

# 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	Optimal and robust controller synthesis using energy timed automata with uncertainty. Formal Aspects of Computing, 2021, 33, 3-25.	1.4	5
2	An Integer Static Analysis for Better Extrapolation in Uppaal. Lecture Notes in Computer Science, 2021, , 84-99.	1.0	1
3	Online and Proactive Vehicle Rerouting with Uppaal Stratego. Transportation Research Record, 2021, 2675, 13-22.	1.0	5
4	L <sup>∞</sup> -based learning of Markov decision processes (extended version). Formal Aspects of Computing, 2021, 33, 575-615.	1.4	12
5	Efficient Local Computation of Differential Bisimulations via Coupling and Up-to Methods. , 2021, , .		2
6	Quantitative Analysis of Interval Markov Chains. Lecture Notes in Computer Science, 2021, , 57-77.	1.0	3
7	Active Learning of Markov Decision Processes using Baum-Welch algorithm. , 2021, , .		6
8	Dependency graphs with applications to verification. International Journal on Software Tools for Technology Transfer, 2020, 22, 635-654.	1.7	4
9	Urgent Partial Order Reduction for Extended Timed Automata. Lecture Notes in Computer Science, 2020, , 179-195.	1.0	3
10	From Statistical Model Checking to Run-Time Monitoring Using a Bayesian Network Approach. Lecture Notes in Computer Science, 2020, , 517-535.	1.0	3
11	Converging from branching to linear metrics on Markov chains. Mathematical Structures in Computer Science, 2019, 29, 3-37.	0.5	2
12	L <sup>∞</sup> -Based Learning of Markov Decision Processes. Lecture Notes in Computer Science, 2019, , 651-669.	1.0	20
13	Continuous-Time Models for System Design and Analysis. Lecture Notes in Computer Science, 2019, , 452-477.	1.0	6
14	Models, Mindsets, Meta: The What, the How, and the Why Not?. Lecture Notes in Computer Science, 2019, , 3-13.	1.0	0
15	Contracts for System Design. Foundations and Trends in Electronic Design Automation, 2018, 12, 124-400.	1.0	116
16	Preface: Dedicated to the memory of Zoltan Ésik (1951–2016). Soft Computing, 2018, 22, 1033-1033.	2.1	0
17	Average-energy games. Acta Informatica, 2018, 55, 91-127.	0.5	15
18	On decidability of recursive weighted logics. Soft Computing, 2018, 22, 1085-1102.	2.1	1

#	ARTICLE	IF	CITATIONS
19	20 Years of UPPAAL Enabled Industrial Model-Based Validation and Beyond. Lecture Notes in Computer Science, 2018, , 212-229.	1.0	13
20	Analytical Solution for Long Battery Lifetime Prediction in Nonadaptive Systems. Lecture Notes in Computer Science, 2018, , 173-189.	1.0	5
21	Mastering operational limitations of LEO satellites – The GomX-3 approach. Acta Astronautica, 2018, 151, 726-735.	1.7	11
22	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
23	Model-Based Mutation Testing of Real-Time Systems via Model Checking. , 2018, , .		9
24	On the metric-based approximate minimization of Markov Chains. Journal of Logical and Algebraic Methods in Programming, 2018, 100, 36-56.	0.4	4
25	A Distributed Fixed-Point Algorithm for Extended Dependency Graphs*. Fundamenta Informaticae, 2018, 161, 351-381.	0.3	8
26	Generic Formal Framework for Compositional Analysis of Hierarchical Scheduling Systems. , 2018, , .		7
27	Mutation-Based Test-Case Generation with Ecdar. , 2017, , .		15
28	Extended Dependency Graphs and Efficient Distributed Fixed-Point Computation. Lecture Notes in Computer Science, 2017, , 139-158.	1.0	12
29	Compositional Testing of Real-Time Systems. Lecture Notes in Computer Science, 2017, , 107-124.	1.0	2
30	Optimizing the resource requirements of hierarchical scheduling systems. ACM SIGBED Review, 2016, 13, 41-48.	1.8	4
