Jingang Yi

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

133 papers	2,084 citations	25 h-index	40 g-index
156 ext. papers	2,582 ext. citations	3.9 avg, IF	5.32 L-index

#	Paper	IF	Citations
133	Disturbance-Observer-Based Hysteresis Compensation for Piezoelectric Actuators. *IEEE/ASME Transactions on Mechatronics*, **2009**, 14, 456-464	5.5	134
132	Kinematic Modeling and Analysis of Skid-Steered Mobile Robots With Applications to Low-Cost Inertial-Measurement-Unit-Based Motion Estimation. *IEEE Transactions on Robotics*, **2009**, 25, 1087-1097	6.5	121
131	Steady-State Throughput and Scheduling Analysis of Multicluster Tools: A Decomposition Approach. *IEEE Transactions on Automation Science and Engineering*, **2008**, 5, 321-336	4.9	93
130	Multicluster tools scheduling: an integrated event graph and network model approach. *IEEE Transactions on Semiconductor Manufacturing*, **2006**, 19, 339-351	2.6	92
129	Optimal Scheduling of Multicluster Tools With Constant Robot Moving Times, Part I: Two-Cluster Analysis. *IEEE Transactions on Automation Science and Engineering*, **2011**, 8, 5-16	4.9	90
128	Mechatronic Systems Design for an Autonomous Robotic System for High-Efficiency Bridge Deck Inspection and Evaluation. *IEEE/ASME Transactions on Mechatronics*, **2013**, 18, 1655-1664	5.5	75
127	A Piezo-Sensor-Based "Smart Tire" System for Mobile Robots and Vehicles. *IEEE/ASME Transactions on Mechatronics*, **2008**, 13, 95-103	5.5	61
126	Emergency Braking Control with an Observer-based Dynamic Tire/Road Friction Model and Wheel Angular Velocity Measurement. *Vehicle System Dynamics*, **2003**, 39, 81-97	2.8	58
125	Optimal Scheduling of Multicluster Tools With Constant Robot Moving Times, Part II: Tree-Like Topology Configurations. *IEEE Transactions on Automation Science and Engineering*, **2011**, 8, 17-28	4.9	56
124	On stable simultaneous input and state estimation for discrete-time linear systems. *International Journal of Adaptive Control and Signal Processing*, **2011**, 25, 671-686	2.8	55
123	A Vibration-Based PMN-PT Energy Harvester. *IEEE Sensors Journal*, **2009**, 9, 731-739	4	53
122	A PVDF-Based Deformation and Motion Sensor: Modeling and Experiments. *IEEE Sensors Journal*, **2008**, 8, 384-391	4	41
121	Macroscopic traffic flow propagation stability for adaptive cruise controlled vehicles. *Transportation Research Part C: Emerging Technologies*, **2006**, 14, 81-95	8.4	37
120	Simultaneous Localization of Multiple Unknown and Transient Radio Sources Using a Mobile Robot. *IEEE Transactions on Robotics*, **2012**, 28, 668-680	6.5	34
119	Rider trunk and bicycle pose estimation with fusion of force/inertial sensors. *IEEE Transactions on Biomedical Engineering*, **2013**, 60, 2541-51	5	34
118	On the Stability and Agility of Aggressive Vehicle Maneuvers: A Pendulum-Turn Maneuver Example. *IEEE Transactions on Control Systems Technology*, **2012**, 20, 663-676	4.8	33
117	Stability of macroscopic traffic flow modeling through wavefront expansion. *Transportation Research Part B: Methodological*, **2003**, 37, 661-679	7.2	32

