Alan Frank T Winfield

List of Publications by Year
in descending order

89 papers	2,544 citations	186209 28 h-index	214721 47 g-index
94 all docs	94 docs citations	94 times ranked	1979 citing authors

#	Article	IF	Citations
1	Interactive robots in experimental biology. Trends in Ecology and Evolution, 2011, 26, 369-375.	4.2	207
2	Ethical governance is essential to building trust in robotics and artificial intelligence systems. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20180085.	1.6	186
3	Standardizing Ethical Design for Artificial Intelligence and Autonomous Systems. Computer, 2017, 50, 116-119.	1.2	160
4	Machine Ethics: The Design and Governance of Ethical AI and Autonomous Systems [Scanning the Issue]. Proceedings of the IEEE, 2019, 107, 509-517.	16.4	118
5	Safety in numbers: fault-tolerance in robot swarms. International Journal of Modelling, Identification and Control, 2006, 1, 30.	0.2	110
6	Principles of robotics: regulating robots in the real world. Connection Science, 2017, 29, 124-129.	1.8	106
7	An architecture for ethical robots inspired by the simulation theory of cognition. Cognitive Systems Research, 2018, 48, 56-66.	1.9	86
8	Adaptive foraging for simulated and real robotic swarms: the dynamical response threshold approach. Swarm Intelligence, 2016, 10, 1-31.	1.3	85
9	Environment-driven distributed evolutionary adaptation in a population of autonomous robotic agents. Mathematical and Computer Modelling of Dynamical Systems, 2012, 18, 101-129.	1.4	78
10	Special issue on swarm robotics. Swarm Intelligence, 2008, 2, 69-72.	1.3	67
11	Ethical standards in robotics and AI. Nature Electronics, 2019, 2, 46-48.	13.1	67
12	Towards an Ethical Robot: Internal Models, Consequences and Ethical Action Selection. Lecture Notes in Computer Science, 2014, , 85-96.	1.0	64
13	Designing Ethical Social Robotsâ€"A Longitudinal Field Study With Older Adults. Frontiers in Robotics and AI, 2020, 7, 1.	2.0	62
14	Governing AI safety through independent audits. Nature Machine Intelligence, 2021, 3, 566-571.	8.3	61
15	Modelling a wireless connected swarm of mobile robots. Swarm Intelligence, 2008, 2, 241-266.	1.3	57
16	Open-hardware e-puck Linux extension board for experimental swarm robotics research. Microprocessors and Microsystems, 2011, 35, 60-67.	1.8	54
17	On Formal Specification of Emergent Behaviours in Swarm Robotic Systems. International Journal of Advanced Robotic Systems, 2005, 2, 39.	1.3	52
18	Towards temporal verification of swarm robotic systems. Robotics and Autonomous Systems, 2012, 60, 1429-1441.	3.0	52

#	Article	IF	Citations
19	Open Science. Science Communication, 2012, 34, 679-689.	1.8	49
20	Building safer robots: Safety driven control. International Journal of Robotics Research, 2012, 31, 1603-1626.	5.8	45
21	On Fault Tolerance and Scalability of Swarm Robotic Systems. Springer Tracts in Advanced Robotics, 2013, , 431-444.	0.3	45
22	On Proactive, Transparent, and Verifiable Ethical Reasoning for Robots. Proceedings of the IEEE, 2019, 107, 541-561.	16.4	45
23	Feature and Performance Comparison of the V-REP, Gazebo and ARGoS Robot Simulators. Lecture Notes in Computer Science, 2018, , 357-368.	1.0	44
24	Experiments in Artificial Theory of Mind: From Safety to Story-Telling. Frontiers in Robotics and AI, 2018, 5, 75.	2.0	38
25	On embodied memetic evolution and the emergence of behavioural traditions in Robots. Memetic Computing, 2011, 3, 261-270.	2.7	33
26	Special Issue â€œOn Defining Artificial Intelligenceâ€â€”Commentaries and Authorâ€™s Response. Journal of Artificial General Intelligence, 2020, 11, 1-100.	0.6	33
27	An immune-inspired swarm aggregation algorithm for self-healing swarm robotic systems. BioSystems, 2016, 146, 60-76.	0.9	30
28	Evolving Behaviour Trees for Swarm Robotics. Springer Proceedings in Advanced Robotics, 2018, , 487-501.	0.9	30
29	Adaptive sliding mode control for MIMO nonlinear systems based on fuzzy logic scheme. International Journal of Automation and Computing, 2004, 1, 51-62.	4.5	26
30	Mutual Shaping in Swarm Robotics: User Studies in Fire and Rescue, Storage Organization, and Bridge Inspection. Frontiers in Robotics and AI, 2020, 7, 53.	2.0	26
31	The Dark Side of Ethical Robots. , 2018, , .		22
32	Mapping the hinterland: Data issues in open science. Public Understanding of Science, 2016, 25, 88-103.	1.6	21
33	Onboard Evolution of Understandable Swarm Behaviors. Advanced Intelligent Systems, 2019, 1, 1900031.	3.3	21
34	The euRathlon 2015 Grand Challenge: The First Outdoor Multi-domain Search and Rescue Robotics Competitionâ€”A Marine Perspective. Marine Technology Society Journal, 2016, 50, 81-97.	0.3	20
35	Run-time detection of faults in autonomous mobile robots based on the comparison of simulated and real robot behaviour. , 2014, , .		19
36	Towards Temporal Verification of Emergent Behaviours in Swarm Robotic Systems. Lecture Notes in Computer Science, 2011, , 336-347.	1.0	18

