

# Zhangguo Yu

## List of Publications by Year in descending order

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125  
papers

911  
citations

567281

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126  
all docs

126  
docs citations

126  
times ranked

610  
citing authors

#	ARTICLE	IF	CITATIONS
1	Resistant Compliance Control for Biped Robot Inspired by Humanlike Behavior. IEEE/ASME Transactions on Mechatronics, 2022, 27, 3463-3473.	5.8	21
2	Explosive Electric Actuator and Control for Legged Robots. Engineering, 2022, 12, 39-47.	6.7	7
3	Adaptability Control Towards Complex Ground Based on Fuzzy Logic for Humanoid Robots. IEEE Transactions on Fuzzy Systems, 2022, 30, 1574-1584.	9.8	21
4	Stride Length and Stepping Duration Adjustments Based on Center of Mass Stabilization Control. IEEE/ASME Transactions on Mechatronics, 2022, 27, 5005-5015.	5.8	2
5	Controllable Height Hopping of a Parallel Legged Robot. Applied Sciences (Switzerland), 2021, 11, 1421.	2.5	7
6	Dynamic Torso Compliance Control for Standing and Walking Balance of Position-Controlled Humanoid Robots. IEEE/ASME Transactions on Mechatronics, 2021, 26, 679-688.	5.8	14
7	Development of robotic polishing/fettling system on ceramic pots. International Journal of Advanced Robotic Systems, 2021, 18, 172988142110128.	2.1	7
8	A guide-weight criterion-based topology optimization method for maximizing the fundamental eigenfrequency of the continuum structure. Structural and Multidisciplinary Optimization, 2021, 64, 2135-2148.	3.5	5
9	A Unified Control Framework for High-Dynamic Motions of Biped Robots. , 2021, , .		6
10	A Swing-foot Trajectory Generation Method For Biped Walking*. , 2021, , .		2
11	Motion Control for Underactuated Robots Adaptable to Uneven Terrain by Decomposing Body Balance and Velocity Tracking. , 2021, , .		3
12	A vertical jump optimization strategy for one-legged robot with variable reduction ratio joint. , 2021, , .		6
13	Bio-Inspired Take-Off Maneuver and Control in Vertical Jumping for Quadruped Robot with Manipulator. Micromachines, 2021, 12, 1189.	2.9	6
14	Design and Implementation of Symmetric Legged Robot for Highly Dynamic Jumping and Impact Mitigation. Sensors, 2021, 21, 6885.	3.8	3
15	Continuous Jumping Control Based on Virtual Model Control for a One-Leg Robot Platform. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2021, , 24-33.	0.6	0
16	Falling Prediction based on Machine Learning for Biped Robots. Journal of Intelligent and Robotic Systems: Theory and Applications, 2021, 103, 1.	3.4	6
17	Autonomous Navigation with Human Observation for a Biped Robot. , 2021, , .		3
18	Computationally Efficient Coordinate Transformation for Field-Oriented Control Using Phase Shift of Linear Hall-Effect Sensor Signals. IEEE Transactions on Industrial Electronics, 2020, 67, 3442-3451.	7.9	16

