Francesco Mondada

List of Publications by Year
in descending order

145	5,722	172207	128067
papers	citations	29 h-index	60 g-index

153	153	153	3234
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Teachersâ€™ Perspective on Fostering Computational Thinking Through Educational Robotics. Advances in Intelligent Systems and Computing, 2022, , 177-185.	0.5	6
2	Exploring a Handwriting Programming Language for Educational Robots. Advances in Intelligent Systems and Computing, 2022, , 268-275.	0.5	1
3	Aligning the Design of Educational Robotics Tools With Classroom Activities. Advances in Educational Technologies and Instructional Design Book Series, 2022, , 1-21.	0.2	1
4	The role of feedback and guidance as intervention methods to foster computational thinking in educational robotics learning activities for primary school. Computers and Education, 2022, 180, 104431.	5.1	23
5	The CT-cube: A framework for the design and the assessment of computational thinking activities. Computers in Human Behavior Reports, 2022, 5, 100166.	2.3	8
6	A computer science and robotics integration model for primary school: evaluation of a large-scale in-service K-4 teacher-training program. Education and Information Technologies, 2021, 26, 2445-2475.	3.5	33
7	Investigating the Role of Educational Robotics in Formal Mathematics Education: The Case of Geometry forÂ15-Year-Old Students. Lecture Notes in Computer Science, 2021, , 67-81.	1.0	1
8	The symbiotic relationship between educational robotics and computer science in formal education. Education and Information Technologies, 2021, 26, 5077-5107.	3.5	13
9	Social Integrating Robots Suggest Mitigation Strategies for Ecosystem Decay. Frontiers in Bioengineering and Biotechnology, 2021, 9, 612605.	2.0	11
10	Accessible Maker-Based Approaches to Educational Robotics in Online Learning. IEEE Access, 2021, 9, 96877-96889.	2.6	5
11	A data-driven method for reconstructing and modelling social interactions in moving animal groups. Philosophical Transactions of the Royal Society B: Biological Sciences, 2020, 375, 20190380.	1.8	31
12	Strategies to modulate zebrafish collective dynamics with a closed-loop biomimetic robotic system. Bioinspiration and Biomimetics, 2020, 15, 046004.	1.5	7
13	Exploring Escape Games as a Teaching Tool in Educational Robotics. Advances in Intelligent Systems and Computing, 2020, , 95-106.	0.5	17
14	Introducing a Paper-Based Programming Language for Computing Education in Classrooms. , 2020, , .		8
15	Fostering computational thinking through educational robotics: a model for creative computational problem solving. International Journal of STEM Education, 2020, 7, .	2.7	85
16	Learning Symmetry with Tangible Robots. Advances in Intelligent Systems and Computing, 2020, , 270-283.	0.5	4
17	Bidirectional interactions facilitate the integration of a robot into a shoal of zebrafish Danio rerio. PLoS ONE, 2019, 14, e0220559.	1.1	13
18	Heuristics for the Development and Evaluation of Educational Robotics Systems. IEEE Transactions on Education, 2019, 62, 278-287.	2.0	22

