Simon Garnier

List of Publications by Year in Descending Order

43 papers	2,404 citations	21 h-index	47 g-index
47 ext. papers	2,900 ext. citations	4.8 avg, IF	4.94 L-index

#	Paper	IF	Citations
43	Simulated poaching affects global connectivity and efficiency in social networks of African savanna elephants-An exemplar of how human disturbance impacts group-living species.. *PLoS Computational Biology*, **2022**, 18, e1009792	5	0
42	Hysteresis stabilizes dynamic control of self-assembled army ant constructions.. *Nature Communications*, **2022**, 13, 1160	17.4	6
41	A cellular platform for the development of synthetic living machines. *Science Robotics*, **2021**, 6,	18.6	29
40	Individual error correction drives responsive self-assembly of army ant scaffolds. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	4
39	Ant colonies: building complex organizations with minuscule brains and no leaders. *Journal of Organization Design*, **2021**, 10, 55-74	1.4	4
38	Consensus of travel direction is achieved by simple copying, not voting, in free-ranging goats. *Royal Society Open Science*, **2021**, 8, 201128	3.3	3
37	Decoding collective communications using information theory tools. *Journal of the Royal Society Interface*, **2020**, 17, 20190563	4.1	18
36	Collective Pulsing in Xeniid Corals: Part I-Using Computer Vision and Information Theory to Search for Coordination. *Bulletin of Mathematical Biology*, **2020**, 82, 90	2.1	
35	Ant Collective Behavior Is Heritable and Shaped by Selection. *American Naturalist*, **2020**, 196, 541-554	3.7	2
34	Contact Calls Facilitate Group Contraction in Free-Ranging Goats (Capra aegagrus hircus). *Frontiers in Ecology and Evolution*, **2019**, 7,	3.7	8
33	Temporal and spatial pattern of trail clearing in the Australian meat ant, Iridomyrmex purpureus. *Animal Behaviour*, **2019**, 150, 97-111	2.8	2
32	Information Transfer During Food Choice in the Slime Mold Physarum polycephalum. *Frontiers in Ecology and Evolution*, **2019**, 7,	3.7	14
31	Methods for the effective study of collective behavior in a radial arm maze. *Behavior Research Methods*, **2018**, 50, 1673-1685	6.1	5
30	Predicting Dynamical Crime Distribution From Environmental and Social Influences. *Frontiers in Applied Mathematics and Statistics*, **2018**, 4,	2.2	20
29	Genetic lineage tracing of targeted cell populations during enthesis healing. *Journal of Orthopaedic Research*, **2018**, 36, 3275-3284	3.8	17
28	Architecture, space and information in constructions built by humans and social insects: a conceptual review. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2018**, 373,	5.8	20
27	The adaptive significance of phasic colony cycles in army ants. *Journal of Theoretical Biology*, **2017**, 428, 43-47	2.3	5

26	Optimal construction of army ant living bridges. *Journal of Theoretical Biology*, **2017**, 435, 184-198	2.3	9
25	Decision-making without a brain: how an amoeboid organism solves the two-armed bandit. *Journal of the Royal Society Interface*, **2016**, 13,	4.1	50
24	ANTS 2014 special issue: Editorial. *Swarm Intelligence*, **2015**, 9, 71-73	3	1
23	Army ants dynamically adjust living bridges in response to a cost-benefit trade-off. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 15113-8	11.5	66
22	Information integration and multiattribute decision making in non-neuronal organisms. *Animal Behaviour*, **2015**, 100, 44-50	2.8	41
21	From individual to collective dynamics in Argentine ants (Linepithema humile). *Mathematical Biosciences*, **2015**, 262, 56-64	3.9	7
20	Both information and social cohesion determine collective decisions in animal groups. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 5263-8	11.5	106
19	Do ants need to estimate the geometrical properties of trail bifurcations to find an efficient route? A swarm robotics test bed. *PLoS Computational Biology*, **2013**, 9, e1002903	5	33
18	Stability and responsiveness in a self-organized living architecture. *PLoS Computational Biology*, **2013**, 9, e1002984	5	22
17	Estimation models describe well collective decisions among three options. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, E3466-7	11.5	8
16	Individual rules for trail pattern formation in Argentine ants (Linepithema humile). *PLoS Computational Biology*, **2012**, 8, e1002592	5	89
15	Visual attention and the acquisition of information in human crowds. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 7245-50	11.5	142
14	From Ants to Robots and Back: How Robotics Can Contribute to the Study of Collective Animal Behavior. *Studies in Computational Intelligence*, **2011**, 105-120	0.8	13
13	Self-organized discrimination of resources. *PLoS ONE*, **2011**, 6, e19888	3.7	35
12	Artificial pheromone for path selection by a foraging swarm of robots. *Biological Cybernetics*, **2010**, 103, 339-52	2.8	46
11	The walking behaviour of pedestrian social groups and its impact on crowd dynamics. *PLoS ONE*, **2010**, 5, e10047	3.7	573
10	Self-Organized Aggregation Triggers Collective Decision Making in a Group of Cockroach-Like Robots. *Adaptive Behavior*, **2009**, 17, 109-133	1.1	67
9	Path selection and foraging efficiency in Argentine ant transport networks. *Behavioral Ecology and Sociobiology*, **2009**, 63, 1167-1179	2.5	37

8	Experimental study of the behavioural mechanisms underlying self-organization in human crowds. *Proceedings of the Royal Society B: Biological Sciences*, **2009**, 276, 2755-62	4.4	300
7	Collective information processing and pattern formation in swarms, flocks, and crowds. *Topics in Cognitive Science*, **2009**, 1, 469-97	2.5	116
6	The embodiment of cockroach aggregation behavior in a group of micro-robots. *Artificial Life*, **2008**, 14, 387-408	1.4	65
5	Are ants sensitive to the geometry of tunnel bifurcation?. *Animal Cognition*, **2008**, 11, 637-42	3.1	24
4	Alice in Pheromone Land: An Experimental Setup for the Study of Ant-like Robots **2007**,		57
3	The biological principles of swarm intelligence. *Swarm Intelligence*, **2007**, 1, 3-31	3	306
2	Aggregation Behaviour as a Source of Collective Decision in a Group of Cockroach-Like-Robots. *Lecture Notes in Computer Science*, **2005**, 169-178	0.9	33
1	Simulated poaching affects global connectivity and efficiency in social networks of African savanna elephants - an exemplar of how human disturbance impacts group-living species		1