

# Wolfgang Reif

## List of Publications by Year in descending order

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191  
papers

1,761  
citations

394421

19  
h-index

526287

27  
g-index

203  
all docs

203  
docs citations

203  
times ranked

757  
citing authors

#	ARTICLE	IF	CITATIONS
1	Verification of Crashesafe Caching in a Virtual File System Switch. Formal Aspects of Computing, 2022, 34, 1-33.	1.8	1
2	Software & System Verification with KIV. Lecture Notes in Computer Science, 2022, , 408-436.	1.3	4
3	FlowFrontNet: Improving Carbon Composite Manufacturing with CNNs. Lecture Notes in Computer Science, 2021, , 411-426.	1.3	5
4	Semantic Plug and Play: An Architecture Combining Linked Data and Reconfigurable Hardware. , 2021, , .		1
5	Architecture for Emergency Control of Autonomous UAV Ensembles. , 2021, , .		4
6	Flashix: Modular Verification of a Concurrent and Crash-Safe Flash File System. Lecture Notes in Computer Science, 2021, , 239-265.	1.3	4
7	RealCaPP: Real-time capable Plug & Produce communication platform with OPC UA over TSN for distributed industrial robot control. , 2021, , .		4
8	Multi-robot Cooperation for Assembly: Automated Planning and Optimization. Lecture Notes in Electrical Engineering, 2021, , 169-192.	0.4	4
9	A Real-World Realization of the AntNet Routing Algorithm with ActivityBots. , 2021, , .		0
10	Towards a Real-Time Capable Plug & Produce Environment for Adaptable Factories. , 2021, , .		4
11	Constraint-based Whole-Body-Control of Mobile Manipulators in Human-Centered Environments. , 2021, , .		1
12	Distributed Constraint Optimization for Task Allocation in Self-Adaptive Manufacturing Systems. , 2021, , .		1
13	UAV Inspection of Large Components: Indoor Navigation Relative to Structures. , 2021, , .		0
14	ROSSi A Graphical Programming Interface for ROS 2. , 2021, , .		0
15	PermeabilityNets: Comparing Neural Network Architectures on a Sequence-to-Instance Task in CFRP Manufacturing. , 2021, , .		3
16	Deadlock Avoidance for Multiple Tasks in a Self-Organizing Production Cell. , 2020, , .		1
17	Towards Real-time Process Monitoring and Machine Learning for Manufacturing Composite Structures. , 2020, , .		5
18	Real-time capable OPC-UA Programs over TSN for distributed industrial control. , 2020, , .		12

#	ARTICLE	IF	CITATIONS
19	Adding Concurrency to a Sequential Refinement Tower. Lecture Notes in Computer Science, 2020, , 6-23.	1.3	6
20	Modular Integration of Crashesafe Caching into a Verified Virtual File System Switch. Lecture Notes in Computer Science, 2020, , 218-236.	1.3	5
21	Industrial Robot Programming. , 2020, , 1-9.		0
22	Industrial Robot Programming. , 2020, , 1-9.		0
23	Learning Controllers for Adaptive Spreading of Carbon Fiber Tows. Lecture Notes in Computer Science, 2020, , 65-77.	1.3	0
24	LegoBot: Automated Planning for Coordinated Multi-Robot Assembly of LEGO structures. , 2020, , .		7
25	Modeling and Execution of Coordinated Missions in Reconfigurable Robot Ensembles. , 2020, , .		0
26	Robust Distance Estimation of Capacitive Proximity Sensors in HRI using Neural Networks. , 2020, , .		5
27	How to find assembly plans (fast): Hierarchical state space partitioning for efficient multi-robot assembly. , 2020, , .		2
28	Ensemble Programming for Multipotent Systems. , 2019, , .		3
29	Multipotent Systems: Combining Planning, Self-Organization, and Reconfiguration in Modular Robot Ensembles. Sensors, 2019, 19, 17.	3.8	21
30	Reducing Bias in Preference Aggregation for Multiagent Soft Constraint Problems. Lecture Notes in Computer Science, 2019, , 510-526.	1.3	1
31	A Chained Neural Network Model for Photovoltaic Power Forecast. Lecture Notes in Computer Science, 2019, , 566-578.	1.3	0
32	Modular and Domain-guided Multi-robot Planning for Assembly Processes. , 2019, , .		2
33	Integrating planning and reactive behavior by using semantically annotated robot tasks. World Scientific Encyclopedia With Semantic Computing and Robotic Intelligence, 2019, , 111-120.	0.0	0
34	Quantitative and qualitative safety analysis of a hemodialysis machine with S#. Journal of Software: Evolution and Process, 2018, 30, e1942.	1.6	2
35	Symbolic execution for a clash-free subset of ASMs. Science of Computer Programming, 2018, 158, 21-40.	1.9	1
36	Self-Organized Resource Allocation for Reconfigurable Robot Ensembles. , 2018, , .		4

