

TaeWon Seo

List of Publications by Year in descending order

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145
papers

1,646
citations

361413

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434195

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145
all docs

145
docs citations

145
times ranked

834
citing authors

#	ARTICLE	IF	CITATIONS
1	Tank-Like Module-Based Climbing Robot Using Passive Compliant Joints. IEEE/ASME Transactions on Mechatronics, 2013, 18, 397-408.	5.8	110
2	Survey on Glass And Façade-Cleaning Robots: Climbing Mechanisms, Cleaning Methods, and Applications. International Journal of Precision Engineering and Manufacturing - Green Technology, 2019, 6, 367-376.	4.9	60
3	Six-Degree-of-Freedom Hovering Control of an Underwater Robotic Platform With Four Tilting Thrusters via Selective Switching Control. IEEE/ASME Transactions on Mechatronics, 2015, 20, 2370-2378.	5.8	59
4	High-payload climbing and transitioning by compliant locomotion with magnetic adhesion. Robotics and Autonomous Systems, 2012, 60, 1308-1316.	5.1	49
5	AnyClimb: A New Wall-Climbing Robotic Platform for Various Curvatures. IEEE/ASME Transactions on Mechatronics, 2016, 21, 1812-1821.	5.8	49
6	Series of Multilinked Caterpillar Track-Type Climbing Robots. Journal of Field Robotics, 2016, 33, 737-750.	6.0	45
7	Lightweight Multi-DOF Manipulator With Wire-Driven Gravity Compensation Mechanism. IEEE/ASME Transactions on Mechatronics, 2017, 22, 1308-1314.	5.8	45
8	STEP: A New Mobile Platform With 2-DOF Transformable Wheels for Service Robots. IEEE/ASME Transactions on Mechatronics, 2020, 25, 1859-1868.	5.8	40
9	Development of a wall-climbing platform with modularized wall-cleaning units. Automation in Construction, 2017, 83, 1-18.	9.8	38
10	A new design methodology for four-bar linkage mechanisms based on derivations of coupler curve. Mechanism and Machine Theory, 2016, 100, 138-154.	4.5	34
11	AnyClimb-II: Dry-adhesive linkage-type climbing robot for uneven vertical surfaces. Mechanism and Machine Theory, 2018, 124, 197-210.	4.5	33
12	Kinematic analysis and experimental verification on the locomotion of gecko. Journal of Bionic Engineering, 2009, 6, 246-254.	5.0	29
13	Unmanned High-Rise Façade Cleaning Robot Implemented on a Gondola: Field Test on 000-Building in Korea. IEEE Access, 2019, 7, 30174-30184.	4.2	29
14	Gait planning based on kinematics for a quadruped gecko model with redundancy. Robotics and Autonomous Systems, 2010, 58, 648-656.	5.1	28
15	Optimal design of hand-carrying rocker-bogie mechanism for stair climbing. Journal of Mechanical Science and Technology, 2013, 27, 125-132.	1.5	26
16	Steerable dry-adhesive linkage-type wall-climbing robot. Mechanism and Machine Theory, 2020, 153, 103987.	4.5	24
17	Numerical hybrid Taguchi-random coordinate search algorithm for path synthesis. Mechanism and Machine Theory, 2016, 102, 203-216.	4.5	23
18	Design and Force-Tracking Impedance Control of 2-DOF Wall-Cleaning Manipulator via Disturbance Observer. IEEE/ASME Transactions on Mechatronics, 2020, 25, 1487-1498.	5.8	22

