

Javier Esparza

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

166
papers

3,567
citations

29
h-index

54
g-index

172
ext. papers

3,821
ext. citations

0.9
avg, IF

5.55
L-index

#	Paper	IF	Citations
166	Separators in Continuous Petri Nets. <i>Lecture Notes in Computer Science</i> , 2022 , 81-100	0.9	
165	Population Protocols: Beyond Runtime Analysis. <i>Lecture Notes in Computer Science</i> , 2021 , 28-51	0.9	
164	The complexity of verifying population protocols. <i>Distributed Computing</i> , 2021 , 34, 133-177	1.2	3
163	Towards efficient verification of population protocols. <i>Formal Methods in System Design</i> , 2021 , 57, 305-342	1.4	1
162	Finding Cut-Offs in Leaderless Rendez-Vous Protocols is Easy. <i>Lecture Notes in Computer Science</i> , 2021 , 42-61	0.9	
161	Computing Parameterized Invariants of Parameterized Petri Nets. <i>Lecture Notes in Computer Science</i> , 2021 , 141-163	0.9	1
160	Back to the Future: A Fresh Look at Linear Temporal Logic. <i>Lecture Notes in Computer Science</i> , 2021 , 3-13	0.9	
159	Lower Bounds on the State Complexity of Population Protocols 2021 ,		3
158	An Efficient Normalisation Procedure for Linear Temporal Logic and Very Weak Alternating Automata 2020 ,		5
157	A Unified Translation of Linear Temporal Logic to \exists Automata. <i>Journal of the ACM</i> , 2020 , 67, 1-61	2	3
156	Peregrine 2.0: Explaining Correctness of Population Protocols Through Stage Graphs. <i>Lecture Notes in Computer Science</i> , 2020 , 550-556	0.9	2
155	Structural Invariants for the Verification of Systems with Parameterized Architectures. <i>Lecture Notes in Computer Science</i> , 2020 , 228-246	0.9	5
154	Checking Qualitative Liveness Properties of Replicated Systems with Stochastic Scheduling. <i>Lecture Notes in Computer Science</i> , 2020 , 372-397	0.9	6
153	Complexity of Verification and Synthesis of Threshold Automata. <i>Lecture Notes in Computer Science</i> , 2020 , 144-160	0.9	4
152	Computing the Expected Execution Time of Probabilistic Workflow Nets. <i>Lecture Notes in Computer Science</i> , 2019 , 154-171	0.9	2
151	Parameterized Analysis of Immediate Observation Petri Nets. <i>Lecture Notes in Computer Science</i> , 2019 , 365-385	0.9	7
150	Negotiation as concurrency primitive. <i>Acta Informatica</i> , 2019 , 56, 93-159	0.9	1

149	Computing the Concurrency Threshold of Sound Free-Choice Workflow Nets. <i>Lecture Notes in Computer Science</i> , 2018 , 3-19	0.9	1
148	Peregrine: A Tool for the Analysis of Population Protocols. <i>Lecture Notes in Computer Science</i> , 2018 , 604-631	0.9	9
147	One Theorem to Rule Them All 2018 ,		15
146	Black Ninjas in the Dark 2018 ,		2
145	Model Checking Procedural Programs 2018 , 541-572		7
144	Advances in Parameterized Verification of Population Protocols. <i>Lecture Notes in Computer Science</i> , 2017 , 7-14	0.9	1
143	Model checking parameterized asynchronous shared-memory systems. <i>Formal Methods in System Design</i> , 2017 , 50, 140-167	1.4	3
142	Minimizing Test Suites with Unfoldings of Multithreaded Programs. <i>Transactions on Embedded Computing Systems</i> , 2017 , 16, 1-24	1.8	4
141	Towards Efficient Verification of Population Protocols 2017 ,		7
140	Static analysis of deterministic negotiations 2017 ,		3
139	Polynomial analysis algorithms for free choice Probabilistic Workflow Nets. <i>Performance Evaluation</i> , 2017 , 117, 104-129	1.2	7
138	Verification of population protocols. <i>Acta Informatica</i> , 2017 , 54, 191-215	0.9	22
137	From LTL and Limit-Deterministic Büchi Automata to Deterministic Parity Automata. <i>Lecture Notes in Computer Science</i> , 2017 , 426-442	0.9	20
136	From LTL to deterministic automata. <i>Formal Methods in System Design</i> , 2016 , 49, 219-271	1.4	17
135	Parameterized Verification of Asynchronous Shared-Memory Systems. <i>Journal of the ACM</i> , 2016 , 63, 1-48	2	12
134	Limit-Deterministic Büchi Automata for Linear Temporal Logic. <i>Lecture Notes in Computer Science</i> , 2016 , 312-332	0.9	30
133	Polynomial Analysis Algorithms for Free Choice Probabilistic Workflow Nets. <i>Lecture Notes in Computer Science</i> , 2016 , 89-104	0.9	3
132	Reduction Rules for Colored Workflow Nets. <i>Lecture Notes in Computer Science</i> , 2016 , 342-358	0.9	13

