

Francesco Mondada

List of Publications by Citations

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142
papers

3,942
citations

29
h-index

59
g-index

153
ext. papers

4,744
ext. citations

2.9
avg, IF

5.27
L-index

#	Paper	IF	Citations
142	Social integration of robots into groups of cockroaches to control self-organized choices. <i>Science</i> , 2007 , 318, 1155-8	33.3	365
141	Evolution of homing navigation in a real mobile robot. <i>IEEE Transactions on Systems, Man, and Cybernetics</i> , 1996 , 26, 396-407		240
140	Swarm-Bot: A New Distributed Robotic Concept. <i>Autonomous Robots</i> , 2004 , 17, 193-221	3	217
139	Autonomous Self-Assembly in Swarm-Bots 2006 , 22, 1115-1130		202
138	Evolving Self-Organizing Behaviors for a Swarm-Bot. <i>Autonomous Robots</i> , 2004 , 17, 223-245	3	200
137	Swarmanoid: A Novel Concept for the Study of Heterogeneous Robotic Swarms. <i>IEEE Robotics and Automation Magazine</i> , 2013 , 20, 60-71	3.4	183
136	Evolutionary neurocontrollers for autonomous mobile robots. <i>Neural Networks</i> , 1998 , 11, 1461-1478	9.1	125
135	. <i>IEEE Robotics and Automation Magazine</i> , 2005 , 12, 21-28	3.4	123
134	What do people expect from robots? 2008 ,		104
133	The marXbot, a miniature mobile robot opening new perspectives for the collective-robotic research 2010 ,		95
132	Magnebike: A magnetic wheeled robot with high mobility for inspecting complex-shaped structures. <i>Journal of Field Robotics</i> , 2009 , 26, 453-476	6.7	93
131	Teamwork in Self-Organized Robot Colonies. <i>IEEE Transactions on Evolutionary Computation</i> , 2009 , 13, 695-711	15.6	90
130	Understanding collective aggregation mechanisms: From probabilistic modelling to experiments with real robots. <i>Robotics and Autonomous Systems</i> , 1999 , 29, 51-63	3.5	88
129	Self-organized coordinated motion in groups of physically connected robots. <i>IEEE Transactions on Systems, Man, and Cybernetics</i> , 2007 , 37, 224-39		71
128	Cooperation through self-assembly in multi-robot systems. <i>ACM Transactions on Autonomous and Adaptive Systems</i> , 2006 , 1, 115-150	1.2	64
127	Bringing Robotics to Formal Education: The Thymio Open-Source Hardware Robot. <i>IEEE Robotics and Automation Magazine</i> , 2017 , 24, 77-85	3.4	60
126	ASEBA: A Modular Architecture for Event-Based Control of Complex Robots. <i>IEEE/ASME Transactions on Mechatronics</i> , 2011 , 16, 321-329	5.5	59

125	KhepOnTheWeb: open access to a mobile robot on the Internet. <i>IEEE Robotics and Automation Magazine</i> , 2000 , 7, 41-47	3.4	56
124	Evolution of neural control structures: some experiments on mobile robots. <i>Robotics and Autonomous Systems</i> , 1995 , 16, 183-195	3.5	53
123	Cooperative navigation in robotic swarms. <i>Swarm Intelligence</i> , 2014 , 8, 1-33	3	49
122	Thymio II, a robot that grows wiser with children 2013 ,		46
121	2015 ,		45
120	Lessons learned from robotic vacuum cleaners entering the home ecosystem. <i>Robotics and Autonomous Systems</i> , 2014 , 62, 376-391	3.5	44
119	Mobile robot miniaturisation: A tool for investigation in control algorithms 1994 , 501-513		42
118	Which robot behavior can motivate children to tidy up their toys? 2014 ,		36
117	The SWARM-BOTS Project. <i>Lecture Notes in Computer Science</i> , 2005 , 31-44	0.9	35
116	Fostering computational thinking through educational robotics: a model for creative computational problem solving. <i>International Journal of STEM Education</i> , 2020 , 7,	4	35
115	. <i>IEEE Robotics and Automation Magazine</i> , 2016 , 23, 16-23	3.4	33
114	SWARM-BOT: from concept to implementation		29
113	Cellulo 2017 ,		28
112	Autonomous vacuum cleaner. <i>Robotics and Autonomous Systems</i> , 1997 , 19, 233-245	3.5	27
111	Mergeable nervous systems for robots. <i>Nature Communications</i> , 2017 , 8, 439	17.4	26
110	Autonomous construction using scarce resources in unknown environments. <i>Autonomous Robots</i> , 2012 , 33, 467-485	3	26
109	Compact magnetic wheeled robot with high mobility for inspecting complex shaped pipe structures 2007 ,		26
108	Closed-loop interactions between a shoal of zebrafish and a group of robotic fish in a circular corridor. <i>Swarm Intelligence</i> , 2018 , 12, 227-244	3	25

