Et Industries*, **2006**, 7, 301-309		

124	Algorithms for Involute and Octoidal Bevel-Gear Generation. *Journal of Mechanical Design, Transactions of the ASME*, **2005**, 127, 664-672	3	22
123	Synthesis of the Base Curves For N-Lobed Elliptical Gears. *Journal of Mechanical Design, Transactions of the ASME*, **2005**, 127, 997-1005	3	25
122	. *IEEE/ASME Transactions on Mechatronics*, **2005**, 10, 43-49	5.5	21
121	Impact dynamics of flexible-joint robots. *Computers and Structures*, **2005**, 83, 25-33	4.5	29
120	A collision-avoidance scheme for redundant manipulators: Theory and experiments. *Journal of Field Robotics*, **2005**, 22, 737-757		39
119	Modular and Recursive Kinematics and Dynamics for Parallel Manipulators. *Multibody System Dynamics*, **2005**, 14, 419-455	2.8	21
118	FORCE-AND-MOTION-TRANSMISSION EVALUATION IN SPATIAL MECHANISMS. *Transactions of the Canadian Society for Mechanical Engineering*, **2005**, 29, 527-539	1.1	
117	THE CONCEPTUAL DESIGN OF EPICYCLIC CAM TRAINS. *Transactions of the Canadian Society for Mechanical Engineering*, **2004**, 28, 125-138	1.1	
116	A PARAMETRIC STUDY OF PLANAR CAM-ROLLER SPEED REDUCERS. *Transactions of the Canadian Society for Mechanical Engineering*, **2004**, 28, 263-275	1.1	1
115	The control of semi-autonomous two-wheeled robots undergoing large payload-variations **2004**,		36
114	Rigid-body pose and twist estimation using an accelerometer array. *Archive of Applied Mechanics*, **2004**, 74, 223-236	2.2	20
113	The control of linear time-periodic systems using Floquet⬚yapunov theory. *International Journal of Control*, **2004**, 77, 472-490	1.5	46
112	The Qualitative Synthesis of Parallel Manipulators. *Journal of Mechanical Design, Transactions of the ASME*, **2004**, 126, 617-624	3	129
111	THE KINEMATICS Of MOBILE ROBOTS WITH ORIENTABLE SINGLE AND DUAL WHEELS ROLLING ON A PLANE. *Transactions of the Canadian Society for Mechanical Engineering*, **2004**, 28, 251-262	1.1	
110	The Computation of All 4R Serial Spherical Wrists With an Isotropic Architecture. *Journal of Mechanical Design, Transactions of the ASME*, **2003**, 125, 275-280	3	29
109	. *IEEE/ASME Transactions on Mechatronics*, **2003**, 8, 469-475	5.5	19
108	A Novel Approach to the Teaching of Planar Mechanism Dynamics ⬚A Case Study. *International Journal of Mechanical Engineering Education*, **2003**, 31, 201-214	0.6	1
107	The Design of a Novel Pure-Rolling Transmission to Convert Rotational into Translational Motion. *Journal of Mechanical Design, Transactions of the ASME*, **2003**, 125, 205-207	3	8

106	On the kinetostatic optimization of revolute-coupled planar manipulators. *Mechanism and Machine Theory*, **2002**, 37, 351-374	4	16
105	Synthesis of conjugate Geneva mechanisms with curved slots. *Mechanism and Machine Theory*, **2002**, 37, 1043-1061	4	21
104	The Proportional-Damping Matrix of Arbitrarily Damped Linear Mechanical Systems. *Journal of Applied Mechanics, Transactions ASME*, **2002**, 69, 649-656	2.7	16
103	Formulas for Dynamic Analysis. *Applied Mechanics Reviews*, **2002**, 55, B3-B4	8.6	1
102	Vibration of Strongly Nonlinear Discontinuous Systems. Foundations of Engineering Mechanics. *Applied Mechanics Reviews*, **2002**, 55, B65-B66	8.6	1
101	The optimum synthesis of an elastic torque-compensating cam mechanism. *Mechanism and Machine Theory*, **2001**, 36, 245-259	4	16
100	The Dynamics of the Swashplate Mechanism of a VTOL Unmanned Aerial Vehicle. *Multibody System Dynamics*, **2001**, 5, 105-131	2.8	4
99	The size-minimization of planar cam mechanisms. *Mechanism and Machine Theory*, **2001**, 36, 371-386	4	14
98	On the kinematic design of the 5R planar, symmetric manipulator. *Mechanism and Machine Theory*, **2001**, 36, 1301-1313	4	37
97	A Sequential-Quadratic-Programming Algorithm Using Orthogonal Decomposition With Gerschgorin Stabilization. *Journal of Mechanical Design, Transactions of the ASME*, **2001**, 123, 501-509	3	15
96	Pitfalls of a least-squares-equivalent controller for linear, time-periodic systems. *International Journal of Control*, **2001**, 74, 199-204	1.5	8
