# Jingang Yi

## List of Publications by Year in Descending Order

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|---|---|---|---|
| 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 | A Contactless On-bed Radar System for Human Respiration Monitoring. *IEEE Transactions on Instrumentation and Measurement*, **2022**, 1-1 | 5.2 | 0 |
| 132 | Coordinated Pose Control of Mobile Manipulation With an Unstable Bikebot Platform. *IEEE/ASME Transactions on Mechatronics*, **2022**, 1-11 | 5.5 | 1 |
| 131 | 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 |
| 130 | A Framework for Remote Interaction and Management of Home Care Elderly Adults. *IEEE Sensors Journal*, **2022**, 1-1 | 4 | |
| 129 | Autonomous Bikebot Control for Crossing Obstacles With Assistive Leg Impulsive Actuation. *IEEE/ASME Transactions on Mechatronics*, **2022**, 1-9 | 5.5 | |
| 128 | Detection method of eyes opening and closing ratio for driver's fatigue monitoring. *IET Intelligent Transport Systems*, **2021**, 15, 31-42 | 2.4 | 2 |
| 127 | Control of a Bipedal Walker Under Foot Slipping Condition Using Whole-Body Operational Space Framework. *IFAC-PapersOnLine*, **2021**, 54, 278-283 | 0.7 | 1 |
| 126 | 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 |
| 125 | Stable Learning-Based Tracking Control of Underactuated Balance Robots. *IEEE Robotics and Automation Letters*, **2021**, 6, 1543-1550 | 4.2 | 4 |
| 124 | Gaussian Process (GP)-based Learning Control of Selective Laser Melting Process **2021**, | | 1 |
| 123 | Real-Time Walking Gait Estimation for Construction Workers using a Single Wearable Inertial Measurement Unit (IMU) **2021**, | | 3 |
| 122 | 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 |
| 121 | Reconstructing Walking Dynamics from Two Shank-Mounted Inertial Measurement Units (IMUs). *IEEE/ASME Transactions on Mechatronics*, **2021**, 1-1 | 5.5 | 3 |
| 120 | Wearable Knee Assistive Devices for Kneeling Tasks in Construction. *IEEE/ASME Transactions on Mechatronics*, **2021**, 26, 1989-1996 | 5.5 | 2 |
| 119 | Auto-Calibrated 3D Hyperspectral Scanning Using a Heterogeneous Set of Cameras and Lights with Spectrally-Optimal Next-Best-View Planning **2020**, | | 1 |
| 118 | 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 |
| 117 | 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 |

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|---|---|---|---|
| 116 | How to Carry Loads Economically: Analysis Based on a Predictive Biped Model. *Journal of Biomechanical Engineering*, **2020**, 142, | 2.1 | 6 |
| 115 | Sliding-Mode Nonlinear Predictive Control of Brain-Controlled Mobile Robots. *IEEE Transactions on Cybernetics*, **2020**, PP, | 10.2 | 6 |
| 114 | Wearable IMU-based Early Limb Lameness Detection for Horses using Multi-Layer Classifiers **2020**, | | 3 |
| 113 | Safety-Guaranteed Learning-Predictive Control for Aggressive Autonomous Vehicle Maneuvers **2020**, | | 2 |
| 112 | Assist-As-Needed Control of a Wearable Lightweight Knee Robotic Device **2020**, | | 1 |
| 111 | Recoverability Estimation and Control for an Inverted Pendulum Walker Model Under Foot Slip **2020**, | | 1 |
| 110 | Development of a Two-Wheel Steering Unmanned Bicycle: Simulation and Experimental Study* **2020**, | | 2 |
| 109 | Spline-Based Modeling and Control of Soft Robots **2020**, | | 1 |
| 108 | Stability and Control of a Rider-Bicycle System: Analysis and Experiments. *IEEE Transactions on Automation Science and Engineering*, **2020**, 17, 348-360 | 4.9 | 11 |
| 107 | Gaussian Processes Model-Based Control of Underactuated Balance Robots **2019**, | | 9 |
| 106 | Proprioceptive Localization Assisted by Magnetoreception: A Minimalist Intermittent Heading Based Approach. *IEEE Robotics and Automation Letters*, **2019**, 4, 586-593 | 4.2 | 2 |
| 105 | Real-Time Intended Knee Joint Motion Prediction by Deep-Recurrent Neural Networks. *IEEE Sensors Journal*, **2019**, 19, 11503-11509 | 4 | 22 |
| 104 | . *IEEE Sensors Journal*, **2019**, 19, 5936-5945 | 4 | 11 |
| 103 | Generation of High-Density Hyperspectral Point Clouds of Crops with Robotic Multi-Camera Planning **2019**, | | 2 |
| 102 | A REVIEW ON HUMAN-EXOSKELETON COORDINATION TOWARDS LOWER LIMB ROBOTIC EXOSKELETON SYSTEMS. *International Journal of Robotics and Automation*, **2019**, 34, | 1.3 | 6 |
| 101 | Bipedal Model and Hybrid Zero Dynamics of Human Walking With Foot Slip. *Journal of Computational and Nonlinear Dynamics*, **2019**, 14, | 1.4 | 4 |
| 100 | A Model Predictive Control Based Iterative Trajectory Optimization Method for Systems with State-Like Disturbances **2019**, | | 1 |
| 99 | An Integrated Stationary/Moving Balance Control of an Autonomous Bikebot **2019**, | | 2 |