131	Negotiations and Petri Nets. <i>Lecture Notes in Computer Science</i> , 2016 , 203-225	0.9	2
130	Existence of home states in Petri nets is decidable. <i>Information Processing Letters</i> , 2016 , 116, 423-427	0.8	10
129	Distributed Markov Chains. <i>Lecture Notes in Computer Science</i> , 2015 , 117-134	0.9	3
128	Unfolding Based Minimal Test Suites for Testing Multithreaded Programs 2015 ,		1
127	2015 ,		4
126	Model Checking Parameterized Asynchronous Shared-Memory Systems. <i>Lecture Notes in Computer Science</i> , 2015 , 67-84	0.9	9
125	Negotiation Programs. <i>Lecture Notes in Computer Science</i> , 2015 , 157-178	0.9	1
124	FPSOLVE: A Generic Solver for Fixpoint Equations Over Semirings. <i>International Journal of Foundations of Computer Science</i> , 2015 , 26, 805-825	0.6	
123	Pattern-Based Verification for Multithreaded Programs. <i>ACM Transactions on Programming Languages and Systems</i> , 2014 , 36, 1-29	1.6	13
122	A Brief History of Strahler Numbers. <i>Lecture Notes in Computer Science</i> , 2014 , 1-13	0.9	9
121	FPSolve: A Generic Solver for Fixpoint Equations over Semirings. <i>Lecture Notes in Computer Science</i> , 2014 , 1-15	0.9	5
120	From LTL to Deterministic Automata: A Safrless Compositional Approach. <i>Lecture Notes in Computer Science</i> , 2014 , 192-208	0.9	23
119	An SMT-Based Approach to Coverability Analysis. <i>Lecture Notes in Computer Science</i> , 2014 , 603-619	0.9	38
118	On Negotiation as Concurrency Primitive II: Deterministic Cyclic Negotiations. <i>Lecture Notes in Computer Science</i> , 2014 , 258-273	0.9	8
117	Deterministic Negotiations: Concurrency for Free. <i>Lecture Notes in Computer Science</i> , 2014 , 23-31	0.9	
116	Message-Passing Algorithms for the Verification of Distributed Protocols. <i>Lecture Notes in Computer Science</i> , 2014 , 222-241	0.9	
115	Analyzing probabilistic pushdown automata. <i>Formal Methods in System Design</i> , 2013 , 43, 124-163	1.4	23
114	A strongly polynomial algorithm for criticality of branching processes and consistency of stochastic context-free grammars. <i>Information Processing Letters</i> , 2013 , 113, 381-385	0.8	2

