

Kim G Larsen

List of Publications by Year in descending order

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180
papers

8,154
citations

101384

36
h-index

58464

82
g-index

188
all docs

188
docs citations

188
times ranked

2258
citing authors

#	ARTICLE	IF	CITATIONS
1	Uppaal in a nutshell. International Journal on Software Tools for Technology Transfer, 1997, 1, 134-152.	1.7	1,528
2	A Tutorial on Uppaal. Lecture Notes in Computer Science, 2004, , 200-236.	1.0	950
3	Bisimulation through probabilistic testing. Information and Computation, 1991, 94, 1-28.	0.5	812
4	Uppaal SMC tutorial. International Journal on Software Tools for Technology Transfer, 2015, 17, 397-415.	1.7	354
5	Efficient On-the-Fly Algorithms for the Analysis of Timed Games. Lecture Notes in Computer Science, 2005, , 66-80.	1.0	191
6	UPPAAL-Tiga: Time for Playing Games!. Lecture Notes in Computer Science, 2007, , 121-125.	1.0	180
7	Model-checking for real-time systems. Lecture Notes in Computer Science, 1995, , 62-88.	1.0	134
8	Modal I/O Automata for Interface and Product Line Theories. Lecture Notes in Computer Science, 2007, , 64-79.	1.0	132
9	Timed I/O automata. , 2010, , .		117
10	Contracts for System Design. Foundations and Trends in Electronic Design Automation, 2018, 12, 124-400.	1.0	116
11	Infinite Runs in Weighted Timed Automata with Energy Constraints. Lecture Notes in Computer Science, 2008, , 33-47.	1.0	108
12	Optimal scheduling using priced timed automata. Performance Evaluation Review, 2005, 32, 34-40.	0.4	105
13	Proof systems for satisfiability in Hennessy-Milner Logic with recursion. Theoretical Computer Science, 1990, 72, 265-288.	0.5	104
14	Time for Statistical Model Checking of Real-Time Systems. Lecture Notes in Computer Science, 2011, , 349-355.	1.0	96
15	Statistical Model Checking for Networks of Priced Timed Automata. Lecture Notes in Computer Science, 2011, , 80-96.	1.0	94
16	Reachability Analysis of Probabilistic Systems by Successive Refinements. Lecture Notes in Computer Science, 2001, , 39-56.	1.0	89
17	Online Testing of Real-time Systems Using Uppaal. Lecture Notes in Computer Science, 2005, , 79-94.	1.0	86
18	Lower and upper bounds in zone-based abstractions of timed automata. International Journal on Software Tools for Technology Transfer, 2006, 8, 204-215.	1.7	76

#	ARTICLE	IF	CITATIONS
19	Uppaal Implementation Secrets. Lecture Notes in Computer Science, 2002, , 3-22.	1.0	76
20	Compositionality Through an Operational Semantics of Contexts. Journal of Logic and Computation, 1991, 1, 761-795.	0.5	69
21	Proof systems for Hennessy-Milner Logic with recursion. , 1988, , 215-230.		63
22	The power of reachability testing for timed automata. Theoretical Computer Science, 2003, 300, 411-475.	0.5	61
23	Model checking via reachability testing for timed automata. Lecture Notes in Computer Science, 1998, , 263-280.	1.0	56
24	Compositional verification of probabilistic processes. , 1992, , 456-471.		55
25	Statistical Model Checking for Stochastic Hybrid Systems. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 92, 122-136.	0.8	54
26	Optimal Strategies in Priced Timed Game Automata. Lecture Notes in Computer Science, 2004, , 148-160.	1.0	52
27	From timed automata to logic “ and back. Lecture Notes in Computer Science, 1995, , 529-539.	1.0	50
28	Optimal infinite scheduling for multi-priced timed automata. Formal Methods in System Design, 2008, 32, 3-23.	0.9	48
29	Static Guard Analysis in Timed Automata Verification. Lecture Notes in Computer Science, 2003, , 254-270.	1.0	46
30	Priced Timed Automata: Algorithms and Applications. Lecture Notes in Computer Science, 2005, , 162-182.	1.0	44
31	CMC: A Tool for Compositional Model-Checking of Real-Time Systems. IFIP Advances in Information and Communication Technology, 1998, , 439-456.	0.5	44
32	Automatic Synthesis of Robust and Optimal Controllers “ An Industrial Case Study. Lecture Notes in Computer Science, 2009, , 90-104.	1.0	44
33	Quantitative analysis of real-time systems using priced timed automata. Communications of the ACM, 2011, 54, 78-87.	3.3	43
34	Learning deterministic probabilistic automata from a model checking perspective. Machine Learning, 2016, 105, 255-299.	3.4	43
35	UPPAAL - Now, Next, and Future. Lecture Notes in Computer Science, 2001, , 99-124.	1.0	43
36	Quantitative analysis of weighted transition systems. The Journal of Logic and Algebraic Programming, 2010, 79, 689-703.	1.4	41