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19	Robots mediating interactions between animals for interspecies collective behaviors. Science Robotics, 2019, 4, .	9.9	40
20	Autonomous Exploration for Radioactive Hotspots Localization Taking Account of Sensor Limitations. Sensors, 2019, 19, 292.	2.1	16
21	Robot swarms as an educational tool: The Thymioâ€™s way. International Journal of Advanced Robotic Systems, 2019, 16, 172988141882518.	1.3	19
22	Augmented Robotics for Learners: A Case Study on Optics. , 2019, , .		3
23	A Tangible Programming Language for the Educational Robot Thymio. , 2019, , .		11
24	Designing a socially integrated mobile robot for ethological research. Robotics and Autonomous Systems, 2018, 103, 42-55.	3.0	26
25	Closed-loop interactions between a shoal of zebrafish and a group of robotic fish in a circular corridor. Swarm Intelligence, 2018, 12, 227-244.	1.3	46
26	Evo-Bots: A Simple, Stochastic Approach to Self-assembling Artificial Organisms. Springer Proceedings in Advanced Robotics, 2018, , 373-385.	0.9	3
27	Localization of Inexpensive Robots with Low-Bandwidth Sensors. Springer Proceedings in Advanced Robotics, 2018, , 545-558.	0.9	3
28	How mimetic should a robotic fish be to socially integrate into zebrafish groups?. Bioinspiration and Biomimetics, 2018, 13, 025001.	1.5	25
29	How to Blend a Robot Within a Group of Zebrafish: Achieving Social Acceptance Through Real-Time Calibration of a Multi-level Behavioural Model. Lecture Notes in Computer Science, 2018, , 73-84.	1.0	10
30	Follow the dummy: Measuring the influence of a biomimetic robotic fish-lure on the collective decisions of a zebrafish shoal inside a circular corridor. , 2018, , .		0
31	Bringing Robotics to Formal Education: The Thymio Open-Source Hardware Robot. IEEE Robotics and Automation Magazine, 2017, 24, 77-85.	2.2	90
32	Windfield. , 2017, , .		13
33	Windfield. , 2017, , .		3
34	Cellulo. , 2017, , .		52
35	Design of a modular robotic system that mimics small fish locomotion and body movements for ethological studies. International Journal of Advanced Robotic Systems, 2017, 14, 172988141770662.	1.3	17
36	Mergeable nervous systems for robots. Nature Communications, 2017, 8, 439.	5.8	43

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37	Multi-robot control and tracking framework for bio-hybrid systems with closed-loop interaction. , 2017, , .		14
38	Open-Source and Widely Disseminated Robot Hardware [From the Guest Editors]. IEEE Robotics and Automation Magazine, 2017, 24, 30-31.	2.2	4
39	Improved Mobile Robot Programming Performance through Real-time Program Assessment. , 2017, , .		2
40	Can Robotics Help Move Researchers Toward Open Science? [From the Field]. IEEE Robotics and Automation Magazine, 2017, 24, 111-112.	2.2	2
41	Haptic-Enabled Handheld Mobile Robots. , 2017, , .		17
42	Automated Calibration of a Biomimetic Space-Dependent Model for Zebrafish and Robot Collective Behaviour in a Structured Environment. Lecture Notes in Computer Science, 2017, , 107-118.	1.0	12
43	Real-time high-accuracy 2D localization with structured patterns. , 2016, , .		24
44	Pedagogical Uses of Thymio II: How Do Teachers Perceive Educational Robots in Formal Education?. IEEE Robotics and Automation Magazine, 2016, 23, 16-23.	2.2	44
45	Infiltrating the zebrafish swarm: design, implementation and experimental tests of a miniature robotic fish lure for fishâ€“robot interaction studies. Artificial Life and Robotics, 2016, 21, 239-246.	0.7	28
46	R2T2. International Journal of Advanced Robotic Systems, 2016, 13, 172988141665816.	1.3	14
47	Electroencephalography as implicit communication channel for proximal interaction between humans and robot swarms. Swarm Intelligence, 2016, 10, 247-265.	1.3	13
48	Autonomous Construction with Compliant Building Material. Advances in Intelligent Systems and Computing, 2016, , 1371-1388.	0.5	12
49	Ranger, An Example of Integration of Robotics into the Home Ecosystem. Mechanisms and Machine Science, 2016, , 181-189.	0.3	8
50	A review: Can robots reshape K-12 STEM education?. , 2015, , .		90
51	Construction automation with autonomous mobile robots: A review. , 2015, , .		47
52	Providing and optimizing a robotic construction plan for rescue operations. , 2015, , .		0
53	Bio-inspired construction with mobile robots and compliant pockets. Robotics and Autonomous Systems, 2015, 74, 340-350.	3.0	39
54	Adaptation and Awareness in Robot Ensembles: Scenarios and Algorithms. Lecture Notes in Computer Science, 2015, , 471-494.	1.0	12

