Vicente Mata-Amela

List of Publications by Year
in descending order

68	1,085	430754 18	454834 30
papers	citations	h-index	g-index

71	71	71	662
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Identification of dynamic parameters of a 3-DOF RPS parallel manipulator. Mechanism and Machine Theory, 2008, 43, 1-17.	2.7	90
2	Serial-robot dynamics algorithms for moderately large numbers of joints. Mechanism and Machine Theory, 2002, 37, 739-755.	2.7	55
3	Trajectory planning in workspaces with obstacles taking into account the dynamic robot behaviour. Mechanism and Machine Theory, 2006, 41, 525-536.	2.7	55
4	Model-Based Control of a 3-DOF Parallel Robot Based on Identified Relevant Parameters. IEEE/ASME Transactions on Mechatronics, 2013, 18, 1737-1744.	3.7	54
5	Dynamic parameter identification in industrial robots considering physical feasibility. Advanced Robotics, 2005, 19, 101-119.	1.1	53
6	A methodology for dynamic parameters identification of 3-DOF parallel robots in terms of relevant parameters. Mechanism and Machine Theory, 2010, 45, 1337-1356.	2.7	52
7	Adaptive control of a 3-DOF parallel manipulator considering payload handling and relevant parameter models. Robotics and Computer-Integrated Manufacturing, 2014, 30, 468-477.	6.1	45
8	A comparison between direct and indirect dynamic parameter identification methods in industrial robots. Robotica, 2006, 24, 579-590.	1.3	35
9	A 3-PRS parallel manipulator for ankle rehabilitation: towards a low-cost robotic rehabilitation. Robotica, 2017, 35, 1939-1957.	1.3	35
10	Kinematic description of soft tissue artifacts: quantifying rigid versus deformation components and their relation with bone motion. Medical and Biological Engineering and Computing, 2012, 50, 1173-1181.	1.6	30
11	Effect of marker cluster design on the accuracy of human movement analysis using stereophotogrammetry. Medical and Biological Engineering and Computing, 2006, 44, 1113-1119.	1.6	27
12	Experimental Analysis of Rigid Body Motion. A Vector Method to Determine Finite and Infinitesimal Displacements From Point Coordinates. Journal of Mechanical Design, Transactions of the ASME, 2009, 131, .	1.7	26
13	A direct approach to solving trajectory planning problems using genetic algorithms with dynamics considerations in complex environments. Robotica, 2015, 33, 669-683.	1.3	26
14	Evolutionary indirect approach to solving trajectory planning problem for industrial robots operating in workspaces with obstacles. European Journal of Mechanics, A/Solids, 2013, 42, 210-218.	2.1	24
15	Design and Kinematic Analysis of a Novel 3UPS/RPU Parallel Kinematic Mechanism With 2T2R Motion for Knee Diagnosis and Rehabilitation Tasks. Journal of Mechanisms and Robotics, 2017, 9, .	1.5	24
16	Inverse dynamic problem in robots using Gibbs-Appell equations. Robotica, 2002, 20, 59-67.	1.3	21
17	Mechatronic Development and Dynamic Control of a 3-DOF Parallel Manipulator. Mechanics Based Design of Structures and Machines, 2012, 40, 434-452.	3.4	21
18	Mechatronic design, experimental setup, and control architecture design of a novel 4 DoF parallel manipulator. Mechanics Based Design of Structures and Machines, 2018, 46, 425-439.	3.4	21