95	Singularity analysis of three-legged parallel robots based on passive-joint velocities. *IEEE Transactions on Automation Science and Engineering*, **2001**, 17, 413-422		36
94	Discussion: Position Analysis in Analytical (sic) Form of the 3-PSP Mechanism (Di Gregorio, R., and Parenti-Castelli, V., 2001, ASME J. Mech. Des., 123, pp. 51-55). *Journal of Mechanical Design, Transactions of the ASME*, **2001**, 123, 56-56	3	
93	Computation of all optimum dyads in the approximate synthesis of planar linkages for rigid-body guidance. *Mechanism and Machine Theory*, **2000**, 35, 1065-1078	4	36
92	. *IEEE Transactions on Automation Science and Engineering*, **2000**, 16, 720-731		13
91	The direct kinematics of parallel manipulators under joint-sensor redundancy. *IEEE Transactions on Automation Science and Engineering*, **2000**, 16, 12-19		58
90	The kinematics of manipulators built from closed planar mechanisms **1999**,		5
89	On the workspace determination of spherical serial and platform mechanisms. *Mechanism and Machine Theory*, **1999**, 34, 497-512	4	42

88	The Kinematics of the Swashplate Mechanism of a VTOL Unmanned Aerial Vehicle. *Multibody System Dynamics*, **1999**, 3, 333-365	2.8	8
87	The angular-acceleration tensor of rigid-body kinematics and its properties. *Archive of Applied Mechanics*, **1999**, 69, 204-214	2.2	15
86	The analysis of arbitrarily-damped linear mechanical systems. *Archive of Applied Mechanics*, **1999**, 69, 529-541	2.2	5
85	Feedback Control of Planar Linkages Using a Linearizing Filter: Theory and Experiments. *Multibody System Dynamics*, **1998**, 2, 253-276	2.8	
84	A Formalism for the Analysis and Design of Modular Kinematic Structures. *International Journal of Robotics Research*, **1998**, 17, 720-730	5.7	7
83	Nonholonomic Systems Revisited Within the Framework of Analytical Mechanics. *Applied Mechanics Reviews*, **1998**, 51, 415-433	8.6	38
82	Kinematics and dynamics of a six-degree-of-freedom parallel manipulator with revolute legs. *Robotica*, **1997**, 15, 385-394	2.1	47
81	Kinematic Isotropy and the Optimum Design of Parallel Manipulators. *International Journal of Robotics Research*, **1997**, 16, 185-197	5.7	163
80	DYNAMICS OF TWO COOPERATING FLEXIBLE-LINK MANIPULATORS PLANAR CASE. *Transactions of the Canadian Society for Mechanical Engineering*, **1997**, 21, 1-17	1.1	0
79	The synthesis of a multi-step cam mechanism to drive a shaking belt conveyor. *Mechanism and Machine Theory*, **1996**, 31, 913-924	4	
78	The mechanical design of a seven-axes manipulator with kinematic isotropy. *Journal of Intelligent and Robotic Systems: Theory and Applications*, **1995**, 14, 21-41	2.9	42
77	Singularity analysis of planar parallel manipulators. *Mechanism and Machine Theory*, **1995**, 30, 665-678	4	78
76	The design of kinematically isotropic rolling robots with omnidirectional wheels. *Mechanism and Machine Theory*, **1995**, 30, 1127-1137	4	27
75	The Isotropic Design of Two General Classes of Planar Parallel Manipulators. *Journal of Field Robotics*, **1995**, 12, 795-805		11
74	Real-time direct kinematics of general six-degree-of-freedom parallel manipulators with minimum-sensor data. *Journal of Field Robotics*, **1995**, 12, 833-844		38
73	The Kinematics of Spatial Double-Triangular Parallel Manipulators. *Journal of Mechanical Design, Transactions of the ASME*, **1995**, 117, 658-661	3	5
72	The Design Optimization of Cam Mechanisms With Oscillating Flat-Face Followers Under Curvature Constraints. *Journal of Mechanical Design, Transactions of the ASME*, **1994**, 116, 311-314	3	4
71	The Generation of Contact Surfaces of Indexing Cam Mechanisms A Unified Approach. *Journal of Mechanical Design, Transactions of the ASME*, **1994**, 116, 369-374	3	25

70	On rotation representations in computational robot kinematics. *Journal of Intelligent and Robotic Systems: Theory and Applications*, **1994**, 9, 5-23	2.9	4