116	Contactless Determination of Electrical Conductivity of One-Dimensional Nanomaterials by Solution-Based Electro-orientation Spectroscopy. *ACS Nano*, **2015**, 9, 5405-12	16.7	30
115	Wearable Sensor System for Detecting Gait Parameters of Abnormal Gaits: A Feasibility Study. *IEEE Sensors Journal*, **2018**, 18, 4234-4241	4	30
114	The Lower Limbs Kinematics Analysis by Wearable Sensor Shoes. *IEEE Sensors Journal*, **2016**, 16, 2627-2638	4	28
113	Whole-Body Pose Estimation in Human Bicycle Riding Using a Small Set of Wearable Sensors. *IEEE/ASME Transactions on Mechatronics*, **2015**, 1-1	5.5	28
112	Autonomous robotic system for bridge deck data collection and analysis **2014**,		26
111	Vision-based motion planning for an autonomous motorcycle on ill-structured roads. *Autonomous Robots*, **2007**, 23, 197-212	3	26
110	Quasi-Direct Drive Actuation for a Lightweight Hip Exoskeleton with High Backdrivability and High Bandwidth. *IEEE/ASME Transactions on Mechatronics*, **2020**, 25, 1794-1802	5.5	25
109	Cooperative Search of Multiple Unknown Transient Radio Sources Using Multiple Paired Mobile Robots. *IEEE Transactions on Robotics*, **2014**, 30, 1161-1173	6.5	25
108	Autonomous robotic system for high-efficiency non-destructive bridge deck inspection and evaluation **2013**,		25
107	Embedded Flexible Force Sensor for In-Situ Tire-Road Interaction Measurements. *IEEE Sensors Journal*, **2013**, 13, 1756-1765	4	23
106	RABIT: implementation, performance validation and integration with other robotic platforms for improved management of bridge decks. *International Journal of Intelligent Robotics and Applications* , **2017**, 1, 271-286	1.7	22
105	Real-Time Intended Knee Joint Motion Prediction by Deep-Recurrent Neural Networks. *IEEE Sensors Journal*, **2019**, 19, 11503-11509	4	22
104	A simple model for predicting walking energetics with elastically-suspended backpack. *Journal of Biomechanics*, **2016**, 49, 4150-4153	2.9	21
103	Two Shank-Mounted IMUs-Based Gait Analysis and Classification for Neurological Disease Patients. *IEEE Robotics and Automation Letters*, **2020**, 5, 1970-1976	4.2	19
102	Autonomous motorcycles for agile maneuvers, part I: Dynamic modeling **2009**,		18
101	A robotic bipedal model for human walking with slips **2015**,		17
100	Motion Control, Planning and Manipulation of Nanowires Under Electric-Fields in Fluid Suspension. *IEEE Transactions on Automation Science and Engineering*, **2015**, 12, 37-49	4.9	17
99	A Novel Tactile Sensor with Electromagnetic Induction and Its Application on Stick-Slip Interaction Detection. *Sensors*, **2016**, 16, 430	3.8	17

98	Inertial Sensor-Based Slip Detection in Human Walking. *IEEE Transactions on Automation Science and Engineering*, **2019**, 16, 1399-1411	4.9	17
97	Throughput Analysis of Linear Cluster Tools **2007**,		16
96	Absolute Attitude Estimation of Rigid Body on Moving Platform Using Only Two Gyroscopes and Relative Measurements. *IEEE/ASME Transactions on Mechatronics*, **2018**, 23, 1350-1361	5.5	15
95	An integrated physical-learning model of physical human-robot interactions with application to pose estimation in bikebot riding. *International Journal of Robotics Research*, **2016**, 35, 1459-1476	5.7	15
94	Stationary balance control of a bikebot **2014**,		15
93	Autonomous motorcycles for agile maneuvers, part II: Control systems design **2009**,		15
92	Balance control and analysis of stationary riderless motorcycles **2011**,		15
91	Neural network based uniformity profile control of linear chemical-mechanical planarization. *IEEE Transactions on Semiconductor Manufacturing*, **2003**, 16, 609-620	2.6	15
90	Simultaneous Multiple-Nanowire Motion Control, Planning, and Manipulation Under Electric Fields in Fluid Suspension. *IEEE Transactions on Automation Science and Engineering*, **2018**, 15, 80-91	4.9	14
89	Static Tire/Road Stick□Slip Interactions: Analysis and Experiments. *IEEE/ASME Transactions on Mechatronics*, **2014**, 19, 1940-1950	5.5	14
88	High-throughput electrical measurement and microfluidic sorting of semiconductor nanowires. *Lab on A Chip*, **2016**, 16, 2126-34	7.2	13
87	Automated characterization and assembly of individual nanowires for device fabrication. *Lab on A Chip*, **2018**, 18, 1494-1503	7.2	12
86	. *IEEE Sensors Journal*, **2019**, 19, 5936-5945	4	11
85	Evaluation on Step Counting Performance of Wristband Activity Monitors in Daily Living Environment. *IEEE Access*, **2017**, 5, 13020-13027	3.5	11
84	Trajectory tracking and balance control of an autonomous bikebot **2017**,		11
83	Model predictive control of buoyancy propelled autonomous underwater glider **2015**,		11
82	On the Time to Search for an Intermittent Signal Source Under a Limited Sensing Range. *IEEE Transactions on Robotics*, **2011**, 27, 313-323	6.5	11
81	Localization of Unknown Networked Radio Sources Using a Mobile Robot with a Directional Antenna. *Proceedings of the American Control Conference*, **2007**,	1.2	11