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55	Youâ€™re Doing It Wrong! Studying Unexpected Behaviors in Child-Robot Interaction. Lecture Notes in Computer Science, 2015, , 390-400.	1.0	25
56	A miniature mobile robot developed to be socially integrated with species of small fish. , 2014, , .		16
57	Social Adaptation of Robots for Modulating Self-Organization in Animal Societies. , 2014, , .		5
58	Which robot behavior can motivate children to tidy up their toys?. , 2014, , .		60
59	Lessons learned from robotic vacuum cleaners entering the home ecosystem. Robotics and Autonomous Systems, 2014, 62, 376-391.	3.0	57
60	Cooperative navigation in robotic swarms. Swarm Intelligence, 2014, 8, 1-33.	1.3	61
61	Decentralized self-selection of swarm trajectories: from dynamical systems theory to robotic implementation. Swarm Intelligence, 2014, 8, 329-351.	1.3	22
62	A Sociological Contribution to Understanding the Use of Robots in Schools: The Thymio Robot. Lecture Notes in Computer Science, 2014, , 217-228.	1.0	21
63	Fuzzy Control System for Autonomous Navigation of Thymio II Mobile Robots. Journal of Emerging Technologies in Web Intelligence, 2014, 6, .	0.6	1
64	Fuzzy Control System for Autonomous Navigation and Parking of Thymio II Mobile Robots. International Journal of Computer and Electrical Engineering, 2014, 6, 321-325.	0.2	0
65	Swarmanoid: A Novel Concept for the Study of Heterogeneous Robotic Swarms. IEEE Robotics and Automation Magazine, 2013, 20, 60-71.	2.2	254
66	Seamless multi-robot programming for the people: ASEBA and the wireless Thymio II robot. , 2013, , .		2
67	Physical Interactions in Swarm Robotics: The Hand-Bot Case Study. Springer Tracts in Advanced Robotics, 2013, , 585-595.	0.3	0
68	Thymio II, a robot that grows wiser with children. , 2013, , .		74
69	Upgrade Your Robot Competition, Make a Festival! [Competitions]. IEEE Robotics and Automation Magazine, 2013, 20, 12-14.	2.2	4
70	Towards Long-Term Collective Experiments. Advances in Intelligent Systems and Computing, 2013, , 683-692.	0.5	4
71	Towards Bio-hybrid Systems Made of Social Animals and Robots. Lecture Notes in Computer Science, 2013, , 384-386.	1.0	17
72	ASSISI: Mixing Animals with Robots in a Hybrid Society. Lecture Notes in Computer Science, 2013, , 441-443.	1.0	18

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73	Development of a mobile robot to study the collective behavior of zebrafish. , 2012, , .		19
74	Autonomous construction using scarce resources in unknown environments. Autonomous Robots, 2012, 33, 467-485.	3.2	35
75	Building a safe robot for behavioral biology experiments. , 2012, , .		4
76	Involving and training public school teachers in using robotics for education. , 2012, , .		3
77	Analysis of impact of an annual robotics festival. , 2012, , .		1
78	A programming workshop using the robot “Thymio II”: The effect on the understanding by children. , 2012, , .		16
79	Highly compact robots for inspection of power plants. Journal of Field Robotics, 2012, 29, 47-68.	3.2	37
80	A Two Years Informal Learning Experience Using the Thymio Robot. , 2012, , 37-48.		28
81	Cutting Down the Energy Consumed by Domestic Robots: Insights from Robotic Vacuum Cleaners. Lecture Notes in Computer Science, 2012, , 128-139.	1.0	4
82	A Stochastic Self-reconfigurable Modular Robot with Mobility Control. Lecture Notes in Computer Science, 2012, , 416-417.	1.0	1
83	Communication assisted navigation in robotic swarms: Self-organization and cooperation. , 2011, , .		39
84	Towards Autonomous Energy-Wise RObjects. Lecture Notes in Computer Science, 2011, , 311-322.	1.0	6
85	Cyâ€mag^{3D}: a simple and miniature climbing robot with advance mobility in ferromagnetic environment. Industrial Robot, 2011, 38, 229-233.	1.2	13
86	Enhanced directional self-assembly based on active recruitment and guidance. , 2011, , .		0
87	ASEBA: A Modular Architecture for Event-Based Control of Complex Robots. IEEE/ASME Transactions on Mechatronics, 2011, 16, 321-329.	3.7	75
88	A social approach for target localization: simulation and implementation in the marXbot robot. Memetic Computing, 2011, 3, 245-259.	2.7	6
89	TRIPILLAR: a miniature magnetic caterpillar climbing robot with plane transition ability. Robotica, 2011, 29, 1075-1081.	1.3	29
90	Enhanced directional self-assembly based on active recruitment and guidance. , 2011, , .		6

