

Nicola Pio Belfiore

List of Publications by Year in descending order

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81
papers

1,373
citations

304368

22
h-index

377514

34
g-index

85
all docs

85
docs citations

85
times ranked

674
citing authors

#	ARTICLE	IF	CITATIONS
1	A Comprehensive Survey on Microgrippers Design: Mechanical Structure. Journal of Mechanical Design, Transactions of the ASME, 2017, 139, .	1.7	87
2	A Comprehensive Survey on Microgrippers Design: Operational Strategy. Journal of Mechanical Design, Transactions of the ASME, 2017, 139, .	1.7	69
3	Analysis of driving seat vibrations in high forward speed tractors. Biosystems Engineering, 2007, 97, 171-180.	1.9	68
4	Development of Micro-Grippers for Tissue and Cell Manipulation with Direct Morphological Comparison. Micromachines, 2015, 6, 1710-1728.	1.4	61
5	Fabrication of Novel MEMS Microgrippers by Deep Reactive Ion Etching With Metal Hard Mask. Journal of Microelectromechanical Systems, 2017, 26, 926-934.	1.7	59
6	MEMS-Based Conjugate Surfaces Flexure Hinge. Journal of Mechanical Design, Transactions of the ASME, 2015, 137, .	1.7	54
7	A Review on Parametric Dynamic Models of Magnetorheological Dampers and Their Characterization Methods. Actuators, 2018, 7, 16.	1.2	53
8	Comparison of solution strategies for multibody dynamics equations. International Journal for Numerical Methods in Engineering, 2011, 88, 637-656.	1.5	46
9	An atlas of linkage-type robotic grippers. Mechanism and Machine Theory, 1997, 32, 811-833.	2.7	43
10	Automatic sketching of planar kinematic chains. Mechanism and Machine Theory, 1994, 29, 177-193.	2.7	41
11	Inverse kinetostatic analysis of compliant four-bar linkages. Mechanism and Machine Theory, 2013, 69, 350-372.	2.7	41
12	Compliance Synthesis of CSFH MEMS-Based Microgrippers. Journal of Mechanical Design, Transactions of the ASME, 2017, 139, .	1.7	41
13	Operational characterization of CSFH MEMS technology based hinges. Journal of Micromechanics and Microengineering, 2018, 28, 055012.	1.5	32
14	On the numerical computation of Generalized Burmester Points. Meccanica, 1995, 30, 147-153.	1.2	28
15	On Crossley's contribution to the development of graph based algorithms for the analysis of mechanisms and gear trains. Mechanism and Machine Theory, 2015, 89, 92-106.	2.7	28
16	New MEMS Tweezers for the Viscoelastic Characterization of Soft Materials at the Microscale. Micromachines, 2018, 9, 15.	1.4	28
17	An Atlas of Remote Actuated Bevel Gear Wrist Mechanisms of up to Nine Links. International Journal of Robotics Research, 1993, 12, 448-459.	5.8	26
18	Kinematic Synthesis of a D-Drive MEMS Device With Rigid-Body Replacement Method. Journal of Mechanical Design, Transactions of the ASME, 2018, 140, .	1.7	26