113	A Fully Verified Executable LTL Model Checker. <i>Lecture Notes in Computer Science</i> , 2013 , 463-478	0.9	46
112	Parameterized Verification of Asynchronous Shared-Memory Systems. <i>Lecture Notes in Computer Science</i> , 2013 , 124-140	0.9	21
111	On Negotiation as Concurrency Primitive. <i>Lecture Notes in Computer Science</i> , 2013 , 440-454	0.9	9
110	Reactive and Proactive Diagnosis of Distributed Systems Using Net Unfoldings 2012 ,		1
109	A Perfect Model for Bounded Verification 2012 ,		13
108	Space-efficient scheduling of stochastically generated tasks. <i>Information and Computation</i> , 2012 , 210, 87-110	0.8	2
107	Proving Termination of Probabilistic Programs Using Patterns. <i>Lecture Notes in Computer Science</i> , 2012 , 123-138	0.9	31
106	Deterministic Automata for the (F,G)-Fragment of LTL. <i>Lecture Notes in Computer Science</i> , 2012 , 7-22	0.9	31
105	Rabinizer: Small Deterministic Automata for LTL(F,G). <i>Lecture Notes in Computer Science</i> , 2012 , 72-76	0.9	14
104	Learning Workflow Petri Nets. <i>Fundamenta Informaticae</i> , 2011 , 113, 205-228	1	4
103	Parikh's theorem: A simple and direct automaton construction. <i>Information Processing Letters</i> , 2011 , 111, 614-619	0.8	33
102	Derivation tree analysis for accelerated fixed-point computation. <i>Theoretical Computer Science</i> , 2011 , 412, 3226-3241	1.1	2
101	Complexity of pattern-based verification for multithreaded programs 2011 ,		14
100	Complexity of pattern-based verification for multithreaded programs. <i>ACM SIGPLAN Notices</i> , 2011 , 46, 499-510	0.2	10
99	Probabilistic Abstractions with Arbitrary Domains. <i>Lecture Notes in Computer Science</i> , 2011 , 334-350	0.9	4
98	Solving Fixed-Point Equations by Derivation Tree Analysis. <i>Lecture Notes in Computer Science</i> , 2011 , 19-35.	0.9	3
97	Newtonian program analysis. <i>Journal of the ACM</i> , 2010 , 57, 1-47	2	33
96	Computing the Least Fixed Point of Positive Polynomial Systems. <i>SIAM Journal on Computing</i> , 2010 , 39, 2282-2335	1.1	17

95	Learning Workflow Petri Nets. <i>Lecture Notes in Computer Science</i> , 2010 , 206-225	0.9	6
94	On least fixed points of systems of positive polynomials. <i>ACM Communications in Computer Algebra</i> , 2010 , 43, 81-83	0.2	
93	Automatic Error Correction of Java Programs. <i>Lecture Notes in Computer Science</i> , 2010 , 67-81	0.9	7
92	A False History of True Concurrency: From Petri to Tools. <i>Lecture Notes in Computer Science</i> , 2010 , 1-2	0.9	1
91	Verification of Graph Transformation Systems with Context-Free Specifications. <i>Lecture Notes in Computer Science</i> , 2010 , 107-122	0.9	6
90	A False History of True Concurrency: From Petri to Tools. <i>Lecture Notes in Computer Science</i> , 2010 , 180-186		3
89	Space-Efficient Scheduling of Stochastically Generated Tasks. <i>Lecture Notes in Computer Science</i> , 2010 , 539-550	0.9	1
88	Analysis of Systems with Stochastic Process Creation. <i>Lecture Notes in Computer Science</i> , 2010 , 1-1	0.9	
87	Stochastic Process Creation. <i>Lecture Notes in Computer Science</i> , 2009 , 24-33	0.9	
86	A negative result on depth-first net unfoldings. <i>International Journal on Software Tools for Technology Transfer</i> , 2008 , 10, 161-166	1.3	3
85	Solving Monotone Polynomial Equations. <i>International Federation for Information Processing</i> , 2008 , 285-298		1
84	Approximative Methods for Monotone Systems of Min-Max-Polynomial Equations. <i>Lecture Notes in Computer Science</i> , 2008 , 698-710	0.9	11
83	Newton's Method for \mathbb{E} Continuous Semirings. <i>Lecture Notes in Computer Science</i> , 2008 , 14-26	0.9	11
82	SDSIrep: A Reputation System Based on SDSI 2008 , 501-516		4
81	Symbolic Context-Bounded Analysis of Multithreaded Java Programs. <i>Lecture Notes in Computer Science</i> , 2008 , 270-287	0.9	33
80	On the convergence of Newton's method for monotone systems of polynomial equations 2007 ,		19
79	An Extension of Newton's Method to \mathbb{E} Continuous Semirings. <i>Lecture Notes in Computer Science</i> , 2007 , 157-168	0.9	9
78	On Fixed Point Equations over Commutative Semirings 2007 , 296-307		19