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91	Swarm-Bots to the Rescue. Lecture Notes in Computer Science, 2011, , 165-172.	1.0	10
92	Towards an Autonomous Evolution of Non-biological Physical Organisms. Lecture Notes in Computer Science, 2011, , 173-180.	1.0	6
93	Communication assisted navigation in robotic swarms: Self-organization and cooperation. , 2011, , .		14
94	CY-MAG3DE: MAGNETIC CLIMBING INSPECTION ROBOT. , 2011, , .		2
95	Affordable SLAM through the co-design of hardware and methodology. , 2010, , .		17
96	MagneBike: Compact magnetic wheeled robot for power plant inspection. , 2010, , .		12
97	The marXbot, a miniature mobile robot opening new perspectives for the collective-robotic research. , 2010, , .		126
98	Towards mixed societies of chickens and robots. , 2010, , .		32
99	Highly compact robots for inspection of power plants. , 2010, , .		13
100	Tubulo â€" A train-like miniature inspection climbing robot for ferromagnetic tubes. , 2010, , .		9
101	DESIGN OF MAGNETIC SWITCHABLE DEVICE (MSD) AND APPLICATIONS IN CLIMBING ROBOT. , 2010, , .		13
102	MAGNETIC WHEELS OPTIMIZATION AND APPLICATION TO THE MagneBike CLIMBING ROBOT. , 2010, , .		2
103	Cy-mag^{3D}: A SIMPLE AND MINIATURE CLIMBING ROBOT WITH ADVANCE MOBILITY IN FERROMAGNETIC ENVIRONMENT. , 2010, , .		3
104	Segregation in swarms of mobile robots based on the Brazil nut effect. , 2009, , .		23
105	Design of collision avoidance system for a chicken robot based on fuzzy relation equations. , 2009, , .		1
106	Teamwork in Self-Organized Robot Colonies. IEEE Transactions on Evolutionary Computation, 2009, 13, 695-711.	7.5	118
107	Magnebike: A magnetic wheeled robot with high mobility for inspecting complexâ€shaped structures. Journal of Field Robotics, 2009, 26, 453-476.	3.2	123
108	TRIPILLAR: MINIATURE MAGNETIC CATERPILLAR CLIMBING ROBOT WITH PLANE TRANSITION ABILITY. , 2009, , .		8