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19	A brief note on the concept of planarity for kinematic chains. <i>Mechanism and Machine Theory</i> , 2000, 35, 1745-1750.	2.7	25
20	A method for the identification of the connectivity in multi-loop kinematic chains: Analysis of chains with total and partial mobility. <i>Mechanism and Machine Theory</i> , 2006, 41, 1443-1466.	2.7	25
21	A genetic algorithm-based method for the mechanical characterization of biosamples using a MEMS microgripper: numerical simulations. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2019, 96, 88-95.	1.5	22
22	Distributed Databases for the development of Mechanisms Topology. <i>Mechanism and Machine Theory</i> , 2000, 35, 1727-1744.	2.7	21
23	Innovative Silicon Microgrippers for Biomedical Applications: Design, Mechanical Simulation and Evaluation of Protein Fouling. <i>Actuators</i> , 2018, 7, 12.	1.2	21
24	Active Joint Stiffness Regulation to Achieve Isotropic Compliance in the Euclidean Space. <i>Journal of Mechanisms and Robotics</i> , 2012, 4, .	1.5	20
25	Attitudes toward Sustainability and Green Economy Issues Related to Some Students Learning Their Characteristics: A Preliminary Study. <i>Sustainability</i> , 2014, 6, 3484-3503.	1.6	18
26	A hybrid approach to the development of a multilayer neural network for wear and fatigue prediction in metal forming. <i>Tribology International</i> , 2007, 40, 1705-1717.	3.0	17
27	Isotropic compliance in the Special Euclidean Group SE(3). <i>Mechanism and Machine Theory</i> , 2016, 98, 263-281.	2.7	17
28	An Approach to the Extreme Miniaturization of Rotary Comb Drives. <i>Actuators</i> , 2018, 7, 70.	1.2	16
29	Isotropic Compliance in E(3): Feasibility and Workspace Mapping. <i>Journal of Mechanisms and Robotics</i> , 2016, 8, .	1.5	15
30	Grasping and Releasing Agarose micro Beads in Water Drops. <i>Micromachines</i> , 2019, 10, 436.	1.4	15
31	Micromanipulation: A Challenge for Actuation. <i>Actuators</i> , 2018, 7, 85.	1.2	14
32	Compliant Nano-Pliers as a Biomedical Tool at the Nanoscale: Design, Simulation and Fabrication. <i>Micromachines</i> , 2020, 11, 1087.	1.4	14
33	Theoretical and Experimental Study of Crossover Operators of Genetic Algorithms. <i>Journal of Optimization Theory and Applications</i> , 1998, 99, 271-302.	0.8	12
34	Ball toroidal CVT: a feasibility study based on topology, kinematics, statics and lubrication. <i>International Journal of Vehicle Design</i> , 2003, 32, 304.	0.1	12
35	An Interdisciplinary Approach to the Nanomanipulation of SiO ₂ Nanoparticles: Design, Fabrication and Feasibility. <i>Applied Sciences (Switzerland)</i> , 2018, 8, 2645.	1.3	12
36	A novel method to fully suppress single and bi-modal excitations due to the support vibration by means of piezoelectric actuators. <i>Journal of Sound and Vibration</i> , 2021, 510, 116260.	2.1	12

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37	Kinetostatic optimization of a MEMS-based compliant 3 DOF plane parallel platform. , 2013, , .		11
38	Mechanical Response of Four-Bar Linkage Microgrippers with Bidirectional Electrostatic Actuation. Actuators, 2018, 7, 78.	1.2	11
39	The development of a MEMS/NEMS-based 3 D.O.F. compliant micro robot. , 2010, , .		10
40	Design, optimization and construction of MEMS-based micro grippers for cell manipulation. , 2013, , .		10
41	Design, Fabrication, Testing and Simulation of a Rotary Double Comb Drives Actuated Microgripper. Micromachines, 2021, 12, 1263.	1.4	10
42	Scalloping and Stress Concentration in DRIE-Manufactured Comb-Drives. Actuators, 2018, 7, 57.	1.2	9
43	A Simple Application of Conjugate Profile Theory to the Development of a Silicon Micro Tribometer. , 2014, , .		8
44	Development of a NEMS-Technology Based Nano Gripper. Mechanisms and Machine Science, 2018, , 601-611.	0.3	8
45	Isotropy in any RR planar dyad under active joint stiffness regulation. , 2010, , .		7
46	Performance Analysis of Compliant MEMS Parallel Robots Through Pseudo-Rigid-Body Model Synthesis. , 2012, , .		7
47	Applications of computational intelligence to mechanical engineering. , 2014, , .		7
48	A Feasibility Study of a Novel Piezo MEMS Tweezer for Soft Materials Characterization. Applied Sciences (Switzerland), 2019, 9, 2277.	1.3	7
49	Toward Operations in a Surgical Scenario: Characterization of a Microgripper via Light Microscopy Approach. Applied Sciences (Switzerland), 2019, 9, 1901.	1.3	7
50	The development of a feasible method for the tribological characterization of gear teeth surface treatments. Tribology International, 2006, 39, 789-795.	3.0	6
51	Damage resistance and roughness retention of work rolls in cold rolling mills. Revue De Metallurgie, 2010, 107, 245-255.	0.3	6
52	An investigation on Cognitive Styles and multiple intelligences model based learning preferences in a group of students in engineering. , 2010, , .		6
53	Design and Validation of a Single-SOI-Wafer 4-DOF Crawling Microgripper. Micromachines, 2019, 10, 376.	1.4	6
54	On a test bench for studying lubrication in a spherical bearing: simulations and experimental validation. TriboTest Journal: Tribology and Lubrication in Practice, 2006, 12, 287-308.	0.7	5

