Dawn M Tilbury

List of Publications by Year in Descending Order

95 papers	859 citations	16 h-index	25 g-index
109 ext. papers	1,154 ext. citations	3.4 avg, IF	4.82 L-index

#	Paper	IF	Citations
95	Cooperative Product Agents to Improve Manufacturing System Flexibility: A Model-Based Decision Framework. *IEEE Transactions on Automation Science and Engineering*, **2022**, 1-18	4.9	2
94	Towards an Automated Learning Control Architecture for Cyber-Physical Manufacturing Systems. *IEEE Access*, **2022**, 1-1	3.5	1
93	A Digital Twin Framework for Mechanical System Health State Estimation. *IFAC-PapersOnLine*, **2021**, 54, 1-7	0.7	1
92	Dynamic Resource Allocation Using Multi-Agent Control for Manufacturing Systems. *IFAC-PapersOnLine*, **2021**, 54, 488-494	0.7	2
91	. *IEEE Robotics and Automation Letters*, **2021**, 6, 5913-5920	4.2	1
90	Developing the Workforce for Next-Generation Smart Manufacturing Systems: A Multidisciplinary Research Team Approach. *Smart and Sustainable Manufacturing Systems*, **2021**, 5, 20200009	0.8	0
89	New Unobtrusive Tidal Volume Monitoring System Using Channel State Information in Wi-Fi Signal: Preliminary Result. *IEEE Sensors Journal*, **2021**, 21, 3810-3821	4	1
88	Trend-Based Repair Quality Assessment for Industrial Rotating Equipment **2021**, 5, 1675-1680		3
87	A Methodology to Develop and Implement Digital Twin Solutions for Manufacturing Systems. *IEEE Access*, **2021**, 9, 44247-44265	3.5	9
86	Model Predictive Control of Priced Timed Automata Encoded With First-Order Logic. *IEEE Transactions on Control Systems Technology*, **2021**, 1-8	4.8	4
85	Layer-to-Layer Stability of Linear Layerwise Spatially Varying Systems: Applications in Fused Deposition Modeling. *IEEE Transactions on Control Systems Technology*, **2021**, 1-16	4.8	0
84	Multimodal Hybrid Pedestrian: A Hybrid Automaton Model of Urban Pedestrian Behavior for Automated Driving Applications. *IEEE Access*, **2021**, 9, 27708-27722	3.5	4
83	A Requirements Driven Digital Twin Framework: Specification and Opportunities. *IEEE Access*, **2020**, 8, 107781-107801	3.5	43
82	Comparing the Effects of False Alarms and Misses on Humans' Trust in (Semi)Autonomous Vehicles **2020**,		4
81	Priced Timed Automata Models for Control of Intelligent Product Agents in Manufacturing Systems. *IFAC-PapersOnLine*, **2020**, 53, 136-142	0.7	2
80	Context-Sensitive Modeling and Analysis of Cyber-Physical Manufacturing Systems for Anomaly Detection and Diagnosis. *IEEE Transactions on Automation Science and Engineering*, **2020**, 17, 29-40	4.9	18
79	Analysis and Prediction of Pedestrian Crosswalk Behavior during Automated Vehicle Interactions **2020**,		4

