

# Sanaz Mostaghim

## List of Publications by Year in descending order

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145  
papers

2,229  
citations

516710

16  
h-index

454955

30  
g-index

166  
all docs

166  
docs citations

166  
times ranked

1526  
citing authors

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 1  | Strategies for finding good local guides in multi-objective particle swarm optimization (MOPSO). , 0, , .  |      | 355       |
| 2  | A Framework for Large-Scale Multiobjective Optimization Based on Problem Transformation. IEEE Transactions on Evolutionary Computation, 2018, 22, 260-275. | 10.0 | 205       |
| 3  | Experimental Analysis of Bound Handling Techniques in Particle Swarm Optimization. IEEE Transactions on Evolutionary Computation, 2013, 17, 259-271.       | 10.0 | 127       |
| 4  | Heatmap Visualization of Population Based Multi Objective Algorithms. , 2007, , 361-375.   |      | 91        |
| 5  | A review of hybrid evolutionary multiple criteria decision making methods. , 2014, , .   |      | 79        |
| 6  | Parallel Approaches for Multiobjective Optimization. Lecture Notes in Computer Science, 2008, , 349-372.   | 1.3  | 57        |
| 7  | Covering Pareto-optimal fronts by subswarms in multi-objective particle swarm optimization. , 0, , .   |      | 56        |
| 8  | The role of e-dominance in multi objective particle swarm optimization methods. , 0, , .   |      | 55        |
| 9  | Multi-objective particle swarm optimization on computer grids. , 2007, , .   |      | 51        |
| 10 | About Selecting the Personal Best in Multi-Objective Particle Swarm Optimization. Lecture Notes in Computer Science, 2006, , 523-532.                      | 1.3  | 49        |
| 11 | Empirical comparison of MOPSO methods - Guide selection and diversity preservation -. , 2009, , .  |      | 48        |
| 12 | Computational Intelligence. Texts in Computer Science, 2016, , .   | 0.7  | 44        |
| 13 | Covering Pareto Sets by Multilevel Evolutionary Subdivision Techniques. Lecture Notes in Computer Science, 2003, , 118-132.                                | 1.3  | 41        |
| 14 | Hybridizing evolutionary strategies with continuation methods for solving multi-objective problems. Engineering Optimization, 2008, 40, 383-402.           | 2.6  | 40        |
| 15 | Decentralized evolution of robotic behavior using finite state machines. International Journal of Intelligent Computing and Cybernetics, 2009, 2, 695-723. | 2.7  | 35        |
| 16 | Open Loop Search for General Video Game Playing. , 2015, , .   |      | 35        |
| 17 | Confidence measure: A novel metric for robust meta-heuristic optimisation algorithms. Information Sciences, 2015, 317, 114-142.                            | 6.9  | 31        |
| 18 | Distance Based Ranking in Many-Objective Particle Swarm Optimization. Lecture Notes in Computer Science, 2008, , 753-762.                                  | 1.3  | 26        |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 19 | Mutation operators based on variable grouping for multi-objective large-scale optimization. , 2016, , .   |     | 25        |
| 20 | Interactive multi-objective particle swarm optimization with heatmap-visualization-based user interface. Engineering Optimization, 2010, 42, 119-139. | 2.6 | 23        |
| 21 | Multi-layer Perceptrons. Texts in Computer Science, 2022, , 53-124.   | 0.7 | 23        |
| 22 | Parallel multi-objective optimization using Master-Slave model on heterogeneous resources. , 2008, , .  |     | 22        |
| 23 | Weighted Optimization Framework for Large-scale Multi-objective Optimization. , 2016, , .   |     | 22        |
| 24 | Asynchronous Multi-Objective Optimisation in Unreliable Distributed Environments. Studies in Computational Intelligence, 2009, , 51-78.               | 0.9 | 22        |
| 25 | Bilevel Optimization of Multi-Component Chemical Systems Using Particle Swarm Optimization. , 0, , .  |     | 21        |
| 26 | A knee point based evolutionary multi-objective optimization for mission planning problems. , 2017, , .   |     | 21        |
| 27 | On the Scalable Multi-Objective Multi-Agent Pathfinding Problem. , 2020, , .  |     | 19        |
| 28 | Solving the Bi-objective Traveling Thief Problem with Multi-objective Evolutionary Algorithms. Lecture Notes in Computer Science, 2017, , 46-60.      | 1.3 | 19        |
| 29 | Multiobjective Monte Carlo Tree Search for Real-Time Games. IEEE Transactions on Games, 2015, 7, 347-360.   | 1.4 | 18        |
| 30 | Multiobjective optimization for interwoven systems. Journal of Multi-Criteria Decision Analysis, 2017, 24, 71-81.                                     | 1.9 | 17        |
| 31 | Comparison of data structures for storing Pareto-sets in MOEAs. , 0, , .  |     | 16        |
| 32 | The automotive deployment problem: A practical application for constrained multiobjective evolutionary optimisation. , 2010, , .                      |     | 16        |
| 33 | Comparison study of large-scale optimisation techniques on the LSMOP benchmark functions. , 2017, , .   |     | 16        |
| 34 | A Survey on Graph-based Systems in Manufacturing Processes. , 2018, , .   |     | 16        |
| 35 | Hop count based distance estimation in mobile ad hoc networks “ Challenges and consequences. Ad Hoc Networks, 2014, 15, 39-52.                        | 5.5 | 15        |
| 36 | Evolutionary Population Dynamics and Multi-Objective Optimisation Problems. , 0, , 185-206.   |     | 15        |

