

Majid Zamani

List of Publications by Year in descending order

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127
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127
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127
times ranked

765
citing authors

#	ARTICLE	IF	CITATIONS
1	Symbolic Models for Nonlinear Control Systems Without Stability Assumptions. IEEE Transactions on Automatic Control, 2012, 57, 1804-1809.	5.7	201
2	SCOTS. , 2016, , .		125
3	Symbolic Control of Stochastic Systems via Approximately Bisimilar Finite Abstractions. IEEE Transactions on Automatic Control, 2014, 59, 3135-3150.	5.7	109
4	Symbolic models for stochastic switched systems: A discretization and a discretization-free approach. Automatica, 2015, 55, 183-196.	5.0	72
5	Backstepping Design for Incremental Stability. IEEE Transactions on Automatic Control, 2011, 56, 2184-2189.	5.7	60
6	Design of an H ∞ PID controller using particle swarm optimization. International Journal of Control, Automation and Systems, 2009, 7, 273-280.	2.7	54
7	Approximately bisimilar symbolic models for randomly switched stochastic systems. Systems and Control Letters, 2014, 69, 38-46.	2.3	42
8	Compositional Abstraction for Networks of Control Systems: A Dissipativity Approach. IEEE Transactions on Control of Network Systems, 2018, 5, 1003-1015.	3.7	39
9	Opacity of Nondeterministic Transition Systems: A (Bi)Simulation Relation Approach. IEEE Transactions on Automatic Control, 2019, 64, 5116-5123.	5.7	38
10	On Approximate Opacity of Cyber-Physical Systems. IEEE Transactions on Automatic Control, 2021, 66, 1630-1645.	5.7	38
11	Formal Synthesis of Stochastic Systems via Control Barrier Certificates. IEEE Transactions on Automatic Control, 2021, 66, 3097-3110.	5.7	35
12	Approximations of Stochastic Hybrid Systems: A Compositional Approach. IEEE Transactions on Automatic Control, 2017, 62, 2838-2853.	5.7	34
13	Compositional Construction of Approximate Abstractions of Interconnected Control Systems. IEEE Transactions on Control of Network Systems, 2018, 5, 116-127.	3.7	34
14	Compositional construction of infinite abstractions for networks of stochastic control systems. Automatica, 2019, 107, 125-137.	5.0	34
15	Control Barrier Functions for Unknown Nonlinear Systems using Gaussian Processes. , 2020, , .		31
16	Backstepping controller synthesis and characterizations of incremental stability. Systems and Control Letters, 2013, 62, 949-962.	2.3	30
17	A Lyapunov-Based Small-Gain Theorem for Infinite Networks. IEEE Transactions on Automatic Control, 2021, 66, 5830-5844.	5.7	27
18	Formal Controller Synthesis for Continuous-Space MDPs via Model-Free Reinforcement Learning. , 2020, , .		26

#	ARTICLE	IF	CITATIONS
19	Compositional abstractions of interconnected discrete-time stochastic control systems. , 2017, , .		25
20	Compositional synthesis of finite abstractions for networks of systems: A small-gain approach. Automatica, 2019, 107, 551-561.	5.0	25
21	pFaces. , 2019, , .		25
22	Application and system-level software fault tolerance through full system restarts. , 2017, , .		23
23	From Dissipativity Theory to Compositional Construction of Finite Markov Decision Processes. , 2018, , .		23
24	Compositional (In)Finite Abstractions for Large-Scale Interconnected Stochastic Systems. IEEE Transactions on Automatic Control, 2020, 65, 5280-5295.	5.7	23
25	Secure-by-construction synthesis of cyber-physical systems. Annual Reviews in Control, 2022, 53, 30-50.	7.9	22
26	Temporal Logic Verification of Stochastic Systems Using Barrier Certificates. Lecture Notes in Computer Science, 2018, , 177-193.	1.3	21
27	Compositional construction of approximate abstractions. , 2015, , .		20
28	Backstepping Design for Incremental Stability of Stochastic Hamiltonian Systems with Jumps. IEEE Transactions on Automatic Control, 2018, 63, 255-261.	5.7	20
29	Approximately Bisimilar Symbolic Models for Digital Control Systems. Lecture Notes in Computer Science, 2012, , 362-377.	1.3	20
30	Bisimilar symbolic models for stochastic control systems without state-space discretization. , 2014, , .		19
31	Towards scalable synthesis of stochastic control systems. Discrete Event Dynamic Systems: Theory and Applications, 2017, 27, 341-369.	1.5	19
32	Compositional abstraction-based synthesis for networks of stochastic switched systems. Automatica, 2020, 114, 108827.	5.0	18
33	Compositional abstraction-based synthesis for continuous-time stochastic hybrid systems. European Journal of Control, 2021, 57, 82-94.	2.6	17
34	Symbolic Abstractions of Networked Control Systems. IEEE Transactions on Control of Network Systems, 2018, 5, 1622-1634.	3.7	15
35	Constructing Control System Abstractions from Modular Components. , 2018, , .		15
36	Invariance Feedback Entropy of Nondeterministic Control Systems. , 2017, , .		14