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37	Integrating planning and reactive behavior by using semantically annotated robot tasks. Encyclopedia With Semantic Computing and Robotic Intelligence, 2018, 02, 1850005.	0.2	0
38	Semantic Plug and Play " Self-Descriptive Modular Hardware for Robotic Applications. International Journal of Semantic Computing, 2018, 12, 559-577.	0.5	6
39	Measuring and Evaluating the Performance of Self-Organization Mechanisms Within Collective Adaptive Systems. Lecture Notes in Computer Science, 2018, , 202-220.	1.3	6
40	Case Study: Adaptive Test Automation for Testing an Adaptive Hadoop Resource Manager. , 2018, , .		1
41	Integrating Reactive Behavior and Planning: Optimizing Execution Time Through Predictive Preparation of State Machine Tasks. , 2018, , .		0
42	Test suite reduction for self-organizing systems. , 2018, , .		7
43	MiniBrass: Soft constraints for MiniZinc. Constraints, 2018, 23, 403-450.	0.7	6
44	Synthesizing Capabilities for Collective Adaptive Systems from Self-descriptive Hardware Devices Bridging the Reality Gap. Lecture Notes in Computer Science, 2018, , 94-108.	1.3	8
45	Qualitative and quantitative analysis of safety-critical systems with. International Journal on Software Tools for Technology Transfer, 2018, 20, 359-377.	1.9	2
46	Towards a Tool-based Methodology for Developing Software for Dynamic Robot Teams. , 2018, , .		2
47	Towards Re-orchestration of Real-Time Component Systems in Robotics. , 2017, , .		3
48	Consistent World Models for Cooperating Robots: Separating Logical Relationships, Sensor Interpretation and Estimation. , 2017, , .		1
49	Toward Adaptive, Self-Aware Test Automation. , 2017, , .		6
50	Facilitating Planning by Using Self-Organization. , 2017, , .		6
51	Modular Verification of Order-Preserving Write-Back Caches. Lecture Notes in Computer Science, 2017, , 375-390.	1.3	7
52	An Approach for Isolated Testing of Self-Organization Algorithms. Lecture Notes in Computer Science, 2017, , 188-222.	1.3	7
53	Code Abstractions for Automatic Information Flow Control in a Model-Driven Approach. Lecture Notes in Computer Science, 2017, , 209-218.	1.3	0
54	Environment-aware proximity detection with capacitive sensors for human-robot-interaction. , 2016, , .		27