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|----|---|------|-----------|
| 37 | Asynchronous multiple objective particle swarm optimisation in unreliable distributed environments. , 2008, , .                                     |      | 14        |
| 38 | Benchmarking Collective Perception: New Task Difficulty Metrics for Collective Decision-Making. Lecture Notes in Computer Science, 2019, , 699-711. | 1.3  | 14        |
| 39 | Procedural level generation with answer set programming for general Video Game playing. , 2015, , .   |      | 13        |
| 40 | Linear Search Mechanism for Multi- and Many-Objective Optimisation. Lecture Notes in Computer Science, 2019, , 399-410.                             | 1.3  | 13        |
| 41 | Computational Intelligence. Texts in Computer Science, 2022, , .  | 0.7  | 13        |
| 42 | Adaptive Range Parameter Control. , 2012, , .   |      | 12        |
| 43 | A Scalable Many-Objective Pathfinding Benchmark Suite. IEEE Transactions on Evolutionary Computation, 2022, 26, 188-194.                            | 10.0 | 12        |
| 44 | Multi-featured collective perception with Evidence Theory: tackling spatial correlations. Swarm Intelligence, 2021, 15, 83-110.                     | 2.2  | 11        |
| 45 | Collective Decision Making in Swarm Robotics with Distributed Bayesian Hypothesis Testing. Lecture Notes in Computer Science, 2020, , 55-67.        | 1.3  | 11        |
| 46 | Transfer strategies from single- to multi-objective grouping mechanisms. , 2018, , .  |      | 10        |
| 47 | Multi-Objective Task Allocation for Wireless Sensor Networks. , 2020, , .   |      | 10        |
| 48 | Dynamic search initialisation strategies for multi-objective optimisation in peer-to-peer networks. , 2009, , .                                     |      | 9         |
| 49 | Energy Aware Particle Swarm Optimization as search mechanism for aerial micro-robots. , 2016, , .   |      | 9         |
| 50 | Multi-objective tree search approaches for general video game playing. , 2016, , .  |      | 9         |
| 51 | HTN fighter: Planning in a highly-dynamic game. , 2017, , .   |      | 9         |
| 52 | Energy-saving decision making for aerial swarms: PSO-based navigation in vector fields. , 2017, , .   |      | 9         |
| 53 | MOSAİK: A Formal Model for Self-Organizing Manufacturing Systems. IEEE Pervasive Computing, 2021, 20, 9-18.   | 1.3  | 9         |
| 54 | A Single-Copter UWB-Ranging-Based Localization System Extendable to a Swarm of Drones. Drones, 2021, 5, 85.   | 4.9  | 9         |

