

Manfred Broy

List of Publications by Year in descending order

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Version: 2024-02-01

87
papers

2,343
citations

331259

21
h-index

276539

41
g-index

116
all docs

116
docs citations

116
times ranked

864
citing authors

#	ARTICLE	IF	CITATIONS
1	Specification and Development of Interactive Systems. Texts and Monographs in Computer Science, 2001, , .	0.7	240
2	Engineering Automotive Software. Proceedings of the IEEE, 2007, 95, 356-373.	16.4	192
3	Software Engineering for Automotive Systems: A Roadmap. , 2007, , .		174
4	Partial abstract types. Acta Informatica, 1982, 18, 47-64.	0.5	146
5	From MSCS to Statecharts. , 1999, , 61-71.		116
6	A formal model of services. ACM Transactions on Software Engineering and Methodology, 2007, 16, 5.	4.8	112
7	On hierarchies of abstract data types. Acta Informatica, 1983, 20, 1.	0.5	97
8	Compositional refinement of interactive systems. Journal of the ACM, 1997, 44, 850-891.	1.8	63
9	Cyber-Physical Systems: Imminent Challenges. Lecture Notes in Computer Science, 2012, , 1-28.	1.0	59
10	Towards a formal foundation of the specification and description language SDL. Formal Aspects of Computing, 1991, 3, 21-57.	1.4	51
11	A Logical Basis for Component-Oriented Software and Systems Engineering. Computer Journal, 2010, 53, 1758-1782.	1.5	50
12	Multifunctional software systems: Structured modeling and specification of functional requirements. Science of Computer Programming, 2010, 75, 1193-1214.	1.5	42
13	Guiding requirements engineering for software-intensive embedded systems in the automotive industry. Computer Science - Research and Development, 2014, 29, 21-43.	2.7	39
14	Algebraic implementations preserve program correctness. Science of Computer Programming, 1986, 7, 35-53.	1.5	38
15	Semantics of finite and infinite networks of concurrent communicating agents. Distributed Computing, 1987, 2, 13-31.	0.7	38
16	Toward a Holistic and Standardized Automotive Architecture Description. Computer, 2009, 42, 98-101.	1.2	37
17	UML formal semantics: lessons learned. Software and Systems Modeling, 2011, 10, 441-446.	2.2	37
18	Demystifying maintainability. , 2006, , .		33

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19	Nondeterministic data flow programs: How to avoid the merge anomaly. <i>Science of Computer Programming</i> , 1988, 10, 65-85.	1.5	32
20	On Integrating Design Thinking for Human-Centered Requirements Engineering. <i>IEEE Software</i> , 2020, 37, 25-31.	2.1	32
21	Predicative specifications for functional programs describing communicating networks. <i>Information Processing Letters</i> , 1987, 25, 93-101.	0.4	31
22	Engineering Cyber-Physical Systems: Challenges and Foundations. , 2013, , 1-13.		31
23	A Meta Model for Artefact-Oriented: Fundamentals and Lessons Learned in Requirements Engineering. <i>Lecture Notes in Computer Science</i> , 2010, , 183-197.	1.0	30
24	Refinement of Time. <i>Lecture Notes in Computer Science</i> , 1997, , 44-63.	1.0	25
25	AutoMoDe - Notations, Methods, and Tools for Model-Based Development of Automotive Software. , 0, , .		23
26	Modeling layered distributed communication systems. <i>Formal Aspects of Computing</i> , 2005, 17, 1-18.	1.4	21
27	Rethinking Nonfunctional Software Requirements. <i>Computer</i> , 2015, 48, 96-99.	1.2	21
28	Requirements Engineering as a Key to Holistic Software Quality. <i>Lecture Notes in Computer Science</i> , 2006, , 24-34.	1.0	21
29	Model-driven architecture-centric engineering of (embedded) software intensive systems: modeling theories and architectural milestones. <i>Innovations in Systems and Software Engineering</i> , 2007, 3, 75-102.	1.6	20
30	Semantics of communicating processes. <i>Information and Control</i> , 1984, 61, 202-246.	1.3	19
31	AutoFocus - Ein Werkzeugprototyp zur Entwicklung eingebetteter Systeme. <i>Computer Science - Research and Development</i> , 1999, 14, 121-134.	0.9	19
32	Service-Oriented Systems Engineering: Specification and Design of Services and Layered Architectures. , 2005, , 47-81.		19
33	Adding fair choice to Dijkstra's calculus. <i>ACM Transactions on Programming Languages and Systems</i> , 1994, 16, 924-938.	1.7	18
34	A logical approach to systems engineering artifacts: semantic relationships and dependencies beyond traceability – from requirements to functional and architectural views. <i>Software and Systems Modeling</i> , 2018, 17, 365-393.	2.2	17
35	Artefacts in software engineering: a fundamental positioning. <i>Software and Systems Modeling</i> , 2019, 18, 2777-2786.	2.2	17
36	On the correctness of upper layers of automotive systems. <i>Formal Aspects of Computing</i> , 2008, 20, 637-662.	1.4	15