#	ARTICLE	IF	CITATIONS
55	Secure Integration of Third Party Components in a Model-Driven Approach. Lecture Notes in Computer Science, 2016, , 66-86.	1.3	0
56	On Structure and Distribution of Software for Mobile Manipulators. Lecture Notes in Electrical Engineering, 2016, , 209-227.	0.4	1
57	Modular, crash-safe refinement for ASMs with submachines. Science of Computer Programming, 2016, 131, 3-21.	1.9	14
58	Toward Integrated Analysis &&& Testing of Component-Based, Adaptive Robot Systems. , 2016, , .		2
59	Fault-Aware Modeling and Specification for Efficient Formal Safety Analysis. Lecture Notes in Computer Science, 2016, , 97-114.	1.3	3
60	Back-to-Back Testing of Self-organization Mechanisms. Lecture Notes in Computer Science, 2016, , 18-35.	1.3	7
61	Risk-Based Interoperability Testing Using Reinforcement Learning. Lecture Notes in Computer Science, 2016, , 52-69.	1.3	7
62	The Social Concept of Trust as Enabler for Robustness in Open Self-Organising Systems. , 2016, , 1-16.		2
63	Specification and Design of Trust-Based Open Self-Organising Systems. , 2016, , 17-54.		1
64	Inside a Verified Flash File System: Transactions and Garbage Collection. Lecture Notes in Computer Science, 2016, , 73-93.	1.3	10
65	Unified Simulation, Visualization, and Formal Analysis of Safety-Critical Systems with. Lecture Notes in Computer Science, 2016, , 150-167.	1.3	3
66	A Relational Encoding for a Clash-Free Subset of ASMs. Lecture Notes in Computer Science, 2016, , 237-243.	1.3	1
67	Combining PosoMAS Method Content with Scrum: Agile Software Engineering for Open Self-Organising Systems. Scalable Computing, 2016, 16, .	1.0	1
68	Declassification of Information with Complex Filter Functions. , 2016, , .		1
69	Modeling information flow properties with UML. , 2015, , .		2
70	Executable Specifications of Safety-Critical Systems with S#. IFAC-PapersOnLine, 2015, 48, 44-49.	0.9	4
71	A backward-oriented approach for offline programming of complex manufacturing tasks. , 2015, , .		12
72	Abstracting security-critical applications for model checking in a model-driven approach. , 2015, , .		2

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73	Cooperative Resource Allocation in Open Systems of Systems. ACM Transactions on Autonomous and Adaptive Systems, 2015, 10, 1-44.	0.8	14
74	Active Learning for Efficient Sampling of Control Models of Collectives. , 2015, , .		1
75	An Approach to Robust Resource Allocation in Large-Scale Systems of Systems. , 2015, , .		7
76	A Research Overview and Evaluation of Performance Metrics for Self-Organization Algorithms. , 2015, , .		14
77	Runtime Model-Based Safety Analysis of Self-Organizing Systems with S#. , 2015, , .		9
78	Formal verification of QVT transformations for code generation. Software and Systems Modeling, 2015, 14, 981-1002.	2.7	12
79	Verification of B <sup>+</sup> trees by integration of shape analysis and interactive theorem proving. Software and Systems Modeling, 2015, 14, 27-44.	2.7	2
80	KIV: overview and VerifyThis competition. International Journal on Software Tools for Technology Transfer, 2015, 17, 677-694.	1.9	39
81	Partial Valuation Structures for Qualitative Soft Constraints. Lecture Notes in Computer Science, 2015, , 115-133.	1.3	9
82	Integrating a Model-Driven Approach and Formal Verification for the Development of Secure Service Applications. Texts and Monographs in Symbolic Computation, 2015, , 45-81.	0.4	1
83	Abstraction of Heterogeneous Supplier Models in Hierarchical Resource Allocation. Lecture Notes in Computer Science, 2015, , 23-53.	1.3	2
84	A Heuristic for Constrained Set Partitioning in the Light of Heterogeneous Objectives. Lecture Notes in Computer Science, 2015, , 223-244.	1.3	3
85	A Particle Swarm Optimizer for Solving the Set Partitioning Problem in the Presence of Partitioning Constraints. , 2015, , .		6
86	Integration and Exchangeability of External Security-Critical Web Services in a Model-Driven Approach. Lecture Notes in Computer Science, 2015, , 63-73.	1.3	0
87	Quality over Quantity in Soft Constraints. , 2014, , .		5
88	An Effective Implementation of Norms in Trust-Aware Open Self-Organising Systems. , 2014, , .		3
89	Proactive Guidance for Dynamic and Cooperative Resource Allocation under Uncertainties. , 2014, , .		6
90	Development of a Verified Flash File System. Lecture Notes in Computer Science, 2014, , 9-24.	1.3	24