69	On Twist and Wrench Generators and Annihilators **1994**, 379-411		18
68	Synthesis of Contact Surfaces of Spherical Cam-Oscillating Roller-Follower Mechanisms: A General Approach. *Journal of Mechanical Design, Transactions of the ASME*, **1994**, 116, 315-319	3	15
67	The Design of Cam Mechanisms With Translating Flat-Face Followers Under Curvature Constraints. *Journal of Mechanical Design, Transactions of the ASME*, **1994**, 116, 306-310	3	9
66	Design philosophy of an isotropic six-axis serial manipulator. *Robotics and Computer-Integrated Manufacturing*, **1993**, 10, 275-286	9.2	1
65	The synthesis of smooth Cartesian trajectories for pick-and-place operations of spherical wrists. *Mechanism and Machine Theory*, **1993**, 28, 261-269	4	1
64	The Semigraphical Solution of the Direct Kinematics of General Platform-Type Parallel Manipulators. *Solid Mechanics and Its Applications*, **1993**, 165-173	0.4	6
63	Closure to Discussion of Dynamics of Nonholonomic Mechanical Systems Using a Natural Orthogonal Complement (1992, ASME J. Appl Mech., 59, pp. 242243). *Journal of Applied Mechanics, Transactions ASME*, **1992**, 59, 243-244	2.7	1
62	Kinematic Isotropy and the Conditioning Index of Serial Robotic Manipulators. *International Journal of Robotics Research*, **1992**, 11, 560-571	5.7	166
61	The Design of Isotropic Manipulator Architectures in the Presence of Redundancies. *International Journal of Robotics Research*, **1992**, 11, 196-201	5.7	96
60	THE CONSTRAINED LEAST-SQUARE OPTIMIZATION OF SPHERICAL FOUR-BAR LINKAGES FOR RIGID-BODY GUIDANCE. *Transactions of the Canadian Society for Mechanical Engineering*, **1992**, 16, 47-60	1.1	3
59	On the application of Mohr's circle to 2-dof vibration analysis: A tutorial. *Journal of Sound and Vibration*, **1992**, 154, 556-567	3.9	4
58	The mathematics of motion for computer animation: A case study. *Mathematical and Computer Modelling*, **1991**, 15, 61-77		1
57	Die theoretischen grundlagen zur behandlung algebraischer singularitёen der kinematischen koordinatenumkehr in der robotertechnik. *Mechanism and Machine Theory*, **1991**, 26, 315-322	4	2
56	Optimization of Dynamic Forces in Mechanical Hands. *Journal of Mechanical Design, Transactions of the ASME*, **1991**, 113, 167-173	3	37
55	A Global Performance Index for the Kinematic Optimization of Robotic Manipulators. *Journal of Mechanical Design, Transactions of the ASME*, **1991**, 113, 220-226	3	632
54	DYNAMICS OF FLEXIBLE MULTIBODY MECHANICAL SYSTEMS. *Transactions of the Canadian Society for Mechanical Engineering*, **1991**, 15, 235-256	1.1	3
53	Minimization of Power Losses in Cooperating Manipulators **1991**,		2

52	The Evaluation of Moments of 3-D Solids of Revolution Using Spline Approximations of the Boundary. *Journal of Mechanical Design, Transactions of the ASME*, **1990**, 112, 108-110	3	2
51	Constrained Design Optimization Using Orthogonal Decomposition. *Journal of Mechanical Design, Transactions of the ASME*, **1990**, 112, 255-256	3	4
50	Unconstrained nonlinear least-square optimization of planar linkages for rigid-body guidance. *Mechanism and Machine Theory*, **1990**, 25, 97-118	4	35
49	EFFICIENT SIMULATION ALGORITHM FOR ROBOTIC MANIPULATOR DYNAMICS. *Transactions of the Canadian Society for Mechanical Engineering*, **1990**, 14, 137-142	1.1	
48	. *IEEE Transactions on Automation Science and Engineering*, **1990**, 6, 281-290		1071
47	Kinematic Inversion of Robotic Manipulators in the Presence of Redundancies. *International Journal of Robotics Research*, **1989**, 8, 80-97	5.7	26
46	Optimization of planar and spherical function generators as minimum-defect linkages. *Mechanism and Machine Theory*, **1989**, 24, 293-307	4	19
45	An algorithm for the inverse dynamics of n-axis general manipulators using Kane's equations. *Computers and Mathematics With Applications*, **1989**, 17, 1545-1561	2.7	23
44	Profile determination of a drop of liquid under surface tension, gravity and centrifugal forces. *Computational Mechanics*, **1989**, 4, 329-344	4	3