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37	A stream-based mathematical model for distributed information processing systems - the SysLab system model -. IFIP Advances in Information and Communication Technology, 1997, , 315-322.	0.5	15
38	A Model of Dynamic Systems. Lecture Notes in Computer Science, 2014, , 39-53.	1.0	15
39	Softwareentwicklung in Deutschland. Informatik-Spektrum, 2001, 24, 81-90.	1.0	13
40	Modelling operating system structures by timed stream processing functions. Journal of Functional Programming, 1992, 2, 1-21.	0.5	12
41	Views of queues. Science of Computer Programming, 1988, 11, 65-86.	1.5	11
42	A Functional Rephrasing of the Assumption/Commitment Specification Style. Formal Methods in System Design, 1998, 13, 87-119.	0.9	11
43	Specification and top-down design of distributed systems. Journal of Computer and System Sciences, 1987, 34, 236-265.	0.9	10
44	Can Practitioners Neglect Theory and Theoreticians Neglect Practice?. Computer, 2011, 44, 19-24.	1.2	9
45	Compositional Refinement of Interactive Systems Modelled by Relations. Lecture Notes in Computer Science, 1998, , 130-149.	1.0	9
46	Seamless Model Driven Systems Engineering Based on Formal Models. Lecture Notes in Computer Science, 2009, , 1-19.	1.0	9
47	A semantic and methodological essence of message sequence charts. Science of Computer Programming, 2005, 54, 213-256.	1.5	8
48	Computability and realizability for interactive computations. Information and Computation, 2015, 241, 277-301.	0.5	8
49	Software and System Modeling: Structured Multi-view Modeling, Specification, Design and Implementation. , 2012, , 309-372.		7
50	System Behaviour Models with Discrete and Dense Time. , 2012, , 3-25.		7
51	A systematic approach to language constructs for concurrent programs. Science of Computer Programming, 1984, 4, 103-139.	1.5	6
52	Experiences with software specification and verification using LP, the Larch proof assistant. Formal Methods in System Design, 1996, 8, 221-272.	0.9	6
53	Time, Abstraction, Causality and Modularity in Interactive Systems. Electronic Notes in Theoretical Computer Science, 2004, 108, 3-9.	0.9	6
54	Interaction and Realizability. Lecture Notes in Computer Science, 2007, , 29-50.	1.0	6