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37	Finite abstractions of networked control systems. , 2014, , .		13
38	From dissipativity theory to compositional synthesis of symbolic models. , 2018, , .		13
39	Compositional Synthesis of Finite Abstractions for Continuous-Space Stochastic Control Systems: A Small-Gain Approach. IFAC-PapersOnLine, 2018, 51, 265-270.	0.9	13
40	Verification of Approximate Opacity via Barrier Certificates. , 2021, 5, 1369-1374.		13
41	Compositional construction of control barrier functions for interconnected control systems. , 2020, , .		13
42	A Lyapunov approach in incremental stability. , 2011, , .		12
43	Compositional Synthesis of Symbolic Models for Networks of Switched Systems. , 2019, 3, 1056-1061.		12
44	Data-Driven Safety Verification of Stochastic Systems via Barrier Certificates. IFAC-PapersOnLine, 2021, 54, 7-12.	0.9	12
45	From Dissipativity Theory to Compositional Synthesis of Large-Scale Stochastic Switched Systems. IEEE Transactions on Automatic Control, 2022, 67, 4422-4437.	5.7	12
46	dtControl. , 2020, , .		11
47	AMYTISS: Parallelized Automated Controller Synthesis for Large-Scale Stochastic Systems. Lecture Notes in Computer Science, 2020, , 461-474.	1.3	10
48	ISS small-gain criteria for infinite networks with linear gain functions. Systems and Control Letters, 2021, 157, 105051.	2.3	10
49	Compositional Abstraction-based Synthesis for Cascade Discrete-Time Control Systems. IFAC-PapersOnLine, 2018, 51, 13-18.	0.9	9
50	Synthesis of Partially Observed Jump-Diffusion Systems via Control Barrier Functions. , 2021, 5, 253-258.		9
51	Compositional Construction of Control Barrier Functions for Networks of Continuous-Time Stochastic Systems. IFAC-PapersOnLine, 2020, 53, 1856-1861.	0.9	9
52	Compositional Construction of Finite MDPs for Continuous-Time Stochastic Systems: A Dissipativity Approach. IFAC-PapersOnLine, 2020, 53, 1962-1967.	0.9	9
53	Symbolic models for stochastic control systems without stability assumptions. , 2013, , .		9
54	Compositional abstraction of large-scale stochastic systems: A relaxed dissipativity approach. Nonlinear Analysis: Hybrid Systems, 2020, 36, 100880.	3.5	8