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55	A preliminary study on the dynamic characterization of a MEMS microgripper for biomedical applications. , 2021, , .		5
56	Functional Synthesis of a New Class of Micro Electro-Mechanical Systems. Topics in Intelligent Engineering and Informatics, 2014, , 81-93.	0.4	5
57	Downsizing Effects on Micro and Nano Comb Drives. Actuators, 2022, 11, 71.	1.2	5
58	A new NEMS Based Linear-to-Rotary Displacement-Capacity Transducer. , 2019, , .		4
59	Analytical Modeling of a New Compliant Microsystem for Atherectomy Operations. Micromachines, 2022, 13, 1094.	1.4	4
60	Simulation of verbal and mathematical learning by means of simple neural networks. , 2010, , .		3
61	High density compliant contacting technology for integrated high power modules in automotive applications. , 2012, , .		3
62	Development of a MEMS technology CSFH based microgripper. , 2014, , .		3
63	Quadrupedal Robotsâ€™ Gaits Identification via Contact Forces Optimization. Applied Sciences (Switzerland), 2021, 11, 2102.	1.3	3
64	FINE-TUNING OF MODELLING STRATEGY TO SIMULATE THERMO-MECHANICAL BEHAVIOUR OF DOUBLE FRICTION PENDULUM SEISMIC ISOLATORS UST ESTIMATOR. NED University Journal of Research, 2019, 3, 165-172.	0.4	3
65	A Comprehensive Evaluation of the Efficiency of an Integrated Biogas, Trigen, PV and Greenhouse Plant, Using Digraph Theory. Studies in Computational Intelligence, 2009, , 595-605.	0.7	3
66	Global efficiency of an UPS module integrated with PV, H2, and CAES systems. , 2013, , .		2
67	Closed-form symbolic computation of the global efficiency of complex systems by means of digraphs. , 2013, , .		2
68	New strategy for testing new high nitrogen bearing steel for offshore wind turbines. Wind Engineering, 2016, 40, 426-430.	1.1	2
69	Mechanical Modelling of Friction Pendulum Isolation Devices. Lecture Notes in Civil Engineering, 2018, , 133-146.	0.3	2
70	Advanced Multi-Body Modelling of DCCSS Isolators: Geometrical Compatibility and Kinematics. Buildings, 2021, 11, 50.	1.4	2
71	COMPLETE ANALYTICAL THERMOMECHANICAL MODEL OF DOUBLE FRICTION PENDULUM DEVICES. , 2017, , .		2
72	Dynamic Model of a Conjugate-Surface Flexure Hinge Considering Impacts between Cylinders. Micromachines, 2022, 13, 957.	1.4	2

#	ARTICLE	IF	CITATIONS
73	A New Concept Compliant Platform with Spatial Mobility and Remote Actuation. Applied Sciences (Switzerland), 2019, 9, 3966.	1.3	1
74	Engineering-Aided Inventive Surgery. Applied Sciences (Switzerland), 2020, 10, 3957.	1.3	1
75	Product information with enhanced background description for improved revision of decisions. , 2008, , .		0
76	Analysis of a teaching and learning method supported by open source codes and web activities. , 2012, , .		0
77	Isotropic compliance in RRP planar manipulators. , 2014, , .		0
78	Optimal Joint Stiffness Regulation in a Planar Robot for Packaging Operations. , 2014, , .		0
79	An accelerated test stand to assess wear in offshore wind turbines rolling bearings. Wind Engineering, 2018, 42, 136-140.	1.1	0
80	Active isotropic compliance in redundant manipulators. Multibody System Dynamics, 2020, 49, 421-445.	1.7	0
81	A Genetic Algorithm for the Estimation of Viscoelastic Parameters of Biological Samples Manipulated by Mems Tweezers. Lecture Notes in Mechanical Engineering, 2020, , 920-931.	0.3	0