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19	Dynamic simulation of a parallel robot: Coulomb friction and stickâ€“slip in robot joints. Robotica, 2010, 28, 35-45.	1.3	19
20	A formulation for path planning of manipulators in complex environments by using adjacent configurations. Advanced Robotics, 1996, 11, 33-56.	1.1	18
21	Hybrid force/position control for a 3-DOF 1T2R parallel robot: Implementation, simulations and experiments. Mechanics Based Design of Structures and Machines, 2016, 44, 16-31.	3.4	18
22	On the Experiment Design for Direct Dynamic Parameter Identification of Parallel Robots. Advanced Robotics, 2009, 23, 329-348.	1.1	16
23	Passive Exercise Adaptation for Ankle Rehabilitation Based on Learning Control Framework. Sensors, 2020, 20, 6215.	2.1	16
24	Experimental analysis of Type II singularities and assembly change points in a 3UPS+RPU parallel robot. Mechanism and Machine Theory, 2021, 158, 104242.	2.7	16
25	Simultaneous algorithm to solve the trajectory planning problem. Mechanism and Machine Theory, 2009, 44, 1910-1922.	2.7	15
26	Experimental determination of instantaneous screw axis in human motions. Error analysis. Mechanism and Machine Theory, 2007, 42, 429-441.	2.7	14
27	Kinematic analysis and dimensional optimization of a 2R2T parallel manipulator. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2019, 41, 1.	0.8	14
28	3D inertia transfer concept and symbolic determination of the base inertial parameters. Mechanism and Machine Theory, 2012, 49, 284-297.	2.7	13
29	Optimal Reconfiguration of a Parallel Robot for Forward Singularities Avoidance in Rehabilitation Therapies. A Comparison via Different Optimization Methods. Sustainability, 2020, 12, 5803.	1.6	13
30	The machine layout problem in robot cells. International Journal of Production Research, 1998, 36, 1273-1292.	4.9	12
31	Identifiability of the Dynamic Parameters of a Class of Parallel Robots in the Presence of Measurement Noise and Modeling Discrepancy#. Mechanics Based Design of Structures and Machines, 2008, 36, 478-498.	3.4	12
32	Direct stepâ€byâ€step method for industrial robot path planning. Industrial Robot, 2009, 36, 594-607.	1.2	12
33	Optimal average path of the instantaneous helical axis in planar motions with one functional degree of freedom. Journal of Biomechanics, 2010, 43, 375-378.	0.9	11
34	Representation of planar motion of complex joints by means of rolling pairs. Application to neck motion. Journal of Biomechanics, 2011, 44, 747-750.	0.9	11
35	Trajectory Adaptation and Learning for Ankle Rehabilitation Using a 3-PRS Parallel Robot. Lecture Notes in Computer Science, 2015, , 483-494.	1.0	11
36	Navigation of Autonomous Light Vehicles Using an Optimal Trajectory Planning Algorithm. Sustainability, 2021, 13, 1233.	1.6	11

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37	Solving the inverse dynamic control for low cost real-time industrial robot control applications. Robotica, 2003, 21, 261-269.	1.3	10
38	Kinematics of the trunk in sitting posture: An analysis based on the instantaneous axis of rotation. Ergonomics, 2009, 52, 695-706.	1.1	10
39	Evolutionary Path Planning Algorithm for Industrial Robots. Advanced Robotics, 2012, 26, 1369-1392.	1.1	10
40	Optimal synthesis of three-revolute manipulators. Meccanica, 1994, 29, 95-103.	1.2	9
41	Comparing the efficiency of five algorithms applied to path planning for industrial robots. Industrial Robot, 2012, 39, 580-591.	1.2	9
42	Point of optimal kinematic error: Improvement of the instantaneous helical pivot method for locating centers of rotation. Journal of Biomechanics, 2014, 47, 1742-1747.	0.9	9
43	Design of a 3-UPS-RPU Parallel Robot for Knee Diagnosis and Rehabilitation. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2016, , 303-310.	0.3	8
44	Synthesis of the Inverse Kinematic Model of Non-Redundant Open-Chain Robotic Systems Using Groebner Basis Theory. Applied Sciences (Switzerland), 2020, 10, 2781.	1.3	8
45	A procedure for estimating the relevant forces in the human knee using a four-bar mechanism. Computer Methods in Biomechanics and Biomedical Engineering, 2010, 13, 577-587.	0.9	7
46	Dynamic Parameter Identification of Subject-Specific Body Segment Parameters Using Robotics Formalism: Case Study Head Complex. Journal of Biomechanical Engineering, 2016, 138, 051009.	0.6	7
47	Dynamic Parameter Identification for Parallel Manipulators. , 2008, , .		6
48	Realâ€time solving of dynamic problem in industrial robots. Industrial Robot, 2011, 38, 119-129.	1.2	6
49	Simultaneous algorithm for trajectory planning. Asian Journal of Control, 2010, 12, 468-479.	1.9	5
50	A Comparison of Algorithms for Path Planning of Industrial Robots. , 2009, , 247-254.		5
51	Optimal Reconfiguration of a Limited Parallel Robot for Forward Singularities Avoidance. Multidisciplinary Journal for Education, Social and Technological Sciences, 2020, 7, 113.	0.8	5
52	Model of Soft Tissue Artifact Propagation to Joint Angles in Human Movement Analysis. Journal of Biomechanical Engineering, 2014, 136, 034502.	0.6	4
53	Generation of adjacent configurations for a collision-free path planning of manipulators. Robotica, 1996, 14, 391-396.	1.3	3
54	Identification of dynamic parameters in low-mobility mechanical systems: application to short long arm vehicle suspension. Vehicle System Dynamics, 2013, 51, 1242-1264.	2.2	3