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55	Data-driven verification of stochastic linear systems with signal temporal logic constraints. <i>Automatica</i> , 2021, 131, 109781.	5.0	8
56	Data-Driven Verification under Signal Temporal Logic Constraints. <i>IFAC-PapersOnLine</i> , 2020, 53, 69-74.	0.9	8
57	Software Fault Tolerance for Cyber-Physical Systems via Full System Restart. <i>ACM Transactions on Cyber-Physical Systems</i> , 2020, 4, 1-20.	2.5	8
58	On a Notion of Approximate Opacity for Discrete-Time Stochastic Control Systems*. , 2020, , .		8
59	Compositional approximations of interconnected stochastic hybrid systems. , 2014, , .		7
60	Abstraction-Based Synthesis of Opacity-Enforcing Controllers using Alternating Simulation Relations. , 2019, , .		7
61	Compositional Abstraction-Based Synthesis for Interconnected Systems: An Approximate Composition Approach. <i>IEEE Transactions on Control of Network Systems</i> , 2021, 8, 702-712.	3.7	7
62	Constructing MDP Abstractions Using Data With Formal Guarantees. , 2023, 7, 460-465.		7
63	Compositional Construction of Finite MDPs for Large-Scale Stochastic Switched Systems: A Dissipativity Approach. <i>IFAC-PapersOnLine</i> , 2019, 52, 31-36.	0.9	6
64	From Dissipativity Theory to Compositional Abstractions of Interconnected Stochastic Hybrid Systems. <i>IEEE Transactions on Control of Network Systems</i> , 2020, 7, 433-445.	3.7	6
65	Symbolic Models for a Class of Impulsive Systems. , 2021, 5, 247-252.		6
66	Compositional abstraction-based synthesis of general MDPs via approximate probabilistic relations. <i>Nonlinear Analysis: Hybrid Systems</i> , 2021, 39, 100991.	3.5	6
67	Compositional synthesis of opacity-preserving finite abstractions for interconnected systems. <i>Automatica</i> , 2021, 131, 109745.	5.0	6
68	Modular Verification of Opacity for Interconnected Control Systems via Barrier Certificates. , 2022, 6, 890-895.		6
69	Invariance Feedback Entropy of Uncertain Control Systems. <i>IEEE Transactions on Automatic Control</i> , 2021, 66, 5680-5695.	5.7	6
70	Compositional Construction of Control Barrier Certificates for Large-Scale Interconnected Stochastic Systems. <i>IFAC-PapersOnLine</i> , 2020, 53, 1862-1867.	0.9	6
71	Controller synthesis for interconnected systems using parametric assume-guarantee contracts. , 2020, , .		6
72	Secure-by-Construction Controller Synthesis for Stochastic Systems under Linear Temporal Logic Specifications. , 2021, , .		6

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73	A Lyapunov-Based ISS Small-Gain Theorem for Infinite Networks of Nonlinear Systems. IEEE Transactions on Automatic Control, 2023, 68, 1447-1462.	5.7	6
74	Safety Verification of Stochastic Systems: A Repetitive Scenario Approach. , 2023, 7, 448-453.		6
75	Symbolic models of networked control systems: A feedback refinement relation approach. , 2016, , .		5
76	Compositional abstractions of networks of stochastic hybrid systems: A dissipativity approach * *This work was supported in part by the European Union's Horizon 2020 Research and Innovation program under grant agreement no. 674875 and by the German Research Foundation (DFG) through the grant ZA 873/1-1. IFAC-PapersOnLine, 2017, 50, 15804-15809.	0.9	5
77	Infinite-step opacity of nondeterministic finite transition systems: A bisimulation relation approach. , 2017, , .		5
78	Towards approximate opacity of cyber-physical system. , 2019, , .		5
79	Verification of Switched Stochastic Systems via Barrier Certificates. , 2019, , .		5
80	Approximate abstractions of control systems with an application to aggregation. Automatica, 2020, 119, 109065.	5.0	5
81	Data-Driven Estimation of Infinitesimal Generators of Stochastic Systems. IFAC-PapersOnLine, 2021, 54, 277-282.	0.9	5
82	QUEST: A Tool for State-Space Quantization-Free Synthesis of Symbolic Controllers. Lecture Notes in Computer Science, 2017, , 309-313.	1.3	5
83	Synthesis of Stochastic Systems with Partial Information via Control Barrier Functions. IFAC-PapersOnLine, 2020, 53, 2441-2446.	0.9	5
84	From Small-Gain Theory to Compositional Construction of Barrier Certificates for Large-Scale Stochastic Systems. IEEE Transactions on Automatic Control, 2022, 67, 5638-5645.	5.7	5
85	Symbolic models for unstable nonlinear control systems. , 2010, , .		4
86	Compositional construction of abstractions via relaxed small-gain conditions Part I: continuous case. , 2018, , .		4
87	Abstraction-based Synthesis of Continuous-Time Stochastic Control Systems. , 2019, , .		4
88	Symbolic models for retarded jump-diffusion systems. Automatica, 2020, 111, 108666.	5.0	4
89	Set stability of infinite networks: ISS small-gain theory and its applications. IFAC-PapersOnLine, 2021, 54, 72-77.	0.9	4
90	Verification of approximate opacity for switched systems: A compositional approach. Nonlinear Analysis: Hybrid Systems, 2021, 42, 101084.	3.5	4