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19	Combination of Hardware and Control to Reduce Humanoids Fall Damage. International Journal of Humanoid Robotics, 2020, 17, 2050002.	1.1	3
20	Structural Design and Crawling Pattern Generator of a Planar Quadruped Robot for High-Payload Locomotion. Sensors, 2020, 20, 6543.	3.8	19
21	Dynamic Torso Posture Compliance Control for Standing Balance of Position-Controlled Humanoid Robots. , 2020, , .		3
22	A model to predict ground reaction force for elastically-suspended backpacks. Gait and Posture, 2020, 82, 118-125.	1.4	15
23	A Novel Foot Contact Probability Estimator for Biped Robot State Estimation. , 2020, , .		3
24	Ball Tracking and Trajectory Prediction for Table-Tennis Robots. Sensors, 2020, 20, 333.	3.8	26
25	A Compliance Control Method Based on Viscoelastic Model for Position-Controlled Humanoid Robots. , 2020, , .		3
26	Gait Transition Between Standing and Falling Down for a Humanoid Robot. Mechanisms and Machine Science, 2019, , 2501-2509.	0.5	3
27	Contact Force/Torque Control Based on Viscoelastic Model for Stable Bipedal Walking on Indefinite Uneven Terrain. IEEE Transactions on Automation Science and Engineering, 2019, 16, 1627-1639.	5.2	26
28	Virtual-model-based compliance control for pushing recovery of position controlled humanoid robots. , 2019, , .		1
29	Dimensionality Reduced Pre-grasp Planning for Bionic Hand Using Q-distance Quality Measurement. , 2019, , .		1
30	A novel hierarchical control strategy for biped robot walking on uneven terrain. , 2019, , .		11
31	Walking Control of Biped Robots on Uneven Terrains Based on SLIP Model. , 2019, , .		3
32	Ankle Torque Control for Steady Walking of Humanoid Robot. , 2019, , .		2
33	Study on Quasi-passive Walking Robot Based on Impulse Thrust. , 2019, , .		0
34	Planning and Control of Forward Jumping Movement of Humanoid Robot. , 2019, , .		0
35	Historical Development of BHR Humanoid Robots. History of Mechanism and Machine Science, 2019, , 310-323.	0.2	5
36	Disturbance Rejection for Biped Walking Using Zero-Moment Point Variation Based on Body Acceleration. IEEE Transactions on Industrial Informatics, 2019, 15, 2265-2276.	11.3	29

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37	A Falling Forwards Protection Strategy for Humanoid Robots. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2019, , 314-322.	0.6	0
38	A Falling Motion Strategy for Humanoids Based on Motion Primitives of Human Falling. Mechanisms and Machine Science, 2018, , 264-272.	0.5	3
39	Falling Prediction and Recovery Control for a Humanoid Robot. , 2018, , .		1
40	Fall Protection of Humanoids Inspired by Human Fall Motion. , 2018, , .		3
41	Development of a Bipedal Robot with Bi-articular Muscle-tendon Complex between Hip and Knee Joint. , 2018, , .		4
42	Simultaneous Prevention of Rotational and Translational Slip for a Humanoid Robot. Applied Sciences (Switzerland), 2018, 8, 1554.	2.5	3
43	Introduction of Toe Mechanism with Bi-articular Tendon into Legged Robot. , 2018, , .		3
44	Turning Gait Planning Method for Humanoid Robots. Applied Sciences (Switzerland), 2018, 8, 1257.	2.5	7
45	Design of a Super Underactuated Dexterous Robotic Hand. , 2018, , .		1
46	Motion Planning for Bipedal Robot to Perform Jump Maneuver. Applied Sciences (Switzerland), 2018, 8, 139.	2.5	12
47	Master-Slave Control of an Intention-Actuated Exoskeletal Robot for Locomotion and Lower Extremity Rehabilitation. International Journal of Precision Engineering and Manufacturing, 2018, 19, 983-991.	2.2	16
48	A novel under-actuated bionic hand and its grasping stability analysis. Advances in Mechanical Engineering, 2017, 9, 168781401668885.	1.6	5
49	Bioinspired Control of Walking With Toe-Off, Heel-Strike, and Disturbance Rejection for a Biped Robot. IEEE Transactions on Industrial Electronics, 2017, 64, 7962-7971.	7.9	43
50	A minimized falling damage method for humanoid robots. International Journal of Advanced Robotic Systems, 2017, 14, 172988141772801.	2.1	9
51	Design and control of robot legs with bi-articular muscle-tendon complex. , 2017, , .		7
52	Design of a rigid mechanism for a knee joint with continuously variable reduction ratio. , 2017, , .		0
53	Trajectory optimization of humanoid robots swinging leg. , 2017, , .		3
54	Biomimetic upper limb mechanism of humanoid robot for shock resistance based on viscoelasticity. , 2017, , .		3

