

Xin Li

List of Publications by Year in descending order

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44
papers

573
citations

623734

14
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642732

23
g-index

44
all docs

44
docs citations

44
times ranked

197
citing authors

#	ARTICLE	IF	CITATIONS
1	Analysis of vortex levitation. <i>Experimental Thermal and Fluid Science</i> , 2008, 32, 1448-1454.	2.7	72
2	Development of a new noncontact gripper using swirl vanes. <i>Robotics and Computer-Integrated Manufacturing</i> , 2013, 29, 63-70.	9.9	51
3	Experimental investigation on climbing robot using rotation-flow adsorption unit. <i>Robotics and Autonomous Systems</i> , 2018, 105, 112-120.	5.1	45
4	Theoretical and Experimental Study of Factors Affecting the Suction Force of a Bernoulli Gripper. <i>Journal of Engineering Mechanics - ASCE</i> , 2014, 140, .	2.9	44
5	Study on the basic characteristics of a vortex bearing element. <i>International Journal of Advanced Manufacturing Technology</i> , 2013, 64, 1-12.	3.0	37
6	Computational Fluid Dynamics Study of a Noncontact Handling Device Using Air-Swirling Flow. <i>Journal of Engineering Mechanics - ASCE</i> , 2011, 137, 400-409.	2.9	33
7	Experimental comparison of Bernoulli gripper and vortex gripper. <i>International Journal of Precision Engineering and Manufacturing</i> , 2015, 16, 2081-2090.	2.2	30
8	Optimization of outer diameter of Bernoulli gripper. <i>Experimental Thermal and Fluid Science</i> , 2016, 77, 284-294.	2.7	29
9	Performance of a non-contact handling device using swirling flow with various gap height. <i>Journal of Visualization</i> , 2010, 13, 319-326.	1.8	23
10	Effect of supply flow rate on performance of pneumatic non-contact gripper using vortex flow. <i>Experimental Thermal and Fluid Science</i> , 2016, 79, 91-100.	2.7	23
11	Experimental and theoretical study of dynamic characteristics of Bernoulli gripper. <i>Precision Engineering</i> , 2018, 52, 323-331.	3.4	23
12	Pressure-Distribution Methods for Estimating Lifting Force of a Swirl Gripper. <i>IEEE/ASME Transactions on Mechatronics</i> , 2014, 19, 707-718.	5.8	19
13	Experimental comparison of drag-wiper and roller-wiper glass-cleaning robots. <i>Industrial Robot</i> , 2016, 43, 409-420.	2.1	16
14	Vacuum suction unit based on the zero pressure difference method. <i>Physics of Fluids</i> , 2020, 32, .	4.0	16
15	Development and Analysis of an Electrically Activated Sucker for Handling Workpieces With Rough and Uneven Surfaces. <i>IEEE/ASME Transactions on Mechatronics</i> , 2016, 21, 1024-1034.	5.8	15
16	Experimental study of vortex suction unit-based wall-climbing robot on walls with various surface conditions. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2018, 232, 3977-3991.	2.1	14
17	Visual Positioning of Distant Wall-Climbing Robots Using Convolutional Neural Networks. <i>Journal of Intelligent and Robotic Systems: Theory and Applications</i> , 2020, 98, 603-613.	3.4	8
18	Study on the basic characteristics of a contactless air film conveyor using viscous traction. <i>Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology</i> , 2016, 230, 1139-1148.	1.8	6

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19	Development of Wall-Climbing Robot Using Vortex Suction Unit and Its Evaluation on Walls with Various Surface Conditions. Lecture Notes in Computer Science, 2017, , 179-192.	1.3	6
20	Effect of chamber diameter of vortex gripper on maximum suction force and flow field. Advances in Mechanical Engineering, 2019, 11, 168781401983740.	1.6	6
21	Gap flow with circumferential velocity in annular skirt of vortex gripper. Precision Engineering, 2019, 57, 64-72.	3.4	6
22	Study on the basic characteristics of a noncontact air conveyor for large glass sheets. Advances in Mechanical Engineering, 2017, 9, 168781401769719.	1.6	5
23	Dynamic characteristics of vortex levitation. , 2008, , .		4
24	Modeling and verification of a contactless air film conveyor using a viscous traction principle. International Journal of Precision Engineering and Manufacturing, 2017, 18, 1763-1772.	2.2	4
25	Inertia-enhancement effect of divergent flow on the force characteristics of a Bernoulli gripper. Physics of Fluids, 2021, 33, .	4.0	4
26	Theoretical and Experimental Study and Design Method of Blade Height of a Rotational-Flow Suction Unit in a Wall-Climbing Robot. Journal of Mechanisms and Robotics, 2020, 12, .	2.2	4
27	Suppression of Vortex Precession in a Non-Contact Handling Device by a Circular Column. Journal of Flow Control Measurement & Visualization, 2016, 04, 70-78.	0.1	4
28	Modelling and experimental validation of dynamic characteristics of porous-walled air film for non-contact conveyor system. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2013, 227, 787-797.	1.8	3
29	Stiffness improvement of swirl gripper based on gap height and force estimation. Precision Engineering, 2020, 62, 134-142.	3.4	3
30	Development of following robot for supplying power to solar panel cleaning robot. Industrial Robot, 2022, 49, 88-95.	2.1	3
31	An Experimental Investigation on the Quasi-Static Flotation Transport of a Glass Substrate Using Vortex Bearing Elements. Journal of Flow Control Measurement & Visualization, 2013, 01, 6-12.	0.1	3
32	Development and experimental evaluation of air flotation element with additional air intake capacity. Lubrication Science, 2015, 27, 397-411.	2.1	2
33	Force characteristics and two-dimensional pressure fields of air flotation units with different numbers and distribution radii of orifices. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2020, 234, 108-120.	2.1	2
34	Theoretical modeling and experimental study of pressure fields of inclined airflow film. Precision Engineering, 2021, 67, 14-23.	3.4	2
35	Experimental investigation on nozzle diameter of vortex gripper. Assembly Automation, 2021, 41, 1-9.	1.7	2
36	Convolutional network-based method for wall-climbing robot direction angle measurement. Industrial Robot, 2019, 46, 863-869.	2.1	1

#	ARTICLE	IF	CITATIONS
37	Force Characteristics of Rotating Air Film and Flow Closed-Loop for Noncontact Adsorption. , 2019, , .		1
38	Convolutional network-based method for wall-climbing robot direction angle measurement. , 2019, , .		1
39	Two-dimensional pressure field and backflow in the annular skirt of vortex gripper. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2020, , 095440622097404.	2.1	1
40	Efficiency Improvement of Electrically Activated Rotation-Flow Suction Unit Based on Drag Torque and Suction Force Modeling. IEEE/ASME Transactions on Mechatronics, 2020, 25, 882-893.	5.8	1
41	Optimization of mechanical performance of a Bernoulli gripper based on the force characteristic curve synthesis method. Industrial Robot, 2022, 49, 1169.	2.1	1
42	Development of Vacuum Suction Unit Using Flame Extinguishment. , 2018, , .		0
43	Force Characteristics of Rotating Air Film and Flow Closed-Loop for Noncontact Adsorption. IEEE/ASME Transactions on Mechatronics, 2020, 25, 2835-2845.	5.8	0
44	Bubble growth in water vortex unit and its effect on suction force. Physics of Fluids, 0, , .	4.0	0