31	Learning deterministic probabilistic automata from a model checking perspective. Machine Learning, 2016, 105, 255-299.	3.4	43
32	Statistical and exact schedulability analysis of hierarchical scheduling systems. Science of Computer Programming, 2016, 127, 103-130.	1.5	13
33	A Cost/Reward Method for Optimal Infinite Scheduling in Mobile Cloud Computing. Lecture Notes in Computer Science, 2016, , 66-85.	1.0	5
34	On the Power of Statistical Model Checking. Lecture Notes in Computer Science, 2016, , 843-862.	1.0	7
35	Importance Sampling for Stochastic Timed Automata. Lecture Notes in Computer Science, 2016, , 163-178.	1.0	8
36	Online and Compositional Learning of Controllers with Application to Floor Heating. Lecture Notes in Computer Science, 2016, , 244-259.	1.0	30

#	ARTICLE	IF	CITATIONS
37	Alternation-Free Weighted Mu-Calculus: Decidability and Completeness. <i>Electronic Notes in Theoretical Computer Science</i> , 2015, 319, 289-313.	0.9	5
38	Quantitative Schedulability Analysis of Continuous Probability Tasks in a Hierarchical Context. , 2015, , .		6
39	Formal Analysis and Testing of Real-Time Automotive Systems Using UPPAAL Tools. <i>Lecture Notes in Computer Science</i> , 2015, , 47-61.	1.0	31
40	A reconfigurable framework for compositional schedulability and power analysis of hierarchical scheduling systems with frequency scaling. <i>Science of Computer Programming</i> , 2015, 113, 236-260.	1.5	7
41	Uppaal SMC tutorial. <i>International Journal on Software Tools for Technology Transfer</i> , 2015, 17, 397-415.	1.7	354
42	Statistical model checking for biological systems. <i>International Journal on Software Tools for Technology Transfer</i> , 2015, 17, 351-367.	1.7	33
43	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
44	Refinement checking on parametric modal transition systems. <i>Acta Informatica</i> , 2015, 52, 269-297.	0.5	6
45	Concurrent weighted logic. <i>Journal of Logical and Algebraic Methods in Programming</i> , 2015, 84, 884-897.	0.4	1
46	Real-time specifications. <i>International Journal on Software Tools for Technology Transfer</i> , 2015, 17, 17-45.	1.7	16
47	Converging from Branching to Linear Metrics on Markov Chains. <i>Lecture Notes in Computer Science</i> , 2015, , 349-367.	1.0	4
48	CAAL: Concurrency Workbench, Aalborg Edition. <i>Lecture Notes in Computer Science</i> , 2015, , 573-582.	1.0	23
49	Resource-Parameterized Timing Analysis of Real-Time Systems. <i>Lecture Notes in Computer Science</i> , 2015, , 190-205.	1.0	3
50	Model Checking Process Algebra of Communicating Resources for Real-Time Systems. , 2014, , .		0
51	Degree of Schedulability of Mixed-Criticality Real-Time Systems with Probabilistic Sporadic Tasks. , 2014, , .		8
52	Quantified Dynamic Metric Temporal Logic for Dynamic Networks of Stochastic Hybrid Automata. , 2014, , .		2
53	Adequacy and Complete Axiomatization for Timed Modal Logic. <i>Electronic Notes in Theoretical Computer Science</i> , 2014, 308, 183-210.	0.9	4
54	Statistical Model Checking Past, Present, and Future. <i>Lecture Notes in Computer Science</i> , 2014, , 135-142.	1.0	20

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55	Efficient controller synthesis for a fragment of $\text{MTL}_{\infty}$ . Acta Informatica, 2014, 51, 165-192.	0.5	5
56	Complete proof systems for weighted modal logic. Theoretical Computer Science, 2014, 546, 164-175.	0.5	11
57	Robust synthesis for real-time systems. Theoretical Computer Science, 2014, 515, 96-122.	0.5	7
58	Lower-bound-constrained runs in weighted timed automata. Performance Evaluation, 2014, 73, 91-109.	0.9	9
