Danilo Pianini

List of Publications by Year
in descending order

60 papers	**1,294** citations	567281 **15** h-index	434195 **31** g-index
63 all docs	**63** docs citations	**63** times ranked	**582** citing authors

#	Article	IF	Citations
1	Aggregate Programming for the Internet of Things. Computer, 2015, 48, 22-30.	1.1	138
2	Modelling and simulation of Opportunistic IoT Services with Aggregate Computing. Future Generation Computer Systems, 2019, 91, 252-262.	7.5	121
3	Chemical-oriented simulation of computational systems with ALCHEMIST. Journal of Simulation, 2013, 7, 202-215.	1.5	91
4	Protelis. , 2015, , .		76
5	Developing pervasive multi-agent systems with nature-inspired coordination. Pervasive and Mobile Computing, 2015, 17, 236-252.	3.3	75
6	Engineering Resilient Collective Adaptive Systems by Self-Stabilisation. ACM Transactions on Modeling and Computer Simulation, 2018, 28, 1-28.	0.8	68
7	A development approach for collective opportunistic Edge-of-Things services. Information Sciences, 2019, 498, 154-169.	6.9	60
8	A Higher-Order Calculus of Computational Fields. ACM Transactions on Computational Logic, 2019, 20, 1-55.	0.9	55
9	From distributed coordination to field calculus and aggregate computing. Journal of Logical and Algebraic Methods in Programming, 2019, 109, 100486.	0.5	44
10	Partitioned integration and coordination via the self-organising coordination regions pattern. Future Generation Computer Systems, 2021, 114, 44-68.	7.5	36
11	Engineering collective intelligence at the edge with aggregate processes. Engineering Applications of Artificial Intelligence, 2021, 97, 104081.	8.1	36
12	Efficient Engineering of Complex Self-Organising Systems by Self-Stabilising Fields. , 2015, , .		33
13	Self-Adaptation to Device Distribution in the Internet of Things. ACM Transactions on Autonomous and Adaptive Systems, 2017, 12, 1-29.	0.8	29
14	Code Mobility Meets Self-organisation: A Higher-Order Calculus of Computational Fields. Lecture Notes in Computer Science, 2015, , 113-128.	1.3	27
15	Pulverization in Cyber-Physical Systems: Engineering the Self-Organizing Logic Separated from Deployment. Future Internet, 2020, 12, 203.	3.8	25
16	Pervasive ecosystems. , 2012, , .		24
17	Linda in Space-Time: An Adaptive Coordination Model for Mobile Ad-Hoc Environments. Lecture Notes in Computer Science, 2012, , 212-229.	1.3	24
18	Simulating Large-scale Aggregate MASs with Alchemist and Scala. , 0, , .		20

#	ARTICLE	IF	CITATIONS
19	On execution platforms for large-scale aggregate computing. , 2016, , .		18
20	Distributed statistical analysis of complex systems modeled through a chemical metaphor. , 2014, , .		17
21	Self-organising Coordination Regions: A Pattern for Edge Computing. Lecture Notes in Computer Science, 2019, , 182-199.	1.3	16
22	Self-Adaptation to Device Distribution Changes. , 2016, , .		15
23	Improving Gossip Dynamics Through Overlapping Replicates. Lecture Notes in Computer Science, 2016, , 192-207.	1.3	15
24	From Field-Based Coordination to Aggregate Computing. Lecture Notes in Computer Science, 2018, , 252-279.	1.3	15
25	A coordination model of pervasive service ecosystems. Science of Computer Programming, 2015, 110, 3-22.	1.9	13
26	Optimal resilient distributed data collection in mobile edge environments. Computers and Electrical Engineering, 2021, 96, 107580.	4.8	13
27	Combining self-organisation, context-awareness and semantic reasoning. , 2013, , .		12
28	Time-Fluid Field-Based Coordination through Programmable Distributed Schedulers. Logical Methods in Computer Science, 0, Volume 17, Issue 4, .	0.4	12
29	A Methodology and Simulation-Based Toolchain for Estimating Deployment Performance of Smart Collective Services at the Edge. IEEE Internet of Things Journal, 2022, 9, 20136-20148.	8.7	12
30	Aggregate Processes in Field Calculus. Lecture Notes in Computer Science, 2019, , 200-217.	1.3	11
31	Predicting Social Density in Mass Events to Prevent Crowd Disasters. Lecture Notes in Computer Science, 2013, , 206-215.	1.3	10
32	Digital Twins, Virtual Devices, and Augmentations for Self-Organising Cyber-Physical Collectives. Applied Sciences (Switzerland), 2022, 12, 349.	2.5	9
33	Gradient-Based Self-Organisation Patterns of Anticipative Adaptation. , 2012, , .		8
34	HPC from a self-organisation perspective: The case of crowd steering at the urban scale. , 2014, , .		8
35	Towards a Foundational API for Resilient Distributed Systems Design. , 2017, , .		8
36	Aggregate plans for multiagent systems. International Journal of Agent Oriented Software Engineering, 2017, 5, 336.	0.4	8