77	jMoped: A Test Environment for Java Programs 2007 , 164-167		8
76	Model Checking Probabilistic Pushdown Automata. <i>Logical Methods in Computer Science</i> , 2006 , 2,		18
75	Monotonic Set-Extended Prefix Rewriting and Verification of Recursive Ping-Pong Protocols. <i>Lecture Notes in Computer Science</i> , 2006 , 415-429	0.9	
74	Separability in Conflict-Free Petri Nets 2006 , 1-18		7
73	Abstraction Refinement with Craig Interpolation and Symbolic Pushdown Systems. <i>Lecture Notes in Computer Science</i> , 2006 , 489-503	0.9	25
72	Rewriting Models of Boolean Programs. <i>Lecture Notes in Computer Science</i> , 2006 , 136-150	0.9	11
71	Efficient Algorithms for Alternating Pushdown Systems with an Application to the Computation of Certificate Chains. <i>Lecture Notes in Computer Science</i> , 2006 , 141-153	0.9	15
70	Reachability Analysis of Synchronized PA Systems. <i>Electronic Notes in Theoretical Computer Science</i> , 2005 , 138, 153-178	0.7	8
69	Locality-Based Abstractions. <i>Lecture Notes in Computer Science</i> , 2005 , 118-134	0.9	4
68	A Note on On-the-Fly Verification Algorithms. <i>Lecture Notes in Computer Science</i> , 2005 , 174-190	0.9	68
67	jMoped: A Java Bytecode Checker Based on Moped. <i>Lecture Notes in Computer Science</i> , 2005 , 541-545	0.9	19
66	Reachability Analysis of Multithreaded Software with Asynchronous Communication. <i>Lecture Notes in Computer Science</i> , 2005 , 348-359	0.9	40
65	Verifying Probabilistic Procedural Programs. <i>Lecture Notes in Computer Science</i> , 2004 , 16-31	0.9	10
64	A Generic Approach to the Static Analysis of Concurrent Programs with Procedures. <i>International Journal of Foundations of Computer Science</i> , 2003 , 14, 551-582	0.6	22
63	Model checking LTL with regular valuations for pushdown systems. <i>Information and Computation</i> , 2003 , 186, 355-376	0.8	81
62	A generic approach to the static analysis of concurrent programs with procedures 2003 ,		72
61	A generic approach to the static analysis of concurrent programs with procedures. <i>ACM SIGPLAN Notices</i> , 2003 , 38, 62-73	0.2	16
60	Simple Representative Instantiations for Multicast Protocols. <i>Lecture Notes in Computer Science</i> , 2003 , 128-143	0.9	2

