

# Majid Zamani

## List of Publications by Year in descending order

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127  
papers

1,860  
citations

394421

19  
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377865

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127  
docs citations

127  
times ranked

765  
citing authors

#	ARTICLE	IF	CITATIONS
1	Estimation of Infinitesimal Generators for Unknown Stochastic Hybrid Systems via Sampling: A Formal Approach. , 2023, 7, 223-228.		0
2	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
3	Safety Verification of Stochastic Systems: A Repetitive Scenario Approach. , 2023, 7, 448-453.		6
4	Constructing MDP Abstractions Using Data With Formal Guarantees. , 2023, 7, 460-465.		7
5	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
6	Modular Verification of Opacity for Interconnected Control Systems via Barrier Certificates. , 2022, 6, 890-895.		6
7	Data-Driven Safety Verification of Discrete-Time Networks: A Compositional Approach. , 2022, 6, 2210-2215.		3
8	Compositional construction of abstractions for infinite networks of discrete-time switched systems. Nonlinear Analysis: Hybrid Systems, 2022, 44, 101173.	3.5	0
9	From Dissipativity Theory to Compositional Synthesis of Large-Scale Stochastic Switched Systems. IEEE Transactions on Automatic Control, 2022, 67, 4422-4437.	5.7	12
10	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
11	Secure-by-construction synthesis of cyber-physical systems. Annual Reviews in Control, 2022, 53, 30-50.	7.9	22
12	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
13	Modular Computation of Restoration Entropy for Networks of Systems: A Dissipativity Approach. , 2022, 6, 3289-3294.		2
14	A Scenario Approach for Synthesizing $\mathcal{K}$ -Inductive Barrier Certificates. , 2022, 6, 3247-3252.		2
15	Controller Synthesis for Unknown Polynomial-Type Systems: A Data-Driven Approach. , 2022, , .		2
16	On Approximate Opacity of Cyber-Physical Systems. IEEE Transactions on Automatic Control, 2021, 66, 1630-1645.	5.7	38
17	Symbolic Models for a Class of Impulsive Systems. , 2021, 5, 247-252.		6
18	Synthesis of Partially Observed Jump-Diffusion Systems via Control Barrier Functions. , 2021, 5, 253-258.		9

#	ARTICLE	IF	CITATIONS
19	Formal Synthesis of Stochastic Systems via Control Barrier Certificates. IEEE Transactions on Automatic Control, 2021, 66, 3097-3110.	5.7	35
20	Compositional abstraction-based synthesis of general MDPs via approximate probabilistic relations. Nonlinear Analysis: Hybrid Systems, 2021, 39, 100991.	3.5	6
21	Set stability of infinite networks: ISS small-gain theory and its applications. IFAC-PapersOnLine, 2021, 54, 72-77.	0.9	4
22	Data-Driven Safety Verification of Stochastic Systems via Barrier Certificates. IFAC-PapersOnLine, 2021, 54, 7-12.	0.9	12
23	Formal verification of hyperproperties for control systems. , 2021, , .		1
24	Verification of Approximate Opacity via Barrier Certificates. , 2021, , .		0
25	Compositional Abstraction-Based Synthesis for Interconnected Systems: An Approximate Composition Approach. IEEE Transactions on Control of Network Systems, 2021, 8, 702-712.	3.7	7
26	Data-driven verification of stochastic linear systems with signal temporal logic constraints. Automatica, 2021, 131, 109781.	5.0	8
27	Compositional synthesis of opacity-preserving finite abstractions for interconnected systems. Automatica, 2021, 131, 109745.	5.0	6
28	Verification of Approximate Opacity via Barrier Certificates. , 2021, 5, 1369-1374.		13
29	Cloud-Ready Acceleration of Formal Method Techniques for Cyber-Physical Systems. IEEE Design and Test, 2021, 38, 25-34.	1.2	1
30	Verification of approximate opacity for switched systems: A compositional approach. Nonlinear Analysis: Hybrid Systems, 2021, 42, 101084.	3.5	4
31	Symbolic models for infinite networks of control systems: A compositional approach. Nonlinear Analysis: Hybrid Systems, 2021, 43, 101097.	3.5	1
32	Data-Driven Estimation of Infinitesimal Generators of Stochastic Systems. IFAC-PapersOnLine, 2021, 54, 277-282.	0.9	5
33	Compositional abstraction-based synthesis for continuous-time stochastic hybrid systems. European Journal of Control, 2021, 57, 82-94.	2.6	17
34	Invariance Feedback Entropy of Uncertain Control Systems. IEEE Transactions on Automatic Control, 2021, 66, 5680-5695.	5.7	6
35	A Lyapunov-Based Small-Gain Theorem for Infinite Networks. IEEE Transactions on Automatic Control, 2021, 66, 5830-5844.	5.7	27
36	ISS small-gain criteria for infinite networks with linear gain functions. Systems and Control Letters, 2021, 157, 105051.	2.3	10