#	ARTICLE	IF	CITATIONS
37	A context dependent equivalence between processes. Theoretical Computer Science, 1987, 49, 185-215.	0.5	40
38	Constraint Markov Chains. Theoretical Computer Science, 2011, 412, 4373-4404.	0.5	40
39	Graphical versus logical specifications. Theoretical Computer Science, 1992, 106, 3-20.	0.5	39
40	Learning Probabilistic Automata for Model Checking. , 2011, , .		39
41	An evaluation framework for energy aware buildings using statistical model checking. Science China Information Sciences, 2012, 55, 2694-2707.	2.7	39
42	Timed modal specification " Theory and tools. Lecture Notes in Computer Science, 1993, , 253-267.	1.0	39
43	On Modal Refinement and Consistency. Lecture Notes in Computer Science, 2007, , 105-119.	1.0	38
44	Reduction and Refinement Strategies for Probabilistic Analysis. Lecture Notes in Computer Science, 2002, , 57-76.	1.0	37
45	ECDAR: An Environment for Compositional Design and Analysis of Real Time Systems. Lecture Notes in Computer Science, 2010, , 365-370.	1.0	37
46	Staying Alive as Cheaply as Possible. Lecture Notes in Computer Science, 2004, , 203-218.	1.0	36
47	Statistical model checking for biological systems. International Journal on Software Tools for Technology Transfer, 2015, 17, 351-367.	1.7	33
48	Resource-Optimal Scheduling Using Priced Timed Automata. Lecture Notes in Computer Science, 2004, , 220-235.	1.0	32
49	Formal Analysis and Testing of Real-Time Automotive Systems Using UPPAAL Tools. Lecture Notes in Computer Science, 2015, , 47-61.	1.0	31
50	Lower and Upper Bounds in Zone Based Abstractions of Timed Automata. Lecture Notes in Computer Science, 2004, , 312-326.	1.0	30
51	Online and Compositional Learning of Controllers with Application to Floor Heating. Lecture Notes in Computer Science, 2016, , 244-259.	1.0	30
52	Automated verification of an audio-control protocol using Uppaal. The Journal of Logic and Algebraic Programming, 2002, 52-53, 163-181.	1.4	29
53	Compositional Design Methodology with Constraint Markov Chains. , 2010, , .		29
54	Compositional model checking of real time systems. Lecture Notes in Computer Science, 1995, , 27-41.	1.0	29