107	Towards mixed societies of chickens and robots 2010 ,		25
106	Adapted magnetic wheel unit for compact robots inspecting complex shaped pipe structures 2007 ,		25
105	Bio-inspired construction with mobile robots and compliant pockets. <i>Robotics and Autonomous Systems</i> , 2015 , 74, 340-350	3.5	24
104	Communication assisted navigation in robotic swarms: Self-organization and cooperation 2011 ,		24
103	Robots mediating interactions between animals for interspecies collective behaviors. <i>Science Robotics</i> , 2019 , 4,	18.6	22
102	Decentralized self-selection of swarm trajectories: from dynamical systems theory to robotic implementation. <i>Swarm Intelligence</i> , 2014 , 8, 329-351	3	21
101	2015 ,		21
100	TRIPILLAR: a miniature magnetic caterpillar climbing robot with plane transition ability ¹ . <i>Robotica</i> , 2011 , 29, 1075-1081	2.1	20
99	Highly compact robots for inspection of power plants. <i>Journal of Field Robotics</i> , 2012 , 29, 47-68	6.7	19
98	How mimetic should a robotic fish be to socially integrate into zebrafish groups?. <i>Bioinspiration and Biomimetics</i> , 2018 , 13, 025001	2.6	18
97	A Two Years Informal Learning Experience Using the Thymio Robot 2012 , 37-48		18
96	The Hand-Bot, a Robot Design for Simultaneous Climbing and Manipulation. <i>Lecture Notes in Computer Science</i> , 2009 , 11-22	0.9	17
95	Heuristics for the Development and Evaluation of Educational Robotics Systems. <i>IEEE Transactions on Education</i> , 2019 , 62, 278-287	2.1	15
94	Infiltrating the zebrafish swarm: design, implementation and experimental tests of a miniature robotic fish lure for fishBot interaction studies. <i>Artificial Life and Robotics</i> , 2016 , 21, 239-246	0.6	15
93	2010 ,		15
92	Transport of an object by six pre-attached robots interacting via physical links		15
91	Superlinear Physical Performances in a SWARM-BOT. <i>Lecture Notes in Computer Science</i> , 2005 , 282-291	0.9	15
90	Autonomous Self-assembly in a Swarm-bot 2006 , 314-322		15