#	ARTICLE	IF	CITATIONS
37	Safe-visor architecture for sandboxing (AI-based) unverified controllers in stochastic cyber-physical systems. <i>Nonlinear Analysis: Hybrid Systems</i> , 2021, 43, 101110.	3.5	2
38	Secure-by-Construction Controller Synthesis for Stochastic Systems under Linear Temporal Logic Specifications. , 2021, , .		6
39	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
40	Symbolic models for retarded jump-diffusion systems. <i>Automatica</i> , 2020, 111, 108666.	5.0	4
41	Approximate abstractions of control systems with an application to aggregation. <i>Automatica</i> , 2020, 119, 109065.	5.0	5
42	Formal Controller Synthesis for Continuous-Space MDPs via Model-Free Reinforcement Learning. , 2020, , .		26
43	Compositional abstraction of large-scale stochastic systems: A relaxed dissipativity approach. <i>Nonlinear Analysis: Hybrid Systems</i> , 2020, 36, 100880.	3.5	8
44	Compositional (In)Finite Abstractions for Large-Scale Interconnected Stochastic Systems. <i>IEEE Transactions on Automatic Control</i> , 2020, 65, 5280-5295.	5.7	23
45	Compositional abstraction-based synthesis for networks of stochastic switched systems. <i>Automatica</i> , 2020, 114, 108827.	5.0	18
46	AMYTISS: Parallelized Automated Controller Synthesis for Large-Scale Stochastic Systems. <i>Lecture Notes in Computer Science</i> , 2020, , 461-474.	1.3	10
47	Data-Driven Verification under Signal Temporal Logic Constraints. <i>IFAC-PapersOnLine</i> , 2020, 53, 69-74.	0.9	8
48	Compositional Construction of Control Barrier Functions for Networks of Continuous-Time Stochastic Systems. <i>IFAC-PapersOnLine</i> , 2020, 53, 1856-1861.	0.9	9
49	Compositional Synthesis of Symbolic Models for Infinite Networks. <i>IFAC-PapersOnLine</i> , 2020, 53, 1868-1873.	0.9	2
50	Compositional Construction of Finite MDPs for Continuous-Time Stochastic Systems: A Dissipativity Approach. <i>IFAC-PapersOnLine</i> , 2020, 53, 1962-1967.	0.9	9
51	Control Barrier Functions for Unknown Nonlinear Systems using Gaussian Processes. , 2020, , .		31
52	Compositional construction of control barrier functions for interconnected control systems. , 2020, , .		13
53	dtControl. , 2020, , .		11
54	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