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55	An experimental characterization of human falling down. Mechanical Sciences, 2017, 8, 79-89.	1.0	11
56	Disturbance Rejection Controller for Biped Walking Using Real-Time ZMP Regulation. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2016, , 179-188.	0.6	3
57	Falling protective method for humanoid robots using arm compliance to reduce damage. , 2016, , .		3
58	Exploiting human walking speed transitions using a dynamic bipedal walking robot with controllable stiffness and limb coordination. , 2016, , .		1
59	Cat-inspired mechanical design of self-adaptive toes for a legged robot. , 2016, , .		1
60	Realization of foot rotation by breaking the kinematic contact constraint. Robotica, 2016, 34, 1059-1070.	1.9	0
61	A walking control strategy combining global sensory reflex and leg synchronization. Robotica, 2016, 34, 973-994.	1.9	8
62	Passive buffering arm for a humanoid robot against falling damage. , 2016, , .		2
63	Rolling motion generation of multi-points contact for a humanoid robot. , 2016, , .		2
64	Impact motion control of humanoid robot BHR-5 based on the energy integral method. Advances in Mechanical Engineering, 2016, 8, 168781401562602.	1.6	1
65	Development of a Socially Interactive System with Whole-Body Movements for BHR-4. International Journal of Social Robotics, 2016, 8, 183-192.	4.6	4
66	Gait Planning of Omnidirectional Walk on Inclined Ground for Biped Robots. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2016, 46, 888-897.	9.3	34
67	A torque limiter for safe joint applied to humanoid robots against falling damage. , 2015, , .		10
68	A falling motion control of humanoid robots based on biomechanical evaluation of falling down of humans. , 2015, , .		10
69	The arm and waist motion design of humanoid robot for fast walking. , 2015, , .		0
70	A Robust Vision Module for Humanoid Robotic Ping-Pong Game. International Journal of Advanced Robotic Systems, 2015, 12, 35.	2.1	6
71	Designation and Control of Landing Points for Competitive Robotic Table Tennis. International Journal of Advanced Robotic Systems, 2015, 12, 92.	2.1	5
72	Design and similarity evaluation on humanoid facial expression. , 2015, , .		0

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73	Biomimetic inspiration for PKM torso design in humanoid robots. , 2015, , .		4
74	Integral Acceleration Generation for Slip Avoidance in a Planar Humanoid Robot. IEEE/ASME Transactions on Mechatronics, 2015, 20, 2924-2934.	5.8	11
75	Hand-eye servo and impedance control for manipulator arm to capture target satellite safely. Robotica, 2015, 33, 848-864.	1.9	23
76	A load-adaptive controller for humanoid robots. , 2015, , .		0
77	System design of a 9-DOF robot capable of fast and flexible rally task. , 2014, , .		2
78	Bipedal walking with toe-off, heel-strike and compliance with external disturbances. , 2014, , .		3
79	A universal pattern generator for biped walking on 3D slopes. , 2014, , .		1
80	Stability control for biped walking based on phase modification during double support period. , 2014, , .		1
81	Decentralised adaptive control of cooperating Robotic manipulators with disturbance observers. IET Control Theory and Applications, 2014, 8, 515-521.	2.1	37
82	Fast trajectory planning of reactive operation considering manipulability for a humanoid. , 2014, , .		1
83	Human-like walking patterns with pelvic rotation for a humanoid robot. , 2014, , .		4
84	Bio-inspired falling motion control for a biped humanoid robot. , 2014, , .		11
85	Effect of the &#x201C;torso protective strategy&#x201D; for safe falling of a biped humanoid robot. , 2014, , .		0
86	Anti-skid foot design for a humanoid robot. , 2014, , .		4
87	A new flexible controller for a humanoid robot that considers visual and force information interaction. , 2014, , .		0
88	Slip prevention of a humanoid robot by coordinating acceleration vector. , 2014, , .		1
89	Modeling and design of a humanoid robotic face based on an active drive points model. Advanced Robotics, 2014, 28, 379-388.	1.8	20
90	Omnidirectional Disturbance Rejection for a Biped Robot by Acceleration Optimization. Intelligent Automation and Soft Computing, 2014, 20, 471-485.	2.1	2