#	Article	IF	Citations
37	Mapping Intelligence: Requirements and Possibilities. Studies in Applied Philosophy, Epistemology and Rational Ethics, 2018, , 117-135.	0.2	18
38	An Analysis of Emergent Taxis in a Wireless Connected Swarm of Mobile Robots. , 2007, , .		16
39	Embodied imitation-enhanced reinforcement learning in multi-agent systems. Adaptive Behavior, 2014, 22, 31-50.	1.1	13
40	The distributed co-evolution of an on-board simulator and controller for swarm robot behaviours. Evolutionary Intelligence, 2014, 7, 95-106.	2.3	13
41	Negative Updating Combined with Opinion Pooling in the Best-of-n Problem in Swarm Robotics. Lecture Notes in Computer Science, 2018, , 97-108.	1.0	13
42	Bootstrapping Artificial Evolution to Design Robots for Autonomous Fabrication. Robotics, 2020, 9, 106.	2.1	13
43	Sample and time efficient policy learning with CMA-ES and Bayesian Optimisation. , 2020, , .		11
44	Towards Autonomous Robot Evolution. , 2021, , 29-51.		11
45	A methodology for provably stable behaviour-based intelligent control. Robotics and Autonomous Systems, 2006, 54, 52-73.	3.0	10
46	Hardware Design for Autonomous Robot Evolution. , 2020, , .		10
47	Scoring robotic competitions: Balancing judging promptness and meaningful performance evaluation. , 2018, , .		9
48	Toward Controllable Morphogenesis in Large Robot Swarms. IEEE Robotics and Automation Letters, 2019, 4, 3386-3393.	3.3	9
49	Combining Opinion Pooling and Evidential Updating for Multi-Agent Consensus. , 2018, , .		9
50	On Adaptive Self-Organization in Artificial Robot Organisms. , 2009, , .		8
51	The distributed co-evolution of an embodied simulator and controller for swarm robot behaviours. , 2011, , .		8
52	Towards Exogenous Fault Detection in Swarm Robotic Systems. Lecture Notes in Computer Science, 2014, , 429-430.	1.0	8
53	Stable Manipulator Trajectory Control Using Neural Networks. , 1997, , 117-151.		7
54	The ARE Robot Fabricator: How to (Re)produce Robots that Can Evolve in the Real World. , 2019, , .		7

