

# Radu Calinescu

## List of Publications by Year in descending order

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Version: 2024-02-01

67  
papers

1,650  
citations

567281

15  
h-index

454955

30  
g-index

69  
all docs

69  
docs citations

69  
times ranked

955  
citing authors

#	ARTICLE	IF	CITATIONS
1	Dynamic QoS Management and Optimization in Service-Based Systems. IEEE Transactions on Software Engineering, 2011, 37, 387-409.	5.6	290
2	Self-adaptive software needs quantitative verification at runtime. Communications of the ACM, 2012, 55, 69-77.	4.5	238
3	Large-scale complex IT systems. Communications of the ACM, 2012, 55, 71-77.	4.5	209
4	Engineering Trustworthy Self-Adaptive Software with Dynamic Assurance Cases. IEEE Transactions on Software Engineering, 2018, 44, 1039-1069.	5.6	119
5	Assuring the Machine Learning Lifecycle. ACM Computing Surveys, 2022, 54, 1-39.	23.0	90
6	Formal Verification With Confidence Intervals to Establish Quality of Service Properties of Software Systems. IEEE Transactions on Reliability, 2016, 65, 107-125.	4.6	59
7	An incremental verification framework for component-based software systems. , 2013, , .		46
8	Synthesis of probabilistic models for quality-of-service software engineering. Automated Software Engineering, 2018, 25, 785-831.	2.9	43
9	Efficient synthesis of robust models for stochastic systems. Journal of Systems and Software, 2018, 143, 140-158.	4.5	40
10	Search-Based Synthesis of Probabilistic Models for Quality-of-Service Software Engineering (T). , 2015, , .		32
11	UNDERSEA: An Exemplar for Engineering Self-Adaptive Unmanned Underwater Vehicles. , 2017, , .		29
12	A Systematic Review of Cloud Lock-In Solutions. , 2013, , .		25
13	Uncertainty in Self-adaptive Systems: A Research Community Perspective. ACM Transactions on Autonomous and Adaptive Systems, 2020, 15, 1-36.	0.8	24
14	Big data + politics = open data: The case of health care data in England. Policy and Internet, 2013, 5, 228-243.	4.3	23
15	Synthesis and Verification of Self-aware Computing Systems. , 2017, , 337-373.		23
16	Developing self-verifying service-based systems. , 2013, , .		22
17	Designing Robust Software Systems through Parametric Markov Chain Synthesis. , 2017, , .		22
18	A Computational Model for the AMPA Receptor Phosphorylation Master Switch Regulating Cerebellar Long-Term Depression. PLoS Computational Biology, 2016, 12, e1004664.	3.2	22

#	ARTICLE	IF	CITATIONS
19	CADS*: Computer-Aided Development of Self-* Systems. Lecture Notes in Computer Science, 2009, , 421-424.	1.3	21
20	Compositional Reverification of Probabilistic Safety Properties for Large-Scale Complex IT Systems. Lecture Notes in Computer Science, 2012, , 303-329.	1.3	19
21	Socio-Cyber-Physical Systems: Models, Opportunities, Open Challenges. , 2019, , .		18
22	Formal Methods @ Runtime. Lecture Notes in Computer Science, 2011, , 122-135.	1.3	17
23	FACT: A Probabilistic Model Checker for Formal Verification with Confidence Intervals. Lecture Notes in Computer Science, 2016, , 540-546.	1.3	16
24	Self-Adaptive Role-Based Access Control for Business Processes. , 2017, , .		13
25	Observation-Enhanced QoS Analysis of Component-Based Systems. IEEE Transactions on Software Engineering, 2020, 46, 526-548.	5.6	12
26	Fast Parametric Model Checking through Model Fragmentation. , 2021, , .		12
27	Comparison of automated crystallographic model-building pipelines. Acta Crystallographica Section D: Structural Biology, 2019, 75, 1119-1128.	2.3	11
28	Efficient Parametric Model Checking Using Domain Knowledge. IEEE Transactions on Software Engineering, 2021, 47, 1114-1133.	5.6	11
29	Towards a Model-Driven Solution to the Vendor Lock-In Problem in Cloud Computing. , 2013, , .		10
30	A scalable approach for re-configuring evolving industrial control systems. , 2014, , .		10
31	Accurate Analysis of Quality Properties of Software with Observation-Based Markov Chain Refinement. , 2017, , .		8
32	Safety Controller Synthesis for Collaborative Robots. , 2020, , .		8
33	Verified synthesis of optimal safety controllers for human-robot collaboration. Science of Computer Programming, 2022, 218, 102809.	1.9	8
34	Synthesis of Adaptation Plans for Cloud Infrastructure with Hybrid Cost Models. , 2014, , .		7
35	Towards Deductive Verification of Control Algorithms for Autonomous Marine Vehicles. , 2020, , .		7
36	High-availability clusters: A taxonomy, survey, and future directions. Journal of Systems and Software, 2022, 187, 111208.	4.5	7

