

Kang Tai

List of Publications by Year in descending order

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Version: 2024-02-01

124
papers

3,115
citations

136740

32
h-index

182168

51
g-index

129
all docs

129
docs citations

129
times ranked

2208
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 1 | MULTIOBJECTIVE DESIGN OPTIMIZATION BY AN EVOLUTIONARY ALGORITHM. Engineering Optimization, 2001, 33, 399-424. | 1.5 | 236 |
| 2 | A socio-behavioural simulation model for engineering design optimization. Engineering Optimization, 2002, 34, 341-354. | 1.5 | 151 |
| 3 | Structural topology design optimization using Genetic Algorithms with a bit-array representation. Computer Methods in Applied Mechanics and Engineering, 2005, 194, 3749-3770. | 3.4 | 124 |
| 4 | An enhanced genetic algorithm for structural topology optimization. International Journal for Numerical Methods in Engineering, 2006, 65, 18-44. | 1.5 | 109 |
| 5 | An evolutionary approach for cooling system optimization in plastic injection moulding. International Journal of Production Research, 2004, 42, 2047-2061. | 4.9 | 99 |
| 6 | State-of-the-art in empirical modelling of rapid prototyping processes. Rapid Prototyping Journal, 2014, 20, 164-178. | 1.6 | 94 |
| 7 | Comparison of statistical and machine learning methods in modelling of data with multicollinearity. International Journal of Modelling, Identification and Control, 2013, 18, 295. | 0.2 | 91 |
| 8 | Performance evaluation of microbial fuel cell by artificial intelligence methods. Expert Systems With Applications, 2014, 41, 1389-1399. | 4.4 | 83 |
| 9 | An integrated SRM-multi-gene genetic programming approach for prediction of factor of safety of 3-D soil nailed slopes. Engineering Applications of Artificial Intelligence, 2014, 30, 30-40. | 4.3 | 83 |
| 10 | Design of Structures and Compliant Mechanisms by Evolutionary Optimization of Morphological Representations of Topology. Journal of Mechanical Design, Transactions of the ASME, 2000, 122, 560-566. | 1.7 | 78 |
| 11 | Design Synthesis of Path Generating Compliant Mechanisms by Evolutionary Optimization of Topology and Shape. Journal of Mechanical Design, Transactions of the ASME, 2002, 124, 492-500. | 1.7 | 74 |
| 12 | A multi-gene genetic programming model for estimating stress-dependent soil water retention curves. Computational Geosciences, 2014, 18, 45-56. | 1.2 | 68 |
| 13 | Graph representation for structural topology optimization using genetic algorithms. Computers and Structures, 2004, 82, 1609-1622. | 2.4 | 65 |
| 14 | Probability Collectives: A multi-agent approach for solving combinatorial optimization problems. Applied Soft Computing Journal, 2010, 10, 759-771. | 4.1 | 64 |
| 15 | Analytical gradient-based optimization of offshore wind turbine substructures under fatigue and extreme loads. Marine Structures, 2016, 47, 23-41. | 1.6 | 59 |
| 16 | A hybrid M^{\prime} -genetic programming approach for ensuring greater trustworthiness of prediction ability in modelling of FDM process. Journal of Intelligent Manufacturing, 2014, 25, 1349-1365. | 4.4 | 56 |
| 17 | Radial point interpolation collocation method (RPICM) for partial differential equations. Computers and Mathematics With Applications, 2005, 50, 1425-1442. | 1.4 | 55 |
| 18 | Topology optimization of piezoelectric sensors/actuators for torsional vibration control of composite plates. Smart Materials and Structures, 2006, 15, 253-269. | 1.8 | 51 |

