

Kira Barton

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.

93
papers

1,996
citations

18
h-index

42
g-index

108
ext. papers

2,474
ext. citations

4
avg, IF

5.11
L-index

#	Paper	IF	Citations
93	High-resolution electrohydrodynamic jet printing. <i>Nature Materials</i> , 2007 , 6, 782-9	27	1011
92	A desktop electrohydrodynamic jet printing system. <i>Mechatronics</i> , 2010 , 20, 611-616	3	63
91	Control of high-resolution electrohydrodynamic jet printing. <i>Control Engineering Practice</i> , 2011 , 19, 1266-1273	5.3	53
90	Real-Time Manufacturing Machine and System Performance Monitoring Using Internet of Things. <i>IEEE Transactions on Automation Science and Engineering</i> , 2018 , 15, 1735-1748	4.9	44
89	A Requirements Driven Digital Twin Framework: Specification and Opportunities. <i>IEEE Access</i> , 2020 , 8, 107781-107801	3.5	43
88	Large dynamic range nanopositioning using iterative learning control. <i>Precision Engineering</i> , 2014 , 38, 48-56	2.9	37
87	The impact of ankle-foot orthosis stiffness on gait: A systematic literature review. <i>Gait and Posture</i> , 2019 , 69, 101-111	2.6	33
86	The model-based product agent: A control oriented architecture for intelligent products in multi-agent manufacturing systems. <i>Control Engineering Practice</i> , 2019 , 86, 105-117	3.9	32
85	High Precision Electrohydrodynamic Printing of Polymer Onto Microcantilever Sensors. <i>IEEE Sensors Journal</i> , 2011 , 11, 2246-2253	4	29
84	Categorization of Anomalies in Smart Manufacturing Systems to Support the Selection of Detection Mechanisms. <i>IEEE Robotics and Automation Letters</i> , 2017 , 2, 1885-1892	4.2	26
83	A field shaping printhead for high-resolution electrohydrodynamic jet printing onto non-conductive and uneven surfaces. <i>Applied Physics Letters</i> , 2014 , 104, 143510	3.4	26
82	Robust iterative learning for high precision motion control through . <i>Mechatronics</i> , 2014 , 24, 549-561	3	24
81	Product personalization enabled by assembly architecture and cyber physical systems. <i>CIRP Annals - Manufacturing Technology</i> , 2017 , 66, 33-36	4.9	23
80	Production as a Service: A Digital Manufacturing Framework for Optimizing Utilization. <i>IEEE Transactions on Automation Science and Engineering</i> , 2018 , 15, 1483-1493	4.9	23
79	Iterative Learning Control of Iteration-Varying Systems via Robust Update Laws with Experimental Implementation. <i>Control Engineering Practice</i> , 2017 , 62, 36-45	3.9	22
78	A software-defined framework for the integrated management of smart manufacturing systems. <i>Manufacturing Letters</i> , 2018 , 15, 18-21	4.5	19
77	Context-Sensitive Modeling and Analysis of Cyber-Physical Manufacturing Systems for Anomaly Detection and Diagnosis. <i>IEEE Transactions on Automation Science and Engineering</i> , 2020 , 17, 29-40	4.9	18

76	Iterative Learning-Based Path Optimization for Repetitive Path Planning, With Application to 3-D Crosswind Flight of Airborne Wind Energy Systems. <i>IEEE Transactions on Control Systems Technology</i> , 2020 , 28, 1447-1459	4.8	18
75	Application of robust monotonically convergent spatial iterative learning control to microscale additive manufacturing. <i>Mechatronics</i> , 2018 , 56, 157-165	3	18
74	A Framework for Automatic Initialization of Multi-Agent Production Systems Using Semantic Web Technologies. <i>IEEE Robotics and Automation Letters</i> , 2019 , 4, 4330-4337	4.2	17
73	A multi-objective iterative learning control approach for additive manufacturing applications. <i>Control Engineering Practice</i> , 2017 , 64, 74-87	3.9	16
72	Exponential stability of nonlinear differential repetitive processes with applications to iterative learning control. <i>Automatica</i> , 2017 , 81, 369-376	5.7	16
71	Manufacturing Choices for Ankle-Foot Orthoses: A Multi-objective Optimization. <i>Procedia CIRP</i> , 2017 , 65, 145-150	1.8	15
70	Area-Selective Atomic Layer Deposition Patterned by Electrohydrodynamic Jet Printing for Additive Manufacturing of Functional Materials and Devices. <i>ACS Nano</i> , 2020 ,	16.7	15
69	A day in the life of a dolphin: Using bio-logging tags for improved animal health and well-being. <i>Marine Mammal Science</i> , 2017 , 33, 785-802	1.9	14
68	SMART: A System-Level Manufacturing and Automation Research Testbed. <i>Smart and Sustainable Manufacturing Systems</i> , 2017 , 1, 20170006	0.8	14
67	A Digital Twin Framework for Performance Monitoring and Anomaly Detection in Fused Deposition Modeling 2019 ,		14
66	Dynamic Resource Task Negotiation to Enable Product Agent Exploration in Multi-Agent Manufacturing Systems. <i>IEEE Robotics and Automation Letters</i> , 2019 , 4, 2854-2861	4.2	13
65	A Unified Digital Twin Framework for Real-time Monitoring and Evaluation of Smart Manufacturing Systems 2019 ,		13
64	Airflow assisted printhead for high-resolution electrohydrodynamic jet printing onto non-conductive and tilted surfaces. <i>Applied Physics Letters</i> , 2015 , 107, 054103	3.4	13
63	Dynamic Rerouting of Cyber-Physical Production Systems in Response to Disruptions Based on SDC Framework 2019 ,		11
62	Integration, Calibration, and Experimental Verification of a Speed Sensor for Swimming Animals. <i>IEEE Sensors Journal</i> , 2019 , 19, 3616-3625	4	10
61	A Dynamical Model of Drop Spreading in Electrohydrodynamic Jet Printing. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2017 , 139,	3.3	10
60	Off-road ground robot path energy cost prediction through probabilistic spatial mapping. <i>Journal of Field Robotics</i> , 2020 , 37, 421-439	6.7	10
59	Incorporating customer personalization preferences in open product architecture design. <i>Journal of Manufacturing Systems</i> , 2020 , 56, 72-83	9.1	9

