

# Nicola Santoro

## List of Publications by Year in descending order

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Version: 2024-02-01

80  
papers

2,555  
citations

201385

27  
h-index

205818

48  
g-index

81  
all docs

81  
docs citations

81  
times ranked

543  
citing authors

#	ARTICLE	IF	CITATIONS
1	Gathering of asynchronous robots with limited visibility. Theoretical Computer Science, 2005, 337, 147-168.	0.5	319
2	Arbitrary pattern formation by asynchronous, anonymous, oblivious robots. Theoretical Computer Science, 2008, 407, 412-447.	0.5	166
3	Distributed Computing by Mobile Robots: Gathering. SIAM Journal on Computing, 2012, 41, 829-879.	0.8	166
4	Distributed Computing by Oblivious Mobile Robots. Synthesis Lectures on Distributed Computing Theory, 2012, 3, 1-185.	0.1	116
5	Solving the Robots Gathering Problem. Lecture Notes in Computer Science, 2003, , 1181-1196.	1.0	108
6	Autonomous mobile robots with lights. Theoretical Computer Science, 2016, 609, 171-184.	0.5	101
7	Hard Tasks for Weak Robots: The Role of Common Knowledge in Pattern Formation by Autonomous Mobile Robots. Lecture Notes in Computer Science, 1999, , 93-102.	1.0	85
8	Self-deployment of mobile sensors on a ring. Theoretical Computer Science, 2008, 402, 67-80.	0.5	78
9	Mobile Search for a Black Hole in an Anonymous Ring. Algorithmica, 2007, 48, 67-90.	1.0	77
10	Optimal Parallel Merging and Sorting Without Memory Conflicts. IEEE Transactions on Computers, 1987, C-36, 1367-1369.	2.4	72
11	Searching for a black hole in arbitrary networks: optimal mobile agents protocols. Distributed Computing, 2006, 19, 1-99999.	0.7	72
12	Remembering without memory: Tree exploration by asynchronous oblivious robots. Theoretical Computer Science, 2010, 411, 1583-1598.	0.5	62
13	Map construction of unknown graphs by multiple agents. Theoretical Computer Science, 2007, 385, 34-48.	0.5	59
14	Computing Without Communicating: Ring Exploration by Asynchronous Oblivious Robots. Algorithmica, 2013, 65, 562-583.	1.0	58
15	Localized Distance-Sensitive Service Discovery in Wireless Sensor and Actor Networks. IEEE Transactions on Computers, 2009, 58, 1275-1288.	2.4	56
16	Forming sequences of geometric patterns with oblivious mobile robots. Distributed Computing, 2015, 28, 131-145.	0.7	55
17	Sense of direction: Definitions, properties, and classes. Networks, 1998, 32, 165-180.	1.6	47
18	Rendezvous and Election of Mobile Agents: Impact of Sense of Direction. Theory of Computing Systems, 2007, 40, 143-162.	0.7	43

#	ARTICLE	IF	CITATIONS
19	Distributed computing by mobile robots: uniform circle formation. Distributed Computing, 2017, 30, 413-457.	0.7	40
20	Efficient elections in chordal ring networks. Algorithmica, 1989, 4, 437-446.	1.0	38
21	UNIFORM SCATTERING OF AUTONOMOUS MOBILE ROBOTS IN A GRID. International Journal of Foundations of Computer Science, 2011, 22, 679-697.	0.8	37
22	Rendezvous of Mobile Agents in Unknown Graphs with Faulty Links. Lecture Notes in Computer Science, 2007, , 108-122.	1.0	35
23	The Power of Lights: Synchronizing Asynchronous Robots Using Visible Bits. , 2012, , .		34
24	Ping Pong in Dangerous Graphs: Optimal Black Hole Search with Pebbles. Algorithmica, 2012, 62, 1006-1033.	1.0	31
25	Shape formation by programmable particles. Distributed Computing, 2020, 33, 69-101.	0.7	30
26	Network Exploration by Silent and Oblivious Robots. Lecture Notes in Computer Science, 2010, , 208-219.	1.0	29
27	On the computational power of oblivious robots. , 2010, , .		28
28	How many oblivious robots can explore a line. Information Processing Letters, 2011, 111, 1027-1031.	0.4	28
29	USING SCATTERED MOBILE AGENTS TO LOCATE A BLACK HOLE IN AN UN-ORIENTED RING WITH TOKENS. International Journal of Foundations of Computer Science, 2008, 19, 1355-1372.	0.8	27
30	NETWORK DECONTAMINATION IN PRESENCE OF LOCAL IMMUNITY. International Journal of Foundations of Computer Science, 2007, 18, 457-474.	0.8	25
31	ZONER: A ZONE-based Sensor Relocation Protocol for Mobile Sensor Networks. Local Computer Networks (LCN), Proceedings of the IEEE Conference on, 2006, , .	0.0	24
32	Map construction and exploration by mobile agents scattered in a dangerous network. , 2009, , .		22
33	Searching for Black Holes in Subways. Theory of Computing Systems, 2012, 50, 158-184.	0.7	22
34	Designing a Streaming Algorithm for Outlier Detection in Data Mining – An Incremental Approach. Sensors, 2020, 20, 1261.	2.1	22
35	Exploring an unknown dangerous graph using tokens. Theoretical Computer Science, 2013, 472, 28-45.	0.5	20
36	Rendezvous of Two Robots with Constant Memory. Lecture Notes in Computer Science, 2013, , 189-200.	1.0	20