59	Stuttering for Abstract Probabilistic Automata. The Journal of Logic and Algebraic Programming, 2014, 83, 1-19.	1.4	1
60	Hierarchical Scheduling Framework Based on Compositional Analysis Using Uppaal. Lecture Notes in Computer Science, 2014, , 61-78.	1.0	19
61	Probabilistic Modal Specifications (Invited Extended Abstract). Lecture Notes in Computer Science, 2014, , 1-4.	1.0	0
62	Abstract Probabilistic Automata. Information and Computation, 2013, 232, 66-116.	0.5	16
63	Weighted modal transition systems. Formal Methods in System Design, 2013, 42, 193-220.	0.9	16
64	Stone Duality for Markov Processes. , 2013, , .		9
65	Rewrite-Based Statistical Model Checking of WMTL. Lecture Notes in Computer Science, 2013, , 260-275.	1.0	20
66	On-the-Fly Exact Computation of Bisimilarity Distances. Lecture Notes in Computer Science, 2013, , 1-15.	1.0	26
67	Model-Based Verification, Optimization, Synthesis and Performance Evaluation of Real-Time Systems. Lecture Notes in Computer Science, 2013, , 67-108.	1.0	4
68	Computing Behavioral Distances, Compositionally. Lecture Notes in Computer Science, 2013, , 74-85.	1.0	13
69	Quantitative Modal Transition Systems. Lecture Notes in Computer Science, 2013, , 50-58.	1.0	1
70	Extending modal transition systems with structured labels. Mathematical Structures in Computer Science, 2012, 22, 581-617.	0.5	19
71	Compositional verification of real-time systems using Ecdar. International Journal on Software Tools for Technology Transfer, 2012, 14, 703-720.	1.7	17
72	A Logic for Accumulated-Weight Reasoning on Multiweighted Modal Automata. , 2012, , .		9

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73	Schedulability Analysis Abstractions for Safety Critical Java. , 2012, , .		2
74	EXPTIME-completeness of thorough refinement on modal transition systems. Information and Computation, 2012, 218, 54-68.	0.5	7
75	An evaluation framework for energy aware buildings using statistical model checking. Science China Information Sciences, 2012, 55, 2694-2707.	2.7	39
76	New results for Constraint Markov Chains. Performance Evaluation, 2012, 69, 379-401.	0.9	3
77	Consistency and refinement for Interval Markov Chains. The Journal of Logic and Algebraic Programming, 2012, 81, 209-226.	1.4	12
78	Reachability analysis for timed automata using max-plus algebra. The Journal of Logic and Algebraic Programming, 2012, 81, 298-313.	1.4	12
79	Modal transition systems with weight intervals. The Journal of Logic and Algebraic Programming, 2012, 81, 408-421.	1.4	15
80	New Results on Timed Specifications. Lecture Notes in Computer Science, 2012, , 175-192.	1.0	7
81	Statistical Model Checking, Refinement Checking, Optimization, and Synthesis for Stochastic Hybrid Systems. Lecture Notes in Computer Science, 2012, , 7-10.	1.0	5
82	Learning Probabilistic Automata for Model Checking. , 2011, , .		39
83	Quantitative analysis of real-time systems using priced timed automata. Communications of the ACM, 2011, 54, 78-87.	3.3	43
84	Abstract Probabilistic Automata. Lecture Notes in Computer Science, 2011, , 324-339.	1.0	24
85	Metrics for weighted transition systems: Axiomatization and complexity. Theoretical Computer Science, 2011, 412, 3358-3369.	0.5	23
86	Constraint Markov Chains. Theoretical Computer Science, 2011, 412, 4373-4404.	0.5	40
87	Time for Statistical Model Checking of Real-Time Systems. Lecture Notes in Computer Science, 2011, , 349-355.	1.0	96
88	Quantitative Refinement for Weighted Modal Transition Systems. Lecture Notes in Computer Science, 2011, , 60-71.	1.0	17
89	Timed Automata Can Always Be Made Implementable. Lecture Notes in Computer Science, 2011, , 76-91.	1.0	13