43	The Optimum Kinematic Design of a Spherical Three-Degree-of-Freedom Parallel Manipulator. *Journal of Mechanisms, Transmissions, and Automation in Design*, **1989**, 111, 202-207		370
42	THE MODELLING OF HOLONOMIC MECHANICAL SYSTEMS USING A NATURAL ORTHOGONAL COMPLEMENT. *Transactions of the Canadian Society for Mechanical Engineering*, **1989**, 13, 81-89	1.1	18
41	EFFICIENT INVERSE DYNAMICS OF GENERAL N-AXIS ROBOTIC MANIPULATORS. *Transactions of the Canadian Society for Mechanical Engineering*, **1989**, 13, 91-95	1.1	
40	. *IEEE Transactions on Systems, Man, and Cybernetics*, **1988**, 18, 173-178		15
39	Simulation of finite-dimensional linear dynamical systems using zero-order holds and numerical-stabilization methods. *Computers and Mathematics With Applications*, **1988**, 16, 307-320	2.7	2
38	Optimal synthesis of cam mechanisms with oscillating flat-face followers. *Mechanism and Machine Theory*, **1988**, 23, 1-6	4	12
37	Performance evaluation of path-generating planar, spherical and spatial four-bar linkages. *Mechanism and Machine Theory*, **1988**, 23, 257-268	4	15
36	An unconstrained nonlinear least-square method of optimization of RRRR planar path generators. *Mechanism and Machine Theory*, **1988**, 23, 343-353	4	58
35	Dynamic Simulation of n-Axis Serial Robotic Manipulators Using a Natural Orthogonal Complement. *International Journal of Robotics Research*, **1988**, 7, 32-47	5.7	45

34	The Formulation of Dynamical Equations of Holonomic Mechanical Systems Using a Natural Orthogonal Complement. *Journal of Applied Mechanics, Transactions ASME*, **1988**, 55, 243-244	2.7	87
33	The Kinematic Inversion of Robot Manipulators in the Presence of Singularities. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **1988**, 110, 246-254	1.6	11
32	DETERMINATION DU DEGRE DE LIBERTE DES CHAINES CINEMATIQUE. *Transactions of the Canadian Society for Mechanical Engineering*, **1988**, 12, 219-226	1.1	18
31	The Global Least-Square Optimization of Function-Generating Linkages. *Journal of Mechanisms, Transmissions, and Automation in Design*, **1987**, 109, 204-209		9
30	Computation of Rigid-Body Angular Acceleration From Point-Acceleration Measurements. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **1987**, 109, 124-127	1.6	15
29	A General Method of Four-Bar Linkage Mobility Analysis. *Journal of Mechanisms, Transmissions, and Automation in Design*, **1987**, 109, 197-203		29
28	Representation graphique de la region de mobilite des mecanismes plans et spheriques a barres articulees. *Mechanism and Machine Theory*, **1987**, 22, 557-562	4	7
27	A spline-based method of solution of nonlinear two-point boundary-value problems. *Computers and Mathematics With Applications*, **1986**, 12, 969-985	2.7	2
26	Optimierung ebener, sphärischer und rämlicher getriebe zur approximierten lagenzuordnung. *Mechanism and Machine Theory*, **1986**, 21, 187-197	4	3
25	Automatic Computation of the Screw Parameters of Rigid-Body Motions. Part I: Finitely-Separated Positions. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **1986**, 108, 32-38	1.6	32
24	Automatic Computation of the Screw Parameters of Rigid-Body Motions. Part II: Infinitesimally-Separated Positions. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **1986**, 108, 39-43	1.6	19
23	Iterative Kinematic Inversion of General Five-Axis Robot Manipulators. *International Journal of Robotics Research*, **1986**, 4, 59-70	5.7	15
22	On the Numerical Solution of the Inverse Kinematic Problem. *International Journal of Robotics Research*, **1985**, 4, 21-37	5.7	96
21	Synthesis of plane curves with prescribed local geometric properties using periodic splines. *CAD Computer Aided Design*, **1983**, 15, 147-155	2.9	15
20	The Degree of Freedom of Parallel Robots: A Group-Theoretic Approach		9
19	On the nonlinear controllability of a quasiholonomic mobile robot		32
18	Singularity analysis of three-legged parallel robots based on passive-joint velocities		1
17	Pose-and-twist estimation of a rigid body using accelerometers		8