TomÃ s Margalef

List of Publications by Year
in descending order

101 papers	744 citations	623574 14 h-index	713332 21 g-index
109 all docs	109 docs citations	109 times ranked	421 citing authors

#	Article	IF	Citations
1	Cloud-Based Urgent Computing for Forest Fire Spread Prediction under Data Uncertainties. , 2021, , .		1
2	Wind Field Parallelization Based on Python Multiprocessing to Reduce Forest Fire Propagation Prediction Uncertainty. Lecture Notes in Computer Science, 2020, , 550-560.	1.0	0
3	Early Adaptive Evaluation Scheme for Data-Driven Calibration in Forest Fire Spread Prediction. Lecture Notes in Computer Science, 2020, , 17-30.	1.0	2
4	Scalability of a multi-physics system for forest fire spread prediction in multi-core platforms. Journal of Supercomputing, 2019, 75, 1163-1174.	2.4	5
5	Wind field parallelization based on Schwarz alternating domain decomposition method. Future Generation Computer Systems, 2018, 82, 565-574.	4.9	3
6	Relevance of Error Function in Input Parameter Calibration in a Coupled Wind Field Model-Forest Fire Spread Simulator. , 2018, , .		0
7	Reducing Data Uncertainty in Forest Fire Spread Prediction: A Matter of Error Function Assessment. Lecture Notes in Computer Science, 2018, , 207-220.	1.0	0
8	Time aware genetic algorithm for forest fire propagation prediction: exploiting multiâ€core platforms. Concurrency Computation Practice and Experience, 2017, 29, e3837.	1.4	23
9	Applying vectorization of diagonal sparse matrix to accelerate wind field calculation. Journal of Supercomputing, 2017, 73, 240-258.	2.4	5
10	Introducing computational thinking, parallel programming and performance engineering in interdisciplinary studies. Journal of Parallel and Distributed Computing, 2017, 105, 116-126.	2.7	10
11	HeDPM: load balancing of linear pipeline applications on heterogeneous systems. Journal of Supercomputing, 2017, 73, 3738-3760.	2.4	6
12	Automatic fire perimeter determination using MODIS hotspots information. , 2016, , .		4
13	Applying domain decomposition to wind field calculation. Parallel Computing, 2016, 57, 185-196.	1.3	6
14	Reducing Data Uncertainty in Surface Meteorology Using Data Assimilation: A Comparison Study. Procedia Computer Science, 2016, 80, 1846-1855.	1.2	0
15	Error Function Impact in Dynamic Data-driven Framework Applied to Forest Fire Spread Prediction. Procedia Computer Science, 2016, 80, 418-427.	1.2	4
16	Automated and dynamic abstraction of MPI application performance. Cluster Computing, 2016, 19, 1105-1137.	3.5	1
17	Accelerating preconditioned conjugate gradient solver in wind field calculation. , 2016, , .		2
18	Large Forest Fire Spread Prediction: Data and Computational Science. Procedia Computer Science, 2016, 80, 909-918.	1.2	6

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19	Environment for automatic development and tuning of parallel applications. , 2016, , .		1
20	Hybrid application to accelerate wind field calculation. Journal of Computational Science, 2016, 17, 576-590.	1.5	5
21	Real-time genetic spatial optimization to improve forest fire spread forecasting in high-performance computing environments. International Journal of Geographical Information Science, 2016, 30, 594-611.	2.2	9
22	Determining map partitioning to minimize wind field uncertainty in forest fire propagation prediction. Journal of Computational Science, 2016, 14, 28-37.	1.5	9
23	Adapting Map Resolution to Accomplish Execution Time Constraints in Wind Field Calculation. Procedia Computer Science, 2015, 51, 2749-2753.	1.2	2
24	Forest Fire Propagation Prediction Based on Overlapping DDDAS Forecasts. Procedia Computer Science, 2015, 51, 1623-1632.	1.2	16
25	Relieving Uncertainty in Forest Fire Spread Prediction by Exploiting Multicore Architectures. Procedia Computer Science, 2015, 51, 1752-1761.	1.2	7
26	Applying domain decomposition Schwarz method to accelerate wind field calculation. , 2015, , .		3
27	Online root-cause performance analysis of parallel applications. Parallel Computing, 2015, 48, 81-107.	1.3	1
28	Enhancing computational efficiency on forest fire forecasting by time-aware Genetic Algorithms. Journal of Supercomputing, 2015, 71, 1869-1881.	2.4	7
29	Coupled Dynamic Data-Driven Framework for Forest Fire Spread Prediction. Lecture Notes in Computer Science, 2015, , 54-67.	1.0	5
30	Enhancing multi-model forest fire spread prediction by exploiting multi-core parallelism. Journal of Supercomputing, 2014, 70, 721-732.	2.4	15
31	Predicting Performance of Hybrid Master/Worker Applications Using Model-Based Regression Trees. , 2014, , .		0
32	Response time assessment in forest fire spread simulation: An integrated methodology for efficient exploitation of available prediction time. Environmental Modelling and Software, 2014, 54, 153-164.	1.9	24
33	GMATE: Dynamic Tuning of Parallel Applications in Grid Environment. Journal of Grid Computing, 2014, 12, 371-398.	2.5	2
34	Determining map partitioning to accelerate wind field calculation. , 2014, , .		5
35	Wind Field Uncertainty in Forest Fire Propagation Prediction. Procedia Computer Science, 2014, 29, 1535-1545.	1.2	20
36	Towards a Dynamic Data Driven Wildfire Behavior Prediction System at European Level. Procedia Computer Science, 2014, 29, 1216-1226.	1.2	12