90	Robust Specification of Real Time Components. Lecture Notes in Computer Science, 2011, , 129-144.	1.0	12

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91	Statistical Model Checking for Networks of Priced Timed Automata. Lecture Notes in Computer Science, 2011, , 80-96.	1.0	94
92	Parametric Modal Transition Systems. Lecture Notes in Computer Science, 2011, , 275-289.	1.0	22
93	Scenario-based verification of real-time systems using Uppaal. Formal Methods in System Design, 2010, 37, 200-264.	0.9	17
94	Quantitative analysis of weighted transition systems. The Journal of Logic and Algebraic Programming, 2010, 79, 689-703.	1.4	41
95	Scenario-based analysis and synthesis of real-time systems using uppaal. , 2010, , .		8
96	Modal and mixed specifications: key decision problems and their complexities. Mathematical Structures in Computer Science, 2010, 20, 75-103.	0.5	5
97	Compositional Design Methodology with Constraint Markov Chains. , 2010, , .		29
98	Verification, Performance Analysis and Controller Synthesis for Real-Time Systems. Lecture Notes in Computer Science, 2010, , 34-61.	1.0	6
99	ECDAR: An Environment for Compositional Design and Analysis of Real Time Systems. Lecture Notes in Computer Science, 2010, , 365-370.	1.0	37
100	Methodologies for Specification of Real-Time Systems Using Timed I/O Automata. Lecture Notes in Computer Science, 2010, , 290-310.	1.0	5
101	Timed I/O automata. , 2010, , .		117
102	EXPTIME-complete Decision Problems for Modal and Mixed Specifications. Electronic Notes in Theoretical Computer Science, 2009, 242, 19-33.	0.9	9
103	Discount-Optimal Infinite Runs in Priced Timed Automata. Electronic Notes in Theoretical Computer Science, 2009, 239, 179-191.	0.9	13
104	Discounting in Time. Electronic Notes in Theoretical Computer Science, 2009, 253, 25-31.	0.9	3
105	Playing Games with Timed Games. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 238-243.	0.4	7
106	Automatic Synthesis of Robust and Optimal Controllers – An Industrial Case Study. Lecture Notes in Computer Science, 2009, , 90-104.	1.0	44
107	Checking Thorough Refinement on Modal Transition Systems Is EXPTIME-Complete. Lecture Notes in Computer Science, 2009, , 112-126.	1.0	20
108	Efficient on-the-fly Algorithm for Checking Alternating Timed Simulation. Lecture Notes in Computer Science, 2009, , 73-87.	1.0	14

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109	Model-Based GUI Testing Using Uppaal at Novo Nordisk. Lecture Notes in Computer Science, 2009, , 814-818.	1.0	1
110	Optimal infinite scheduling for multi-priced timed automata. Formal Methods in System Design, 2008, 32, 3-23.	0.9	48
111	Cooperative Testing of Timed Systems. Electronic Notes in Theoretical Computer Science, 2008, 220, 79-92.	0.9	11
112	A game-theoretic approach to real-time system testing. , 2008, , .		7
113	Complexity of Decision Problems for Mixed and Modal Specifications. , 2008, , 112-126.		16
114	Infinite Runs in Weighted Timed Automata with Energy Constraints. Lecture Notes in Computer Science, 2008, , 33-47.	1.0	108
115	Modal I/O Automata for Interface and Product Line Theories. Lecture Notes in Computer Science, 2007, , 64-79.	1.0	132
116	Model-Checking One-Clock Priced Timed Automata. , 2007, , 108-122.		11
117	Modeling software product lines using color-blind transition systems. International Journal on Software Tools for Technology Transfer, 2007, 9, 471-487.	1.7	8
118	Complexity in Simplicity: Flexible Agent-Based State Space Exploration. , 2007, , 231-245.		4
119	UPPAAL-Tiga: Time for Playing Games!. Lecture Notes in Computer Science, 2007, , 121-125.	1.0	180