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55	Compositional Construction of Abstractions for Infinite Networks of Switched Systems. , 2020, , .		1
56	Compositional Construction of Control Barrier Certificates for Large-Scale Interconnected Stochastic Systems. IFAC-PapersOnLine, 2020, 53, 1862-1867.	0.9	6
57	Synthesis of Stochastic Systems with Partial Information via Control Barrier Functions. IFAC-PapersOnLine, 2020, 53, 2441-2446.	0.9	5
58	A spectral small-gain condition for input-to-state stability of infinite networks. IFAC-PapersOnLine, 2020, 53, 5303-5308.	0.9	0
59	Controller synthesis for interconnected systems using parametric assume-guarantee contracts. , 2020, , .		6
60	On a Notion of Approximate Opacity for Discrete-Time Stochastic Control Systems* . , 2020, , .		8
61	Compositional synthesis of finite abstractions for networks of systems: A small-gain approach. Automatica, 2019, 107, 551-561.	5.0	25
62	Compositional Abstractions of Interconnected Discrete-Time Switched Systems. , 2019, , .		2
63	Compositional Synthesis of Symbolic Models for Networks of Switched Systems. , 2019, 3, 1056-1061.		12
64	Towards approximate opacity of cyber-physical system. , 2019, , .		5
65	pFaces. , 2019, , .		25
66	Compositional Construction of Finite MDPs for Large-Scale Stochastic Switched Systems: A Dissipativity Approach. IFAC-PapersOnLine, 2019, 52, 31-36.	0.9	6
67	Compositional construction of infinite abstractions for networks of stochastic control systems. Automatica, 2019, 107, 125-137.	5.0	34
68	Synthesis of Symbolic Controllers: A Parallelized and Sparsity-Aware Approach. Lecture Notes in Computer Science, 2019, , 265-281.	1.3	3
69	Opacity of Nondeterministic Transition Systems: A (Bi)Simulation Relation Approach. IEEE Transactions on Automatic Control, 2019, 64, 5116-5123.	5.7	38
70	Verification of Switched Stochastic Systems via Barrier Certificates. , 2019, , .		5
71	Abstraction-based Synthesis of Continuous-Time Stochastic Control Systems. , 2019, , .		4
72	Compositional synthesis of almost maximally permissible safety controllers. , 2019, , .		3

#	ARTICLE	IF	CITATIONS
73	Abstraction-Based Synthesis of Opacity-Enforcing Controllers using Alternating Simulation Relations. , 2019, , .		7
74	Compositional Verification of Large-Scale Stochastic Systems via Relaxed Small-Gain Conditions. , 2019, , .		3
75	Compositional Synthesis of not Necessarily Stabilizable Stochastic Systems via Finite Abstractions. , 2019, , .		4
76	Sandboxing Controllers for Stochastic Cyber-Physical Systems. Lecture Notes in Computer Science, 2019, , 247-264.	1.3	1
77	Major Computational Breakthroughs in the Synthesis of Symbolic Controllers via Decomposed Algorithms. , 2018, , .		2
78	From dissipativity theory to compositional synthesis of symbolic models. , 2018, , .		13
79	Compositional Construction of Approximate Abstractions of Interconnected Control Systems. IEEE Transactions on Control of Network Systems, 2018, 5, 116-127.	3.7	34
80	Compositional Abstraction for Networks of Control Systems: A Dissipativity Approach. IEEE Transactions on Control of Network Systems, 2018, 5, 1003-1015.	3.7	39
81	Backstepping Design for Incremental Stability of Stochastic Hamiltonian Systems with Jumps. IEEE Transactions on Automatic Control, 2018, 63, 255-261.	5.7	20
82	Symbolic Abstractions of Networked Control Systems. IEEE Transactions on Control of Network Systems, 2018, 5, 1622-1634.	3.7	15
83	Compositional abstraction for interconnected systems over Riemannian manifolds: A small-gain approach. , 2018, , .		0
84	Compositional Abstraction-based Synthesis for Cascade Discrete-Time Control Systems. IFAC-PapersOnLine, 2018, 51, 13-18.	0.9	9
85	Compositional Synthesis of Finite Abstractions for Continuous-Space Stochastic Control Systems: A Small-Gain Approach. IFAC-PapersOnLine, 2018, 51, 265-270.	0.9	13
86	Compositional abstraction for interconnected systems over Riemannian manifolds: A dissipativity approach. , 2018, , .		0
87	Compositional construction of abstractions via relaxed small-gain conditions Part I: continuous case. , 2018, , .		4
88	From Dissipativity Theory to Compositional Construction of Finite Markov Decision Processes. , 2018, , .		23
89	Compositional abstractions of networks of stochastic hybrid systems under randomly switched topologies. , 2018, , .		1
90	Constructing Control System Abstractions from Modular Components. , 2018, , .		15