#	Article	IF	Citations
37	Emerging Distributed Programming Paradigm for Cyber-Physical Systems Over LoRaWANs. , 2018, , .		8
38	On the Social Implications of Collective Adaptive Systems. IEEE Technology and Society Magazine, 2020, 39, 36-46.	0.8	8
39	Combining Self-Organisation and Autonomic Computing in CASs with Aggregate-MAPE. , 2016, , .		7
40	Self-Stabilising Target Counting in Wireless Sensor Networks Using Euler Integration. , 2017, , .		7
41	A model for drosophila melanogaster development from a single cell to stripe pattern formation. , 2012, , .		5
42	Transparent Protection of Aggregate Computations from Byzantine Behaviours via Blockchain. , 2018, , .		5
43	ScaFi-Web: A Web-Based Application for Field-Based Coordination Programming. Lecture Notes in Computer Science, 2021, , 285-299.	1.3	5
44	Self Organization in Coordination Systems Using a WordNet-Based Ontology. , 2010, , .		4
45	Security in Collective Adaptive Systems: A Roadmap. , 2019, , .		4
46	Self-organising Pervasive Ecosystems: A Crowd Evacuation Example. Lecture Notes in Computer Science, 2011, , 115-129.	1.3	4
47	A Collective Adaptive Approach to Decentralised k-Coverage in Multi-robot Systems. ACM Transactions on Autonomous and Adaptive Systems, 2022, 17, 1-39.	0.8	4
48	Spatial awareness in pervasive ecosystems. Knowledge Engineering Review, 2016, 31, 343-366.	2.6	3
49	Extending the Gillespie's Stochastic Simulation Algorithm for Integrating Discrete-Event and Multi-Agent Based Simulation. Lecture Notes in Computer Science, 2016, , 3-18.	1.3	3
50	Simulation of Large Scale Computational Ecosystems with Alchemist: A Tutorial. Lecture Notes in Computer Science, 2021, , 145-161.	1.3	3
51	Aggregate centrality measures for IoT-based coordination. Science of Computer Programming, 2021, 203, 102584.	1.9	3
52	Multi-agent Systems Meet Aggregate Programming: Towards a Notion of Aggregate Plan. Lecture Notes in Computer Science, 2015, , 49-64.	1.3	3
53	The share Operator for Field-Based Coordination. Lecture Notes in Computer Science, 2019, , 54-71.	1.3	3
54	Breaking down monoliths with Microservices and DevOps: an industrial experience report. , 2021, , .		3

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55	Practical Aggregate Programming with Protelis. , 2017, , .		2
56	Spatial Tuples: Augmenting reality with tuples. Expert Systems, 2018, 35, e12273.	4.5	2
57	Democratic Process and Digital Platforms: An Engineering Perspective. Lecture Notes in Computer Science, 2019, , 83-96.	1.3	2
58	Towards Pulverised Architectures for Collective Adaptive Systems through Multi-Tier Programming. , 2021, , .		1
59	Computational Fields Meet Augmented Reality: Perspectives and Challenges. , 2015, , .		0
60	Time-Fluid Field-Based Coordination. Lecture Notes in Computer Science, 2020, , 193-210.	1.3	0