120	On Modal Refinement and Consistency. Lecture Notes in Computer Science, 2007, , 105-119.	1.0	38
121	Timed Control with Observation Based and Stuttering Invariant Strategies. Lecture Notes in Computer Science, 2007, , 192-206.	1.0	27
122	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
123	Model Checking Timed Automata with Priorities Using DBM Subtraction. Lecture Notes in Computer Science, 2006, , 128-142.	1.0	19
124	Almost Optimal Strategies in One Clock Priced Timed Games. Lecture Notes in Computer Science, 2006, , 345-356.	1.0	18
125	Synthesis of Optimal Strategies Using HyTech. Electronic Notes in Theoretical Computer Science, 2005, 119, 11-31.	0.9	11
126	Online Testing of Real-time Systems Using Uppaal. Lecture Notes in Computer Science, 2005, , 79-94.	1.0	86



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127	Efficient On-the-Fly Algorithms for the Analysis of Timed Games. Lecture Notes in Computer Science, 2005, , 66-80.	1.0	191
128	Priced Timed Automata: Algorithms and Applications. Lecture Notes in Computer Science, 2005, , 162-182.	1.0	44
129	Color-Blind Specifications for Transformations of Reactive Synchronous Programs. Lecture Notes in Computer Science, 2005, , 160-174.	1.0	5
130	Optimal scheduling using priced timed automata. Performance Evaluation Review, 2005, 32, 34-40.	0.4	105
131	A Tutorial on Uppaal. Lecture Notes in Computer Science, 2004, , 200-236.	1.0	950
132	Resource-Optimal Scheduling Using Priced Timed Automata. Lecture Notes in Computer Science, 2004, , 220-235.	1.0	32
133	Lower and Upper Bounds in Zone Based Abstractions of Timed Automata. Lecture Notes in Computer Science, 2004, , 312-326.	1.0	30
134	Staying Alive as Cheaply as Possible. Lecture Notes in Computer Science, 2004, , 203-218.	1.0	36
135	Optimal Strategies in Priced Timed Game Automata. Lecture Notes in Computer Science, 2004, , 148-160.	1.0	52
136	Time-Optimal Test Cases for Real-Time Systems. Lecture Notes in Computer Science, 2004, , 234-245.	1.0	11
137	Optimal Strategies in Priced Timed Game Automata. BRICS Report Series, 2004, 11, .	0.2	6
138	The power of reachability testing for timed automata. Theoretical Computer Science, 2003, 300, 411-475.	0.5	61
139	Static Guard Analysis in Timed Automata Verification. Lecture Notes in Computer Science, 2003, , 254-270.	1.0	46
140	Unification & Sharing in Timed Automata Verification. Lecture Notes in Computer Science, 2003, , 225-229.	1.0	10
141	Resource-Efficient Scheduling for Real Time Systems. Lecture Notes in Computer Science, 2003, , 16-19.	1.0	4
142	Automated verification of an audio-control protocol using Uppaal. The Journal of Logic and Algebraic Programming, 2002, 52-53, 163-181.	1.4	29
143	Exact Acceleration of Real-Time Model Checking. Electronic Notes in Theoretical Computer Science, 2002, 65, 120-139.	0.9	14
144	Reduction and Refinement Strategies for Probabilistic Analysis. Lecture Notes in Computer Science, 2002, , 57-76.	1.0	37

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145	Uppaal Implementation Secrets. Lecture Notes in Computer Science, 2002, , 3-22.	1.0	76
146	Verification of Large State/Event Systems Using Compositionality and Dependency Analysis. Formal Methods in System Design, 2001, 18, 5-23.	0.9	25
147	Reachability Analysis of Probabilistic Systems by Successive Refinements. Lecture Notes in Computer Science, 2001, , 39-56.	1.0	89
148	UPPAAL - Now, Next, and Future. Lecture Notes in Computer Science, 2001, , 99-124.	1.0	43
149	Minimum-Cost Reachability for Priced Timed Automata. BRICS Report Series, 2001, 8, .	0.2	20