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37	Core Allocation Policies on Multicore Platforms to Accelerate Forest Fire Spread Predictions. Lecture Notes in Computer Science, 2014, , 151-160.	1.0	2
38	Parameter calibration framework for environmental emergency models. Simulation Modelling Practice and Theory, 2013, 31, 10-21.	2.2	11
39	Performance Model for Master/Worker Hybrid Applications on Multicore Clusters. , 2013, , .		1
40	Coupling Diagnostic and Prognostic Models to a Dynamic Data Driven Forest Fire Spread Prediction System. Procedia Computer Science, 2013, 18, 1851-1860.	1.2	12
41	Relieving the Effects of Uncertainty in Forest Fire Spread Prediction by Hybrid MPI-OpenMP Parallel Strategies. Procedia Computer Science, 2013, 18, 2278-2287.	1.2	23
42	Applying Probability Theory for the Quality Assessment of a Wildfire Spread Prediction Framework Based on Genetic Algorithms. Scientific World Journal, The, 2013, 2013, 1-12.	0.8	3
43	Topic 11: Multicore and Manycore Programming. Lecture Notes in Computer Science, 2013, , 545-546.	1.0	0
44	Genetic Algorithm Characterization for the Quality Assessment of Forest Fire Spread Prediction. Procedia Computer Science, 2012, 9, 312-320.	1.2	12
45	On the Way of Applying Urgent Computing Solutions to Forest Fire Propagation Prediction. Procedia Computer Science, 2012, 9, 1657-1666.	1.2	7
46	Coupling Wind Dynamics into a DDDAS Forest Fire Propagation Prediction System. Procedia Computer Science, 2012, 9, 1110-1118.	1.2	20
47	Dynamic Data-Driven Genetic Algorithm for forest fire spread prediction. Journal of Computational Science, 2012, 3, 398-404.	1.5	47
48	A methodology for transparent knowledge specification in a dynamic tuning environment. Software - Practice and Experience, 2012, 42, 281-302.	2.5	0
49	Load balancing in homogeneous pipeline based applications. Parallel Computing, 2012, 38, 125-139.	1.3	14
50	MATE: Toward Scalable Automated and Dynamic Performance Tuning Environment. Lecture Notes in Computer Science, 2012, , 430-440.	1.0	0
51	Prediction Time Assessment in a DDDAS for Natural Hazard Management: Forest Fire Study Casel. Procedia Computer Science, 2011, 4, 1761-1770.	1.2	2
52	Evolutionary Optimisation Techniques to Estimate Input Parameters in Environmental Emergency Modelling. Studies in Computational Intelligence, 2011, , 125-143.	0.7	2
53	Towards policies for data insertion in dynamic data driven application systems: a case study sudden changes in wildland fire. Procedia Computer Science, 2010, 1, 1267-1276.	1.2	3
54	Knowledge-guided Genetic Algorithm for input parameter optimisation in environmental modelling. Procedia Computer Science, 2010, 1, 1367-1375.	1.2	19

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55	Wildland fire growth prediction method based on Multiple Overlapping Solution. Journal of Computational Science, 2010, 1, 229-237.	1.5	35
56	Scalable dynamic Monitoring, Analysis and Tuning Environment for parallel applications. Journal of Parallel and Distributed Computing, 2010, 70, 330-337.	2.7	9
57	Evolutionary Intelligent System for input parameter optimisation in environmental modelling: A case study in forest fire forecasting. , 2010, , .		1
58	A Performance Tuning Strategy for Complex Parallel Application. , 2010, , .		6
59	Data Injection at Execution Time in Grid Environments Using Dynamic Data Driven Application System for Wildland Fire Spread Prediction. , 2010, , .		5
60	Task distribution using factoring load balancing in Masterâ€“Worker applications. Information Processing Letters, 2009, 109, 902-906.	0.4	4
61	Injecting Dynamic Real-Time Data into a DDDAS for Forest Fire Behavior Prediction. Lecture Notes in Computer Science, 2009, , 489-499.	1.0	21
62	An Adaptive System for Forest Fire Behavior Prediction. , 2008, , .		9
63	Performance models for dynamic tuning of parallel applications on Computational Grids. , 2008, , .		3
64	Applying a Dynamic Data Driven Genetic Algorithm to Improve Forest Fire Spread Prediction. Lecture Notes in Computer Science, 2008, , 36-45.	1.0	29
65	Dynamic Pipeline Mapping (DPM). Lecture Notes in Computer Science, 2008, , 295-304.	1.0	7
66	On-Line Performance Modeling for MPI Applications. Lecture Notes in Computer Science, 2008, , 68-77.	1.0	8
67	Performance Model for Parallel Mathematical Libraries Based on Historical Knowledgebase. Lecture Notes in Computer Science, 2008, , 110-119.	1.0	1
68	MATE: Monitoring, Analysis and Tuning Environment for parallel/distributed applications. Concurrency Computation Practice and Experience, 2007, 19, 1517-1531.	1.4	18
69	Design and implementation of a dynamic tuning environment. Journal of Parallel and Distributed Computing, 2007, 67, 474-490.	2.7	22
70	Automatic Generation of Dynamic Tuning Techniques. Lecture Notes in Computer Science, 2007, , 13-22.	1.0	4
71	Automatic Tuning in Computational Grids. , 2007, , 381-389.		1
72	Improving forest-fire prediction by applying a statistical approach. Forest Ecology and Management, 2006, 234, S210.	1.4	7