58	. <i>IEEE Transactions on Control Systems Technology</i> , 2019 , 27, 2470-2483	4.8	9
57	A Methodology to Develop and Implement Digital Twin Solutions for Manufacturing Systems. <i>IEEE Access</i> , 2021 , 9, 44247-44265	3.5	9
56	Virtual fusion: a hybrid environment for improved commissioning in manufacturing systems. <i>International Journal of Production Research</i> , 2017 , 55, 6254-6265	7.8	8
55	An electrohydrodynamic jet printer with integrated metrology. <i>Mechatronics</i> , 2018 , 56, 268-276	3	8
54	An energy-efficient method for multi-robot reconnaissance in an unknown environment 2017 ,		8
53	Design and implementation of an intelligent product agent architecture in manufacturing systems 2017 ,		8
52	Low-back electromyography (EMG) data-driven load classification for dynamic lifting tasks. <i>PLoS ONE</i> , 2018 , 13, e0192938	3.7	8
51	A Centralized Framework for System-Level Control and Management of Additive Manufacturing Fleets 2018 ,		8
50	Pareto iterative learning control: Optimized control for multiple performance objectives. <i>Control Engineering Practice</i> , 2014 , 26, 125-135	3.9	7
49	Production as a service: A centralized framework for small batch manufacturing 2017 ,		7
48	Control-Oriented Modeling and Layer-to-Layer Stability for Fused Deposition Modeling: A Kernel Basis Approach 2019 ,		7
47	Iterative learning-based waypoint optimization for repetitive path planning, with application to airborne wind energy systems 2017 ,		6
46	Learning control of linear iteration varying systems with varying references through robust invariant update laws 2015 ,		6
45	Real-time hybrid simulation of manufacturing systems for performance analysis and control 2015 ,		6
44	An integrated design approach for evaluating the effectiveness and cost of a fleet. <i>Journal of Defense Modeling and Simulation</i> , 2016 , 13, 381-397	0.4	6
43	Integrating Human Operators into Agent-based Manufacturing Systems: A Table-top Demonstration. <i>Procedia Manufacturing</i> , 2018 , 17, 326-333	1.5	6
42	Hybrid Modeling of Electrohydrodynamic Jet Printing. <i>IEEE Transactions on Control Systems Technology</i> , 2020 , 28, 2322-2335	4.8	5
41	LPV models for jet-printed heightmap control 2019 ,		5

40	Closing the Loop in IoT-enabled Manufacturing Systems: Challenges and Opportunities 2018 ,		5
39	An application of spatial Iterative Learning Control to micro-additive manufacturing 2016 ,		4
38	A framework for enhanced localization of marine mammals using auto-detected video and wearable sensor data fusion 2017 ,		4
37	L1 adaptive control in an iterative learning control framework: Stability, robustness and design trade-offs 2013 ,		4
36	A Review of Manufacturing Process Control. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2020 , 142,	3-3	4
35	Subtractive patterning: High-resolution electrohydrodynamic jet printing with solvents. <i>Applied Physics Letters</i> , 2020 , 117, 133702	3-4	4
34	A Control-Oriented Model for Bead Cross-Sectional Geometry in Fused Deposition Modeling 2020 ,		4
33	Model Predictive Control of Priced Timed Automata Encoded With First-Order Logic. <i>IEEE Transactions on Control Systems Technology</i> , 2021 , 1-8	4-8	4
32	Virtual Fusion: Integrating Virtual Components into a Physical Manufacturing System. <i>IFAC-PapersOnLine</i> , 2015 , 48, 904-909	0-7	3
31	Power Prediction for Heterogeneous Ground Robots Through Spatial Mapping and Sharing of Terrain Data. <i>IEEE Robotics and Automation Letters</i> , 2020 , 5, 1579-1586	4-2	3
30	System Identification of a Discrete Repetitive Process Model for Electrohydrodynamic Jet Printing 2018 ,		3
29	A Model of Liquid-Drop Spreading for Electrohydrodynamic Jet Printing 2015 ,		3
28	Estimating Walking Speed in the Wild. <i>Frontiers in Sports and Active Living</i> , 2020 , 2, 583848	2-3	3
27	Electrohydrodynamic Jet Printing of 1D Photonic Crystals: Part II Optical Design and Reflectance Characteristics. <i>Advanced Materials Technologies</i> , 2020 , 5, 2000431	6-8	3
26	Multi-Layer Spatial Iterative Learning Control for Micro-Additive Manufacturing. <i>IFAC-PapersOnLine</i> , 2019 , 52, 97-102	0-7	3
25	An Iterative Learning Approach for Online Flight Path Optimization for Tethered Energy Systems Undergoing Cyclic Spooling Motion 2019 ,		3
24	Time-Scale Transformed Iterative Learning Control for a Class of Nonlinear Systems With Uncertain Trial Duration. <i>IEEE Transactions on Control Systems Technology</i> , 2020 , 28, 1972-1979	4-8	3
23	Trend-Based Repair Quality Assessment for Industrial Rotating Equipment 2021 , 5, 1675-1680		3

