

Renato Vidoni

List of Publications by Year in descending order

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99
papers

2,007
citations

279798

23
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276875

41
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105
all docs

105
docs citations

105
times ranked

1394
citing authors

#	ARTICLE	IF	CITATIONS
1	Emerging research fields in safety and ergonomics in industrial collaborative robotics: A systematic literature review. <i>Robotics and Computer-Integrated Manufacturing</i> , 2021, 67, 101998.	9.9	201
2	Path Planning and Trajectory Planning Algorithms: A General Overview. <i>Mechanisms and Machine Science</i> , 2015, , 3-27.	0.5	184
3	A Review on Energy-Saving Optimization Methods for Robotic and Automatic Systems. <i>Robotics</i> , 2017, 6, 39.	3.5	116
4	Trajectory Planning in Robotics. <i>Mathematics in Computer Science</i> , 2012, 6, 269-279.	0.4	104
5	Experimental validation and comparative analysis of optimal time-jerk algorithms for trajectory planning. <i>Robotics and Computer-Integrated Manufacturing</i> , 2012, 28, 164-181.	9.9	96
6	Design of Human-Centered Collaborative Assembly Workstations for the Improvement of Operatorsâ€™ Physical Ergonomics and Production Efficiency: A Case Study. <i>Sustainability</i> , 2020, 12, 3606.	3.2	79
7	Experimental Validation of Minimum Time-jerk Algorithms for Industrial Robots. <i>Journal of Intelligent and Robotic Systems: Theory and Applications</i> , 2011, 64, 197-219.	3.4	74
8	Evaluation and stability comparison of different vehicle configurations for robotic agricultural operations on side-slopes. <i>Biosystems Engineering</i> , 2015, 129, 197-211.	4.3	58
9	Evaluation of a LiDAR-based 3D-stereoscopic vision system for crop-monitoring applications. <i>Computers and Electronics in Agriculture</i> , 2016, 124, 1-13.	7.7	58
10	Requirements for the Design of Flexible and Changeable Manufacturing and Assembly Systems: A SME-survey. <i>Procedia CIRP</i> , 2016, 41, 207-212.	1.9	57
11	Real-Time Monitoring of Occupantsâ€™ Thermal Comfort through Infrared Imaging: A Preliminary Study. <i>Buildings</i> , 2017, 7, 10.	3.1	46
12	Enabling Connectivity of Cyber-physical Production Systems: A Conceptual Framework. <i>Procedia Manufacturing</i> , 2017, 11, 822-829.	1.9	39
13	A mixed FEM and lumped-parameter dynamic model for evaluating the modal properties of planetary gearboxes. <i>Journal of Mechanical Science and Technology</i> , 2018, 32, 3047-3056.	1.5	36
14	Development and validation of guidelines for safety in human-robot collaborative assembly systems. <i>Computers and Industrial Engineering</i> , 2022, 163, 107801.	6.3	35
15	Natural Motion for Energy Saving in Robotic and Mechatronic Systems. <i>Applied Sciences (Switzerland)</i> , 2019, 9, 3516.	2.5	32
16	An evaluation methodology for the conversion of manual assembly systems into human-robot collaborative workcells. <i>Procedia Manufacturing</i> , 2019, 38, 358-366.	1.9	32
17	Efficient force distribution and leg posture for a bio-inspired spider robot. <i>Robotics and Autonomous Systems</i> , 2011, 59, 142-150.	5.1	31
18	Safety, Ergonomics and Efficiency in Human-Robot Collaborative Assembly: Design Guidelines and Requirements. <i>Procedia CIRP</i> , 2020, 91, 367-372.	1.9	30