89	Robot swarms as an educational tool: The Thymio way. <i>International Journal of Advanced Robotic Systems</i> , 2019 , 16, 172988141882518	1.4	14
88	Designing a socially integrated mobile robot for ethological research. <i>Robotics and Autonomous Systems</i> , 2018 , 103, 42-55	3.5	14
87	Segregation in swarms of mobile robots based on the Brazil nut effect 2009 ,		14
86	Development of a mobile robot to study the collective behavior of zebrafish 2012 ,		14
85	A Sociological Contribution to Understanding the Use of Robots in Schools: The Thymio Robot. <i>Lecture Notes in Computer Science</i> , 2014 , 217-228	0.9	14
84	You're Doing It Wrong! Studying Unexpected Behaviors in Child-Robot Interaction. <i>Lecture Notes in Computer Science</i> , 2015 , 390-400	0.9	14
83	Towards Bio-hybrid Systems Made of Social Animals and Robots. <i>Lecture Notes in Computer Science</i> , 2013 , 384-386	0.9	14
82	Self-assembly on Demand in a Group of Physical Autonomous Mobile Robots Navigating Rough Terrain. <i>Lecture Notes in Computer Science</i> , 2005 , 272-281	0.9	14
81	Electroencephalography as implicit communication channel for proximal interaction between humans and robot swarms. <i>Swarm Intelligence</i> , 2016 , 10, 247-265	3	13
80	A miniature mobile robot developed to be socially integrated with species of small fish 2014 ,		13
79	Object transport by modular robots that self-assemble		13
78	ASSISI: Mixing Animals with Robots in a Hybrid Society. <i>Lecture Notes in Computer Science</i> , 2013 , 441-443	0.9	13
77	Real-time high-accuracy 2D localization with structured patterns 2016 ,		13
76	Design of a modular robotic system that mimics small fish locomotion and body movements for ethological studies. <i>International Journal of Advanced Robotic Systems</i> , 2017 , 14, 172988141770662	1.4	12
75	Adaptation and Awareness in Robot Ensembles: Scenarios and Algorithms. <i>Lecture Notes in Computer Science</i> , 2015 , 471-494	0.9	12
74	Haptic-Enabled Handheld Mobile Robots 2017 ,		11
73	Multi-robot control and tracking framework for bio-hybrid systems with closed-loop interaction 2017 ,		11
72	Highly compact robots for inspection of power plants 2010 ,		11

71	DESIGN OF MAGNETIC SWITCHABLE DEVICE (MSD) AND APPLICATIONS IN CLIMBING ROBOT 2010 ,		11
70	A computer science and robotics integration model for primary school: evaluation of a large-scale in-service K-4 teacher-training program. <i>Education and Information Technologies</i> , 2020 , 26, 1-31	3.6	11
69	Hardware solutions for evolutionary robotics. <i>Lecture Notes in Computer Science</i> , 1998 , 137-151	0.9	11
68	Communication assisted navigation in robotic swarms: Self-organization and cooperation		10
67	Automated Calibration of a Biomimetic Space-Dependent Model for Zebrafish and Robot Collective Behaviour in a Structured Environment. <i>Lecture Notes in Computer Science</i> , 2017 , 107-118	0.9	10
66	A Tangible Programming Language for the Educational Robot Thymio 2019 ,		10
65	Windfield 2017 ,		9
64	Autonomous Exploration for Radioactive Hotspots Localization Taking Account of Sensor Limitations. <i>Sensors</i> , 2019 , 19,	3.8	9
63	Cy-mag3D: a simple and miniature climbing robot with advance mobility in ferromagnetic environment. <i>Industrial Robot</i> , 2011 , 38, 229-233	1.4	9
62	Performance benefits of self-assembly in a swarm-bot 2007 ,		9
61	Autonomous Construction with Compliant Building Material. <i>Advances in Intelligent Systems and Computing</i> , 2016 , 1371-1388	0.4	9
60	A data-driven method for reconstructing and modelling social interactions in moving animal groups. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2020 , 375, 20190380	5.8	9
59	Bidirectional interactions facilitate the integration of a robot into a shoal of zebrafish <i>Danio rerio</i> . <i>PLoS ONE</i> , 2019 , 14, e0220559	3.7	8
58	A programming workshop using the robot Thymio II The effect on the understanding by children 2012 ,		8
57	MagneBike: Compact magnetic wheeled robot for power plant inspection 2010 ,		8
56	"KhepOnTheWeb": An experimental demonstrator in telerobotics and virtual reality		8
55	R2T2: Robotics to integrate educational efforts in South Africa and Europe. <i>International Journal of Advanced Robotic Systems</i> , 2016 , 13, 172988141665816	1.4	7
54	Introducing a Paper-Based Programming Language for Computing Education in Classrooms 2020 ,		7