#	ARTICLE	IF	CITATIONS
19	FlipBot: A new field robotic platform for fast stair climbing. International Journal of Precision Engineering and Manufacturing, 2013, 14, 1909-1914.	2.2	21
20	Dynamic analysis during internal transition of a compliant multi-body climbing robot with magnetic adhesion. Journal of Mechanical Science and Technology, 2014, 28, 5175-5187.	1.5	21
21	Curved-Spoke Tri-Wheel Mechanism for Fast Stair-Climbing. IEEE Access, 2019, 7, 173766-173773.	4.2	21
22	Optimal design of the front linkage of a hydraulic excavator for multi-objective function. Journal of Mechanical Science and Technology, 2014, 28, 3103-3111.	1.5	20
23	Shape-Morphing Wheel Design and Analysis for Step Climbing in High Speed Locomotion. IEEE Robotics and Automation Letters, 2020, 5, 1977-1982.	5.1	20
24	Combot: Compliant climbing robotic platform with transitioning capability and payload capacity. , 2012,, .		19
25	Water and ground-running robotic platform by repeated motion of six spherical footpads. IEEE/ASME Transactions on Mechatronics, 2015,, 1-1.	5.8	18
26	Optimal configuration and parametric design of an underwater vehicle manipulator system for a valve task. Mechanism and Machine Theory, 2018, 123, 76-88.	4.5	18
27	Switching PD-based sliding mode control for hovering of a tilting-thruster underwater robot. PLoS ONE, 2018, 13, e0194427.	2.5	18
28	Position-Tracking Control of Dual-Rope Winch Robot With Rope Slip Compensation. IEEE/ASME Transactions on Mechatronics, 2021, 26, 1754-1762.	5.8	18
29	A new planar 3-DOF parallel mechanism with continuous 360-degree rotational capability. Journal of Mechanical Science and Technology, 2009, 23, 3088-3094.	1.5	17
30	Design of a slider-crank leg mechanism for mobile hopping robotic platforms. Journal of Mechanical Science and Technology, 2013, 27, 207-214.	1.5	17
31	Optimization-Based Nonimpact Rolling Locomotion of a Variable Geometry Truss. IEEE Robotics and Automation Letters, 2019, 4, 747-752.	5.1	17
32	Dual Servo Control of a High-Tilt 3-DOF Microparallel Positioning Platform. IEEE/ASME Transactions on Mechatronics, 2009, 14, 616-625.	5.8	16
33	Tail-Assisted Mobility and Stability Enhancement in Yaw and Pitch Motions of a Water-Running Robot. IEEE/ASME Transactions on Mechatronics, 2017, 22, 1207-1217.	5.8	16
34	Dual Ascender Robot With Position Estimation Using Angle and Length Sensors. IEEE Sensors Journal, 2020, 20, 7422-7432.	4.7	16
35	R-Track: Separable Modular Climbing Robot Design for Wall-to-Wall Transition. IEEE Robotics and Automation Letters, 2021, 6, 1036-1042.	5.1	16
36	Rolling stability enhancement via balancing tail for a water-running robot. Journal of Bionic Engineering, 2015, 12, 395-405.	5.0	15