#	ARTICLE	IF	CITATIONS
55	A constraint oriented proof methodology based on modal transition systems. Lecture Notes in Computer Science, 1995, , 17-40.	1.0	28
56	Timed Control with Observation Based and Stuttering Invariant Strategies. Lecture Notes in Computer Science, 2007, , 192-206.	1.0	27
57	Model-checking real-time control programs: verifying LEGO MINDSTORMS TM systems using UPPAAL, , 2000, , .		26
58	On-the-Fly Exact Computation of Bisimilarity Distances. Lecture Notes in Computer Science, 2013, , 1-15.	1.0	26
59	Learning Markov Decision Processes for Model Checking. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 103, 49-63.	0.8	26
60	Verification of Large State/Event Systems Using Compositionality and Dependency Analysis. Formal Methods in System Design, 2001, 18, 5-23.	0.9	25
61	Abstract Probabilistic Automata. Lecture Notes in Computer Science, 2011, , 324-339.	1.0	24
62	Metrics for weighted transition systems: Axiomatization and complexity. Theoretical Computer Science, 2011, 412, 3358-3369.	0.5	23
63	CAAL: Concurrency Workbench, Aalborg Edition. Lecture Notes in Computer Science, 2015, , 573-582.	1.0	23
64	A compositional protocol verification using relativized bisimulation. Information and Computation, 1992, 99, 80-108.	0.5	22
65	Parametric Modal Transition Systems. Lecture Notes in Computer Science, 2011, , 275-289.	1.0	22
66	Statistical Model Checking Past, Present, and Future. Lecture Notes in Computer Science, 2014, , 135-142.	1.0	20
67	\mathbb{L}^* -Based Learning of Markov Decision Processes. Lecture Notes in Computer Science, 2019, , 651-669.	1.0	20
68	The Power of Reachability Testing for Timed Automata. Lecture Notes in Computer Science, 1998, , 245-256.	1.0	20
69	Checking Thorough Refinement on Modal Transition Systems Is EXPTIME-Complete. Lecture Notes in Computer Science, 2009, , 112-126.	1.0	20
70	Rewrite-Based Statistical Model Checking of WMTL. Lecture Notes in Computer Science, 2013, , 260-275.	1.0	20
71	From Timed Automata to Logic - and Back. BRICS Report Series, 1995, 2, .	0.2	20
72	Minimum-Cost Reachability for Priced Timed Automata. BRICS Report Series, 2001, 8, .	0.2	20

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73	Extending modal transition systems with structured labels. <i>Mathematical Structures in Computer Science</i> , 2012, 22, 581-617.	0.5	19
74	Model Checking Timed Automata with Priorities Using DBM Subtraction. <i>Lecture Notes in Computer Science</i> , 2006, , 128-142.	1.0	19
75	Hierarchical Scheduling Framework Based on Compositional Analysis Using Uppaal. <i>Lecture Notes in Computer Science</i> , 2014, , 61-78.	1.0	19
76	Almost Optimal Strategies in One Clock Priced Timed Games. <i>Lecture Notes in Computer Science</i> , 2006, , 345-356.	1.0	18
77	Continuous modeling of real-time and hybrid systems: from concepts to tools. <i>International Journal on Software Tools for Technology Transfer</i> , 1997, 1, 64-85.	1.7	17
78	Scenario-based verification of real-time systems using Uppaal. <i>Formal Methods in System Design</i> , 2010, 37, 200-264.	0.9	17
79	Compositional verification of real-time systems using Ecdar. <i>International Journal on Software Tools for Technology Transfer</i> , 2012, 14, 703-720.	1.7	17
80	Quantitative Refinement for Weighted Modal Transition Systems. <i>Lecture Notes in Computer Science</i> , 2011, , 60-71.	1.0	17
81	Abstract Probabilistic Automata. <i>Information and Computation</i> , 2013, 232, 66-116.	0.5	16
82	Weighted modal transition systems. <i>Formal Methods in System Design</i> , 2013, 42, 193-220.	0.9	16
83	Real-time specifications. <i>International Journal on Software Tools for Technology Transfer</i> , 2015, 17, 17-45.	1.7	16
84	Complexity of Decision Problems for Mixed and Modal Specifications. , 2008, , 112-126.		16
85	Modal transition systems with weight intervals. <i>The Journal of Logic and Algebraic Programming</i> , 2012, 81, 408-421.	1.4	15
86	Mutation-Based Test-Case Generation with Ecdar. , 2017, , .		15
87	Average-energy games. <i>Acta Informatica</i> , 2018, 55, 91-127.	0.5	15
88	Exact Acceleration of Real-Time Model Checking. <i>Electronic Notes in Theoretical Computer Science</i> , 2002, 65, 120-139.	0.9	14
89	Graphical versus logical specifications. <i>Lecture Notes in Computer Science</i> , 1990, , 57-71.	1.0	14
90	Efficient on-the-fly Algorithm for Checking Alternating Timed Simulation. <i>Lecture Notes in Computer Science</i> , 2009, , 73-87.	1.0	14