#	ARTICLE	IF	CITATIONS
91	Quality Assurance for Self-Adaptive, Self-Organising Systems (Message from the Workshop) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf		
92	Modeling test cases for security protocols with SecureMDD. Computer Networks, 2014, 58, 99-111.	5.1	5
93	RGITL: A temporal logic framework for compositional reasoning about interleaved programs. Annals of Mathematics and Artificial Intelligence, 2014, 71, 131-174.	1.3	23
94	Synthesised Constraint Models for Distributed Energy Management. , 2014, , .		8
95	Flexible and continuous execution of real-time critical robotic tasks. International Journal of Mechatronics and Automation, 2014, 4, 27.	0.2	14
96	A Compositional Proof Method for Linearizability Applied to a Wait-Free Multiset. Lecture Notes in Computer Science, 2014, , 357-372.	1.3	4
97	Verification of a Virtual Filesystem Switch. Lecture Notes in Computer Science, 2014, , 242-261.	1.3	14
98	Trust-Based Scenarios “ Predicting Future Agent Behavior in Open Self-organizing Systems. Lecture Notes in Computer Science, 2014, , 90-102.	1.3	8
99	Towards Testing Self-organizing, Adaptive Systems. Lecture Notes in Computer Science, 2014, , 180-185.	1.3	22
100	Formalizing Information Flow Control in a Model-Driven Approach. Lecture Notes in Computer Science, 2014, , 456-461.	1.3	1
101	Model-Driven Development of Information Flow-Secure Systems with IFlow. , 2013, , .		17
102	A Trust- and Cooperation-Based Solution of a Dynamic Resource Allocation Problem. , 2013, , .		10
103	Model-driven synthesis of monitoring infrastructure for reliable adaptive multi-agent systems. , 2013, , .		7
104	Managing extensibility and maintainability of industrial robotics software. , 2013, , .		3
105	Formal Modeling and Verification of Self-* Systems Based on Observer/Controller-Architectures. Lecture Notes in Computer Science, 2013, , 80-111.	1.3	9
106	Security requirements formalized with OCL in a model-driven approach. , 2013, , .		4
107	Formal Specification of an Erase Block Management Layer for Flash Memory. Lecture Notes in Computer Science, 2013, , 214-229.	1.3	9
108	Evaluation of Jif and Joana as Information Flow Analyzers in a Model-Driven Approach. Lecture Notes in Computer Science, 2013, , 174-186.	1.3	1

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109	On the Influence of Inter-Agent Variation on Multi-Agent Algorithms Solving a Dynamic Task Allocation Problem under Uncertainty. , 2012, , .		15
110	Instantaneous switching between real-time commands for continuous execution of complex robotic tasks. , 2012, , .		3
111	Confidence as a Means to Assess the Accuracy of Trust Values. , 2012, , .		8
112	Model-Driven Testing of Security Protocols with SecureMDD. , 2012, , .		2
113	3rd edition of the workshop on trustworthy self-organizing systems (TSOS 2012). , 2012, , .		0
114	Incremental development of large, secure smart card applications. , 2012, , .		5
115	Model-Driven Development of Secure Service Applications. , 2012, , .		9
116	A Decentralized Multi-agent Algorithm for the Set Partitioning Problem. Lecture Notes in Computer Science, 2012, , 107-121.	1.3	7
117	The ForMoSA Approach to Qualitative and Quantitative Model-Based Safety Analysis. , 2012, , 65-114.		6
118	A genetic algorithm for self-optimization in safety-critical resource-flow systems. , 2011, , .		3
119	Decentralized Reconfiguration for Self-Organizing Resource-Flow Systems Based on Local Knowledge. , 2011, , .		10
120	Workshop Message. , 2011, , .		0
121	Interleaved Programs and Rely-Guarantee Reasoning with ITL. , 2011, , .		21
122	Formal Verification of QVT Transformations for Code Generation. Lecture Notes in Computer Science, 2011, , 533-547.	1.3	14
123	Design of an automation system for performing processes in aerospace industries. , 2011, , .		17
124	Proving linearizability with temporal logic. Formal Aspects of Computing, 2011, 23, 91-112.	1.8	18
125	Patterns to Measure and Utilize Trust in Multi-agent Systems. , 2011, , .		6
126	Ensuring correct self-reconfiguration in safety-critical applications by verified result checking. , 2011, , .		2