| 98 | Collaborative Object Manipulation Through Indirect Control of a Deformable Sheet by a Mobile Robotic Team **2019**, | | 1 |
|---|---|---|---|
| 97 | Control of a Two-Wheel Steering Bikebot for Agile Maneuvers **2019**, | | 3 |
| 96 | Inertial Sensor-Based Slip Detection in Human Walking. *IEEE Transactions on Automation Science and Engineering*, **2019**, 16, 1399-1411 | 4.9 | 17 |
| 95 | Monocular Vision-Based Parameter Estimation for Mobile Robotic Painting. *IEEE Transactions on Instrumentation and Measurement*, **2019**, 68, 3589-3599 | 5.2 | 10 |
| 94 | 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 |
| 93 | Automated characterization and assembly of individual nanowires for device fabrication. *Lab on A Chip*, **2018**, 18, 1494-1503 | 7.2 | 12 |
| 92 | Wearable Sensor System for Detecting Gait Parameters of Abnormal Gaits: A Feasibility Study. *IEEE Sensors Journal*, **2018**, 18, 4234-4241 | 4 | 30 |
| 91 | 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 |
| 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 | Shoe-Floor Interactions in Human Walking With Slips: Modeling and Experiments. *Journal of Biomechanical Engineering*, **2018**, 140, | 2.1 | 8 |
| 88 | 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 |
| 87 | Automated Electric-Field-Based Nanowire Characterization, Manipulation, and Assembly **2018**, | | 3 |
| 86 | Driver Fatigue Detection Based on Machine Vision* **2018**, | | 1 |
| 85 | Capturability of Inverted Pendulum Gait Model Under Slip Conditions **2018**, | | 2 |
| 84 | Strength Capacity Estimation of Human Upper Limb in Human-Robot Interactions with Muscle Synergy Models **2018**, | | 2 |
| 83 | A Real-time Pre-impact Fall Detection and Protection System **2018**, | | 6 |
| 82 | 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 |
| 81 | Evaluation on Step Counting Performance of Wristband Activity Monitors in Daily Living Environment. *IEEE Access*, **2017**, 5, 13020-13027 | 3.5 | 11 |

