

# Goran Frehse

## List of Publications by Year in descending order

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Version: 2024-02-01

44  
papers

1,686  
citations

949033

11  
h-index

685536

24  
g-index

49  
all docs

49  
docs citations

49  
times ranked

762  
citing authors

#	ARTICLE	IF	CITATIONS
1	Decomposing reach set computations with low-dimensional sets and high-dimensional matrices (extended version). Information and Computation, 2022, , 104937.	0.5	0
2	Set Propagation Techniques for Reachability Analysis. Annual Review of Control, Robotics, and Autonomous Systems, 2021, 4, 369-395.	7.5	102
3	Falsification of hybrid systems with symbolic reachability analysis and trajectory splicing. Nonlinear Analysis: Hybrid Systems, 2021, 42, 101093.	2.1	0
4	Reachability Analysis of Linear Hybrid Systems via Block Decomposition. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2020, 39, 4018-4029.	1.9	5
5	JuliaReach. , 2019, , .		42
6	Falsification of hybrid systems using symbolic reachability and trajectory splicing. , 2019, , .		8
7	Reach Set Approximation through Decomposition with Low-dimensional Sets and High-dimensional Matrices. , 2018, , .		28
8	Verification of Hybrid Systems. , 2018, , 1047-1110.		29
9	Formal Feature Interpretation of Hybrid Systems. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2018, 37, 2474-2484.	1.9	3
10	A Toolchain for Verifying Safety Properties of Hybrid Automata via Pattern Templates. , 2018, , .		4
11	Space-Time Interpolants. Lecture Notes in Computer Science, 2018, , 468-486.	1.0	3
12	The 20th ACM International Conference on Hybrid Systems: Computation and Control [Conference Reports]. IEEE Control Systems, 2017, 37, 98-99.	1.0	5
13	Constructing verification models of nonlinear Simulink systems via syntactic hybridization. , 2017, , .		3
14	Formal feature analysis of hybrid automata. , 2016, , .		4
15	Combining zonotopes and support functions for efficient reachability analysis of linear systems. , 2016, , .		26
16	Guided search for hybrid systems based on coarse-grained space abstractions. International Journal on Software Tools for Technology Transfer, 2016, 18, 449-467.	1.7	16
17	From Simulation Models to Hybrid Automata Using Urgency and Relaxation. , 2016, , .		8
18	SL2SX Translator. , 2016, , .		34

#	ARTICLE	IF	CITATIONS
19	Reachability of hybrid systems in space-time. , 2015, , .		2
20	Computing maximizer trajectories of affine dynamics for reachability. , 2015, , .		2
21	Current Challenges in the Verification of Hybrid Systems. Lecture Notes in Computer Science, 2015, , 8-24.	1.0	22
22	Eliminating spurious transitions in reachability with support functions. , 2015, , .		15
23	A Benchmark Suite for Hybrid Systems Reachability Analysis. Lecture Notes in Computer Science, 2015, , 408-414.	1.0	22
24	An Introduction to Hybrid Automata, Numerical Simulation and Reachability Analysis. , 2015, , 50-81.		5
25	Formal Analysis of Timing Effects on Closed-Loop Properties of Control Software. , 2014, , .		50
26	Assume-Guarantee Abstraction Refinement Meets Hybrid Systems. Lecture Notes in Computer Science, 2014, , 116-131.	1.0	23
27	Flowpipe approximation and clustering in space-time. , 2013, , .		47
28	Modular, hierarchical models of control systems in SpaceEx. , 2013, , .		9
29	Flowpipe-Guard Intersection for Reachability Computations with Support Functions. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 94-101.	0.4	10
30	A Box-Based Distance between Regions for Guiding the Reachability Analysis of SpaceEx. Lecture Notes in Computer Science, 2012, , 479-494.	1.0	10
31	SpaceEx: Scalable Verification of Hybrid Systems. Lecture Notes in Computer Science, 2011, , 379-395.	1.0	496
32	Monitoring Dynamical Signals While Testing Timed Aspects of a System. Lecture Notes in Computer Science, 2011, , 115-130.	1.0	2
33	Design Principles for an Extendable Verification Tool for Hybrid Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 244-249.	0.4	4
34	PHAVer: algorithmic verification of hybrid systems past HyTech. International Journal on Software Tools for Technology Transfer, 2008, 10, 263-279.	1.7	165
35	A Counterexample-Guided Approach to Parameter Synthesis for Linear Hybrid Automata. Lecture Notes in Computer Science, 2008, , 187-200.	1.0	51
36	Reachability Analysis of a Switched Buffer Network. , 2007, , 698-701.		2

#	ARTICLE	IF	CITATIONS
37	Recent progress in continuous and hybrid reachability analysis. , 2006, , .		66
38	Time Domain Verification of Oscillator Circuit Properties. Electronic Notes in Theoretical Computer Science, 2006, 153, 9-22.	0.9	20
39	On Timed Simulation Relations for Hybrid Systems and Compositionality. Lecture Notes in Computer Science, 2006, , 200-214.	1.0	6
40	Recent Progress in Continuous hybrid Reachability Analysis. , 2006, , .		11
41	PHAVer: Algorithmic Verification of Hybrid Systems Past HyTech. Lecture Notes in Computer Science, 2005, , 258-273.	1.0	288
42	MODULAR ANALYSIS OF DISCRETE CONTROLLERS FOR DISTRIBUTED HYBRID SYSTEMS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 469-474.	0.4	5
43	ARCH-COMP19 Category Report: Continuous and Hybrid Systems with Linear Continuous Dynamics. , 0, , .		1
44	ARCH-COMP19 Category Report: Hybrid Systems with Piecewise Constant Dynamics. , 0, , .		1