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19	A Variational Approach to Minimum-Jerk Trajectories for Psychological Safety in Collaborative Assembly Stations. IEEE Robotics and Automation Letters, 2019, 4, 823-829.	5.1	29
20	An energy-efficient approach for 3D printing with a Linear Delta Robot equipped with optimal springs. Robotics and Computer-Integrated Manufacturing, 2021, 67, 102045.	9.9	29
21	Enhancing Energy Efficiency of a 4-DOF Parallel Robot Through Task-Related Analysis. Machines, 2020, 8, 10.	2.2	27
22	The Opportunities and Challenges of SME Manufacturing Automation: Safety and Ergonomics in Human-Robot Collaboration. , 2020, , 105-144.		27
23	Methodology for the definition of the optimal assembly cycle and calculation of the optimized assembly cycle time in human-robot collaborative assembly. International Journal of Advanced Manufacturing Technology, 2021, 113, 2369-2384.	3.0	25
24	Validation of Minimum Time-Jerk Algorithms for Trajectory Planning of Industrial Robots. Journal of Mechanisms and Robotics, 2011, 3, .	2.2	24
25	Tendril-Based Climbing Plants to Model, Simulate and Create Bio-Inspired Robotic Systems. Journal of Bionic Engineering, 2015, 12, 250-262.	5.0	24
26	Design and implementation of an ERLS-based 3-D dynamic formulation for flexible-link robots. Robotics and Computer-Integrated Manufacturing, 2013, 29, 273-282.	9.9	23
27	A Multicriteria Motion Planning Approach for Combining Smoothness and Speed in Collaborative Assembly Systems. Applied Sciences (Switzerland), 2020, 10, 5086.	2.5	21
28	A Mechanical Model for the Adhesion of Spiders to Nominally Flat Surfaces. Journal of Bionic Engineering, 2009, 6, 135-142.	5.0	19
29	Minimization of the Energy Consumption in Industrial Robots through Regenerative Drives and Optimally Designed Compliant Elements. Applied Sciences (Switzerland), 2020, 10, 7475.	2.5	19
30	An intelligent framework to manage robotic autonomous agents. Expert Systems With Applications, 2011, 38, 7430-7439.	7.6	17
31	A method for modeling three-dimensional flexible mechanisms based on an equivalent rigid-link system. JVC/Journal of Vibration and Control, 2014, 20, 483-500.	2.6	16
32	ByeLab: An Agricultural Mobile Robot Prototype for Proximal Sensing and Precision Farming. , 2017, , .		16
33	A tracked mobile robotic lab for monitoring the plants volume and health. , 2016, , .		15
34	Modeling the vibration of spatial flexible mechanisms through an equivalent rigid-link system/component mode synthesis approach. JVC/Journal of Vibration and Control, 2017, 23, 1890-1907.	2.6	15
35	A parametric approach for evaluating the stability of agricultural tractors using implements during side-slope activities. Contemporary Engineering Sciences, 0, 8, 1289-1309.	0.2	15
36	Planning Continuous-Jerk Trajectories for Industrial Manipulators. , 2012, , .		14

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37	From Design for Assembly to Design for Collaborative Assembly - Product Design Principles for Enhancing Safety, Ergonomics and Efficiency in Human-Robot Collaboration. <i>Procedia CIRP</i> , 2020, 91, 546-552.	1.9	14
38	Optimal scaling of dynamic safety zones for collaborative robotics. , 2021, , .		14
39	Application of Axiomatic Design for the Design of a Safe Collaborative Human-Robot Assembly Workplace. <i>MATEC Web of Conferences</i> , 2018, 223, 01003.	0.2	13
40	Robust Control of Three-Dimensional Compliant Mechanisms. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2016, 138, .	1.6	12
41	Design, implementation and validation of a stability model for articulated autonomous robotic systems. <i>Robotics and Autonomous Systems</i> , 2016, 83, 158-168.	5.1	12
42	Mechatronic Re-Design of a Manual Assembly Workstation into a Collaborative One for Wire Harness Assemblies. <i>Robotics</i> , 2021, 10, 43.	3.5	12
43	Implementation of a Laboratory Case Study for Intuitive Collaboration Between Man and Machine in SME Assembly. , 2020, , 335-382.		12
44	DFORCE: Delayed FOrce ReferenCE control for master-slave robotic systems. <i>Mechatronics</i> , 2009, 19, 639-646.	3.3	11
45	Advanced Automation for SMEs in the I4.0 Revolution: Engineering Education and Employees Training in the Smart Mini Factory Laboratory. , 2018, , .		11
46	Energy Saving in Mechatronic Systems Through Optimal Point-to-Point Trajectory Generation via Standard Primitives. <i>Mechanisms and Machine Science</i> , 2019, , 20-28.	0.5	11
47	Energy Expenditure Minimization for a Delta-2 Robot Through a Mixed Approach. <i>Computational Methods in Applied Sciences (Springer)</i> , 2020, , 383-390.	0.3	10
48	Jerk-Continuous Trajectories for Cyclic Tasks. , 2012, , .		9
49	Development of a Dynamic Stability Simulator for Articulated and Conventional tractors Useful for Real-Time Safety Devices. <i>Applied Mechanics and Materials</i> , 0, 394, 546-553.	0.2	9
50	Human-robot activity allocation algorithm for the redesign of manual assembly systems into human-robot collaborative assembly. <i>International Journal of Computer Integrated Manufacturing</i> , 2023, 36, 308-333.	4.6	9
51	Adhesion to Flat Surfaces: From Spiders to Stickers. , 2013, , 463-473.		8
52	Collaborative Robotics Safety Control Application Using Dynamic Safety Zones Based on the ISO/TS 15066:2016. <i>Advances in Intelligent Systems and Computing</i> , 2020, , 430-437.	0.6	8
53	Energy-saving optimization method for point-to-point trajectories planned via standard primitives in 1-DoF mechatronic systems. <i>International Journal of Advanced Manufacturing Technology</i> , 2021, 116, 331-344.	3.0	8
54	Flexible-Link Multibody System Eigenvalue Analysis Parameterized with Respect to Rigid-Body Motion. <i>Applied Sciences (Switzerland)</i> , 2019, 9, 5156.	2.5	7