22	Localization and Tracking of Uncontrollable Underwater Agents: Particle Filter Based Fusion of On-Body IMUs and Stationary Cameras 2019 ,		2
21	Medication Adherence and Liquid Level Tracking System for Healthcare Provider Feedback. <i>Sensors</i> , 2020 , 20,	3.8	2
20	Ground Robot Terrain Mapping and Energy Prediction in Environments with 3-D Topography 2018 ,		2
19	An Adaptive Modeling Framework for Bearing Failure Prediction. <i>Electronics (Switzerland)</i> , 2022 , 11, 2572.6		2
18	Bidirectional LSTM Recurrent Neural Network Plus Hidden Markov Model for Wearable Sensor-Based Dynamic State Estimation. <i>ASME Letters in Dynamic Systems and Control</i> , 2021 , 1,		2
17	Priced Timed Automata Models for Control of Intelligent Product Agents in Manufacturing Systems. <i>IFAC-PapersOnLine</i> , 2020 , 53, 136-142	0.7	2
16	Dynamic Resource Allocation Using Multi-Agent Control for Manufacturing Systems. <i>IFAC-PapersOnLine</i> , 2021 , 54, 488-494	0.7	2
15	Electrohydrodynamic Jet Printing of One-Dimensional Photonic Crystals: Part I An Empirical Model for Multi-Material Multi-Layer Fabrication. <i>Advanced Materials Technologies</i> , 2020 , 5, 2000386	6.8	2
14	Integrating optimal process and supplier selection in personalised product architecture design. <i>International Journal of Production Research</i> , 1-20	7.8	2
13	The effect of rotational speed on ankle-foot orthosis properties. <i>Journal of Biomechanics</i> , 2021 , 123, 110483	2.9	2
12	Cooperative Product Agents to Improve Manufacturing System Flexibility: A Model-Based Decision Framework. <i>IEEE Transactions on Automation Science and Engineering</i> , 2022 , 1-18	4.9	2
11	Open Process Automation- and Digital Twin-Based Performance Monitoring of a Process Manufacturing System. <i>IEEE Access</i> , 2022 , 1-1	3.5	2
10	On linearized stability of differential repetitive processes and iterative learning control 2015 ,		1
9	A Digital Twin Framework for Mechanical System Health State Estimation. <i>IFAC-PapersOnLine</i> , 2021 , 54, 1-7	0.7	1
8	Investigation of Environmentally Dependent Movement of Bottlenose Dolphins (<i>Tursiops truncatus</i>). <i>Journal of Zoological and Botanical Gardens</i> , 2021 , 2, 335-348	3.6	1
7	Rohrs Example Revisited: On the Robustness of Adaptive Iterative Learning Control. <i>Asian Journal of Control</i> , 2018 , 20, 993-1002	1.7	1
6	Towards an Automated Learning Control Architecture for Cyber-Physical Manufacturing Systems. <i>IEEE Access</i> , 2022 , 1-1	3.5	1
5	Developing the Workforce for Next-Generation Smart Manufacturing Systems: A Multidisciplinary Research Team Approach. <i>Smart and Sustainable Manufacturing Systems</i> , 2021 , 5, 20200009	0.8	0

4	Iterative Learning-Based Path Optimization With Application to Marine Hydrokinetic Energy Systems. <i>IEEE Transactions on Control Systems Technology</i> , 2021 , 1-15	4.8	o
3	Layer-to-Layer Stability of Linear Layerwise Spatially Varying Systems: Applications in Fused Deposition Modeling. <i>IEEE Transactions on Control Systems Technology</i> , 2021 , 1-16	4.8	o
2	A High-Fidelity Modeling Framework for Near-Field Electrohydrodynamic Jet Printing. <i>IFAC-PapersOnLine</i> , 2021 , 54, 475-481	0.7	
1	Flexible-Time Receding Horizon Iterative Learning Control With Application to Marine Hydrokinetic Energy Systems. <i>IEEE Transactions on Control Systems Technology</i> , 2022 , 1-8	4.8	