Taylor T Johnson

List of Publications by Citations

78 papers	1,016 citations	17 h-index	28 g-index
94 ext. papers	1,370 ext. citations	2.5 avg, IF	5.15 L-index

#	Paper	IF	Citations
78	Detection of False-Data Injection Attacks in Cyber-Physical DC Microgrids. *IEEE Transactions on Industrial Informatics*, **2017**, 13, 2693-2703	11.9	131
77	Output Reachable Set Estimation and Verification for Multilayer Neural Networks. *IEEE Transactions on Neural Networks and Learning Systems*, **2018**, 29, 5777-5783	10.3	79
76	Signal Temporal Logic-Based Attack Detection in DC Microgrids. *IEEE Transactions on Smart Grid*, **2019**, 10, 3585-3595	10.7	50
75	Event-triggered control for continuous-time switched linear systems. *IET Control Theory and Applications*, **2017**, 11, 1694-1703	2.5	46
74	Output Reachable Set Estimation for Switched Linear Systems and Its Application in Safety Verification. *IEEE Transactions on Automatic Control*, **2017**, 62, 5380-5387	5.9	40
73	Robust Exponential Stability and Disturbance Attenuation for Discrete-Time Switched Systems Under Arbitrary Switching. *IEEE Transactions on Automatic Control*, **2018**, 63, 1450-1456	5.9	39
72	NNV: The Neural Network Verification Tool for Deep Neural Networks and Learning-Enabled Cyber-Physical Systems. *Lecture Notes in Computer Science*, **2020**, 3-17	0.9	37
71	HYST **2015**,		35
70	Real-Time Reachability for Verified Simplex Design **2014**,		30
69	Safety Verification of Cyber-Physical Systems with Reinforcement Learning Control. *Transactions on Embedded Computing Systems*, **2019**, 18, 1-22	1.8	29
68	Star-Based Reachability Analysis of Deep Neural Networks. *Lecture Notes in Computer Science*, **2019**, 670-686	0.9	27
67	Virtual Prototyping for Distributed Control of a Fault-Tolerant Modular Multilevel Inverter for Photovoltaics. *IEEE Transactions on Energy Conversion*, **2014**, 29, 841-850	5.4	26
66	Verification of Deep Convolutional Neural Networks Using ImageStars. *Lecture Notes in Computer Science*, **2020**, 18-42	0.9	26
65	Improved Geometric Path Enumeration for Verifying ReLU Neural Networks. *Lecture Notes in Computer Science*, **2020**, 66-96	0.9	22
64	A Small Model Theorem for Rectangular Hybrid Automata Networks. *Lecture Notes in Computer Science*, **2012**, 18-34	0.9	19
63	Hyperproperties of real-valued signals **2017**,		18
62	Reachable Set Estimation and Safety Verification for Piecewise Linear Systems with Neural Network Controllers **2018**,		17

61	Model Validation of PWM DCDC Converters. *IEEE Transactions on Industrial Electronics*, **2017**, 64, 7049-7059	8.9	15
60	Scalable Static Hybridization Methods for Analysis of Nonlinear Systems **2016**,		14
59	Real-Time Reachability for Verified Simplex Design. *Transactions on Embedded Computing Systems*, **2016**, 15, 1-27	1.8	14
58	Parallelizable Reachability Analysis Algorithms for Feed-Forward Neural Networks **2019**,		13
57	Automatically finding bugs in a commercial cyber-physical system development tool chain with SLforge **2018**,		13
56	Nonconservative Lifted Convex Conditions for Stability of Discrete-Time Switched Systems Under Minimum Dwell-Time Constraint. *IEEE Transactions on Automatic Control*, **2019**, 64, 3407-3414	5.9	13
55	Parametrized Verification of Distributed Cyber-Physical Systems: An Aircraft Landing Protocol Case Study **2012**,		12
54	Numerical verification of affine systems with up to a billion dimensions **2019**,		11
53	Static and Dynamic Analysis of Timed Distributed Traces **2012**,		11
52	Reachable Set Estimation for Neural Network Control Systems: A Simulation-Guided Approach. *IEEE Transactions on Neural Networks and Learning Systems*, **2021**, 32, 1821-1830	10.3	11
51	Guided search for hybrid systems based on coarse-grained space abstractions. *International Journal on Software Tools for Technology Transfer*, **2016**, 18, 449-467	1.3	10
50	Hybrid automata: from verification to implementation. *International Journal on Software Tools for Technology Transfer*, **2019**, 21, 87-104	1.3	10
49	Abnormal Data Classification Using Time-Frequency Temporal Logic **2017**,		9
48	Satellite Rendezvous and Conjunction Avoidance: Case Studies in Verification of Nonlinear Hybrid Systems. *Lecture Notes in Computer Science*, **2012**, 252-266	0.9	9
47	Reachable Set Estimation and Verification for Neural Network Models of Nonlinear Dynamic Systems. *Unmanned System Technologies*, **2019**, 123-144	0.4	9
46	Order-reduction abstractions for safety verification of high-dimensional linear systems. *Discrete Event Dynamic Systems: Theory and Applications*, **2017**, 27, 443-461	1	8
45	Cyber-physical specification mismatch identification with dynamic analysis **2015**,		8
44	Invariant Synthesis for Verification of Parameterized Cyber-Physical Systems with Applications to Aerospace Systems **2013**,		8