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55	Passive Control of Attachment in Legged Space Robots. <i>Applied Bionics and Biomechanics</i> , 2010, 7, 69-81.	1.1	6
56	Implementation of a Vision-Based Worker Assistance System in Assembly: a Case Study. <i>Procedia CIRP</i> , 2021, 96, 295-300.	1.9	6
57	Solutions for the automation of operational monitoring activities for agricultural and forestry tasks. <i>Bodenkultur</i> , 2018, 69, 131-140.	0.2	6
58	Multiphysical Design Optimization of Multibody Systems: Application to a Tyrolean Weir Cleaning Mechanism. <i>Mechanisms and Machine Science</i> , 2021, , 459-467.	0.5	6
59	Trajectory Planning for Manufacturing Robots: Algorithm Definition and Experimental Results. , 2010, , .		5
60	A model-based trajectory planning approach for flexible-link mechanisms. , 2013, , .		5
61	Evolution of a Dynamic Model for Flexible Multibody Systems. <i>Mechanisms and Machine Science</i> , 2017, , 533-541.	0.5	5
62	Optimal Design for the Passive Control of Vibration Based on Limit Cycles. <i>Shock and Vibration</i> , 2019, 2019, 1-11.	0.6	5
63	Optimal In-Operation Redesign of Mechanical Systems Considering Vibrationsâ€”A New Methodology Based on Frequency-Band Constraint Formulation and Efficient Sensitivity Analysis. <i>Machines</i> , 2020, 8, 11.	2.2	5
64	Passive control of attachment in legged space robots. <i>Applied Bionics and Biomechanics</i> , 2010, 7, 69-81.	1.1	4
65	Optimal Path Planning for Painting Robots. , 2010, , .		4
66	A delayed force-reflecting haptic controller for masterâ€”slave neurosurgical robots. <i>Advanced Robotics</i> , 2015, 29, 127-138.	1.8	4
67	Designing Fast and Smooth Trajectories in Collaborative Workstations. <i>IEEE Robotics and Automation Letters</i> , 2021, 6, 1700-1706.	5.1	4
68	Control Design for 3D Flexible Link Mechanisms Using Linearized Models. <i>Mechanisms and Machine Science</i> , 2014, , 181-188.	0.5	4
69	Kinematic and Dynamic Analysis of Flexible-Link Parallel Robots by Means of an ERLS Approach. , 2012, , .		3
70	Design and Implementation of a Simulator for 3D Flexible-Link Serial Robots. , 2012, , .		3
71	Efficient Closed-Form Solution of the Kinematics of a Tunnel Digging Machine. <i>Journal of Mechanisms and Robotics</i> , 2017, 9, .	2.2	3
72	AI and ML for Human-Robot Cooperation in Intelligent and Flexible Manufacturing. , 2021, , 95-127.		3

