Alexandru A Costan

List of Publications by Year
in descending order

66 papers	730 citations	1040056 9 h-index	888059 17 g-index
68 all docs	68 docs citations	68 times ranked	610 citing authors

#	Article	IF	Citations
1	MonALISA: An agent based, dynamic service system to monitor, control and optimize distributed systems. Computer Physics Communications, 2009, 180, 2472-2498.	7.5	81
2	A performance evaluation of Apache Kafka in support of big data streaming applications. , 2017, , .		57
3	Spark Versus Flink: Understanding Performance in Big Data Analytics Frameworks. , 2016, , .		47
4	A performance evaluation of Azure and Nimbus clouds for scientific applications. , 2012, , .		38
5	Managing Data Access on Clouds: A Generic Framework for Enforcing Security Policies. , 2011, , .		35
6	Distributed intelligence on the Edge-to-Cloud Continuum: A systematic literature review. Journal of Parallel and Distributed Computing, 2022, 166, 71-94.	4.1	35
7	OverFlow: Multi-Site Aware Big Data Management for Scientific Workflows on Clouds. IEEE Transactions on Cloud Computing, 2016, 4, 76-89.	4.4	32
8	Bridging Data in the Clouds: An Environment-Aware System for Geographically Distributed Data Transfers. , 2014, , .		25
9	A Distributed Multi-Sensor Machine Learning Approach to Earthquake Early Warning. Proceedings of the AAAI Conference on Artificial Intelligence, 2020, 34, 403-411.	4.9	25
10	Fault Tolerance and Recovery in Grid Workflow Management Systems. , 2010, , .		22
11	JetStream. , 2014, , .		21
12	JetStream: Enabling high throughput live event streaming on multi-site clouds. Future Generation Computer Systems, 2016, 54, 274-291.	7.5	17
13	E2Clab: Exploring the Computing Continuum through Repeatable, Replicable and Reproducible Edge-to-Cloud Experiments. , 2020, , .		17
14	MapIterativeReduce. , 2012, , .		15
15	Efficient Scheduling of Scientific Workflows Using Hot Metadata in a Multisite Cloud. IEEE Transactions on Knowledge and Data Engineering, 2019, 31, 1940-1953.	5.7	15
16	Monitoring, accounting and automated decision support for the alice experiment based on the MonALISA framework. , 2007, , .		14
17	Monitoring and control of large systems with MonALISA. Communications of the ACM, 2009, 52, 49-55.	4.5	14
18	Towards Multi-site Metadata Management for Geographically Distributed Cloud Workflows. , 2015, , .		12

#	Article	IF	Citations
19	Adaptive file management for scientific workflows on the Azure cloud. , 2013, , .		11
20	Machine learning patterns for neuroimaging-genetic studies in the cloud. Frontiers in Neuroinformatics, 2014, 8, 31.	2.5	11
21	KerA: Scalable Data Ingestion for Stream Processing. , 2018, , .		11
22	Middleware and architectures for space-based and situated computing. International Journal of Space-Based and Situated Computing, 2011, 1, 43.	0.2	9
23	A dependability layer for large-scale distributed systems. International Journal of Grid and Utility Computing, 2011, 2, 109.	0.2	9
24	A visualisation technique for network topology transformation within MonALISA monitoring framework. International Journal of Grid and Utility Computing, 2011, 2, 119.	0.2	9
25	TomusBlobs: scalable data-intensive processing on Azure clouds. Concurrency Computation Practice and Experience, 2016, 28, 950-976.	2.2	9
26	Planner: Cost-Efficient Execution Plans Placement for Uniform Stream Analytics on Edge and Cloud. , 2018, , .		9
27	A fault tolerance approach for distributed systems using monitoring based replication. , 2010, , .		7
28	TomusBlobs: Towards Communication-Efficient Storage for MapReduce Applications in Azure. , 2012, , .		7
29	Towards a Methodology for Benchmarking Edge Processing Frameworks. , 2019, , .		7
30	A Monitoring Architecture for High-Speed Networks in Large Scale Distributed Collaborations. , 2008, , .		6
31	Managing hot metadata for scientific workflows on multisite clouds. , 2016, , .		6
32	AutoCompBD: Autonomic Computing and Big Data platforms. Soft Computing, 2017, 21, 4497-4499.	3.6	6
33	Keeping up with storage: Decentralized, write-enabled dynamic geo-replication. Future Generation Computer Systems, 2018, 86, 1093-1105.	7.5	6
34	Investigating Edge vs. Cloud Computing Trade-offs for Stream Processing. , 2019, , .		6
35	Distributed Architectures for Event-Based Systems. Studies in Computational Intelligence, 2011, , 11-45.	0.9	5
36	Towards a unified storage and ingestion architecture for stream processing. , 2017, , .		5