#	Article	IF	Citations
55	On the Evolution of Behaviors through Embodied Imitation. Artificial Life, 2015, 21, 141-165.	1.0	6
56	Rational imitation for robots: the cost difference model. Adaptive Behavior, 2017, 25, 60-71.	1.1	6
57	Negative updating applied to the best-of-n problem with noisy qualities. Swarm Intelligence, 2021, 15, 111-143.	1.3	6
58	Stable neural network control for manipulators. Intelligent Systems Engineering, 1993, 2, 213.	0.5	6
59	The ARE Robot Fabricator: How to (Re)produce Robots that Can Evolve in the Real World. , 2019, , .		6
60	Simulation research on braking performance of hydrodynamic torque converter and retarder based on automatic shifting rules. International Journal of Modelling, Identification and Control, 2009, 8, 80.	0.2	5
61	Examining Profiles for Robotic Risk Assessment. , 2020, , .		5
62	Human-robot relationships and the development of responsible social robots. , 2019, , .		5
63	The distributed co-evolution of an embodied simulator and controller for swarm robot behaviours. , 2011, , .		5
64	Experiments in artificial culture: from noisy imitation to storytelling robots. Philosophical Transactions of the Royal Society B: Biological Sciences, 2022, 377, 20200323.	1.8	5
65	Design of hierarchical motion stabilizing controller of tracked mobile robot in three dimensional space. , 2011, , .		4
66	Recruitment Near Worksites Facilitates Robustness of Foraging E-Puck Swarms to Global Positioning Noise. , 2018, , .		4
67	ELSA in Industrial Robotics. Current Robotics Reports, 2020, 1, 179-186.	5.1	4
68	Morpho Evolution With Learning Using a Controller Archive as an Inheritance Mechanism. IEEE Transactions on Cognitive and Developmental Systems, 2023, 15, 507-517.	2.6	4
69	Study of fuzzy control for controllable suspension based on ADAMS and MATLAB co-simulation. International Journal of Modelling, Identification and Control, 2010, 9, 190.	0.2	3
70	The Impact of Affective Verbal Expressions in Social Robots. , 2020, , .		3
71	Self-assembly in Heterogeneous Modular Robots. Springer Tracts in Advanced Robotics, 2014, , 219-232.	0.3	3
72	A New Perspective on Robot Ethics through Investigating Humanâ€“Robot Interactions with Older Adults. Applied Sciences (Switzerland), 2021, 11, 10136.	1.3	3

#	Article	IF	Citations
73	Roboethics â€“for humans. New Scientist, 2011, 210, 32-33.	0.0	2
74	A Novel Design for a Robot Grappling Hook for use in a Nuclear Cave Environment. IFAC-PapersOnLine, 2016, 49, 288-293.	0.5	2
75	Mobile GPGPU Acceleration of Embodied Robot Simulation. Communications in Computer and Information Science, 2015, , 97-109.	0.4	2
76	First Steps Toward Artificial Culture in Robot Societies. Procedia Computer Science, 2011, 7, 130-132.	1.2	1
77	Design of Fuzzy Enhanced Hierarchical Motion Stabilizing Controller of Unmanned Ground Vehicle in Three DimensionalSpace. International Journal of Computational Intelligence Systems, 2011, 4, 1168-1178.	1.6	1
78	Editorial: Special Issue on Ground Robots Operating in Dynamic, Unstructured and Largeâ€Scale Outdoor Environments. Journal of Field Robotics, 2015, 32, 445-446.	3.2	1
79	Onboard Evolution of Understandable Swarm Behaviors. Advanced Intelligent Systems, 2019, 1, 1970062.	3.3	1
80	Reactive Virtual Forces for Heterogeneous and Homogeneous Swarm Exploration and Mapping. Lecture Notes in Computer Science, 2017, , 247-261.	1.0	1
81	Estimating the Energy Cost of (Artificial) Evolution. , 0, , .		1
82	An Artificial Immune System for Self-Healing in Swarm Robotic Systems. Lecture Notes in Computer Science, 2015, , 61-74.	1.0	1
83	Speech Related Accessibility Issues in Social Robots. , 2020, , .		1
84	Evolution of Diverse, Manufacturable Robot Body Plans. , 2020, , .		1
85	Indirect Fuzzy Adaptive Control of Robotic Manipulator Based on Sliding Mode Scheme. , 2007, , .		0
86	Role-Play as Responsible Robotics: The Virtual Witness Testimony Role-Play Interview for Investigating Hazardous Human-Robot Interactions. Frontiers in Robotics and AI, 2021, 8, 644336.	2.0	0
87	A FEASIBILITY STUDY FOR ENERGY AUTONOMY IN MULTI ROBOT SEARCH AND RESCUE OPERATIONS. , 2008, , .		0
88	"What Could Possibly Go Wrong?". , 2020, , .		0
89	â€œWhy Did You Just Do That?â€•Explainability and Artificial Theory of Mind for Social Robots. Frontiers in Artificial Intelligence and Applications, 2020, , .	0.3	0