43	Periodically-Scheduled Controller Analysis Using Hybrid Systems Reachability and Continuization **2015**,		7
42	Model-based design for CPS with learning-enabled components **2019**,		7
41	Reachability analysis of closed-loop switching power converters **2013**,		6
40	Abstraction-Based Guided Search for Hybrid Systems. *Lecture Notes in Computer Science*, **2013**, 117-134	0.9	6
39	Using crowd sourcing to locate and characterize conflicts for vulnerable modes. *Accident Analysis and Prevention*, **2019**, 128, 32-39	6.1	5
38	Cyber-Physical Specification Mismatches. *ACM Transactions on Cyber-Physical Systems*, **2018**, 2, 1-26	2.3	5
37	On reachable set estimation for discrete-time switched linear systems under arbitrary switching **2017**,		5
36	Safe and Stabilizing Distributed Cellular Flows **2010**,		5
35	Design verification methods for switching power converters **2012**,		5
34	Cyber-Physical Anomaly Detection in Microgrids Using Time-Frequency Logic Formalism. *IEEE Access*, **2021**, 9, 20012-20021	3.5	5
33	A curated corpus of simulink models for model-based empirical studies **2018**,		5
32	Safe and stabilizing distributed multi-path cellular flows. *Theoretical Computer Science*, **2015**, 579, 9-32	1.1	4
31	Decentralized Real-Time Safety Verification for Distributed Cyber-Physical Systems. *Lecture Notes in Computer Science*, **2019**, 261-277	0.9	4
30	SLEMI **2020**,		4
29	CyFuzz: A Differential Testing Framework for Cyber-Physical Systems Development Environments. *Lecture Notes in Computer Science*, **2017**, 46-60	0.9	4
28	Robustness Verification of Semantic Segmentation Neural Networks Using Relaxed Reachability. *Lecture Notes in Computer Science*, **2021**, 263-286	0.9	4
27	HyRG **2015**,		3
26	CPS Design with Learning-Enabled Components **2019**,		3

25	SLEMI **2020**,		3
24	Dynamic Mode Decomposition for Continuous Time Systems with the Liouville Operator. *Journal of Nonlinear Science*, **2022**, 32, 1	2.8	3
23	ARCH-COMP19 Category Report: Artificial Intelligence and Neural Network Control Systems (AINNCS) for Continuous and Hybrid Systems Plants		3
22	Reachability Analysis for High-Index Linear Differential Algebraic Equations. *Lecture Notes in Computer Science*, **2019**, 160-177	0.9	3
21	Anonymized Reachability of Hybrid Automata Networks. *Lecture Notes in Computer Science*, **2014**, 130-145	0.9	3
20	Runtime Verification for Hybrid Analysis Tools. *Lecture Notes in Computer Science*, **2015**, 281-286	0.9	3
19	Probabilistic Formal Verification of the SATS Concept of Operation. *Lecture Notes in Computer Science*, **2016**, 191-205	0.9	3
18	Verifying Safety and Persistence in Hybrid Systems Using Flowpipes and Continuous Invariants. *Journal of Automated Reasoning*, **2019**, 63, 1005-1029	1	3
17	Formal specification and dependability analysis of optical communication networks **2017**,		2
16	Tutorial: Software tools for hybrid systems verification, transformation, and synthesis: C2E2, HyST, and TuLiP **2016**,		2
15	Stability of digitally interconnected linear systems **2011**,		2
14	Verification Approaches for Learning-Enabled Autonomous Cyber-Physical Systems. *IEEE Design and Test*, **2020**, 1-1	1.4	2
13	Reachable set estimation and control for switched linear systems with dwell-time restriction **2016**,		2
12	Occupation Kernels and Densely Defined Liouville Operators for System Identification **2019**,		2
11	Verification of Closed-loop Systems with Neural Network Controllers		2
10	Operational Models for Piecewise-Smooth Systems. *Transactions on Embedded Computing Systems*, **2017**, 16, 1-19	1.8	1
9	Turbo-alternator stalling protection using available-power estimate **2011**,		1
8	Formal Online Resiliency Monitoring in Microgrids **2020**,		1

7	Verifying Safety and Persistence Properties of Hybrid Systems Using Flowpipes and Continuous Invariants. *Lecture Notes in Computer Science*, **2017**, 194-211	0.9	1
6	Safe Flocking in Spite of Actuator Faults. *Lecture Notes in Computer Science*, **2010**, 588-602	0.9	1
5	Decoupling Abstractions of Non-linear Ordinary Differential Equations. *Lecture Notes in Computer Science*, **2016**, 628-644	0.9	1
4	On Occupation Kernels, Liouville Operators, and Dynamic Mode Decomposition **2021**,		1
3	Reachability Analysis for One Dimensional Linear Parabolic Equations. *IFAC-PapersOnLine*, **2018**, 51, 133-138	0.7	1
2	Mission Planning for Multiple Vehicles with Temporal Specifications using UxAS. *IFAC-PapersOnLine*, **2018**, 51, 67-72	0.7	1
1	Verification of piecewise deep neural networks: a star set approach with zonotope pre-filter. *Formal Aspects of Computing*, **2021**, 33, 519-545	1.2	1