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|---|---|---|---|
| 80 | Hybrid zero dynamics of human biped walking with foot slip **2017**, | | 6 |
| 79 | Modeling and Experiments of Rotary Percussive Drilling for Robotic Civil Infrastructure Rehabilitation. *IFAC-PapersOnLine*, **2017**, 50, 9784-9789 | 0.7 | 1 |
| 78 | Design of a Robotic Knee Assistive Device (ROKAD) for Slip-Induced Fall Prevention during Walking. *IFAC-PapersOnLine*, **2017**, 50, 9802-9807 | 0.7 | 4 |
| 77 | Disturbance observer-based balance control of robotic biped walkers under slip **2017**, | | 1 |
| 76 | Trajectory tracking and balance control of an autonomous bikebot **2017**, | | 11 |
| 75 | 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 |
| 74 | A simple model for predicting walking energetics with elastically-suspended backpack. *Journal of Biomechanics*, **2016**, 49, 4150-4153 | 2.9 | 21 |
| 73 | Balance recovery control of human walking with foot slip **2016**, | | 6 |
| 72 | Time-optimal simultaneous motion planning and manipulation of multiple nanowires under electric-fields in fluid suspension **2016**, | | 4 |
| 71 | 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 |
| 70 | The Lower Limbs Kinematics Analysis by Wearable Sensor Shoes. *IEEE Sensors Journal*, **2016**, 16, 2627-2638 | 4 | 28 |
| 69 | A Novel Tactile Sensor with Electromagnetic Induction and Its Application on Stick-Slip Interaction Detection. *Sensors*, **2016**, 16, 430 | 3.8 | 17 |
| 68 | Balance equilibrium manifold and control of rider-bikebot systems **2016**, | | 6 |
| 67 | Motion planning for aggressive autonomous vehicle maneuvers **2016**, | | 11 |
| 66 | Pose estimation of a rigid body and its supporting moving platform using two gyroscopes and relative complementary measurements **2016**, | | 2 |
| 65 | High-throughput electrical measurement and microfluidic sorting of semiconductor nanowires. *Lab on A Chip*, **2016**, 16, 2126-34 | 7.2 | 13 |
| 64 | Development of a novel elastic load-carrying device: Design, modeling and analysis **2016**, | | 1 |
| 63 | Motion control of autonomous aggressive vehicle maneuvers **2016**, | | 6 |

| 62 | Contactless Determination of Electrical Conductivity of One-Dimensional Nanomaterials by Solution-Based Electro-orientation Spectroscopy. *ACS Nano*, **2015**, 9, 5405-12 | 16.7 | 30 |
|----|------|------|------|
| 61 | Slip detection and prediction in human walking using only wearable inertial measurement units (IMUs) **2015**, | | 4 |
| 60 | A robotic bipedal model for human walking with slips **2015**, | | 17 |
| 59 | Design of respiratory training robot in rehabilitation of chronic obstructive pulmonary disease **2015**, | | 1 |
| 58 | 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 |
| 57 | Dynamic stability of a rider-bicycle system: Analysis and experiments **2015**, | | 7 |
| 56 | Model predictive control of buoyancy propelled autonomous underwater glider **2015**, | | 11 |
| 55 | On the relationship between manifold learning latent dynamics and zero dynamics for human bipedal walking **2015**, | | 1 |
| 54 | 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 |
| 53 | Static Tire/Road Stick–Slip Interactions: Analysis and Experiments. *IEEE/ASME Transactions on Mechatronics*, **2014**, 19, 1940-1950 | 5.5 | 14 |
| 52 | Whole-body pose estimation in physical rider-bicycle interactions with a monocular camera and a set of wearable gyroscopes **2014**, | | 6 |
| 51 | Pose estimation in physical human-machine interactions with application to bicycle riding **2014**, | | 7 |
| 50 | Autonomous robotic system for bridge deck data collection and analysis **2014**, | | 26 |
| 49 | Neural network-based gait assessment using measurements of a wearable sensor system **2014**, | | 2 |
| 48 | Cooperative Search of Multiple Unknown Transient Radio Sources Using Multiple Paired Mobile Robots. *IEEE Transactions on Robotics*, **2014**, 30, 1161-1173 | 6.5 | 25 |
| 47 | Motion control and manipulation of nanowires under electric-fields in fluid suspension **2014**, | | 5 |
| 46 | Stationary balance control of a bikebot **2014**, | | 15 |
| 45 | Embedded Flexible Force Sensor for In-Situ Tire–Road Interaction Measurements. *IEEE Sensors Journal*, **2013**, 13, 1756-1765 | 4 | 23 |