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73	Application of a Parametric Modal Analysis Approach to Flexible-Multibody Systems. Mechanisms and Machine Science, 2019, , 386-394.	0.5	3
74	Minimum-Energy Trajectory Planning for Industrial Robotic Applications: Analytical Model and Experimental Results. Mechanisms and Machine Science, 2020, , 334-342.	0.5	3
75	Development and Preliminary Tests of a Crop Monitoring Mobile Lab Based on a Combined use of Optical Sensors. International Journal of Computer & Software Engineering, 2016, 1, .	0.4	3
76	An Approximation-Based Design Optimization Approach to Eigenfrequency Assignment for Flexible Multibody Systems. Applied Sciences (Switzerland), 2021, 11, 11558.	2.5	3
77	On the modeling of flexible-link robots: First experimental validation of an ERLS-FEM dynamic model. , 2013, , .		2
78	SMA bio-robotic mimesis of tendril-based climbing plants: First results. , 2013, , .		2
79	DEVELOPMENT AND CHARACTERIZATION TESTS OF A SMALL HYDRAULIC-POWERED TRACTOR PROTOTYPE FOR USE IN EXTREME SLOPED VINEYARDS. Acta Horticulturae, 2013, , 369-375.	0.2	2
80	A FEM-Experimental Approach for the Development of a Conceptual Linear Actuator Based on Tendrilâ€™s Free Coiling. Applied Bionics and Biomechanics, 2017, 2017, 1-12.	1.1	2
81	Vibrational Behavior of Epicyclic Gear Trains With Lumped-Parameter Models: Analysis and Design Optimization Under Uncertainty. , 2018, , .		2
82	Parametric eigenvalue analysis for flexible multibody systems. Mechanisms and Machine Science, 2019, , 4117-4126.	0.5	2
83	A Multibody Dynamic Model for Evaluating the Vibrating Modes of Gear Train Systems. International Journal of Transport Development and Integration, 2021, 5, 264-277.	0.9	2
84	Design and First Tests of a Vision System on a Tele-operated Vehicle for Monitoring the Canopy Vigour Status in Orchards. , 2015, , .		2
85	Online Computation of Time-Optimization-Based, Smooth and Path-Consistent Stop Trajectories for Robots. Robotics, 2022, 11, 70.	3.5	2
86	A Master-Slave Haptic System for Neurosurgery. Applied Bionics and Biomechanics, 2011, 8, 209-220.	1.1	1
87	Design and implementation of a diagnostic device for fuel cell systems based on an application web server. , 2015, , .		1
88	Smart Mechanical Systems for Manufacturing in the Era of Industry 4.0: Condition-Based Predictive Maintenance and Dynamic System Modification for Small and Medium-Sized Enterprises. Chiang Mai University Journal of Natural Sciences, 2021, 20, .	0.1	1
89	Modeling, Design and Optimization of Flexible Mechanical Systems. Applied Sciences (Switzerland), 2021, 11, 7124.	2.5	1
90	Stability Analysis of an Articulated Agri-Robot Under Different Central Joint Conditions. Advances in Intelligent Systems and Computing, 2016, , 335-346.	0.6	1

#	ARTICLE	IF	CITATIONS
91	Synchronisierung von ETO-Fertigung und Baustellenmontage. ZWF Zeitschrift Fuer Wirtschaftlichen Fabrikbetrieb, 2015, 110, 9-13.	0.3	1
92	Optimal Task Placement for Energy Minimization in a Parallel Manipulator. Mechanisms and Machine Science, 2021, , 12-22.	0.5	1
93	Metrology-aware Path Planning for Agricultural Mobile Robots in Dynamic Environments. , 2021, , .		1
94	A mechatronic system mounted on insole for analyzing human gait. , 2014, , .		0
95	Bridging the Gap between the Logical and the Physical Worlds. Advances in Intelligent and Soft Computing, 2009, , 411-420.	0.2	0
96	Climbing Plants, a New Concept for Robotic Grasping. Lecture Notes in Computer Science, 2013, , 418-420.	1.3	0
97	Experimental Evaluation and Comparison of Low-Cost Adaptive Mechatronic Grippers. Mechanisms and Machine Science, 2018, , 630-637.	0.5	0
98	An Embedded Mechatronic Device for Real-Time Monitoring and Prediction of Occupantsâ€™ Thermal Comfort. , 2018, , .		0
99	Stability Measures and Criteria for Autonomous Mobile Robotic Platforms: Analysis, Comparison and Numerical Evaluation. , 2019, , .		0