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|----|---|-----|-----------|
| 55 | Iterated multi-swarm. , 2013, , .   |     | 8         |
| 56 | Properties of scalable distance minimization problems using the Manhattan metric. , 2015, , .   |     | 8         |
| 57 | Modified crowding distance and mutation for multimodal multi-objective optimization. , 2019, , .  |     | 8         |
| 58 | Discrete collective estimation in swarm robotics with distributed Bayesian belief sharing. Swarm Intelligence, 2021, 15, 377-402.                         | 2.2 | 8         |
| 59 | Distributed Geometric Distance Estimation in Ad Hoc Networks. Lecture Notes in Computer Science, 2012, , 28-41.   | 1.3 | 8         |
| 60 | Molecular force field parametrization using multi-objective evolutionary algorithms. , 0, , .   |     | 7         |
| 61 | PSO-based Search mechanism in dynamic environments: Swarms in Vector Fields. , 2017, , .  |     | 7         |
| 62 | Building a Planner: A Survey of Planning Systems Used in Commercial Video Games. IEEE Transactions on Games, 2019, 11, 91-108.                            | 1.4 | 7         |
| 63 | A Study of Mobility in Ad Hoc Networks and Its Effects on a Hop Count Based Distance Estimation. , 2012, , .  |     | 6         |
| 64 | Dynamic Distance Minimization Problems for dynamic multi-objective optimization. , 2017, , .  |     | 6         |
| 65 | How swarm size during evolution impacts the behavior, generalizability, and brain complexity of animats performing a spatial navigation task. , 2018, , . |     | 6         |
| 66 | Multi-objective collective search and movement-based metrics in swarm robotics. , 2019, , .   |     | 6         |
| 67 | A Novel Grid-based Crowding Distance for Multimodal Multi-objective Optimization. , 2020, , .   |     | 6         |
| 68 | Generic Component-Based Mission-Centric Energy Model for Micro-Scale Unmanned Aerial Vehicles. Drones, 2020, 4, 63.                                       | 4.9 | 6         |
| 69 | Modeling Pathfinding for Swarm Robotics. Lecture Notes in Computer Science, 2020, , 190-202.  | 1.3 | 6         |
| 70 | Hybrid Particle Guide Selection Methods in Multi-Objective Particle Swarm Optimization. , 2006, , .   |     | 5         |
| 71 | Evolving PSO algorithm design in vector fields using geometric semantic GP. , 2018, , .   |     | 5         |
| 72 | Parallel Multi-objective Optimization Using Self-organized Heterogeneous Resources. Studies in Computational Intelligence, 2010, , 165-179.               | 0.9 | 5         |

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| 73 | Validating a Peer-to-Peer Evolutionary Algorithm. Lecture Notes in Computer Science, 2012, , 436-445.                           | 1.3 | 5         |
| 74 | Intelligent Business Process Execution using Particle Swarm Optimization. , 2010, , 797-815.                                    |     | 5         |
| 75 | Computational Swarm Intelligence. Texts in Computer Science, 2016, , 299-325.   | 0.7 | 4         |
| 76 | Survey into predictive key performance indicator analysis from data mining perspective. , 2020, , .                             |     | 4         |
| 77 | Ant Colony Optimization based Multi-Robot Planner for Combined Task Allocation and Path Finding. , 2020, , .                    |     | 4         |
| 78 | Particle Swarm Contour Search Algorithm. Entropy, 2020, 22, 407.  | 2.2 | 4         |
| 79 | Tracking the Heritage of Genes in Evolutionary Algorithms. , 2021, , .  |     | 4         |
| 80 | Ising Model as a Switch Voting Mechanism in Collective Perception. Lecture Notes in Computer Science, 2019, , 617-629.          | 1.3 | 4         |
| 81 | Preference-Based Multi-Objective Particle Swarm Optimization Using Desirabilities. , 2010, , 101-110.                           |     | 4         |
| 82 | The Impact of Population Size on the Convergence of Multi-objective Evolutionary Algorithms. , 2021, , .                        |     | 4         |
| 83 | Mobility-Aware Multi-Objective Task Allocation for Wireless Sensor Networks. , 2021, , .  |     | 4         |
| 84 | Discrete Collective Estimation in Swarm Robotics with Ranked Voting Systems. , 2021, , .  |     | 4         |
| 85 | Intelligent Business Process Execution using Particle Swarm Optimization. , 0, , 49-66.   |     | 3         |
| 86 | Organic computing in off-highway machines. , 2010, , .  |     | 3         |
| 87 | Archive Based Multi-swarm Algorithm for Many-Objective Problems. , 2014, , .  |     | 3         |
| 88 | A Robot Localization Framework Using CNNs for Object Detection and Pose Estimation. , 2018, , .                                 |     | 3         |
| 89 | Multi-objective distance minimization problems " applications in technical systems. Automatisierungstechnik, 2018, 66, 964-974. | 0.8 | 3         |
| 90 | Graph-based multi-objective generation of customised wiring harnesses. , 2019, , .  |     | 3         |