59	The Model-Checking Kit. <i>Lecture Notes in Computer Science</i> , 2003 , 463-472	0.9	17
58	An Improvement of McMillan's Unfolding Algorithm. <i>Formal Methods in System Design</i> , 2002 , 20, 285-310	1.4	142
57	An Algebraic Approach to the Static Analysis of Concurrent Software. <i>Lecture Notes in Computer Science</i> , 2002 , 3-3	0.9	
56	Grammars as Processes. <i>Lecture Notes in Computer Science</i> , 2002 , 277-297	0.9	7
55	A BDD-Based Model Checker for Recursive Programs. <i>Lecture Notes in Computer Science</i> , 2001 , 324-336	0.9	69
54	Net Reductions for LTL Model-Checking. <i>Lecture Notes in Computer Science</i> , 2001 , 310-324	0.9	11
53	Implementing LTL model checking with net unfoldings. <i>Lecture Notes in Computer Science</i> , 2001 , 37-56	0.9	21
52	Model-Checking LTL with Regular Valuations for Pushdown Systems. <i>Lecture Notes in Computer Science</i> , 2001 , 316-339	0.9	22
51	Verification of Systems with an Infinite State Space. <i>Lecture Notes in Computer Science</i> , 2001 , 183-186	0.9	2
50	An efficient automata approach to some problems on context-free grammars. <i>Information Processing Letters</i> , 2000 , 74, 221-227	0.8	18
49	Verification of Safety Properties Using Integer Programming: Beyond the State Equation. <i>Formal Methods in System Design</i> , 2000 , 16, 159-189	1.4	35
48	Efficient algorithms for pre* and post* on interprocedural parallel flow graphs 2000 ,		53
47	Efficient Algorithms for Model Checking Pushdown Systems. <i>Lecture Notes in Computer Science</i> , 2000 , 232-247	0.9	159
46	Verifying Single and Multi-mutator Garbage Collectors with Owicki-Gries in Isabelle/HOL. <i>Lecture Notes in Computer Science</i> , 2000 , 619-628	0.9	7
45	A New Unfolding Approach to LTL Model Checking. <i>Lecture Notes in Computer Science</i> , 2000 , 475-486	0.9	17
44	Petri Nets and Regular Processes. <i>Journal of Computer and System Sciences</i> , 1999 , 59, 476-503	1	23
43	A Logical Viewpoint on Process-Algebraic Quotients. <i>Lecture Notes in Computer Science</i> , 1999 , 499-514	0.9	3
42	Constraint-Based Analysis of Broadcast Protocols. <i>Lecture Notes in Computer Science</i> , 1999 , 50-66	0.9	26

41	An Unfolding Algorithm for Synchronous Products of Transition Systems. <i>Lecture Notes in Computer Science</i> , 1999 , 2-20	0.9	26
40	Proof-Checking Protocols Using Bisimulations. <i>Lecture Notes in Computer Science</i> , 1999 , 525-540	0.9	3
39	An Automata-Theoretic Approach to Interprocedural Data-Flow Analysis. <i>Lecture Notes in Computer Science</i> , 1999 , 14-30	0.9	49
38	Reachability in live and safe free-choice Petri nets is NP-complete. <i>Theoretical Computer Science</i> , 1998 , 198, 211-224	1.1	27
37	Decidability and complexity of Petri net problems – An introduction. <i>Lecture Notes in Computer Science</i> , 1998 , 374-428	0.9	125
36	Petri Nets, Commutative Context-Free Grammars, and Basic Parallel Processes. <i>Fundamenta Informaticae</i> , 1997 , 31, 13-25	1	60
35	Decidability of model checking for infinite-state concurrent systems. <i>Acta Informatica</i> , 1997 , 34, 85-107	0.9	106
34	Model checking LTL using constraint programming. <i>Lecture Notes in Computer Science</i> , 1997 , 1-20	0.9	8
33	Reachability analysis of pushdown automata: Application to model-checking. <i>Lecture Notes in Computer Science</i> , 1997 , 135-150	0.9	270
32	Verification using PEP. <i>Lecture Notes in Computer Science</i> , 1996 , 591-594	0.9	3
31	Trapping mutual exclusion in the box calculus. <i>Theoretical Computer Science</i> , 1996 , 153, 95-128	1.1	14
30	An improvement of McMillan's unfolding algorithm. <i>Lecture Notes in Computer Science</i> , 1996 , 87-106	0.9	68
29	Checking system properties via integer programming. <i>Lecture Notes in Computer Science</i> , 1996 , 250-264	0.9	12
28	An effective tableau system for the linear time \exists calculus. <i>Lecture Notes in Computer Science</i> , 1996 , 98-109	0.9	6
27	Deciding finiteness of Petri nets up to bisimulation. <i>Lecture Notes in Computer Science</i> , 1996 , 478-489	0.9	20
26	Complexity results for 1-safe nets. <i>Theoretical Computer Science</i> , 1995 , 147, 117-136	1.1	77
25	Free Choice Petri Nets 1995 ,		406
24	On the model checking problem for branching time logics and basic parallel processes. <i>Lecture Notes in Computer Science</i> , 1995 , 353-366	0.9	19