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37	Hexapedal robotic platform for amphibious locomotion on ground and water surface. Journal of Bionic Engineering, 2016, 13, 39-47.	5.0	14
38	Optimal Parameter Design of a Cleaning Device for Vertical Glass Surfaces. International Journal of Precision Engineering and Manufacturing, 2019, 20, 233-241.	2.2	14
39	Parallel 2-DoF manipulator for wall-cleaning applications. Automation in Construction, 2019, 101, 209-217.	9.8	14
40	Vibration Reduction of Flexible Rope-Driven Mobile Robot for Safe Façade Operation. IEEE/ASME Transactions on Mechatronics, 2021, 26, 1812-1819.	5.8	14
41	High-tilt parallel positioning mechanism development and cutter path simulation for laser micro-machining. CAD Computer Aided Design, 2007, 39, 218-228.	2.7	13
42	Optimal torque distribution method for a redundantly actuated 3-RRR parallel robot using a geometrical approach. Robotica, 2013, 31, 549-554.	1.9	13
43	Optimization of a redundantly actuated 5R symmetrical parallel mechanism based on structural stiffness. Robotica, 2015, 33, 1973-1983.	1.9	13
44	Optimal design of toggle-linkage mechanism for clamping applications. Mechanism and Machine Theory, 2018, 120, 203-212.	4.5	13
45	Generalized solution for a sub-problem of inverse kinematics based on product of exponential formula. Journal of Mechanical Science and Technology, 2018, 32, 2299-2307.	1.5	13
46	Singularity analysis of a planar parallel mechanism with revolute joints based on a geometric approach. International Journal of Precision Engineering and Manufacturing, 2013, 14, 1369-1375.	2.2	12
47	Design, modeling and optimization of an underwater manipulator with four-bar mechanism and compliant linkage. Journal of Mechanical Science and Technology, 2016, 30, 4337-4343.	1.5	12
48	Geometrical kinematic solution of serial spatial manipulators using screw theory. Mechanism and Machine Theory, 2017, 116, 404-418.	4.5	12
49	Novel Angled Spoke-Based Mobile Robot Design for Agile Locomotion With Obstacle-Overcoming Capability. IEEE/ASME Transactions on Mechatronics, 2020, 25, 1980-1989.	5.8	12
50	Design of Window-Cleaning Robotic Manipulator With Compliant Adaptation Capability. IEEE/ASME Transactions on Mechatronics, 2020, 25, 1878-1885.	5.8	12
51	Façade Cleaning Robot With Manipulating and Sensing Devices Equipped on a Gondola. IEEE/ASME Transactions on Mechatronics, 2021, 26, 1719-1727.	5.8	12
52	Empirical Study on Shapes of the Foot Pad and Walking Gaits for Water-Running Robots. Journal of Bionic Engineering, 2014, 11, 572-580.	5.0	11
53	Analysis and Experiment on the Steering Control of a Water-running Robot Using Hydrodynamic Forces. Journal of Bionic Engineering, 2017, 14, 34-46.	5.0	10
54	Modeling and verification of multi-winding rope winch for facade operation. Mechanism and Machine Theory, 2021, 155, 104105.	4.5	10

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55	Development and kinematic calibration for measurement structure of a micro parallel mechanism platform. Journal of Mechanical Science and Technology, 2008, 22, 746-754.	1.5	9
56	Compliant track-wheeled climbing robot with transitioning ability and high-payload capacity. , 2011, , .		9
57	Stiffness synthesis of 3-DOF planar 3RPR parallel mechanisms. Robotica, 2016, 34, 2776-2787.	1.9	9
58	Positioning control of an underwater robot with tilting thrusters via decomposition of thrust vector. International Journal of Control, Automation and Systems, 2017, 15, 2283-2291.	2.7	9
59	Optimal Trajectory Planning for 2-DOF Adaptive Transformable Wheel. IEEE Access, 2020, 8, 14452-14459.	4.2	9
60	UKF-Based Sensor Fusion Method for Position Estimation of a 2-DOF Rope Driven Robot. IEEE Access, 2021, 9, 12301-12308.	4.2	9
61	Robust Design of a Rope Ascender Based on Geometric Parameters of Traction Sheave. International Journal of Precision Engineering and Manufacturing, 2021, 22, 965-974.	2.2	9
62	Simulation-based semi-empirical comparative study of fixed and vectored thruster configurations for an underwater vehicle. Ocean Engineering, 2021, 234, 109231.	4.3	9
63	Optimal Design of Klann-linkage based Walking Mechanism for Amphibious Locomotion on Water and Ground. Journal of Institute of Control, Robotics and Systems, 2014, 20, 936-941.	0.2	9
64	A Compact and Agile Angled-Spoke Wheel-Based Mobile Robot for Uneven and Granular Terrains. IEEE Robotics and Automation Letters, 2022, 7, 1620-1626.	5.1	9
65	Torque distribution optimization of redundantly actuated planar parallel mechanisms based on a null-space solution. Robotica, 2014, 32, 1125-1134.	1.9	8
66	A new non-servo motor type automatic tool changing mechanism based on rotational transmission with dual four-bar linkages. Meccanica, 2018, 53, 2447-2459.	2.0	8
67	Design and Force-Tracking Impedance Control of a 2-DOF Wall-Cleaning Manipulator Using Disturbance Observer and Sliding Mode Control. , 2018, , .		8
68	Modular Two-Degree-of-Freedom Transformable Wheels Capable of Overcoming Obstacle. IEEE Robotics and Automation Letters, 2022, 7, 914-920.	5.1	8
69	Empirical modeling of rotating thruster for underwater robotic platform. Journal of Marine Science and Technology, 2015, 20, 118-126.	2.9	7
70	A geometric approach for singularity analysis of 3-DOF planar parallel manipulators using Grassmannâ€Cayley algebra. Robotica, 2017, 35, 511-520.	1.9	7
71	Disturbance compensation of a dual-arm underwater robot via redundant parallel mechanism theory. Meccanica, 2017, 52, 1711-1719.	2.0	7
72	Performance Comparison of Adaptive Mechanisms of Cleaning Module to Overcome Step-Shaped Obstacles on FaÃ§ades. IEEE Access, 2019, 7, 159879-159887.	4.2	7