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73	Between classical and ideal: enhancing wildland fire prediction using cluster computing. Cluster Computing, 2006, 9, 329-343.	3.5	4
74	Search of Performance Inefficiencies in Message Passing Applications with KappaPI 2 Tool. , 2006, , 409-419.		2
75	S 2 F 2 M â€“ Statistical System for Forest Fire Management. Lecture Notes in Computer Science, 2005, , 427-434.	1.0	5
76	Automatic Tuning of Data Distribution Using Factoring in Master/Worker Applications. Lecture Notes in Computer Science, 2005, , 132-139.	1.0	3
77	Enhancing wildland fire prediction on cluster systems applying evolutionary optimization techniques. Future Generation Computer Systems, 2005, 21, 61-67.	4.9	36
78	Automatic Tuning of Master/Worker Applications. Lecture Notes in Computer Science, 2005, , 95-103.	1.0	7
79	Automatic Performance Analysis of Message Passing Applications Using the KappaPI 2 Tool. Lecture Notes in Computer Science, 2005, , 293-300.	1.0	3
80	MATE: Dynamic Performance Tuning Environment. Lecture Notes in Computer Science, 2004, , 98-107.	1.0	12
81	Accelerating Wildland Fire Prediction on Cluster Systems. Lecture Notes in Computer Science, 2004, , 220-227.	1.0	0
82	Different Approaches to Automatic Performance Analysis of Distributed Applications. , 2004, , 3-19.		1
83	Accelerating Optimization of Input Parameters in Wildland Fire Simulation. Lecture Notes in Computer Science, 2004, , 1067-1074.	1.0	3
84	AUTOMATIC PERFORMANCE ANALYSIS AND DYNAMIC TUNING OF DISTRIBUTED APPLICATIONS. Parallel Processing Letters, 2003, 13, 169-187.	0.4	6
85	Topic 1 Support Tools and Environments. Lecture Notes in Computer Science, 2003, , 5-6.	1.0	0
86	Dynamic Performance Tuning of Distributed Programming Libraries. Lecture Notes in Computer Science, 2003, , 191-200.	1.0	4
87	Dynamic Performance Tuning Supported by Program Specification. Scientific Programming, 2002, 10, 35-44.	0.5	5
88	Optimization of Fire Propagation Model Inputs: A Grand Challenge Application on Metacomputers. Lecture Notes in Computer Science, 2002, , 447-451.	1.0	3
89	Evolutionary Optimization Techniques on Computational Grids. Lecture Notes in Computer Science, 2002, , 513-522.	1.0	9
90	Web Remote Services Oriented Architecture for Cluster Management. Lecture Notes in Computer Science, 2002, , 368-375.	1.0	1

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91	Performance Evaluation and Prediction. Lecture Notes in Computer Science, 2001, , 84-85.	1.0	0
92	Dynamic Performance Tuning Environment. Lecture Notes in Computer Science, 2001, , 36-45.	1.0	6
93	Simulation of Forest Fire Propagation on Parallel & Distributed PVM Platforms. Lecture Notes in Computer Science, 2001, , 386-392.	1.0	1
94	Integrating Automatic Techniques in a Performance Analysis Session. Lecture Notes in Computer Science, 2000, , 173-177.	1.0	5
95	Recent Advances in Parallel Virtual Machine and Message Passing Interface. Lecture Notes in Computer Science, 1999, , .	1.0	1
96	Automatic detection of parallel program performance problems. , 1998, , .		1
97	Knowledge-based automatic performance analysis of parallel programs. Advances in Parallel Computing, 1998, , 697-700.	0.3	2
98	Teaching parallel processing. ACM SIGCUE Outlook, 1996, 24, 159-161.	0.1	1
99	Teaching parallel processing. SIGCSE Bulletin, 1996, 28, 159-161.	0.1	0
100	Scheduling of parallel programs including dynamic loops. Future Generation Computer Systems, 1994, 10, 301-304.	4.9	0
101	Impact of task duplication on static-scheduling performance in multiprocessor systems with variable execution-time tasks. , 1990, , .		3