23	Petri nets, commutative context-free grammars, and basic parallel processes. <i>Lecture Notes in Computer Science</i> , 1995 , 221-232	0.9	20
22	Model checking using net unfoldings. <i>Science of Computer Programming</i> , 1994 , 23, 151-195	1.1	123
21	On the decidability of model checking for several \mathcal{E} calculi and Petri nets 1994 , 115-129		29
20	Decidability Issues for Petri Nets. <i>BRICS Report Series</i> , 1994 , 1,		29
19	Operational Semantics for the Petri Box Calculus. <i>Lecture Notes in Computer Science</i> , 1994 , 210-225	0.9	12
18	The asynchronous committee meeting problem. <i>Lecture Notes in Computer Science</i> , 1994 , 276-287	0.9	
17	Reachability in cyclic extended free-choice systems. <i>Theoretical Computer Science</i> , 1993 , 114, 93-118	1.1	25
16	Complexity Results for 1-safe Nets. <i>DAIMI Report Series</i> , 1993 , 22,	0	2
15	General refinement and recursion operators for the Petri Box calculus. <i>Lecture Notes in Computer Science</i> , 1993 , 130-140	0.9	28
14	Model checking using net unfoldings. <i>Lecture Notes in Computer Science</i> , 1993 , 613-628	0.9	22
13	Shortest paths in reachability graphs. <i>Lecture Notes in Computer Science</i> , 1993 , 224-241	0.9	3
12	Complexity results for 1-safe nets. <i>Lecture Notes in Computer Science</i> , 1993 , 326-337	0.9	21
11	Traps characterize home states in free choice systems. <i>Theoretical Computer Science</i> , 1992 , 101, 161-176	1.1	16
10	A polynomial-time algorithm to decide liveness of bounded free choice nets. <i>Theoretical Computer Science</i> , 1992 , 102, 185-205	1.1	35
9	A solution to the covering problem for 1-bounded conflict-free Petri nets using Linear Programming. <i>Information Processing Letters</i> , 1992 , 41, 313-319	0.8	7
8	Zeros of the Hankel function of real order out of the principal Riemann sheet. <i>Journal of Computational and Applied Mathematics</i> , 1991 , 37, 89-99	2.4	4
7	Model checking of persistent Petri nets 1991 , 35-52		5
6	Reachability in reversible Free Choice systems 1991 , 384-397		4

5	Compositional synthesis of live and bounded free choice Petri nets. <i>Lecture Notes in Computer Science</i> , 1991 , 172-187	0.9	9
4	Top-down synthesis of live and bounded free choice nets 1990 , 118-139		8
3	Synthesis rules for Petri nets, and how they lead to new results 1990 , 182-198		12
2	Derivation Tree Analysis for Accelerated Fixed-Point Computation. <i>Lecture Notes in Computer Science</i> ,301-313	0.9	2
1	Abduction of trap invariants in parameterized systems. <i>Electronic Proceedings in Theoretical Computer Science</i> , <i>EPTCS</i> ,346, 1-17		