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73	Highly Repeatable Rope Winch Design With Multiple Windings and Differential Gear Mechanism. IEEE Access, 2020, 8, 87291-87308.	4.2	7
74	Reconfiguration Solution of a Variable Topology Truss: Design and Experiment. IEEE Robotics and Automation Letters, 2020, 5, 1939-1945.	5.1	7
75	Mechanical and Empirical Parameter Design on a Multi-wound Differential Pulley Winch for a Wall-Climbing Robot. International Journal of Precision Engineering and Manufacturing, 2020, 21, 857-867.	2.2	7
76	Design of a 3-DOF Parallel Manipulator to Compensate for Disturbances in Facade Cleaning. IEEE Access, 2020, 8, 9015-9022.	4.2	7
77	Polygon-Based Random Tree Search Planning for Variable Geometry Truss Robot. IEEE Robotics and Automation Letters, 2020, 5, 813-819.	5.1	7
78	2-Dimensional Dynamic Analysis of Inverted Pendulum Robot With Transformable Wheel for Overcoming Steps. IEEE Robotics and Automation Letters, 2022, 7, 921-927.	5.1	7
79	Hovering control of an underwater robot with tilting thrusters using the decomposition and compensation method based on a redundant actuation model. Robotics and Autonomous Systems, 2022, 150, 103995.	5.1	7
80	Optimal design of 6-DOF eclipse mechanism based on task-oriented workspace. Robotica, 2012, 30, 1041-1048.	1.9	6
81	Experimental study on drag-induced balancing via a static tail for water-running robots. Journal of Bionic Engineering, 2016, 13, 537-543.	5.0	6
82	Comparative study of leg mechanisms for fast and stable water-running. International Journal of Precision Engineering and Manufacturing, 2016, 17, 379-385.	2.2	6
83	Pol-E: Large-obstacle overcoming based on energy conversion method using an elastic link. International Journal of Control, Automation and Systems, 2017, 15, 1835-1843.	2.7	6
84	Robust Design of a Screw-Based Crawling Robot on a Granular Surface. IEEE Access, 2021, 9, 103988-103995.	4.2	6
85	A Tethered Façade Cleaning Robot Based on a Dual Rope Windlass Climbing Mechanism: Design and Experiments. IEEE/ASME Transactions on Mechatronics, 2022, 27, 1982-1989.	5.8	6
86	A Modified Rocker-Bogie Mechanism With Fewer Actuators and High Mobility. IEEE Robotics and Automation Letters, 2022, 7, 8752-8758.	5.1	6
87	Hovering underwater robotic platform with four tilting thrusters. , 2014, , .		5
88	Back-stepping control design for an underwater robot with tilting thrusters. , 2015, , .		5
89	Development of Efficient Strategy for Square Peg-in-Hole Assembly Task. International Journal of Precision Engineering and Manufacturing, 2018, 19, 1323-1330.	2.2	5
90	Position-based Impedance Control of a 2-DOF Compliant Manipulator for a Facade Cleaning Operation. , 2020, , .		5