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91	Compositional Synthesis of not Necessarily Stabilizable Stochastic Systems via Finite Abstractions. , 2019, , .		4
92	Compositional Construction of Safety Controllers for Networks of Continuous-Space POMDPs. IEEE Transactions on Control of Network Systems, 2023, 10, 87-99.	3.7	4
93	Construction of approximations of stochastic control systems: A compositional approach. , 2015, , .		3
94	Efficient HVAC controls: A symbolic approach. , 2016, , .		3
95	On the invariance feedback entropy of linear perturbed control systems. , 2017, , .		3
96	Hierarchical Control via an Approximate Aggregate Manifold. , 2018, , .		3
97	Synthesis of Symbolic Controllers: A Parallelized and Sparsity-Aware Approach. Lecture Notes in Computer Science, 2019, , 265-281.	1.3	3
98	Compositional synthesis of almost maximally permissible safety controllers. , 2019, , .		3
99	Compositional Verification of Large-Scale Stochastic Systems via Relaxed Small-Gain Conditions. , 2019, , .		3
100	SENSE: Abstraction-Based Synthesis of Networked Control Systems. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 272, 65-78.	0.8	3
101	Data-Driven Safety Verification of Discrete-Time Networks: A Compositional Approach. , 2022, 6, 2210-2215.		3
102	A small-gain theorem for set stability of infinite networks: Distributed observation and ISS for time-varying networks. European Journal of Control, 2022, 67, 100634.	2.6	3
103	Towards backstepping design for incremental stability. , 2010, , .		2
104	Symbolic synthesis with average performance guarantees. , 2016, , .		2
105	Major Computational Breakthroughs in the Synthesis of Symbolic Controllers via Decomposed Algorithms. , 2018, , .		2
106	Compositional Abstractions of Interconnected Discrete-Time Switched Systems. , 2019, , .		2
107	Compositional Synthesis of Symbolic Models for Infinite Networks. IFAC-PapersOnLine, 2020, 53, 1868-1873.	0.9	2
108	Safe-visor architecture for sandboxing (AI-based) unverified controllers in stochastic cyber-physical systems. Nonlinear Analysis: Hybrid Systems, 2021, 43, 101110.	3.5	2

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109	Modular Computation of Restoration Entropy for Networks of Systems: A Dissipativity Approach. , 2022, 6, 3289-3294.		2
110	A Scenario Approach for Synthesizing \mathcal{K} -Inductive Barrier Certificates. , 2022, 6, 3247-3252.		2
111	Controller Synthesis for Unknown Polynomial-Type Systems: A Data-Driven Approach. , 2022, , .		2
112	On a notion of estimation entropy for stochastic hybrid systems. , 2016, , .		1
113	Compositional abstraction of interconnected control systems under dynamic interconnection topology. , 2017, , .		1
114	Compositional abstractions of networks of stochastic hybrid systems under randomly switched topologies. , 2018, , .		1
115	Formal verification of hyperproperties for control systems. , 2021, , .		1
116	Cloud-Ready Acceleration of Formal Method Techniques for Cyber-Physical Systems. IEEE Design and Test, 2021, 38, 25-34.	1.2	1
117	Symbolic models for infinite networks of control systems: A compositional approach. Nonlinear Analysis: Hybrid Systems, 2021, 43, 101097.	3.5	1
118	Sandboxing Controllers for Stochastic Cyber-Physical Systems. Lecture Notes in Computer Science, 2019, , 247-264.	1.3	1
119	Compositional Construction of Abstractions for Infinite Networks of Switched Systems. , 2020, , .		1
120	On incremental stability of time-delayed stochastic control systems. , 2016, , .		0
121	Backstepping design for incremental stability of stochastic Hamiltonian systems. , 2016, , .		0
122	Compositional abstraction for interconnected systems over Riemannian manifolds: A small-gain approach. , 2018, , .		0
123	Compositional abstraction for interconnected systems over Riemannian manifolds: A dissipativity approach. , 2018, , .		0
124	Verification of Approximate Opacity via Barrier Certificates. , 2021, , .		0
125	A spectral small-gain condition for input-to-state stability of infinite networks. IFAC-PapersOnLine, 2020, 53, 5303-5308.	0.9	0
126	Compositional construction of abstractions for infinite networks of discrete-time switched systems. Nonlinear Analysis: Hybrid Systems, 2022, 44, 101173.	3.5	0

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127	Estimation of Infinitesimal Generators for Unknown Stochastic Hybrid Systems via Sampling: A Formal Approach. , 2023, 7, 223-228.		0