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37	Robots with Lights: Overcoming Obstructed Visibility Without Colliding. Lecture Notes in Computer Science, 2014, , 150-164.	1.0	20
38	Deployment of Asynchronous Robotic Sensors in Unknown Orthogonal Environments. Lecture Notes in Computer Science, 2008, , 125-140.	1.0	19
39	Shout echo selection in distributed files. Networks, 1986, 16, 77-86.	1.6	18
40	Gathering in dynamic rings. Theoretical Computer Science, 2020, 811, 79-98.	0.5	18
41	Efficient, Decentralized Computation of the Topology of Spatial Regions. IEEE Transactions on Computers, 2011, 60, 1100-1113.	2.4	14
42	Scattered Black Hole Search in an Oriented Ring using Tokens. , 2007, , .		13
43	Distributed Computing by Mobile Robots: Solving the Uniform Circle Formation Problem. Lecture Notes in Computer Science, 2014, , 217-232.	1.0	13
44	Line Recovery by Programmable Particles. , 2018, , .		13
45	Ping Pong in Dangerous Graphs: Optimal Black Hole Search with Pure Tokens. Lecture Notes in Computer Science, 2008, , 227-241.	1.0	13
46	Asynchronous Exploration of an Unknown Anonymous Dangerous Graph with $O(1)$ Pebbles. Lecture Notes in Computer Science, 2012, , 279-290.	1.0	10
47	Locating a Black Hole in an Un-oriented Ring Using Tokens: The Case of Scattered Agents. Lecture Notes in Computer Science, 2007, , 608-617.	1.0	10
48	Mapping an Unfriendly Subway System. Lecture Notes in Computer Science, 2010, , 190-201.	1.0	10
49	Distributed Facility Location for Sensor Network Maintenance. , 2009, , .		8
50	Network Decontamination from a Black Virus. , 2013, , .		8
51	Improving the Optimal Bounds for Black Hole Search in Rings. Lecture Notes in Computer Science, 2011, , 198-209.	1.0	8
52	TOPOLOGICAL CONSTRAINTS FOR SENSE OF DIRECTION. International Journal of Foundations of Computer Science, 1998, 09, 179-197.	0.8	7
53	Synchronized Dancing of Oblivious Chameleons. Lecture Notes in Computer Science, 2014, , 113-124.	1.0	7
54	Gathering in Dynamic Rings. Lecture Notes in Computer Science, 2017, , 339-355.	1.0	7

#	ARTICLE	IF	CITATIONS
55	From P2P to reliable semantic P2P systems. Peer-to-Peer Networking and Applications, 2010, 3, 363-381.	2.6	6
56	Mobility-Based Strategies for Energy Restoration in Wireless Sensor Networks. , 2010, , .		6
57	Distributed Barrier Coverage with Relocatable Sensors. Lecture Notes in Computer Science, 2014, , 235-249.	1.0	6
58	Real-time Outlier Detection Over Streaming Data. , 2019, , .		5
59	Time Optimal Algorithms for Black Hole Search in Rings. Lecture Notes in Computer Science, 2010, , 58-71.	1.0	5
60	Weak robots performing conflicting tasks without knowing who is in their team. , 2020, , .		5
61	Forming Sequences of Patterns With Luminous Robots. IEEE Access, 2020, 8, 90577-90597.	2.6	4
62	Fault-Tolerant Exploration of an Unknown Dangerous Graph by Scattered Agents. Lecture Notes in Computer Science, 2012, , 299-313.	1.0	4
63	On the Computational Power of Energy-Constrained Mobile Robots: Algorithms and Cross-Model Analysis. Lecture Notes in Computer Science, 2022, , 42-61.	1.0	4
64	Distributed computing on oriented anonymous hypercubes with faulty components. Distributed Computing, 2001, 14, 185-189.	0.7	3
65	Energy Restoration in a Linear Sensor Network. , 2018, , .		3
66	Moving and Computing Models: Agents. Lecture Notes in Computer Science, 2019, , 15-34.	1.0	3
67	Separating Bounded and Unbounded Asynchrony for Autonomous Robots. , 2021, , .		3
68	Black Hole Search in Dynamic Rings. , 2021, , .		3
69	Finding Good Coffee in Paris. Lecture Notes in Computer Science, 2012, , 154-165.	1.0	3
70	The un-merging problem. ACM SIGACT News, 1985, 17, 5-6.	0.1	2
71	ON RELIABILITY ANALYSIS OF CHORDAL RINGS. Journal of Circuits, Systems and Computers, 1995, 05, 199-213.	1.0	2
72	Distributed Black Virus Decontamination and Rooted Acyclic Orientations. , 2015, , .		2

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73	Autonomous Mobile Robots: Refining the Computational Landscape. , 2021, , .		2
74	Chapter 6: Energy Restoration in Mobile Sensor Networks. , 2014, , 113-142.		2
75	Fault-Tolerant Sequential Scan. Theory of Computing Systems, 2009, 45, 1-26.	0.7	1
76	Meeting in a polygon by anonymous oblivious robots. Distributed Computing, 2020, 33, 445-469.	0.7	1
77	Fault-tolerant simulation of population protocols. Distributed Computing, 2020, 33, 561-578.	0.7	1
78	Fully Dynamic Line Maintenance by a Simple Robot. , 2022, , .		1
79	TuringMobile: a turing machine of oblivious mobile robots with limited visibility and its applications. Distributed Computing, 2022, 35, 105.	0.7	0
80	Mobility and Computations: Some Open Research Directions. Lecture Notes in Computer Science, 2013, , 1-3.	1.0	0