80	On the wafer/pad friction of chemical-mechanical planarization (CMP) processes - Part I: modeling and analysis. *IEEE Transactions on Semiconductor Manufacturing*, **2005**, 18, 359-370	2.6	11
79	Motion planning for aggressive autonomous vehicle maneuvers **2016**,		11
78	Stability and Control of a RiderBicycle System: Analysis and Experiments. *IEEE Transactions on Automation Science and Engineering*, **2020**, 17, 348-360	4.9	11
77	Dynamic modeling and balance control of human/bicycle systems **2010**,		10
76	On the Optimality of One-Unit Cycle Scheduling of Multi-Cluster Tools with Single-Blade Robots **2007**,		10
75	Monocular Vision-Based Parameter Estimation for Mobile Robotic Painting. *IEEE Transactions on Instrumentation and Measurement*, **2019**, 68, 3589-3599	5.2	10
74	Gaussian Processes Model-Based Control of Underactuated Balance Robots **2019**,		9
73	Shoe-Floor Interactions in Human Walking With Slips: Modeling and Experiments. *Journal of Biomechanical Engineering*, **2018**, 140,	2.1	8
72	IMU-Based Gait Normalcy Index Calculation for Clinical Evaluation of Impaired Gait. *IEEE Journal of Biomedical and Health Informatics*, **2021**, 25, 3-12	7.2	8
71	Real-time motion planning of multiple nanowires in fluid suspension under electric-field actuation. *International Journal of Intelligent Robotics and Applications*, **2018**, 2, 383-399	1.7	8
70	A novel wheel-track hybrid electric powered wheelchair for stairs climbing. *Journal of Advanced Mechanical Design, Systems and Manufacturing*, **2016**, 10, JAMDSM0060-JAMDSM0060	0.6	7
69	Dynamic stability of a rider-bicycle system: Analysis and experiments **2015**,		7
68	Pose estimation in physical human-machine interactions with application to bicycle riding **2014**,		7
67	Dynamic model-aided localization of underwater autonomous gliders **2013**,		7
66	Balance recovery control of human walking with foot slip **2016**,		6
65	Whole-body pose estimation in physical rider-bicycle interactions with a monocular camera and a set of wearable gyroscopes **2014**,		6
64	Hybrid zero dynamics of human biped walking with foot slip **2017**,		6
63	How to Carry Loads Economically: Analysis Based on a Predictive Biped Model. *Journal of Biomechanical Engineering*, **2020**, 142,	2.1	6