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| 44 | 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 |
| 43 | Autonomous robotic system for high-efficiency non-destructive bridge deck inspection and evaluation **2013**, | | 25 |
| 42 | Rider trunk and bicycle pose estimation with fusion of force/inertial sensors. *IEEE Transactions on Biomedical Engineering*, **2013**, 60, 2541-51 | 5 | 34 |
| 41 | Modeling of pure percussive drilling for autonomous robotic bridge decks rehabilitation **2013**, | | 2 |
| 40 | Dynamic model-aided localization of underwater autonomous gliders **2013**, | | 7 |
| 39 | Electrophoresis-based motion planning and control of a nanowire in fluid suspension **2013**, | | 5 |
| 38 | Dynamic rider/bicycle pose estimation with force/IMU measurements **2013**, | | 1 |
| 37 | Simultaneous Localization of Multiple Unknown and Transient Radio Sources Using a Mobile Robot. *IEEE Transactions on Robotics*, **2012**, 28, 668-680 | 6.5 | 34 |
| 36 | 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 |
| 35 | Rider/bicycle pose estimation with IMU/seat force measurements **2012**, | | 5 |
| 34 | Understanding tire/road stick-slip interactions with embedded rubber force sensors **2012**, | | 4 |
| 33 | 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 |
| 32 | 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 |
| 31 | 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 |
| 30 | 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 |
| 29 | Balance control and analysis of stationary riderless motorcycles **2011**, | | 15 |
| 28 | Dynamic modeling and balance control of human/bicycle systems **2010**, | | 10 |
| 27 | Autonomous motorcycles for agile maneuvers, part I: Dynamic modeling **2009**, | | 18 |

| 26 | Disturbance observer-based hysteresis compensation for piezoelectric actuators **2009**, | | 4 |
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| 25 | Autonomous motorcycles for agile maneuvers, part II: Control systems design **2009**, | | 15 |
| 24 | 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 |
| 23 | A Vibration-Based PMN-PT Energy Harvester. *IEEE Sensors Journal*, **2009**, 9, 731-739 | 4 | 53 |
| 22 | 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 |
| 21 | Modeling and motion stability analysis of skid-steered mobile robots **2009**, | | 3 |
| 20 | Disturbance-Observer-Based Hysteresis Compensation for Piezoelectric Actuators. *IEEE/ASME Transactions on Mechatronics*, **2009**, 14, 456-464 | 5.5 | 134 |
| 19 | A Piezo-Sensor-Based Smart Tire System for Mobile Robots and Vehicles. *IEEE/ASME Transactions on Mechatronics*, **2008**, 13, 95-103 | 5.5 | 61 |
| 18 | A PVDF-Based Deformation and Motion Sensor: Modeling and Experiments. *IEEE Sensors Journal*, **2008**, 8, 384-391 | 4 | 41 |
| 17 | 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 |
| 16 | Optimal scheduling of k-unit production of cluster tools with single-blade robots **2008**, | | 2 |
| 15 | Dynamic modeling of an L-shape PMN-PT piezo-based manipulator **2008**, | | 2 |
| 14 | Friction modeling in linear chemical-mechanical planarization. *IEEE Control Systems*, **2008**, 28, 59-78 | 2.9 | 2 |
| 13 | A new algorithm for simultaneous input and state estimation **2008**, | | 5 |
| 12 | On the Optimality of One-Unit Cycle Scheduling of Multi-Cluster Tools with Single-Blade Robots **2007**, | | 10 |
| 11 | Vision-based motion planning for an autonomous motorcycle on ill-structured roads. *Autonomous Robots*, **2007**, 23, 197-212 | 3 | 26 |
| 10 | Localization of Unknown Networked Radio Sources Using a Mobile Robot with a Directional Antenna. *Proceedings of the American Control Conference*, **2007**, | 1.2 | 11 |
| 9 | IMU-based localization and slip estimation for skid-steered mobile robots **2007**, | | 5 |

# LIST OF PUBLICATIONS

| | | | |
|---|---|---|---|
| 8 | Throughput Analysis of Linear Cluster Tools **2007**, | | 16 |
| 7 | Multicluster tools scheduling: an integrated event graph and network model approach. *IEEE Transactions on Semiconductor Manufacturing*, **2006**, 19, 339-351 | 2.6 | 92 |
| 6 | Macroscopic traffic flow propagation stability for adaptive cruise controlled vehicles. *Transportation Research Part C: Emerging Technologies*, **2006**, 14, 81-95 | 8.4 | 37 |
| 5 | 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 |
| 4 | 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 |
| 3 | Stability of macroscopic traffic flow modeling through wavefront expansion. *Transportation Research Part B: Methodological*, **2003**, 37, 661-679 | 7.2 | 32 |
| 2 | Neural network based uniformity profile control of linear chemical-mechanical planarization. *IEEE Transactions on Semiconductor Manufacturing*, **2003**, 16, 609-620 | 2.6 | 15 |
| 1 | Machine Learning-Enabled Noncontact Sleep Structure Prediction. *Advanced Intelligent Systems*, 2100227 | | 3 |