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55	A Computationally Efficient Musculoskeletal Model of the Lower Limb for the Control of Rehabilitation Robots: Assumptions and Validation. Applied Sciences (Switzerland), 2022, 12, 2654.	1.3	3
56	Development of Analytical Models for the Identification of Dynamic Parameters in a Double Wishbone Front Suspension. SAE International Journal of Passenger Cars - Mechanical Systems, 2013, 6, 231-240.	0.4	2
57	Identification of Inertial Parameters for Position and Force Control of Surgical Assistance Robots. Mathematics, 2021, 9, 773.	1.1	2
58	Path Planning in Complex Environments for Industrial Robots with Additional Degrees of Freedom. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2000, , 431-438.	0.3	2
59	Experimental Setup of a Novel 4 DoF Parallel Manipulator. Mechanisms and Machine Science, 2018, , 389-400.	0.3	1
60	Parallel-Populations Genetic Algorithm for the Optimization of Cubic Polynomial Joint Trajectories for Industrial Robots. Lecture Notes in Computer Science, 2011, , 83-92.	1.0	1
61	Development of lower-limb rehabilitation exercises using 3-PRS Parallel Robot and Dynamic Movement Primitives. Multidisciplinary Journal for Education, Social and Technological Sciences, 2020, 7, 30.	0.8	1
62	An heuristic algorithm for the production line layout problem. European Journal of Operational Research, 1994, 75, 62-73.	3.5	0
63	Automatic selection of the Groebner Basisâ€™ monomial order employed for the synthesis of the inverse kinematic model of non-redundant open-chain robotic systems. Mechanics Based Design of Structures and Machines, 2023, 51, 2458-2480.	3.4	0
64	Path Planning Algorithm Among Obstacles by Considering a Manipulability Index. , 2002, , 231-240.		0
65	Forward Dynamics of 3-DOF Parallel Robots: a Comparison Among Different Models. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2010, , 283-290.	0.3	0
66	Modelado e IdentificaciÃ³n de ParÃ¡metros DinÃ¡micos de Robots. ResoluciÃ³n del Problema DinÃ¡mico Inverso en Tiempo Real. RIAI - Revista Iberoamericana De Automatica E Informatica Industrial, 2010, 7, 39-48.	0.6	0
67	IdentificaciÃ³n de parÃ¡metros dinÃ¡micos de la suspensiÃ³n de un vehÃculo.. Ingenieria Y Competitividad, 2014, 16, 307-316.	0.1	0
68	A Multicriteria Approach for Optimal Trajectories in Dynamic Parameter Identification of Parallel Robots. , 2009, , 279-285.		0