150	Model-checking real-time control programs: verifying LEGO MINDSTORMS <sup>TM</sup> systems using UPPAAL. , 2000, , .		26
151	Model checking via reachability testing for timed automata. Lecture Notes in Computer Science, 1998, , 263-280.	1.0	56
152	CMC: A Tool for Compositional Model-Checking of Real-Time Systems. IFIP Advances in Information and Communication Technology, 1998, , 439-456.	0.5	44
153	The Power of Reachability Testing for Timed Automata. Lecture Notes in Computer Science, 1998, , 245-256.	1.0	20
154	Continuous modeling of real-time and hybrid systems: from concepts to tools. International Journal on Software Tools for Technology Transfer, 1997, 1, 64-85.	1.7	17
155	Uppaal in a nutshell. International Journal on Software Tools for Technology Transfer, 1997, 1, 134-152.	1.7	1,528
156	Model-checking for real-time systems. Lecture Notes in Computer Science, 1995, , 62-88.	1.0	134
157	From timed automata to logic " and back. Lecture Notes in Computer Science, 1995, , 529-539.	1.0	50
158	Compositional model checking of real time systems. Lecture Notes in Computer Science, 1995, , 27-41.	1.0	29
159	A constraint oriented proof methodology based on modal transition systems. Lecture Notes in Computer Science, 1995, , 17-40.	1.0	28
160	From Timed Automata to Logic - and Back. BRICS Report Series, 1995, 2, .	0.2	20
161	Automatic synthesis of real time systems. Lecture Notes in Computer Science, 1995, , 535-546.	1.0	4
162	Timed modal specification " Theory and tools. Lecture Notes in Computer Science, 1993, , 253-267.	1.0	39

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163	Compositional verification of probabilistic processes. , 1992, , 456-471.		55
164	Graphical versus logical specifications. Theoretical Computer Science, 1992, 106, 3-20.	0.5	39
165	A compositional protocol verification using relativized bisimulation. Information and Computation, 1992, 99, 80-108.	0.5	22
166	Bisimulation through probabilistic testing. Information and Computation, 1991, 94, 1-28.	0.5	812
167	Compositionality Through an Operational Semantics of Contexts. Journal of Logic and Computation, 1991, 1, 761-795.	0.5	69
168	Proof systems for satisfiability in Hennessy-Milner Logic with recursion. Theoretical Computer Science, 1990, 72, 265-288.	0.5	104
169	Graphical versus logical specifications. Lecture Notes in Computer Science, 1990, , 57-71.	1.0	14
170	Compositional proofs by partial specification of processes. , 1988, , 414-423.		8
171	Proof systems for Hennessy-Milner Logic with recursion. , 1988, , 215-230.		63
172	A context dependent equivalence between processes. Theoretical Computer Science, 1987, 49, 185-215.	0.5	40
173	Learning Markov Decision Processes for Model Checking. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 103, 49-63.	0.8	26
174	Average-energy games. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 193, 1-15.	0.8	4
175	Limit Your Consumption! Finding Bounds in Average-energy Games. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 227, 1-14.	0.8	5
176	Distances for Weighted Transition Systems: Games and Properties. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 57, 134-147.	0.8	13
177	Statistical Model Checking for Stochastic Hybrid Systems. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 92, 122-136.	0.8	54
178	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
179	Parameterized Metatheory for Continuous Markovian Logic. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 103, 33-47.	0.8	0
180	Playing Games with Timed Automata. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 166, 2-3.	0.8	0