53	Exploring Escape Games as a Teaching Tool in Educational Robotics. <i>Advances in Intelligent Systems and Computing</i> , 2020 , 95-106	0.4	7
52	Division of Labour in Self-organised Groups. <i>Lecture Notes in Computer Science</i> , 2008 , 426-436	0.9	7
51	Swarm-Bots to the Rescue. <i>Lecture Notes in Computer Science</i> , 2011 , 165-172	0.9	7
50	Probabilistic Modelling of a Bio-Inspired Collective Experiment with Real Robots 1998 , 289-298		7
49	How to Blend a Robot Within a Group of Zebrafish: Achieving Social Acceptance Through Real-Time Calibration of a Multi-level Behavioural Model. <i>Lecture Notes in Computer Science</i> , 2018 , 73-84	0.9	6
48	TRIPILLAR: MINIATURE MAGNETIC CATERPILLAR CLIMBING ROBOT WITH PLANE TRANSITION ABILITY 2009 ,		6
47	Design, Control, and Applications of Autonomous Mobile Robots 1999 , 159-186		6
46	Social Adaptation of Robots for Modulating Self-Organization in Animal Societies 2014 ,		5
45	Towards Autonomous Energy-Wise ROjects. <i>Lecture Notes in Computer Science</i> , 2011 , 311-322	0.9	5
44	Enhanced directional self-assembly based on active recruitment and guidance 2011 ,		5
43	Evolution of Embodied Intelligence. <i>Lecture Notes in Computer Science</i> , 2004 , 293-311	0.9	5
42	Interactions between Art and Mobile Robotic System Engineering. <i>Lecture Notes in Computer Science</i> , 2001 , 121-137	0.9	5
41	The Autonomous Photovoltaic MarXbot. <i>Advances in Intelligent Systems and Computing</i> , 2013 , 175-183	0.4	5
40	Evolution and mobile autonomous robotics. <i>Lecture Notes in Computer Science</i> , 1996 , 221-249	0.9	5
39	Building a safe robot for behavioral biology experiments 2012 ,		4
38	Upgrade Your Robot Competition, Make a Festival! [Competitions]. <i>IEEE Robotics and Automation Magazine</i> , 2013 , 20, 12-14	3.4	4
37	Tubulo [A train-like miniature inspection climbing robot for ferromagnetic tubes 2010 ,		4
36	Aseba-Challenge: An Open-Source Multiplayer Introduction to Mobile Robots Programming. <i>Lecture Notes in Computer Science</i> , 2008 , 65-74	0.9	4