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91	Discount-Optimal Infinite Runs in Priced Timed Automata. <i>Electronic Notes in Theoretical Computer Science</i> , 2009, 239, 179-191.	0.9	13
92	Statistical and exact schedulability analysis of hierarchical scheduling systems. <i>Science of Computer Programming</i> , 2016, 127, 103-130.	1.5	13
93	20 Years of UPPAAL Enabled Industrial Model-Based Validation and Beyond. <i>Lecture Notes in Computer Science</i> , 2018, , 212-229.	1.0	13
94	Timed Automata Can Always Be Made Implementable. <i>Lecture Notes in Computer Science</i> , 2011, , 76-91.	1.0	13
95	Computing Behavioral Distances, Compositionally. <i>Lecture Notes in Computer Science</i> , 2013, , 74-85.	1.0	13
96	Distances for Weighted Transition Systems: Games and Properties. <i>Electronic Proceedings in Theoretical Computer Science</i> , EPTCS, 0, 57, 134-147.	0.8	13
97	Consistency and refinement for Interval Markov Chains. <i>The Journal of Logic and Algebraic Programming</i> , 2012, 81, 209-226.	1.4	12
98	Reachability analysis for timed automata using max-plus algebra. <i>The Journal of Logic and Algebraic Programming</i> , 2012, 81, 298-313.	1.4	12
99	L [∞] -based learning of Markov decision processes (extended version). <i>Formal Aspects of Computing</i> , 2021, 33, 575-615.	1.4	12
100	Extended Dependency Graphs and Efficient Distributed Fixed-Point Computation. <i>Lecture Notes in Computer Science</i> , 2017, , 139-158.	1.0	12
101	Robust Specification of Real Time Components. <i>Lecture Notes in Computer Science</i> , 2011, , 129-144.	1.0	12
102	Synthesis of Optimal Strategies Using HyTech. <i>Electronic Notes in Theoretical Computer Science</i> , 2005, 119, 11-31.	0.9	11
103	Model-Checking One-Clock Priced Timed Automata. , 2007, , 108-122.		11
104	Cooperative Testing of Timed Systems. <i>Electronic Notes in Theoretical Computer Science</i> , 2008, 220, 79-92.	0.9	11
105	Complete proof systems for weighted modal logic. <i>Theoretical Computer Science</i> , 2014, 546, 164-175.	0.5	11
106	Schedulability of Herschel revisited using statistical model checking. <i>International Journal on Software Tools for Technology Transfer</i> , 2015, 17, 187-199.	1.7	11
107	Mastering operational limitations of LEO satellites – The GomX-3 approach. <i>Acta Astronautica</i> , 2018, 151, 726-735.	1.7	11
108	Time-Optimal Test Cases for Real-Time Systems. <i>Lecture Notes in Computer Science</i> , 2004, , 234-245.	1.0	11

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109	Unification & Sharing in Timed Automata Verification. Lecture Notes in Computer Science, 2003, , 225-229.	1.0	10
110	EXPTIME-complete Decision Problems for Modal and Mixed Specifications. Electronic Notes in Theoretical Computer Science, 2009, 242, 19-33.	0.9	9
111	A Logic for Accumulated-Weight Reasoning on Multiweighted Modal Automata. , 2012, , .		9
112	Stone Duality for Markov Processes. , 2013, , .		9
113	Lower-bound-constrained runs in weighted timed automata. Performance Evaluation, 2014, 73, 91-109.	0.9	9
114	Model-Based Mutation Testing of Real-Time Systems via Model Checking. , 2018, , .		9
115	Compositional proofs by partial specification of processes. , 1988, , 414-423.		8
116	Modeling software product lines using color-blind transition systems. International Journal on Software Tools for Technology Transfer, 2007, 9, 471-487.	1.7	8
117	Scenario-based analysis and synthesis of real-time systems using uppaal. , 2010, , .		8
118	Degree of Schedulability of Mixed-Criticality Real-Time Systems with Probabilistic Sporadic Tasks. , 2014, , .		8
119	High-level frameworks for the specification and verification of scheduling problems. International Journal on Software Tools for Technology Transfer, 2018, 20, 397-422.	1.7	8
120	A Distributed Fixed-Point Algorithm for Extended Dependency Graphs*. Fundamenta Informaticae, 2018, 161, 351-381.	0.3	8
121	Importance Sampling for Stochastic Timed Automata. Lecture Notes in Computer Science, 2016, , 163-178.	1.0	8
122	A game-theoretic approach to real-time system testing. , 2008, , .		7
123	Playing Games with Timed Games. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 238-243.	0.4	7
124	EXPTIME-completeness of thorough refinement on modal transition systems. Information and Computation, 2012, 218, 54-68.	0.5	7
125	Robust synthesis for real-time systems. Theoretical Computer Science, 2014, 515, 96-122.	0.5	7
126	A reconfigurable framework for compositional schedulability and power analysis of hierarchical scheduling systems with frequency scaling. Science of Computer Programming, 2015, 113, 236-260.	1.5	7