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91	Empirical Optimization and Evaluation for Multi-Nozzle Cleaning Device. International Journal of Precision Engineering and Manufacturing, 2021, 22, 1229-1236.	2.2	5
92	Finger Clamping Unit: A Clamping Device with a Large Clamping Range. International Journal of Precision Engineering and Manufacturing, 2021, 22, 313-327.	2.2	5
93	A new instantaneous center analysis methodology for planar closed chains via graphical representation. International Journal of Control, Automation and Systems, 2016, 14, 1528-1534.	2.7	4
94	High-rate controlled turning with a pair of miniature legged robots. , 2017, , .		4
95	Singularity-inducing compliant toggle linkage mechanism for large clamping range. Mechanism and Machine Theory, 2019, 135, 40-53.	4.5	4
96	Comparative study on underwater manipulation methods for valve-turning operation. Meccanica, 2019, 54, 901-916.	2.0	4
97	Contaminated Facade Identification Using Convolutional Neural Network and Image Processing. IEEE Access, 2020, 8, 180010-180021.	4.2	4
98	Real-time UVMS torque distribution algorithm based on weighting matrix. PLoS ONE, 2021, 16, e0253771.	2.5	4
99	Type Synthesis and Kinematic Analysis of a 2-DOF Shape-Morphing Wheel Mechanism for Step-Overcoming. IEEE Access, 2021, 9, 86500-86513.	4.2	4
100	Gain Optimization of a Back-Stepping Controller for 6-Dof Underwater Robotic Platform. Journal of the Korean Society for Precision Engineering, 2013, 30, 1031-1039.	0.2	4
101	Comparison of linear and torsion-based dynamic modeling of a jumping robot via energy conversion. International Journal of Precision Engineering and Manufacturing, 2017, 18, 1529-1535.	2.2	3
102	Robust Design of Detecting Contaminants in Façade Cleaning Applications. IEEE Access, 2020, 8, 2869-2884.	4.2	3
103	A New Lizard-Inspired Robot With S-Shaped Lateral Body Motions. IEEE/ASME Transactions on Mechatronics, 2020, 25, 130-141.	5.8	3
104	Dynamic Modeling of a Novel ATC Mechanism based on 4-bar Linkage. Journal of Institute of Control, Robotics and Systems, 2016, 22, 307-314.	0.2	3
105	Automated technique for high-pressure water-based window cleaning and accompanying parametric study. PLoS ONE, 2020, 15, e0242413.	2.5	3
106	Obstacle-Overcoming and Stabilization Mechanism of a Rope-Riding Mobile Robot on a Façade. IEEE Robotics and Automation Letters, 2022, 7, 1372-1378.	5.1	3
107	Compliant wall-climbing robotic platform for various curvatures. , 2015, , .		2
108	Steering control of a water-running robot using an active tail. , 2016, , .		2