35	Towards an Autonomous Evolution of Non-biological Physical Organisms. <i>Lecture Notes in Computer Science</i> , 2011 , 173-180	0.9	4
34	Towards Long-Term Collective Experiments. <i>Advances in Intelligent Systems and Computing</i> , 2013 , 683-692	2.4	4
33	Ranger, An Example of Integration of Robotics into the Home Ecosystem. <i>Mechanisms and Machine Science</i> , 2016 , 181-189	0.3	4
32	Windfield 2017 ,		3
31	Evo-Bots: A Simple, Stochastic Approach to Self-assembling Artificial Organisms. <i>Springer Proceedings in Advanced Robotics</i> , 2018 , 373-385	0.6	3
30	Involving and training public school teachers in using robotics for education 2012 ,		3
29	A social approach for target localization: simulation and implementation in the marXbot robot. <i>Memetic Computing</i> , 2011 , 3, 245-259	3.4	3
28	Cutting Down the Energy Consumed by Domestic Robots: Insights from Robotic Vacuum Cleaners. <i>Lecture Notes in Computer Science</i> , 2012 , 128-139	0.9	3
27	Social Integrating Robots Suggest Mitigation Strategies for Ecosystem Decay. <i>Frontiers in Bioengineering and Biotechnology</i> , 2021 , 9, 612605	5.8	3
26	Strategies to modulate zebrafish collective dynamics with a closed-loop biomimetic robotic system. <i>Bioinspiration and Biomimetics</i> , 2020 , 15, 046004	2.6	2
25	Localization of Inexpensive Robots with Low-Bandwidth Sensors. <i>Springer Proceedings in Advanced Robotics</i> , 2018 , 545-558	0.6	2
24	Open-Source and Widely Disseminated Robot Hardware [From the Guest Editors]. <i>IEEE Robotics and Automation Magazine</i> , 2017 , 24, 30-31	3.4	2
23	Improved Mobile Robot Programming Performance through Real-time Program Assessment 2017 ,		2
22	Can Robotics Help Move Researchers Toward Open Science? [From the Field]. <i>IEEE Robotics and Automation Magazine</i> , 2017 , 24, 111-112	3.4	2
21	The CT-cube: A framework for the design and the assessment of computational thinking activities. <i>Computers in Human Behavior Reports</i> , 2022 , 5, 100166	2.6	2
20	MAGNETIC WHEELS OPTIMIZATION AND APPLICATION TO THE MagneBike CLIMBING ROBOT 2010 ,		2
19	The role of feedback and guidance as intervention methods to foster computational thinking in educational robotics learning activities for primary school. <i>Computers and Education</i> , 2022 , 180, 104431	9.5	2
18	Planner9, a HTN Planner Distributed on Groups of Miniature Mobile Robots. <i>Lecture Notes in Computer Science</i> , 2009 , 1013-1022	0.9	2

17	Ubichip, Ubidule, and MarXbot: A Hardware Platform for the Simulation of Complex Systems. <i>Lecture Notes in Computer Science</i> , 2010 , 286-298	0.9	2
16	CY-MAG3DE: MAGNETIC CLIMBING INSPECTION ROBOT 2011 ,		2
15	The symbiotic relationship between educational robotics and computer science in formal education. <i>Education and Information Technologies</i> , 2021 , 26, 1-31	3.6	2
14	Seamless multi-robot programming for the people: ASEBA and the wireless Thymio II robot 2013 ,		1
13	Analysis of impact of an annual robotics festival 2012 ,		1
12	Design of collision avoidance system for a chicken robot based on fuzzy relation equations 2009 ,		1
11	Fuzzy Control System for Autonomous Navigation of Thymio II Mobile Robots. <i>Journal of Emerging Technologies in Web Intelligence</i> , 2014 , 6,		1
10	A Stochastic Self-reconfigurable Modular Robot with Mobility Control. <i>Lecture Notes in Computer Science</i> , 2012 , 416-417	0.9	1
9	A data-driven method for reconstructing and modelling social interactions in moving animal groups		1
8	Interactive Mobile Robotic Drinking Glasses 2009 , 543-551		1
7	Accessible Maker-Based Approaches to Educational Robotics in Online Learning. <i>IEEE Access</i> , 2021 , 9, 96877-96889	3.5	1
6	Aligning the Design of Educational Robotics Tools With Classroom Activities. <i>Advances in Educational Technologies and Instructional Design Book Series</i> , 2022 , 1-21	0.3	0
5	Learning Symmetry with Tangible Robots. <i>Advances in Intelligent Systems and Computing</i> , 2020 , 270-283	0.4	0
4	Teachers' Perspective on Fostering Computational Thinking Through Educational Robotics. <i>Advances in Intelligent Systems and Computing</i> , 2022 , 177-185	0.4	0
3	Exploring a Handwriting Programming Language for Educational Robots. <i>Advances in Intelligent Systems and Computing</i> , 2022 , 268-275	0.4	0
2	Physical Interactions in Swarm Robotics: The Hand-Bot Case Study. <i>Springer Tracts in Advanced Robotics</i> , 2013 , 585-595	0.5	
1	Investigating the Role of Educational Robotics in Formal Mathematics Education: The Case of Geometry for 15-Year-Old Students. <i>Lecture Notes in Computer Science</i> , 2021 , 67-81	0.9	