

# Stefan Mitsch

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3925394/publications.pdf>

Version: 2024-02-01

55  
papers

861  
citations

687363

13  
h-index

580821

25  
g-index

59  
all docs

59  
docs citations

59  
times ranked

492  
citing authors

#	ARTICLE	IF	CITATIONS
1	KeYmaeraX: An Axiomatic Tactical Theorem Prover for Hybrid Systems. Lecture Notes in Computer Science, 2015, , 527-538.	1.3	130
2	BeAware!“ Situation awareness, the ontology-driven way. Data and Knowledge Engineering, 2010, 69, 1181-1193.	3.4	81
3	ModelPlex: verified runtime validation of verified cyber-physical system models. Formal Methods in System Design, 2016, 49, 33-74.	0.8	70
4	Formal verification of obstacle avoidance and navigation of ground robots. International Journal of Robotics Research, 2017, 36, 1312-1340.	8.5	57
5	On Provably Safe Obstacle Avoidance for Autonomous Robotic Ground Vehicles. , 0, , .		52
6	How to model and prove hybrid systems with KeYmaera: a tutorial on safety. International Journal on Software Tools for Technology Transfer, 2016, 18, 67-91.	1.9	47
7	Towards Formal Verification of Freeway Traffic Control. , 2012, , .		35
8	VeriPhy: verified controller executables from verified cyber-physical system models. , 2018, , .		33
9	A formally verified hybrid system for safe advisories in the next-generation airborne collision avoidance system. International Journal on Software Tools for Technology Transfer, 2017, 19, 717-741.	1.9	32
10	A tour of BeAware “ A situation awareness framework for control centers. Information Fusion, 2014, 20, 155-173.	19.1	27
11	ModelPlex: Verified Runtime Validation of Verified Cyber-Physical System Models. Lecture Notes in Computer Science, 2014, , 199-214.	1.3	27
12	A Formal Safety Net for Waypoint-Following in Ground Robots. IEEE Robotics and Automation Letters, 2019, 4, 2910-2917.	5.1	20
13	Tactical contract composition for hybrid system component verification. International Journal on Software Tools for Technology Transfer, 2018, 20, 615-643.	1.9	16
14	Bellerophon: Tactical Theorem Proving for Hybrid Systems. Lecture Notes in Computer Science, 2017, , 207-224.	1.3	16
15	The KeYmaera X Proof IDE - Concepts on Usability in Hybrid Systems Theorem Proving. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 240, 67-81.	0.8	16
16	User profile integration made easy. , 2012, , .		15
17	Collaborative Verification-Driven Engineering of Hybrid Systems. Mathematics in Computer Science, 2014, 8, 71-97.	0.4	14
18	Refactoring, Refinement, and Reasoning. Lecture Notes in Computer Science, 2014, , 481-496.	1.3	12

#	ARTICLE	IF	CITATIONS
19	A Survey on Clustering Techniques for Situation Awareness. Lecture Notes in Computer Science, 2013, , 815-826.	1.3	11
20	HyPLC. , 2019, , .		11
21	Modeling Distributed Signal Processing Applications. , 2009, , .		8
22	Pegasus: A Framework for Sound Continuous Invariant Generation. Lecture Notes in Computer Science, 2019, , 138-157.	1.3	8
23	Change and Delay Contracts for Hybrid System Component Verification. Lecture Notes in Computer Science, 2017, , 134-151.	1.3	8
24	VeriPhy: verified controller executables from verified cyber-physical system models. ACM SIGPLAN Notices, 2018, 53, 617-630.	0.2	8
25	Formal Verification of Train Control with Air Pressure Brakes. Lecture Notes in Computer Science, 2017, , 173-191.	1.3	8
26	Modeling Situation-Aware Ambient Assisted Living Systems for Eldercare. , 2009, , .		7
27	Verified Traffic Networks: Component-Based Verification of Cyber-Physical Flow Systems. , 2015, , .		7
28	Situation Prediction Nets. Lecture Notes in Computer Science, 2010, , 202-218.	1.3	6
29	A Retrospective on Developing Hybrid System Provers in the KeYmaera Family. Lecture Notes in Computer Science, 2020, , 21-64.	1.3	5
30	An Engineering Toolbox to Build Situation Aware Ambient Assisted Living Systems. , 2008, , .		4
31	Large-Scale Industrial Positioning and Location Tracking Are We There Yet?. , 2008, , .		4
32	Logic-Based Modeling Approaches for Qualitative and Hybrid Reasoning in Dynamic Spatial Systems. ACM Computing Surveys, 2015, 48, 1-40.	23.0	4
33	On Optimization of Predictions in Ontology-Driven Situation Awareness. Lecture Notes in Computer Science, 2009, , 297-309.	1.3	4
34	A Two-Layered Deployment Scheme for Wireless Sensor Network based Location Tracking. , 2008, , .		3
35	SEM <sup>2</sup> suite &#x2014; Towards a tool suite for supporting knowledge management in situation awareness systems. , 2014, , .		3
36	Pegasus: sound continuous invariant generation. Formal Methods in System Design, 0, , 1.	0.8	3

#	ARTICLE	IF	CITATIONS
37	Towards CPS Verification Engineering. , 2020, , .		3
38	Formally Verified Next-generation Airborne Collision Avoidance Games in ACASX. Transactions on Embedded Computing Systems, 2023, 22, 1-30.	2.9	3
39	A Component-Based Hybrid Systems Verification and Implementation Tool in KeYmaeraX (Tool) Tj ETQq1 1 0.784314 rgBT /Overlock	1.3	2
40	Implicit and Explicit Proof Management in KeYmaera X. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 338, 53-67.	0.8	2
41	Modeling wireless sensor networks based context-aware emergency coordination systems. , 2008, , .		2
42	Safe and Resilient Practical Waypoint-Following for Autonomous Vehicles. , 2022, 6, 1574-1579.		2
43	Verified Quadratic Virtual Substitution for Real Arithmetic. Lecture Notes in Computer Science, 2021, , 200-217.	1.3	2
44	Gulliver-A Framework for Building Smart Speech-Based Applications. , 2007, , .		1
45	Making workflows situation aware. , 2011, , .		1
46	SemGen"Towards a Semantic Data Generator for Benchmarking Duplicate Detectors. Lecture Notes in Computer Science, 2011, , 490-501.	1.3	1
47	Towards Modeling Dynamic Behavior with Integrated Qualitative Spatial Relations. Lecture Notes in Computer Science, 2011, , 271-280.	1.3	1
48	Ontology-Driven Generation of Multi-View Modeling Tools. , 2012, , .		1
49	Towards Duplicate Detection for Situation Awareness Based on Spatio-temporal Relations. Lecture Notes in Computer Science, 2010, , 1097-1107.	1.3	1
50	Formally Verified Safety Net for Waypoint Navigation Neural Network Controllers. Lecture Notes in Computer Science, 2021, , 122-141.	1.3	1
51	Fanoos: Multi-resolution, Multi-strength, Interactive Explanations for Learned Systems. Lecture Notes in Computer Science, 2022, , 43-68.	1.3	1
52	Model-Driven Prototyping Support for Pervasive Healthcare Applications. , 0, , 251-281.		1
53	Verifying Switched System Stability With Logic. , 2022, , .		1
54	Same, Same but Different" A Survey on Duplicate Detection Methods for Situation Awareness. Lecture Notes in Computer Science, 2009, , 1050-1068.	1.3	0

#	ARTICLE	IF	CITATIONS
55	A Conceptual Reference Model of Modeling and Verification Concepts for Hybrid Systems. Lecture Notes in Computer Science, 2014, , 368-379.	1.3	0