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91	Hierarchical Control via an Approximate Aggregate Manifold. , 2018, , .		3
92	Temporal Logic Verification of Stochastic Systems Using Barrier Certificates. Lecture Notes in Computer Science, 2018, , 177-193.	1.3	21
93	Application and system-level software fault tolerance through full system restarts. , 2017, , .		23
94	Invariance Feedback Entropy of Nondeterministic Control Systems. , 2017, , .		14
95	Towards scalable synthesis of stochastic control systems. Discrete Event Dynamic Systems: Theory and Applications, 2017, 27, 341-369.	1.5	19
96	Approximations of Stochastic Hybrid Systems: A Compositional Approach. IEEE Transactions on Automatic Control, 2017, 62, 2838-2853.	5.7	34
97	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
98	Compositional abstraction of interconnected control systems under dynamic interconnection topology. , 2017, , .		1
99	Infinite-step opacity of nondeterministic finite transition systems: A bisimulation relation approach. , 2017, , .		5
100	Compositional abstractions of interconnected discrete-time stochastic control systems. , 2017, , .		25
101	On the invariance feedback entropy of linear perturbed control systems. , 2017, , .		3
102	QUEST: A Tool for State-Space Quantization-Free Synthesis of Symbolic Controllers. Lecture Notes in Computer Science, 2017, , 309-313.	1.3	5
103	On a notion of estimation entropy for stochastic hybrid systems. , 2016, , .		1
104	On incremental stability of time-delayed stochastic control systems. , 2016, , .		0
105	Symbolic synthesis with average performance guarantees. , 2016, , .		2
106	Efficient HVAC controls: A symbolic approach. , 2016, , .		3
107	Backstepping design for incremental stability of stochastic Hamiltonian systems. , 2016, , .		0
108	Symbolic models of networked control systems: A feedback refinement relation approach. , 2016, , .		5

#	ARTICLE	IF	CITATIONS
109	SCOTS. , 2016, , .		125
110	Construction of approximations of stochastic control systems: A compositional approach. , 2015, , .		3
111	Symbolic models for stochastic switched systems: A discretization and a discretization-free approach. Automatica, 2015, 55, 183-196.	5.0	72
112	Compositional construction of approximate abstractions. , 2015, , .		20
113	Symbolic Control of Stochastic Systems via Approximately Bisimilar Finite Abstractions. IEEE Transactions on Automatic Control, 2014, 59, 3135-3150.	5.7	109
114	Compositional approximations of interconnected stochastic hybrid systems. , 2014, , .		7
115	Bisimilar symbolic models for stochastic control systems without state-space discretization. , 2014, , .		19
116	Finite abstractions of networked control systems. , 2014, , .		13
117	Approximately bisimilar symbolic models for randomly switched stochastic systems. Systems and Control Letters, 2014, 69, 38-46.	2.3	42
118	Backstepping controller synthesis and characterizations of incremental stability. Systems and Control Letters, 2013, 62, 949-962.	2.3	30
119	Symbolic models for stochastic control systems without stability assumptions. , 2013, , .		9
120	Symbolic Models for Nonlinear Control Systems Without Stability Assumptions. IEEE Transactions on Automatic Control, 2012, 57, 1804-1809.	5.7	201
121	Approximately Bisimilar Symbolic Models for Digital Control Systems. Lecture Notes in Computer Science, 2012, , 362-377.	1.3	20
122	Backstepping Design for Incremental Stability. IEEE Transactions on Automatic Control, 2011, 56, 2184-2189.	5.7	60
123	A Lyapunov approach in incremental stability. , 2011, , .		12
124	Towards backstepping design for incremental stability. , 2010, , .		2
125	Symbolic models for unstable nonlinear control systems. , 2010, , .		4
126	Design of an $H^\infty$ PID controller using particle swarm optimization. International Journal of Control, Automation and Systems, 2009, 7, 273-280.	2.7	54



#	ARTICLE	IF	CITATIONS
127	SENSE: Abstraction-Based Synthesis of Networked Control Systems. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 272, 65-78.	0.8	3