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37	Exploring Shared State in Key-Value Store for Window-Based Multi-pattern Streaming Analytics. , 2017, , .		5
38	Prediction of Distributed Systems State Based on Monitoring Data. , 2010, , .		4
39	Bringing Introspection Into the BlobSeer Data-Management System Using the MonALISA Distributed Monitoring Framework. , 2010, , .		4
40	Bringing introspection into BlobSeer: Towards a self-adaptive distributed data management system. International Journal of Applied Mathematics and Computer Science, 2011, 21, 229-242.	1.5	4
41	DataSteward: Using Dedicated Compute Nodes for Scalable Data Management on Public Clouds. , 2013, , .		4
42	Transfer as a Service: Towards a Cost-Effective Model for Multi-site Cloud Data Management. , 2014, , .		4
43	Týr: Blob Storage Meets Built-In Transactions. , 2016, , .		4
44	Towards Efficient Location and Placement of Dynamic Replicas for Geo-Distributed Data Stores. , 2016, , .		4
45	Mission possible: Unify HPC and Big Data stacks towards application-defined blobs at the storage layer. Future Generation Computer Systems, 2020, 109, 668-677.	7.5	4
46	Dynamic Meta-Scheduling Architecture Based on Monitoring in Distributed Systems. , 2009, , .		3
47	TýrFS: Increasing Small Files Access Performance with Dynamic Metadata Replication. , 2018, , .		3
48	Reproducible Performance Optimization of Complex Applications on the Edge-to-Cloud Continuum. , 2021, , .		3
49	Monitoring and Control of Large Systems with MonALISA. Queue, 2009, 7, 40-49.	1.1	3
50	Monitoring of Complex Applications Execution in Distributed Dependable Systems. , 2009, , .		2
51	Simulation Model and Instrument to Evaluate Replication Techniques. , 2010, , .		2
52	Automatic Generation of Functional Workflows Using a Semantic Specification. , 2010, , .		2
53	To Overlap or Not to Overlap: Optimizing Incremental MapReduce Computations for On-Demand Data Upload. , 2014, , .		2
54	MDSC. , 2021, , .		2

#	Article	IF	Citations
55	Data replication techniques with applications to the MonALISA distributed monitoring system. , 2009, , .		1
56	Towards a multi-stream low-priority high throughput (multi)point-to-(multi)point data transport protocol. , 2010, , .		1
57	A Worklow Management Platform for Scientific Applications in Grid Environments. , 2010, , .		1
58	Towards a Generic Security Framework for Cloud Data Management Environments. International Journal of Distributed Systems and Technologies, 2012, 3, 17-34.	0.7	1
59	SLoG: Large-Scale Logging Middleware for HPC and Big Data Convergence. , 2018, , .		1
60	Virtual Log-Structured Storage for High-Performance Streaming. , 2021, , .		1
61	Grid Data Handling. , 0, , 112-139.		1
62	A Solution for Fault-Tolerance Based on Adaptive Replication in MonALISA. , 2010, , .		0
63	Prediction Strategies for Self-Adaptive Behavior in Distributed Systems. , 2010, , .		0
64	Distributed Data Storage in Support for Context-Aware Applications. , 2013, , .		0
65	Achieving high throughput for large scale event streaming across geographically distributed data-centers with JetStream. , 2014, , .		0
66	Grid Data Handling. , 2013, , 294-321.		0