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|----|---|-----|-----------|
| 19 | An application of evolutionary system identification algorithm in modelling of energy production system. Measurement: Journal of the International Measurement Confederation, 2018, 114, 122-131. | 2.5 | 48 |
| 20 | Network topological approach to modeling accident causations and characteristics: Analysis of railway incidents in Japan. Reliability Engineering and System Safety, 2020, 193, 106626. | 5.1 | 48 |
| 21 | Structural topology optimization using a genetic algorithm with a morphological geometric representation scheme. Structural and Multidisciplinary Optimization, 2005, 30, 113-127. | 1.7 | 47 |
| 22 | Measurement of properties of graphene sheets subjected to drilling operation using computer simulation. Measurement: Journal of the International Measurement Confederation, 2014, 50, 50-62. | 2.5 | 47 |
| 23 | Target-matching test problem for multiobjective topology optimization using genetic algorithms. Structural and Multidisciplinary Optimization, 2007, 34, 333-345. | 1.7 | 44 |
| 24 | A modified multi-gene genetic programming approach for modelling true stress of dynamic strain aging regime of austenitic stainless steel 304. Meccanica, 2014, 49, 1193-1209. | 1.2 | 40 |
| 25 | Stepwise approach for the evolution of generalized genetic programming model in prediction of surface finish of the turning process. Advances in Engineering Software, 2014, 78, 16-27. | 1.8 | 40 |
| 26 | Predicting the mechanical characteristics of hydrogen functionalized graphene sheets using artificial neural network approach. Journal of Nanostructure in Chemistry, 2013, 3, 1. | 5.3 | 38 |
| 27 | Radial point interpolation collocation method (RPICM) for the solution of nonlinear poisson problems. Computational Mechanics, 2005, 36, 298-306. | 2.2 | 37 |
| 28 | Mathematical modelling of burr height of the drilling process using a statistical-based multi-gene genetic programming approach. International Journal of Advanced Manufacturing Technology, 2014, 73, 113-126. | 1.5 | 37 |
| 29 | A Computational Intelligence-Based Genetic Programming Approach for the Simulation of Soil Water Retention Curves. Transport in Porous Media, 2014, 103, 497-513. | 1.2 | 37 |
| 30 | Review of empirical modelling techniques for modelling of turning process. International Journal of Modelling, Identification and Control, 2013, 20, 121. | 0.2 | 35 |
| 31 | Formulation of bead width model of an SLM prototype using modified multi-gene genetic programming approach. International Journal of Advanced Manufacturing Technology, 2014, 73, 375-388. | 1.5 | 35 |
| 32 | Classification-driven model selection approach of genetic programming in modelling of turning process. International Journal of Advanced Manufacturing Technology, 2013, 69, 1137-1151. | 1.5 | 33 |
| 33 | A novel self-adaptive hybrid multi-objective meta-heuristic for reliability design of trusses with simultaneous topology, shape and sizing optimisation design variables. Structural and Multidisciplinary Optimization, 2019, 60, 1937-1955. | 1.7 | 33 |
| 34 | Estimation of mechanical properties of nanomaterials using artificial intelligence methods. Applied Physics A: Materials Science and Processing, 2014, 116, 1099-1107. | 1.1 | 31 |
| 35 | Design of Grip-and-Move Manipulators Using Symmetric Path Generating Compliant Mechanisms. Journal of Mechanical Design, Transactions of the ASME, 2008, 130, . | 1.7 | 27 |
| 36 | Aircraft morphing wing design by using partial topology optimization. Structural and Multidisciplinary Optimization, 2013, 48, 1109-1128. | 1.7 | 27 |

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| 37 | Estimation of factor of safety of rooted slope using an evolutionary approach. <i>Ecological Engineering</i> , 2014, 64, 314-324. | 1.6 | 27 |
| 38 | An integrated computational approach for determining the elastic properties of boron nitride nanotubes. <i>International Journal of Mechanics and Materials in Design</i> , 2015, 11, 1-14. | 1.7 | 27 |
| 39 | Modeling infrastructure interdependencies by integrating network and fuzzy set theory. <i>International Journal of Critical Infrastructure Protection</i> , 2018, 22, 51-61. | 2.9 | 27 |
| 40 | Target matching problems and an adaptive constraint strategy for multiobjective design optimization using genetic algorithms. <i>Computers and Structures</i> , 2010, 88, 1064-1076. | 2.4 | 26 |
| 41 | Combined CI-MD approach in formulation of engineering moduli of single layer graphene sheet. <i>Simulation Modelling Practice and Theory</i> , 2014, 48, 93-111. | 2.2 | 26 |
| 42 | A molecular dynamics based artificial intelligence approach for characterizing thermal transport in nanoscale material. <i>Thermochimica Acta</i> , 2014, 594, 39-49. | 1.2 | 26 |
| 43 | EARLY DETECTION AND VISUALIZATION OF BREAST TUMOR WITH THERMOGRAM AND NEURAL NETWORK. <i>Journal of Mechanics in Medicine and Biology</i> , 2002, 02, 185-195. | 0.3 | 25 |
| 44 | SOLVING CONSTRAINED OPTIMIZATION PROBLEMS USING PROBABILITY COLLECTIVES AND A PENALTY FUNCTION APPROACH. <i>International Journal of Computational Intelligence and Applications</i> , 2011, 10, 445-470. | 0.6 | 25 |
| 45 | An embedded simulation approach for modeling the thermal conductivity of 2D nanoscale material. <i>Simulation Modelling Practice and Theory</i> , 2014, 44, 1-13. | 2.2 | 25 |
| 46 | Framework based on number of basis functions complexity measure in investigation of the power characteristics of direct methanol fuel cell. <i>Chemometrics and Intelligent Laboratory Systems</i> , 2016, 155, 7-18. | 1.8 | 24 |
| 47 | Optimization of Offshore Wind Turbine Support Structures Using an Analytical Gradient-based Method. <i>Energy Procedia</i> , 2015, 80, 100-107. | 1.8 | 23 |
| 48 | Topology Optimization for Maximum Natural Frequency Using Simulated Annealing and Morphological Representation. <i>AIAA Journal</i> , 2002, 40, 586-589. | 1.5 | 21 |
| 49 | Design of 2-DOF Compliant Mechanisms to Form Grip-and-Move Manipulators for 2D Workspace. <i>Journal of Mechanical Design, Transactions of the ASME</i> , 2010, 132, . | 1.7 | 21 |
| 50 | Point interpolation collocation method for the solution of partial differential equations. <i>Engineering Analysis With Boundary Elements</i> , 2006, 30, 598-609. | 2.0 | 20 |
| 51 | Selection of a robust experimental design for the effective modeling of nonlinear systems using Genetic Programming. , 2013, , . | | 19 |
| 52 | Empirical analysis of model selection criteria for genetic programming in modeling of time series system. , 2013, , . | | 19 |
| 53 | Optimal design of flat patterns for 3D folded structures by unfolding with topological validation. <i>CAD Computer Aided Design</i> , 2007, 39, 898-913. | 1.4 | 17 |
| 54 | Topology Optimization of Compliant Mechanisms Using Evolutionary Algorithm With Design Geometry Encoded as a Graph. , 2002, , 1047. | | 16 |