62	Sliding-Mode Nonlinear Predictive Control of Brain-Controlled Mobile Robots. *IEEE Transactions on Cybernetics*, **2020**, PP,	10.2	6
61	A REVIEW ON HUMANEXOSKELETON COORDINATION TOWARDS LOWER LIMB ROBOTIC EXOSKELETON SYSTEMS. *International Journal of Robotics and Automation*, **2019**, 34,	1.3	6
60	Balance equilibrium manifold and control of rider-bikebot systems **2016**,		6
59	Motion control of autonomous aggressive vehicle maneuvers **2016**,		6
58	A Real-time Pre-impact Fall Detection and Protection System **2018**,		6
57	Motion control and manipulation of nanowires under electric-fields in fluid suspension **2014**,		5
56	Electrophoresis-based motion planning and control of a nanowire in fluid suspension **2013**,		5
55	Simultaneous localization of multiple unknown CSMA-based wireless sensor network nodes using a mobile robot with a directional antenna. *Intelligent Service Robotics*, **2009**, 2, 219-231	2.6	5
54	Rider/bicycle pose estimation with IMU/seat force measurements **2012**,		5
53	A new algorithm for simultaneous input and state estimation **2008**,		5
52	IMU-based localization and slip estimation for skid-steered mobile robots **2007**,		5
51	A Stick-Slip Interactions Model of Soft-Solid Frictional Contacts. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2019**, 141,	1.6	5
50	Slip detection and prediction in human walking using only wearable inertial measurement units (IMUs) **2015**,		4
49	Time-optimal simultaneous motion planning and manipulation of multiple nanowires under electric-fields in fluid suspension **2016**,		4
48	Design of a Robotic Knee Assistive Device (ROKAD) for Slip-Induced Fall Prevention during Walking. *IFAC-PapersOnLine*, **2017**, 50, 9802-9807	0.7	4
47	Disturbance observer-based hysteresis compensation for piezoelectric actuators **2009**,		4
46	Understanding tire/road stick-slip interactions with embedded rubber force sensors **2012**,		4
45	Bipedal Model and Hybrid Zero Dynamics of Human Walking With Foot Slip. *Journal of Computational and Nonlinear Dynamics*, **2019**, 14,	1.4	4

44	Stable Learning-Based Tracking Control of Underactuated Balance Robots. *IEEE Robotics and Automation Letters*, **2021**, 6, 1543-1550	4.2	4
43	Modeling and motion stability analysis of skid-steered mobile robots **2009**,		3
42	Machine Learning-Enabled Noncontact Sleep Structure Prediction. *Advanced Intelligent Systems*,2100227	6	3
41	Wearable IMU-based Early Limb Lameness Detection for Horses using Multi-Layer Classifiers **2020**,		3
40	Real-Time Walking Gait Estimation for Construction Workers using a Single Wearable Inertial Measurement Unit (IMU) **2021**,		3
39	Control of a Two-Wheel Steering Bikebot for Agile Maneuvers **2019**,		3
38	Reconstructing Walking Dynamics from Two Shank-Mounted Inertial Measurement Units (IMUs). *IEEE/ASME Transactions on Mechatronics*, **2021**, 1-1	5.5	3
37	Automated Electric-Field-Based Nanowire Characterization, Manipulation, and Assembly **2018**,		3
36	Proprioceptive Localization Assisted by Magnetoreception: A Minimalist Intermittent Heading Based Approach. *IEEE Robotics and Automation Letters*, **2019**, 4, 586-593	4.2	2
35	Generation of High-Density Hyperspectral Point Clouds of Crops with Robotic Multi-Camera Planning **2019**,		2
34	Neural network-based gait assessment using measurements of a wearable sensor system **2014**,		2
33	Modeling of pure percussive drilling for autonomous robotic bridge decks rehabilitation **2013**,		2
32	Optimal scheduling of k-unit production of cluster tools with single-blade robots **2008**,		2
31	Dynamic modeling of an L-shape PMN-PT piezo-based manipulator **2008**,		2
30	Friction modeling in linear chemical-mechanical planarization. *IEEE Control Systems*, **2008**, 28, 59-78	2.9	2
29	Detection method of eyes opening and closing ratio for driver's fatigue monitoring. *IET Intelligent Transport Systems*, **2021**, 15, 31-42	2.4	2
28	Safety-Guaranteed Learning-Predictive Control for Aggressive Autonomous Vehicle Maneuvers **2020**,		2
27	Development of a Two-Wheel Steering Unmanned Bicycle: Simulation and Experimental Study* **2020**,		2