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127	Generic Formal Framework for Compositional Analysis of Hierarchical Scheduling Systems. , 2018, , .		7
128	On the Power of Statistical Model Checking. Lecture Notes in Computer Science, 2016, , 843-862.	1.0	7
129	New Results on Timed Specifications. Lecture Notes in Computer Science, 2012, , 175-192.	1.0	7
130	Quantitative Schedulability Analysis of Continuous Probability Tasks in a Hierarchical Context. , 2015, , .		6
131	Refinement checking on parametric modal transition systems. Acta Informatica, 2015, 52, 269-297.	0.5	6
132	Verification, Performance Analysis and Controller Synthesis for Real-Time Systems. Lecture Notes in Computer Science, 2010, , 34-61.	1.0	6
133	Optimal Strategies in Priced Timed Game Automata. BRICS Report Series, 2004, 11, .	0.2	6
134	Computing Nash Equilibrium in Wireless Ad Hoc Networks: A Simulation-Based Approach. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 78, 1-14.	0.8	6
135	Continuous-Time Models for System Design and Analysis. Lecture Notes in Computer Science, 2019, , 452-477.	1.0	6
136	Active Learning of Markov Decision Processes using Baum-Welch algorithm. , 2021, , .		6
137	Modal and mixed specifications: key decision problems and their complexities. Mathematical Structures in Computer Science, 2010, 20, 75-103.	0.5	5
138	Efficient controller synthesis for a fragment of $\text{MTL}_{0, \infty}$. Acta Informatica, 2014, 51, 165-192.	0.5	5
139	Alternation-Free Weighted Mu-Calculus: Decidability and Completeness. Electronic Notes in Theoretical Computer Science, 2015, 319, 289-313.	0.9	5
140	Analytical Solution for Long Battery Lifetime Prediction in Nonadaptive Systems. Lecture Notes in Computer Science, 2018, , 173-189.	1.0	5
141	Optimal and robust controller synthesis using energy timed automata with uncertainty. Formal Aspects of Computing, 2021, 33, 3-25.	1.4	5
142	Online and Proactive Vehicle Rerouting with Uppaal Stratego. Transportation Research Record, 2021, 2675, 13-22.	1.0	5
143	A Cost/Reward Method for Optimal Infinite Scheduling in Mobile Cloud Computing. Lecture Notes in Computer Science, 2016, , 66-85.	1.0	5
144	Color-Blind Specifications for Transformations of Reactive Synchronous Programs. Lecture Notes in Computer Science, 2005, , 160-174.	1.0	5