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127	Developing Self-Organizing Robotic Cells Using Organic Computing Principles. Studies in Computational Intelligence, 2011, , 253-273.	0.9	7
128	Formal Verification of a Lock-Free Stack with Hazard Pointers. Lecture Notes in Computer Science, 2011, , 239-255.	1.3	11
129	Verification of Bâ€™+â€™ Trees: An Experiment Combining Shape Analysis and Interactive Theorem Proving. Lecture Notes in Computer Science, 2011, , 188-203.	1.3	4
130	OC-Trust: Towards Trustworthy Organic Computing Systems. , 2011, , 593-595.		0
131	Automated Flaw Detection in Algebraic Specifications. Journal of Automated Reasoning, 2010, 45, 359-395.	1.4	2
132	Interactive verification of concurrent systems using symbolic execution. AI Communications, 2010, 23, 285-307.	1.2	16
133	Engineering self-coordinating software intensive systems. , 2010, , .		1
134	Automated cutting and handling of carbon fiber fabrics in aerospace industries. , 2010, , .		12
135	The Robotics API: An object-oriented framework for modeling industrial robotics applications. , 2010, , .		13
136	Formal Specification and Analysis of Trusted Communities. , 2010, , .		4
137	A Software Engineering Guideline for Self-Organizing Resource-Flow Systems. , 2010, , .		8
138	Interfacing industrial robots using Realtime Primitives. , 2010, , .		7
139	Pitfalls in Formal Reasoning about Security Protocols. , 2010, , .		3
140	Formal Verification of Application-Specific Security Properties in a Model-Driven Approach. Lecture Notes in Computer Science, 2010, , 166-181.	1.3	16
141	On Deadlocks and Fairness in Self-organizing Resource-Flow Systems. Lecture Notes in Computer Science, 2010, , 87-100.	1.3	3
142	Temporal Logic Verification of Lock-Freedom. Lecture Notes in Computer Science, 2010, , 377-396.	1.3	10
143	A Formal Framework for Compositional Verification of Organic Computing Systems. Lecture Notes in Computer Science, 2010, , 17-31.	1.3	7
144	Designing Self-healing in Automotive Systems. Lecture Notes in Computer Science, 2010, , 47-61.	1.3	15

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145	Trustworthy Organic Computing Systems: Challenges and Perspectives. Lecture Notes in Computer Science, 2010, , 62-76.	1.3	36
146	Software Metrics in Static Program Analysis. Lecture Notes in Computer Science, 2010, , 485-500.	1.3	6
147	A generic software framework for role-based Organic Computing systems. , 2009, , .		13
148	Model-Driven Code Generation for Secure Smart Card Applications. , 2009, , .		10
149	An Abstract Specification Language for Static Program Analysis. Electronic Notes in Theoretical Computer Science, 2009, 254, 181-197.	0.9	4
150	Hiding real-time: A new approach for the software development of industrial robots. , 2009, , .		18
151	A Universal Self-Organization Mechanism for Role-Based Organic Computing Systems. Lecture Notes in Computer Science, 2009, , 17-31.	1.3	20
152	Abstract Specification of the UBIFS File System for Flash Memory. Lecture Notes in Computer Science, 2009, , 190-206.	1.3	28
153	SecureMDD: A Model-Driven Development Method for Secure Smart Card Applications. , 2009, , .		22
154	Object-centric programming: A new modeling paradigm for robotic applications. , 2009, , .		2
155	Generating formal specifications for security-critical applications - A model-driven approach. , 2009, , .		20
156	A Systematic Verification Approach for Mondex Electronic Purses Using ASMs. Lecture Notes in Computer Science, 2009, , 93-110.	1.3	7
157	Verification of Mondex electronic purses with KIV: from transactions to a security protocol. Formal Aspects of Computing, 2008, 20, 41-59.	1.8	23
158	A Specification and Construction Paradigm for Organic Computing Systems. , 2008, , .		40
159	Verification of Mondex Electronic Purses with KIV: From a Security Protocol to Verified Code. , 2008, , 165-180.		11
160	Bounded Relational Analysis of Free Data Types. , 2008, , 99-115.		4
161	Automating Algebraic Specifications of Non-freely Generated Data Types. Lecture Notes in Computer Science, 2008, , 141-155.	1.3	2
162	Modeling of self-adaptive systems with SCADE. , 2007, , .		12