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109	Geometrical kinematic and static analyses of planar manipulators using a barycentric formula. Mechanism and Machine Theory, 2016, 97, 72-84.	4.5	2
110	Four-bar linkage-based automatic tool changer: Dynamic modeling and torque optimization. Journal of Mechanical Science and Technology, 2017, 31, 2407-2413.	1.5	2
111	Lateral Disturbance Compensation of a Gondola-Embedded Façade Cleaning Robot via Compliant Planar Arm Structure. IEEE/ASME Transactions on Mechatronics, 2022, 27, 3265-3274.	5.8	2
112	Kinematic Optimal Design on a New Robotic Platform for Stair Climbing. Journal of the Korean Society for Precision Engineering, 2013, 30, 427-433.	0.2	2
113	Hovering Performance Improvement by Modifying COG of Underwater Robotic Platform. Journal of the Korean Society for Precision Engineering, 2015, 32, 661-666.	0.2	2
114	Rope Modeling and Verification for the Robotic Platform of the Wall Cleaning Robot (ROPE RIDE). The Journal of Korea Robotics Society, 2019, 14, 191-195.	0.4	2
115	Optimal Design of a Four-bar Linkage Manipulator for Starfish-Capture Robot Platform. Journal of the Korean Society for Precision Engineering, 2013, 30, 961-968.	0.2	2
116	Gain Optimization of a Controller with Decomposition of Thrust Force and Actuation Limit Algorithm for a Tilted Thrusting Underwater Robot. Journal of the Korean Society for Precision Engineering, 2019, 36, 1025-1031.	0.2	2
117	Position Error Compensation of Façade-Cleaning Robot by Optimal Rope Winch Design. IEEE Access, 2021, 9, 143392-143405.	4.2	2
118	Optimal design of geometric parameters of a four-bar based manipulator for an underwater robotic platform. , 2013, , .		1
119	Low-inertia serial manipulator with counterbalance mechanism. , 2016, , .		1
120	Inverse statics analysis of planar parallel manipulators via Grassmann-Cayley algebra. International Journal of Control, Automation and Systems, 2016, 14, 1389-1394.	2.7	1
121	Parametric Study on Design Parameters of Water-running Robot Based on Dynamic Simulation. Journal of Bionic Engineering, 2018, 15, 960-970.	5.0	1
122	Linkage-Type Walking Mechanism for Unstructured Vertical Wall. , 2018, , .		1
123	Experimental tolerance design of a six-bar toggle-linkage mechanism using near-singularity characteristics. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2019, 41, 1.	1.6	1
124	Polygon-Based Random Tree Search Algorithm for a Size-Changing Robot. IEEE Robotics and Automation Letters, 2022, 7, 8100-8105.	5.1	1
125	Numerical Automated Stiffness Optimization of a Thin Television Back-Cover Module: Research on the Industrial Problem. International Journal of Precision Engineering and Manufacturing, 2021, 22, 1583-1594.	2.2	1
126	Experimental Study on Rolling Stability of Quadruped and Hexapedal Water Running Robots. Journal of the Korean Society for Precision Engineering, 2013, 30, 1023-1029.	0.2	1

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127	Slip Modeling and Simulation of Spiral Zipper Friction-Driven Prismatic Actuator. , 2021, , .		1
128	Detection method for transparent window cleaning device, image processing approach. Scientific Reports, 2022, 12, 3229.	3.3	1
129	Performance Enhancement of a Six-Bar Linkage-Based Clamping Device Using a Curved Slide Joint. International Journal of Precision Engineering and Manufacturing, 2022, 23, 741-751.	2.2	1
130	Novel robotic platform for stable stair climbing by flipping locomotion. , 2013, , .		0
131	Kinematic parameter design of a novel compliant field robotic platform for large-obstacle overcoming. , 2015, , .		0
132	Robust optimal design of a tail's geometry for stable water-running robots. , 2015, , .		0
133	Inverse dynamic modeling of a stair-climbing robotic platform with flip locomotion. , 2015, , .		0
134	Four-bar linkage-based tool changing mechanism and torque compensation based on dynamic characteristics. , 2016, , .		0
135	Empirical study on gallop/trot gaits for water-running robot. , 2017, , .		0
136	Dynamic analysis on hexapedal water-running robot with compliant joints. , 2017, , .		0
137	Methods to Eliminate Surging Motion in a Conveyor System Considering Industrial Case Studies. International Journal of Precision Engineering and Manufacturing, 2019, 20, 583-592.	2.2	0
138	Novel Mobile Mechanism Design for an Obstacle-Overcoming Robot Using Rotating Spokes. IEEE Access, 2021, 9, 122766-122773.	4.2	0
139	Special Issue on Advances in Bio-Inspired Robots. Applied Sciences (Switzerland), 2021, 11, 8492.	2.5	0
140	Effects of body movement on yaw motion in bipedal running lizard by dynamic simulation. PLoS ONE, 2020, 15, e0243798.	2.5	0
141	Automated technique for high-pressure water-based window cleaning and accompanying parametric study. , 2020, 15, e0242413.		0
142	Automated technique for high-pressure water-based window cleaning and accompanying parametric study. , 2020, 15, e0242413.		0
143	Automated technique for high-pressure water-based window cleaning and accompanying parametric study. , 2020, 15, e0242413.		0
144	Automated technique for high-pressure water-based window cleaning and accompanying parametric study. , 2020, 15, e0242413.		0

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145	Simulation Study on the Locomotion Algorithm of Variable Topology Truss Robot based on Motion Primitives. , 2022, , .		0