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109	The Hand-Bot, a Robot Design for Simultaneous Climbing and Manipulation. Lecture Notes in Computer Science, 2009, , 11-22.	1.0	23
110	Planner9, a HTN Planner Distributed on Groups of Miniature Mobile Robots. Lecture Notes in Computer Science, 2009, , 1013-1022.	1.0	2
111	Interactive Mobile Robotic Drinking Glasses. , 2009, , 543-551.		5
112	What do people expect from robots?. , 2008, , .		152
113	Division of Labour in Self-organised Groups. Lecture Notes in Computer Science, 2008, , 426-436.	1.0	11
114	Aseba-Challenge: An Open-Source Multiplayer Introduction to Mobile Robots Programming. Lecture Notes in Computer Science, 2008, , 65-74.	1.0	5
115	Performance benefits of self-assembly in a swarm-bot. , 2007, , .		10
116	Adapted magnetic wheel unit for compact robots inspecting complex shaped pipe structures. , 2007, , .		35
117	Social Integration of Robots into Groups of Cockroaches to Control Self-Organized Choices. Science, 2007, 318, 1155-1158.	6.0	464
118	Self-Organized Coordinated Motion in Groups of Physically Connected Robots. IEEE Transactions on Systems, Man, and Cybernetics, 2007, 37, 224-239.	5.5	84
119	Compact magnetic wheeled robot with high mobility for inspecting complex shaped pipe structures. , 2007, , .		32
120	Autonomous Self-Assembly in Swarm-Bots. , 2006, 22, 1115-1130.		255
121	Cooperation through self-assembly in multi-robot systems. ACM Transactions on Autonomous and Adaptive Systems, 2006, 1, 115-150.	0.4	83
122	Autonomous Self-assembly in a Swarm-bot. , 2006, , 314-322.		22
123	The cooperation of swarm-bots - Physical interactions in collective robotics. IEEE Robotics and Automation Magazine, 2005, 12, 21-28.	2.2	159
124	Superlinear Physical Performances in a SWARM-BOT. Lecture Notes in Computer Science, 2005, , 282-291.	1.0	19
125	The SWARM-BOTS Project. Lecture Notes in Computer Science, 2005, , 31-44.	1.0	49
126	Self-assembly on Demand in a Group of Physical Autonomous Mobile Robots Navigating Rough Terrain. Lecture Notes in Computer Science, 2005, , 272-281.	1.0	19

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127	Evolution of Embodied Intelligence. Lecture Notes in Computer Science, 2004, , 293-311.	1.0	10
128	Swarm-Bot: A New Distributed Robotic Concept. Autonomous Robots, 2004, 17, 193-221.	3.2	277
129	Evolving Self-Organizing Behaviors for a Swarm-Bot. Autonomous Robots, 2004, 17, 223-245.	3.2	265
130	Interactions between Art and Mobile Robotic System Engineering. Lecture Notes in Computer Science, 2001, , 121-137.	1.0	5
131	KhepOnTheWeb: open access to a mobile robot on the Internet. IEEE Robotics and Automation Magazine, 2000, 7, 41-47.	2.2	83
132	Understanding collective aggregation mechanisms: From probabilistic modelling to experiments with real robots. Robotics and Autonomous Systems, 1999, 29, 51-63.	3.0	113
133	Design, Control, and Applications of Autonomous Mobile Robots. , 1999, , 159-186.		19
134	Evolutionary neurocontrollers for autonomous mobile robots. Neural Networks, 1998, 11, 1461-1478.	3.3	164
135	Hardware solutions for evolutionary robotics. Lecture Notes in Computer Science, 1998, , 137-151.	1.0	18
136	Probabilistic Modelling of a Bio-Inspired Collective Experiment with Real Robots. , 1998, , 289-298.		10
137	Autonomous vacuum cleaner. Robotics and Autonomous Systems, 1997, 19, 233-245.	3.0	37
138	Evolution of homing navigation in a real mobile robot. IEEE Transactions on Systems, Man, and Cybernetics, 1996, 26, 396-407.	5.5	311
139	Evolution and mobile autonomous robotics. Lecture Notes in Computer Science, 1996, , 221-249.	1.0	7
140	Evolution of neural control structures: some experiments on mobile robots. Robotics and Autonomous Systems, 1995, 16, 183-195.	3.0	65
141	Mobile robot miniaturisation: A tool for investigation in control algorithms. , 1994, , 501-513.		182
142	"KhepOnTheWeb": An experimental demonstrator in telerobotics and virtual reality. , 0, , .		19
143	SWARM-BOT: from concept to implementation. , 0, , .		50
144	Object transport by modular robots that self-assemble. , 0, , .		28

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145	Transport of an object by six pre-attached robots interacting via physical links. , 0, , .		28