26	Pose estimation of a rigid body and its supporting moving platform using two gyroscopes and relative complementary measurements **2016**,		2
25	An Integrated Stationary/Moving Balance Control of an Autonomous Bikebot **2019**,		2
24	Capturability of Inverted Pendulum Gait Model Under Slip Conditions **2018**,		2
23	Strength Capacity Estimation of Human Upper Limb in Human-Robot Interactions with Muscle Synergy Models **2018**,		2
22	Wearable Knee Assistive Devices for Kneeling Tasks in Construction. *IEEE/ASME Transactions on Mechatronics*, **2021**, 26, 1989-1996	5.5	2
21	Design of respiratory training robot in rehabilitation of chronic obstructive pulmonary disease **2015** ,		1
20	Auto-Calibrated 3D Hyperspectral Scanning Using a Heterogeneous Set of Cameras and Lights with Spectrally-Optimal Next-Best-View Planning **2020**,		1
19	Modeling and Experiments of Rotary Percussive Drilling for Robotic Civil Infrastructure Rehabilitation. *IFAC-PapersOnLine*, **2017**, 50, 9784-9789	0.7	1
18	Disturbance observer-based balance control of robotic biped walkers under slip **2017**,		1
17	On the relationship between manifold learning latent dynamics and zero dynamics for human bipedal walking **2015**,		1
16	Dynamic rider/bicycle pose estimation with force/IMU measurements **2013**,		1
15	Control of a Bipedal Walker Under Foot Slipping Condition Using Whole-Body Operational Space Framework. *IFAC-PapersOnLine*, **2021**, 54, 278-283	0.7	1
14	Collaborative Manipulation of Spherical-Shape Objects with a Deformable Sheet Held by a Mobile Robotic Team. *IFAC-PapersOnLine*, **2021**, 54, 437-442	0.7	1
13	Assist-As-Needed Control of a Wearable Lightweight Knee Robotic Device **2020**,		1
12	Recoverability Estimation and Control for an Inverted Pendulum Walker Model Under Foot Slip **2020**,		1
11	Spline-Based Modeling and Control of Soft Robots **2020**,		1
10	Gaussian Process (GP)-based Learning Control of Selective Laser Melting Process **2021**,		1
9	Development of a novel elastic load-carrying device: Design, modeling and analysis **2016**,		1

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8	A Model Predictive Control Based Iterative Trajectory Optimization Method for Systems with State-Like Disturbances **2019**,		1
7	Collaborative Object Manipulation Through Indirect Control of a Deformable Sheet by a Mobile Robotic Team **2019**,		1
6	Driver Fatigue Detection Based on Machine Vision* **2018**,		1
5	Coordinated Pose Control of Mobile Manipulation With an Unstable Bikebot Platform. *IEEE/ASME Transactions on Mechatronics*, **2022**, 1-11	5.5	1
4	A Contactless On-bed Radar System for Human Respiration Monitoring. *IEEE Transactions on Instrumentation and Measurement*, **2022**, 1-1	5.2	0
3	Wearable Inertial Sensor-Based Limb Lameness Detection and Pose Estimation for Horses. *IEEE Transactions on Automation Science and Engineering*, **2022**, 1-15	4.9	0
2	A Framework for Remote Interaction and Management of Home Care Elderly Adults. *IEEE Sensors Journal*, **2022**, 1-1	4	
1	Autonomous Bikebot Control for Crossing Obstacles With Assistive Leg Impulsive Actuation. *IEEE/ASME Transactions on Mechatronics*, **2022**, 1-9	5.5	