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91	Robust push recovery by whole-body dynamics control with extremal accelerations. Robotica, 2014, 32, 467-476.	1.9	13
92	Design of a Redundant Manipulator for Playing Table Tennis towards Human-Like Stroke Patterns. Advances in Mechanical Engineering, 2014, 6, 807458.	1.6	8
93	Design and Development of the Humanoid Robot BHR-5. Advances in Mechanical Engineering, 2014, 6, 852937.	1.6	40
94	Experiments of a Human-Robot Social Interactive System with Whole-Body Movements. Mechanisms and Machine Science, 2014, , 501-508.	0.5	1
95	Control of one-legged robot hopping in place. , 2013, , .		5
96	Hand-eye servo and flexible control of an anthropomorphic arm. , 2013, , .		2
97	Trot pattern generation for quadruped robot based on the ZMP stability margin. , 2013, , .		8
98	Integrated translational and rotational COG motion to enhance the stability for humanoid robots. , 2013, , .		0
99	Design of a humanoid ping-pong player robot with redundant joints. , 2013, , .		13
100	Development of leg mechanism using a knee joint with variable reduction ratio adaptive to load. , 2013, , .		6
101	A dual-motor joint model for humanoid robots. , 2013, , .		1
102	The Mechanism of Yaw Torque Compensation in the Human and Motion Design for Humanoid Robots. International Journal of Advanced Robotic Systems, 2013, 10, 57.	2.1	19
103	Teleoperation of humanoid motion using 3G communication network. , 2012, , .		1
104	Stepping to recover: A 3D-LIPM based push recovery and fall management scheme for biped robots. , 2012, , .		4
105	Inverse dynamics control with acceleration optimization on a force-controlled bipedal robot. , 2012, , .		4
106	Humanoid walking pattern generation based on the ground reaction force features of human walking. , 2012, , .		6
107	Design and workspace analysis of a light weight and high stiffness arm. , 2011, , .		2
108	An improved ZMP trajectory design for the biped robot BHR. , 2011, , .		5

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109	System design of an Anthropomorphic arm robot for dynamic interaction task. , 2011, , .		3
110	Biped walking planning using Extended Linear Inverted Pendulum Mode with a continuous moving ZMP. , 2011, , .		4
111	Ping-pong trajectory perception and prediction by a PC based High speed four-camera vision system. , 2011, , .		2
112	Design and similarity evaluation on humanoid motion based on human motion capture. Robotica, 2010, 28, 737-745.	1.9	30
113	Control design of a biped humanoid robot capable of facial expression. , 2010, , .		4
114	Design and experiment of an open control system for a humanoid robot. , 2010, , .		1
115	Mechanical design and balance control of a Humanoid Waist Joint. , 2010, , .		3
116	Dynamic model based ball trajectory prediction for a robot ping-pong player. , 2010, , .		22
117	Controller design and real-time fault diagnosis for a humanoid robot. , 2010, , .		0
118	Real-time foot attitude estimation for a humanoid robot based on inertial sensors and force sensor. , 2009, , .		2
119	On-line trajectory generation for a humanoid robot based on combination of off-line patterns. , 2009, , .		2
120	Mechanical design of a light weight and high stiffness arm for humanoids. , 2009, , .		3
121	Flexible foot design for a humanoid robot. , 2008, , .		12
122	Generation of humanoid walking pattern based on human walking measurement. , 2008, , .		12
123	Computer control system and walking pattern control for a humanoid robot. , 2008, , .		14
124	Distributed Control System for a Humanoid Robot. , 2007, , .		16
125	Measurement of human walking and generation of humanoid walking pattern. , 2007, , .		5