78	Context-Adaptive Management of Drivers' Trust in Automated Vehicles. *IEEE Robotics and Automation Letters*, **2020**, 5, 6908-6915	4.2	4
77	Gaussian Mixture Models for Detecting Sleep Apnea Events Using Single Oronasal Airflow Record. *Applied Sciences (Switzerland)*, **2020**, 10, 7889	2.6	3
76	A Control-Oriented Model for Bead Cross-Sectional Geometry in Fused Deposition Modeling **2020**,		4
75	Real-Time Estimation of Drivers' Trust in Automated Driving Systems. *International Journal of Social Robotics*, **2020**, 1	4	10
74	Predicting driver takeover performance in conditionally automated driving. *Accident Analysis and Prevention*, **2020**, 148, 105748	6.1	17
73	Efficient Behavior-aware Control of Automated Vehicles at Crosswalks using Minimal Information Pedestrian Prediction Model **2020**,		2
72	Dynamic Resource Task Negotiation to Enable Product Agent Exploration in Multi-Agent Manufacturing Systems. *IEEE Robotics and Automation Letters*, **2019**, 4, 2854-2861	4.2	13
71	A Unified Digital Twin Framework for Real-time Monitoring and Evaluation of Smart Manufacturing Systems **2019**,		13
70	The model-based product agent: A control oriented architecture for intelligent products in multi-agent manufacturing systems. *Control Engineering Practice*, **2019**, 86, 105-117	3.9	32
69	A Framework for Automatic Initialization of Multi-Agent Production Systems Using Semantic Web Technologies. *IEEE Robotics and Automation Letters*, **2019**, 4, 4330-4337	4.2	17
68	Pedestrian Trust in Automated Vehicles: Role of Traffic Signal and AV Driving Behavior. *Frontiers in Robotics and AI*, **2019**, 6, 117	2.8	21
67	Control-Oriented Modeling and Layer-to-Layer Stability for Fused Deposition Modeling: A Kernel Basis Approach **2019**,		7
66	A Digital Twin Framework for Performance Monitoring and Anomaly Detection in Fused Deposition Modeling **2019**,		14
65	Dynamic Rerouting of Cyber-Physical Production Systems in Response to Disruptions Based on SDC Framework **2019**,		11
64	Time domain characterization for sleep apnea in oronasal airflow signal: a dynamic threshold classification approach. *Physiological Measurement*, **2019**, 40, 054007	2.9	6
63	Cyber-Physical Manufacturing Systems. *Annual Review of Control, Robotics, and Autonomous Systems*, **2019**, 2, 427-443	11.8	10
62	Real-Time Manufacturing Machine and System Performance Monitoring Using Internet of Things. *IEEE Transactions on Automation Science and Engineering*, **2018**, 15, 1735-1748	4.9	44
61	A software-defined framework for the integrated management of smart manufacturing systems. *Manufacturing Letters*, **2018**, 15, 18-21	4.5	19

60	Development and analysis of an operator steering model for teleoperated mobile robots under constant and variable latencies. *Robotica*, **2018**, 36, 167-186	2.1	4
59	Production as a Service: A Digital Manufacturing Framework for Optimizing Utilization. *IEEE Transactions on Automation Science and Engineering*, **2018**, 15, 1483-1493	4.9	23
58	A New Difficulty Index for Teleoperated Robots Driving through Obstacles. *Journal of Intelligent and Robotic Systems: Theory and Applications*, **2018**, 90, 147-160	2.9	3
57	A Centralized Framework for System-Level Control and Management of Additive Manufacturing Fleets **2018**,		8
56	Integrating Human Operators into Agent-based Manufacturing Systems: A Table-top Demonstration. *Procedia Manufacturing*, **2018**, 17, 326-333	1.5	6
55	Conflict-driven Hybrid Observer-based Anomaly Detection **2018**,		2
54	Closing the Loop in IoT-enabled Manufacturing Systems: Challenges and Opportunities **2018**,		5
53	Improved Sensor Fault Detection, Isolation, and Mitigation Using Multiple Observers Approach. *Systems Science and Control Engineering*, **2017**, 5, 70-96	2	10
52	Virtual fusion: a hybrid environment for improved commissioning in manufacturing systems. *International Journal of Production Research*, **2017**, 55, 6254-6265	7.8	8
51	Categorization of Anomalies in Smart Manufacturing Systems to Support the Selection of Detection Mechanisms. *IEEE Robotics and Automation Letters*, **2017**, 2, 1885-1892	4.2	26
50	Production as a service: A centralized framework for small batch manufacturing **2017**,		7
49	Design and implementation of an intelligent product agent architecture in manufacturing systems **2017**,		8
48	SMART: A System-Level Manufacturing and Automation Research Testbed. *Smart and Sustainable Manufacturing Systems*, **2017**, 1, 20170006	0.8	14
47	Multi-Step Ahead Predictions for Critical Levels in Physiological Time Series. *IEEE Transactions on Cybernetics*, **2016**, 46, 1704-14	10.2	23
46	Dynamic Weight-Shifting for Improved Maneuverability and Rollover Prevention in High-Speed Mobile Manipulators. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2016**, 138,	1.6	1
45	Modeling Teleoperated Robot Driving Performance as a Function of Environment Difficulty**This research was supported by the Automotive Research Center at the University of Michigan, with funding from government contract DoD-DoA W56HZV-14-2-0001 through the US Army Tank Automotive Research, Development, and Engineering Center. *IFAC-PapersOnLine*, **2016**, 49, 216-221	0.7	1
44	Effect of concurrent oxygen therapy on accuracy of forecasting imminent postoperative desaturation. *Journal of Clinical Monitoring and Computing*, **2015**, 29, 521-31	2	2
43	A Hierarchical Incentive Arbitration Scheme for Coordinated PEV Charging Stations. *IEEE Transactions on Smart Grid*, **2015**, 6, 1775-1784	10.7	11