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55	Informatik: Grundlagenwissenschaft oder Ingenieurdisziplin?. Informatik-Spektrum, 1999, 22, 206-209.	1.0	5
56	Ein Wegweiser für Forschung und Lehre im Software-Engineering eingebetteter Systeme. Informatik-Spektrum, 2003, 26, 3-7.	1.0	5
57	Two Sides of Structuring Multi-Functional Software Systems: Function Hierarchy and Component Architecture. , 2007, , .		5
58	Theory and methodology of assumption/commitment based system interface specification and architectural contracts. Formal Methods in System Design, 2018, 52, 33-87.	0.9	5
59	Algebraic and functional specification of an interactive serializable database interface. Distributed Computing, 1992, 6, 5-18.	0.7	4
60	Relating Time and Causality in Interactive Distributed Systems. European Review, 2010, 18, 507-563.	0.4	4
61	Denotational semantics of communicating processes based on a language for applicative multiprogramming. Information Processing Letters, 1983, 17, 29-35.	0.4	3
62	Architectural Concepts in Programming Languages. Computer, 2010, 43, 88-91.	1.2	3
63	Informatik in der Automobilindustrie. Informatik-Spektrum, 2011, 34, 1-5.	1.0	3
64	Verifying of interface assertions for infinite state Mealy machines. Journal of Computer and System Sciences, 2014, 80, 1298-1322.	0.9	3
65	On Architecture Specification. Lecture Notes in Computer Science, 2018, , 19-39.	1.0	3
66	Denotational semantics of communicating sequential programs. Information Processing Letters, 1986, 23, 253-259.	0.4	2
67	Broadcasting buffering communication. Computer Languages, Systems and Structures, 1988, 13, 31-47.	0.3	2
68	Specification and design of shared resource arbitration. International Journal of Parallel Programming, 1991, 20, 1-22.	1.1	2
69	Architektur & Management im Großen meistern. Informatik-Spektrum, 2008, 31, 523-525.	1.0	2
70	Operational and Denotational Semantics with Explicit Concurrency. Fundamenta Informaticae, 1992, 16, 201-229.	0.3	2
71	On denotational versus predicative semantics. Journal of Computer and System Sciences, 1991, 42, 1-29.	0.9	1
72	... noch nicht zu spät!. Informatik-Spektrum, 2000, 23, 109-117.	1.0	1

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73	Message Sequence Charts in the Development Process – Roles and Limitations. <i>Electronic Notes in Theoretical Computer Science</i> , 2002, 65, 18-33.	0.9	1
74	Modellbasiertes Software und Systems Engineering als Element eines durchgängigen Systems Lifecycle Managements (SysLM). Xpert Press, 2013, , 73-89.	0.1	1
75	A Functional Calculus for Specification and Verification of Nondeterministic Interactive Systems. <i>Lecture Notes in Computer Science</i> , 2003, , 161-181.	1.0	1
76	Architecture Based Specification and Verification of Embedded Software Systems (Work in Progress). <i>Communications in Computer and Information Science</i> , 2008, , 1-13.	0.4	1
77	Pragmatic Formal Specification of System Properties by Tables. <i>Lecture Notes in Computer Science</i> , 2015, , 329-354.	1.0	1
78	The Leading Role of Software and Systems Architecture in the Age of Digitization. , 2018, , 1-23.		1
79	Software engineering beyond our planning horizon: automation for computer-based systems. <i>Science of Computer Programming</i> , 2002, 42, 1-10.	1.5	0
80	Software-Engineering und Software-Fabrik. <i>Informatik-Spektrum</i> , 2003, 26, 13-16.	1.0	0
81	Edsger W. Dijkstra - Acta Informatica and Marktoberdorf. <i>Acta Informatica</i> , 2003, 39, 141-142.	0.5	0
82	Editorial: Where Theory and Practice Meet. <i>Formal Aspects of Computing</i> , 2003, 15, 297-298.	1.4	0
83	Software auf dem Weg zur Industrialisierung. <i>Informatik-Spektrum</i> , 2005, 28, 269-269.	1.0	0
84	SoSyM special section on service-based software engineering. <i>Software and Systems Modeling</i> , 2006, 5, 170-171.	2.2	0
85	Software-based Functions Safe, reliable, structured. <i>ATZelektronik Worldwide</i> , 2013, 8, 4-9.	0.1	0
86	In memory of Bernhard Schätz, long- time friend and SoSyM editor. <i>Software and Systems Modeling</i> , 2018, 17, 5-7.	2.2	0
87	Seamless Model-Based System Development: Foundations. <i>Lecture Notes in Computer Science</i> , 2020, , 1-9.	1.0	0