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163	Design and construction of organic computing systems. , 2007, , .		18
164	Verifying Smart Card Applications: An ASM Approach. Lecture Notes in Computer Science, 2007, , 313-332.	1.3	9
165	ASN1-light: A Verified Message Encoding for Security Protocols. , 2007, , .		2
166	A Modeling Framework for the Development of Provably Secure E-Commerce Applications. , 2007, , .		7
167	A Refinement Method for Java Programs. Lecture Notes in Computer Science, 2007, , 221-235.	1.3	11
168	Using Deductive Cause-Consequence Analysis (DCCA) with SCADE. Lecture Notes in Computer Science, 2007, , 465-478.	1.3	19
169	Improving medical protocols by formal methods. Artificial Intelligence in Medicine, 2006, 36, 193-209.	6.5	85
170	Safety and Dependability Analysis of Self-Adaptive Systems. , 2006, , .		19
171	The Mondex Challenge: Machine Checked Proofs for an Electronic Purse. Lecture Notes in Computer Science, 2006, , 16-31.	1.3	25
172	Formal Modeling and Verification of Systems with Self-x Properties. Lecture Notes in Computer Science, 2006, , 38-47.	1.3	24
173	DEDUCTIVE CAUSE-CONSEQUENCE ANALYSIS (DCCA). IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 62-67.	0.4	20
174	Interactive Verification of Statecharts. Lecture Notes in Computer Science, 2004, , 355-373.	1.3	20
175	Combining Formal Methods and Safety Analysis – The ForMoSA Approach. Lecture Notes in Computer Science, 2004, , 474-493.	1.3	19
176	Interactive Verification of UML State Machines. Lecture Notes in Computer Science, 2004, , 434-448.	1.3	26
177	Safety analysis of the height control system for the Elbtunnel. Reliability Engineering and System Safety, 2003, 81, 259-268.	8.9	11
178	Verified formal security models for multiapplicative smart cards <sup>1</sup> . Journal of Computer Security, 2002, 10, 339-367.	0.8	8
179	A Method for Secure Smartcard Applications. Lecture Notes in Computer Science, 2002, , 319-333.	1.3	6
180	Safety Analysis of the Height Control System for the Elbtunnel. Lecture Notes in Computer Science, 2002, , 296-308.	1.3	6

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181	Flaw Detection in Formal Specifications. Lecture Notes in Computer Science, 2001, , 642-657.	1.3	9
182	Formal System Development with KIV. Lecture Notes in Computer Science, 2000, , 363-366.	1.3	80
183	KIV 3.0 for Provably Correct Systems. Lecture Notes in Computer Science, 1999, , 330-337.	1.3	12
184	Formal Support for Development of Knowledge-Based Systems. Failure and Lessons Learned in Information Technology Management, 1998, 2, 173-182.	0.1	2
185	Proving System Correctness with KIV 3.0. Lecture Notes in Computer Science, 1997, , 69-72.	1.3	4
186	Reuse of proofs in software verification. Sadhana - Academy Proceedings in Engineering Sciences, 1996, 21, 229-244.	1.3	3
187	The Kiv-approach to software verification. Lecture Notes in Computer Science, 1995, , 339-368.	1.3	33
188	Reuse of proofs in software verification. Lecture Notes in Computer Science, 1993, , 284-293.	1.3	29
189	Correctness of generic modules. , 1992, , 406-417.		8
190	A Formal Model of a Virtual Filesystem Switch. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 102, 33-45.	0.8	7
191	A Wave-like Decentralized Reconfiguration Strategy for Self-organizing Resource-Flow Systems. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 27, 32-33.	0.8	0