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|-----|---|-----|-----------|
| 91  | Positive impact of isomorphic changes in the environment on collective decision-making. , 2019, , .   |     | 3         |
| 92  | Evolving Game State Evaluation Functions for a Hybrid Planning Approach. , 2019, , .  |     | 3         |
| 93  | T-EA: A Traceable Evolutionary Algorithm. , 2020, , .   |     | 3         |
| 94  | How cognitive and environmental constraints influence the reliability of simulated animats in groups. PLoS ONE, 2020, 15, e0228879.   | 2.5 | 3         |
| 95  | Optimal Control Policies to Address the Pandemic Health-Economy Dilemma. , 2021, , .  |     | 3         |
| 96  | The Effects of Crowding Distance and Mutation in Multimodal and Multi-objective Optimization Problems. Computational Methods in Applied Sciences (Springer), 2021, , 115-130. | 0.3 | 3         |
| 97  | A many-objective route planning benchmark problem for navigation. , 2020, , .   |     | 3         |
| 98  | Availability-Aware Multiobjective Task Allocation Algorithm for Internet of Things Networks. IEEE Internet of Things Journal, 2022, 9, 12945-12953.                           | 8.7 | 3         |
| 99  | Driving Swarm: A Swarm Robotics Framework for Intelligent Navigation in a Self-organized World. , 2022, , .   |     | 3         |
| 100 | Self-organized invasive parallel optimization. , 2011, , .  |     | 2         |
| 101 | Distributed swarm evacuation planning. , 2013, , .  |     | 2         |
| 102 | Using $\hat{\mu}$ -Dominance for Hidden and Degenerated Pareto-Fronts. , 2015, , .  |     | 2         |
| 103 | The Influence of Heredity Models on Adaptability in Evolutionary Swarms. , 2016, , .  |     | 2         |
| 104 | Simultaneous Localisation and Optimisation for Swarm Robotics. , 2018, , .  |     | 2         |
| 105 | Vector Field Benchmark for Collective Search in Unknown Dynamic Environments. Lecture Notes in Computer Science, 2018, , 411-419.   | 1.3 | 2         |
| 106 | Performance of dynamic algorithms on the dynamic distance minimization problem. , 2019, , .   |     | 2         |
| 107 | Achieving task allocation in swarm intelligence with bi-objective embodied evolution. Swarm Intelligence, 2021, 15, 287-310.  | 2.2 | 2         |
| 108 | Unit-aware multi-objective genetic programming for the prediction of the stokes flow around a sphere. , 2021, , .   |     | 2         |