42	Equating user performance among communication latency distributions and simulation fidelities for a teleoperated mobile robot **2015**,		2
41	Real-time hybrid simulation of manufacturing systems for performance analysis and control **2015**,		6
40	Driver Modeling for Teleoperation with Time Delay. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2014**, 47, 3551-3556		11
39	Characterizing Energy Usage of a Commercially Available Ground Robot: Method and Results. *Journal of Field Robotics*, **2014**, 31, 441-454	6.7	17
38	A Method for Reducing Noise and Complexity in Yield Analysis for Manufacturing Process Workflows. *IEEE Transactions on Semiconductor Manufacturing*, **2014**, 27, 501-514	2.6	2
37	Evaluating predictions of critical oxygen desaturation events. *Physiological Measurement*, **2014**, 35, 639-55	2.9	8
36	Optimal coverage trajectories for a UGV with tradeoffs for energy and time. *Autonomous Robots*, **2014**, 36, 257-271	3	17
35	Improving teleoperated robot speed using optimization techniques **2013**,		1
34	Predicting oxygen saturation levels in blood using autoregressive models: A threshold metric for evaluating predictive models **2013**,		2
33	Supervisory traction control for a slipping UGV **2013**,		4
32	From Hardware-in-the-Loop to Hybrid Process Simulation: An Ontology for the Implementation Phase of a Manufacturing System. *IEEE Transactions on Automation Science and Engineering*, **2012**, 9, 96-109	4.9	23
31	A formal characterization and analysis for hardware-in-the-loop and hybrid process simulation during manufacturing system deployment. *International Journal on Interactive Design and Manufacturing*, **2011**, 5, 151-169	1.9	3
30	Using hybrid process simulation to evaluate manufacturing system component choices: Integrating a virtual robot with the physical system **2011**,		3
29	Event-based fault detection of manufacturing cell: Data inconsistencies between academic assumptions and industry practice **2010**,		1
28	Modular Supervisory Control with Equivalence-Based Abstraction and Covering-Based Conflict Resolution. *Discrete Event Dynamic Systems: Theory and Applications*, **2010**, 20, 139-185	1	9
27	Closed-loop determinism for non-deterministic environments: Verification for IEC 61499 logic controllers **2009**,		3
26	A New Model for Team Optimization: The Effects of Uncertainty on Interaction. *IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans*, **2008**, 38, 1234-1247		3
25	Modular requirements for Hierarchical Interface-Based Supervisory Control with multiple levels **2008**,		2

24	Modular supervisory control with equivalence-based conflict resolution **2008**,		13
23	Covering-based supervisory control of partially observed discrete event systems for state avoidance **2008**,		2
22	A Factory Health Monitor: System identification, process monitoring, and control **2008**,		2
21	Special Issue on WODES06. *Discrete Event Dynamic Systems: Theory and Applications*, **2007**, 17, 423-424	1	
20	A modular control design method for a flexible manufacturing cell including error handling. *Flexible Services and Manufacturing Journal*, **2007**, 19, 308-330		7
19	Hardware-In-The-Loop for Manufacturing Automation Control: Current Status and Identified Needs **2007**,		14
18	PLC Communication using PROFINET: Experimental Results and Analysis **2006**,		6
17	Experimental Determination of Real Time Peer to Peer Communication Characteristics of EtherNet/IP **2006**,		7
16	Mathematical Modeling and Experimental Identification of an Unmanned Helicopter Robot with Flybar Dynamics. *Journal of Field Robotics*, **2004**, 21, 95-116		72
15	Modelling and optimal controller design of networked control systems with multiple delays. *International Journal of Control*, **2003**, 76, 591-606	1.5	108
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