#	ARTICLE	IF	CITATIONS
37	Using Unstructured Data to Improve the Continuous Planning of Critical Processes Involving Humans. , 2019, , .		6
38	Reinforcement Learning with Quantitative Verification for Assured Multi-Agent Policies. , 2021, , .		6
39	Analysis and Refactoring of Software Systems Using Performance Antipattern Profiles. Lecture Notes in Computer Science, 2020, , 357-377.	1.3	6
40	Maintaining driver attentiveness in shared-control autonomous driving. , 2021, , .		5
41	Evolutionary-Guided Synthesis of Verified Pareto-Optimal MDP Policies. , 2021, , .		5
42	A Multi-agent Framework for Dependable Adaptation of Evolving System Architectures. , 2015, , .		4
43	RiskStructures: A design algebra for risk-aware machines. Formal Aspects of Computing, 2021, 33, 763-802.	1.8	4
44	Utilising Assured Multi-Agent Reinforcement Learning within Safety-Critical Scenarios. Procedia Computer Science, 2021, 192, 1061-1070.	2.0	4
45	Interval change-point detection for runtime probabilistic model checking. , 2020, , .		4
46	BULK-SYNCHRONOUS PARALLEL ALGORITHMS FOR QR AND QZ MATRIX FACTORISATION. International Journal of Parallel, Emergent and Distributed Systems, 1997, 11, 97-112.	0.4	3
47	Services2Cloud: A Framework for Revenue Analysis of Software-as-a-Service Provisioning. , 2013, , .		3
48	Using Intelligent Proxies to Develop Self-Adaptive Service-Based Systems. , 2013, , .		3
49	Towards Systematic Engineering of Collaborative Heterogeneous Robotic Systems. , 2019, , .		3
50	Quantitative verification with adaptive uncertainty reduction. Journal of Systems and Software, 2022, 188, 111275.	4.5	3
51	BULK SYNCHRONOUS PARALLEL ALGORITHMS FOR CONSERVATIVE DISCRETE EVENT SIMULATION— . International Journal of Parallel, Emergent and Distributed Systems, 1996, 9, 15-38.	0.4	2
52	Efficient parametric model checking using domain-specific modelling patterns. , 2018, , .		2
53	Architecting Trustworthy Self-Adaptive Systems (Tutorial). , 2019, , .		2
54	Pairwise running of automated crystallographic model-building pipelines. Acta Crystallographica Section D: Structural Biology, 2020, 76, 814-823.	2.3	2

#	ARTICLE	IF	CITATIONS
55	Probabilistic Program Performance Analysis. , 2021, , .		2
56	Six Software Engineering Principles for Smarter Cyber-Physical Systems. , 2021, , .		2
57	Predicting the performance of automated crystallographic model-building pipelines. Acta Crystallographica Section D: Structural Biology, 2021, 77, 1591-1601.	2.3	2
58	Re-engineering the Database Layer of Legacy Applications for Scalable Cloud Deployment. , 2014, , .		1
59	Special issue on resilient software and software-controlled systems. Computing (Vienna/New York), 2021, 103, 533-534.	4.8	1
60	Towards a Bayesian prognostic framework for high-availability clusters. , 2021, , .		1
61	Side-channel Attacks and Countermeasures in Cloud Services and Infrastructures. , 2022, , .		1
62	Software Quality Analysis with Observation-Enhanced Quantitative Verification (Tutorial). , 2017, , .		0
63	Towards Multi-Objective Optimisation of Hadoop 2.x Application Deployment on Public Clouds. , 2018, , .		0
64	Towards Self-Adaptive Systems with Hierarchical Decentralised Control. , 2018, , .		0
65	Taming Service Uncertainty through Probabilistic Model Learning, Analysis and Synthesis. , 2019, , .		0
66	Protecting Shared Virtualized Environments against Cache Side-channel Attacks. , 2022, , .		0
67	Predicting locally manageable resource failures of high availability clusters. Software - Practice and Experience, 2022, 52, 2191-2225.	3.6	0