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145	Methodologies for Specification of Real-Time Systems Using Timed I/O Automata. Lecture Notes in Computer Science, 2010, , 290-310.	1.0	5
146	Statistical Model Checking, Refinement Checking, Optimization, and Synthesis for Stochastic Hybrid Systems. Lecture Notes in Computer Science, 2012, , 7-10.	1.0	5
147	Limit Your Consumption! Finding Bounds in Average-energy Games. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 227, 1-14.	0.8	5
148	Adequacy and Complete Axiomatization for Timed Modal Logic. Electronic Notes in Theoretical Computer Science, 2014, 308, 183-210.	0.9	4
149	Optimizing the resource requirements of hierarchical scheduling systems. ACM SIGBED Review, 2016, 13, 41-48.	1.8	4
150	On the metric-based approximate minimization of Markov Chains. Journal of Logical and Algebraic Methods in Programming, 2018, 100, 36-56.	0.4	4
151	Dependency graphs with applications to verification. International Journal on Software Tools for Technology Transfer, 2020, 22, 635-654.	1.7	4
152	Converging from Branching to Linear Metrics on Markov Chains. Lecture Notes in Computer Science, 2015, , 349-367.	1.0	4
153	Resource-Efficient Scheduling for Real Time Systems. Lecture Notes in Computer Science, 2003, , 16-19.	1.0	4
154	Complexity in Simplicity: Flexible Agent-Based State Space Exploration. , 2007, , 231-245.		4
155	Model-Based Verification, Optimization, Synthesis and Performance Evaluation of Real-Time Systems. Lecture Notes in Computer Science, 2013, , 67-108.	1.0	4
156	Average-energy games. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 193, 1-15.	0.8	4
157	Automatic synthesis of real time systems. Lecture Notes in Computer Science, 1995, , 535-546.	1.0	4
158	Discounting in Time. Electronic Notes in Theoretical Computer Science, 2009, 253, 25-31.	0.9	3
159	New results for Constraint Markov Chains. Performance Evaluation, 2012, 69, 379-401.	0.9	3
160	Urgent Partial Order Reduction for Extended Timed Automata. Lecture Notes in Computer Science, 2020, , 179-195.	1.0	3
161	Resource-Parameterized Timing Analysis of Real-Time Systems. Lecture Notes in Computer Science, 2015, , 190-205.	1.0	3
162	From Statistical Model Checking to Run-Time Monitoring Using a Bayesian Network Approach. Lecture Notes in Computer Science, 2020, , 517-535.	1.0	3

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163	Quantitative Analysis of Interval Markov Chains. Lecture Notes in Computer Science, 2021, , 57-77.	1.0	3
164	Schedulability Analysis Abstractions for Safety Critical Java. , 2012, , .		2
165	Quantified Dynamic Metric Temporal Logic for Dynamic Networks of Stochastic Hybrid Automata. , 2014, , .		2
166	Converging from branching to linear metrics on Markov chains. Mathematical Structures in Computer Science, 2019, 29, 3-37.	0.5	2
167	Efficient Local Computation of Differential Bisimulations via Coupling and Up-to Methods. , 2021, , .		2
168	Compositional Testing of Real-Time Systems. Lecture Notes in Computer Science, 2017, , 107-124.	1.0	2
169	Stuttering for Abstract Probabilistic Automata. The Journal of Logic and Algebraic Programming, 2014, 83, 1-19.	1.4	1
170	Concurrent weighted logic. Journal of Logical and Algebraic Methods in Programming, 2015, 84, 884-897.	0.4	1
171	On decidability of recursive weighted logics. Soft Computing, 2018, 22, 1085-1102.	2.1	1
172	An Integer Static Analysis for Better Extrapolation in Uppaal. Lecture Notes in Computer Science, 2021, , 84-99.	1.0	1
173	Model-Based GUI Testing Using Uppaal at Novo Nordisk. Lecture Notes in Computer Science, 2009, , 814-818.	1.0	1
174	Quantitative Modal Transition Systems. Lecture Notes in Computer Science, 2013, , 50-58.	1.0	1
175	Model Checking Process Algebra of Communicating Resources for Real-Time Systems. , 2014, , .		0
176	Preface: Dedicated to the memory of Zoltan Ésik (1951-2016). Soft Computing, 2018, 22, 1033-1033.	2.1	0
177	Parameterized Metatheory for Continuous Markovian Logic. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 103, 33-47.	0.8	0
178	Probabilistic Modal Specifications (Invited Extended Abstract). Lecture Notes in Computer Science, 2014, , 1-4.	1.0	0
179	Playing Games with Timed Automata. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 166, 2-3.	0.8	0
180	Models, Mindsets, Meta: The What, the How, and the Why Not?. Lecture Notes in Computer Science, 2019, , 3-13.	1.0	0