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| 109 | Many-Objective Pathfinding Based on Fr chet Similarity Metric. Lecture Notes in Computer Science, 2021, , 375-386.  | 1.3 | 2         |
| 110 | PSO-Based Search Rules for Aerial Swarms Against Unexplored Vector Fields via Genetic Programming. Lecture Notes in Computer Science, 2018, , 41-53.                              | 1.3 | 2         |
| 111 | Multi-Objective Optimization and Decision-Making in Context Steering. , 2021, , .   |     | 2         |
| 112 | Meeting Demands for Mass Customization: A Hybrid Organic Computing Approach. , 2021, , .  |     | 2         |
| 113 | Influence of dynamic environments on agent strategies. , 2016, , .  |     | 1         |
| 114 | Functional brain network extraction using a genetic algorithm with a kick-out method. , 2016, , .   |     | 1         |
| 115 | Understanding Collective Decision-Making in Natural Swarms. , 2018, , .   |     | 1         |
| 116 | Investigation of a Simple Distance Based Ranking Metric for Decomposition-Based Multi/Many-Objective Evolutionary Algorithms. Lecture Notes in Computer Science, 2018, , 384-396. | 1.3 | 1         |
| 117 | Kooperation mittels Schwarmintelligenz. , 2021, , 55-69.  |     | 1         |
| 118 | Self-organized Parallel Cooperation for Solving Optimization Problems. Lecture Notes in Computer Science, 2009, , 135-145.  | 1.3 | 1         |
| 119 | Heterogeneous Evolutionary Swarms with Partial Redundancy Solving Multi-objective Tasks. Lecture Notes in Computer Science, 2017, , 453-468.                                      | 1.3 | 1         |
| 120 | Online Optimization of Movement Cost for Robotic Applications of PSO. Lecture Notes in Computer Science, 2019, , 307-318.   | 1.3 | 1         |
| 121 | Introduction to Artificial Neural Networks. Texts in Computer Science, 2022, , 7-13.  | 0.7 | 1         |
| 122 | A Comparative Study of Different Encodings on the Multi-Objective Pathfinding Problem. , 2021, , .  |     | 1         |
| 123 | A Customized Niching Methodology for the Many-Objective Pathfinding Problem. , 2021, , .  |     | 1         |
| 124 | Genetic Programming-Based Inverse Kinematics for Robotic Manipulators. Lecture Notes in Computer Science, 2022, , 130-145.  | 1.3 | 1         |
| 125 | Preface: nature inspired solutions for high performance computing. Natural Computing, 2013, 12, 27-28.  | 3.0 | 0         |
| 126 | Self-organised swarm display. International Journal of Swarm Intelligence, 2014, 1, 246.  | 0.3 | 0         |



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| 127 | Multi-objective fitness-proportional attraction approach with weights. , 2016, , .  |     | 0         |
| 128 | Elitism and aggregation methods in partial redundant evolutionary swarms solving a multi-objective tasks. , 2017, , .   |     | 0         |
| 129 | IEEE CIS VP-Member Activities Vision Statement [Society Briefs]. IEEE Computational Intelligence Magazine, 2021, 16, 8-8.                                       | 3.2 | 0         |
| 130 | Self-organized Invasive Parallel Optimization with Self-repairing Mechanism. PARS Parallel-Algorithmen -Rechnerstrukturen Und -Systemsoftware, 2011, 28, 90-99. | 0.2 | 0         |
| 131 | Impact of Communication Topology on PSO-based Swarms in Vector Fields. , 2020, , .  |     | 0         |
| 132 | Design of Gate Array Circuits Using Evolutionary Algorithms. , 2008, , 38-50.   |     | 0         |
| 133 | Hybrid Systems for Tuning and Learning Fuzzy Systems. Texts in Computer Science, 2022, , 471-487.   | 0.7 | 0         |
| 134 | Learning Graphical Models. Texts in Computer Science, 2022, , 579-593.  | 0.7 | 0         |
| 135 | Elements of Evolutionary Algorithms. Texts in Computer Science, 2022, , 255-285.  | 0.7 | 0         |
| 136 | General Neural Networks. Texts in Computer Science, 2022, , 39-52.  | 0.7 | 0         |
| 137 | Evidence Propagation. Texts in Computer Science, 2022, , 565-578.   | 0.7 | 0         |
| 138 | Recurrent Networks. Texts in Computer Science, 2022, , 195-212.   | 0.7 | 0         |
| 139 | Decision Graphs. Texts in Computer Science, 2022, , 605-615.  | 0.7 | 0         |
| 140 | Decompositions. Texts in Computer Science, 2022, , 551-563.   | 0.7 | 0         |
| 141 | Fundamental Evolutionary Algorithms. Texts in Computer Science, 2022, , 287-341.  | 0.7 | 0         |
| 142 | Neural Networks: Mathematical Remarks. Texts in Computer Science, 2022, , 213-221.  | 0.7 | 0         |
| 143 | Radial Basis Function Networks. Texts in Computer Science, 2022, , 125-148.   | 0.7 | 0         |
| 144 | Computational Swarm Intelligence. Texts in Computer Science, 2022, , 343-369.   | 0.7 | 0         |

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| 145 | A Multi-objective Multimodal Evolutionary Algorithm Using a Novel Tournament and Environmental Selections. , 2021, , . |    | 0         |