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| 55 | Barâ€system representation for topology optimization using genetic algorithms. Engineering Computations, 2005, 22, 206-231. | 0.7 | 15 |
| 56 | A Probability Collectives Approach with a Feasibility-Based Rule for Constrained Optimization. Applied Computational Intelligence and Soft Computing, 2011, 2011, 1-19. | 1.6 | 15 |
| 57 | Probability Collectives: A distributed optimization approach for constrained problems. , 2010, , . | | 14 |
| 58 | RADIAL BASIS POINT INTERPOLATION COLLOCATION METHOD FOR 2-D SOLID PROBLEM. , 2002, , . | | 13 |
| 59 | Genetic Programming for Modeling Vibratory Finishing Process: Role of Experimental Designs and Fitness Functions. Lecture Notes in Computer Science, 2013, , 23-31. | 1.0 | 13 |
| 60 | Model development based on evolutionary framework for condition monitoring of a lathe machine. Measurement: Journal of the International Measurement Confederation, 2015, 73, 95-110. | 2.5 | 13 |
| 61 | Identifying vulnerabilities in critical infrastructures by network analysis. International Journal of Critical Infrastructures, 2013, 9, 190. | 0.1 | 11 |
| 62 | Optimum shape and topology design using the boundary element method. International Journal of Solids and Structures, 1999, 36, 2021-2040. | 1.3 | 10 |
| 63 | Probability Collectives for decentralized, distributed optimization: A Collective Intelligence Approach. Conference Proceedings IEEE International Conference on Systems, Man, and Cybernetics, 2008, , . | 0.0 | 10 |
| 64 | An Enhanced Chromosome Encoding and Morphological Representation of Geometry for Structural Topology Optimization using GA. , 2007, , . | | 9 |
| 65 | Discrete optimization of truss structure using Probability Collectives. , 2012, , . | | 9 |
| 66 | Evolving genetic programming models of higher generalization ability in modelling of turning process. Engineering Computations, 2015, 32, 2216-2234. | 0.7 | 9 |
| 67 | A new simulation approach of genetic programming in modelling of soil water retention property of unsaturated soil. Engineering Computations, 2015, 32, 914-930. | 0.7 | 9 |
| 68 | An Agent-Based Modeling and Evolutionary Optimization Approach for Vulnerability Analysis of Critical Infrastructure Networks. Communications in Computer and Information Science, 2013, , 176-187. | 0.4 | 9 |
| 69 | Probability Collectives. Intelligent Systems Reference Library, 2015, , . | 1.0 | 8 |
| 70 | System Identification: Survey on Modeling Methods and Models. Advances in Intelligent Systems and Computing, 2017, , 607-615. | 0.5 | 8 |
| 71 | DC-Distributed Power System Modeling and Hardware-in-the-Loop (HIL) Evaluation of Fuel Cell-Powered Marine Vessel. IEEE Journal of Emerging and Selected Topics in Industrial Electronics, 2022, 3, 797-808. | 3.0 | 8 |
| 72 | A hybrid genetic algorithm for multiobjective structural optimization. , 2007, , . | | 7 |

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| 73 | Multiobjective optimization of sensor network deployment by a genetic algorithm. , 2007, , . | | 7 |
| 74 | A modified feasibility-based rule for solving constrained optimization problems using Probability Collectives. , 2012, , . | | 7 |
| 75 | A Probability Collectives Approach for Multi-Agent Distributed and Cooperative Optimization with Tolerance for Agent Failure. Studies in Computational Intelligence, 2013, , 175-201. | 0.7 | 7 |
| 76 | Application of artificial intelligence technique for modelling elastic properties of 2D nanoscale material. Molecular Simulation, 2015, 41, 1143-1152. | 0.9 | 7 |
| 77 | Handling objectives as adaptive constraints for multiobjective structural optimization. , 2007, , . | | 6 |
| 78 | Estimation of Pore Water Pressure of Soil Using Genetic Programming. Geotechnical and Geological Engineering, 2014, 32, 765-772. | 0.8 | 6 |
| 79 | Density characteristics of laser-sintered three-dimensional printing parts investigated by using an integrated finite element analysis-based evolutionary algorithm approach. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2016, 230, 100-110. | 1.5 | 6 |
| 80 | Thermo-mechanical modeling of metallic alloys for nuclear engineering applications. Measurement: Journal of the International Measurement Confederation, 2017, 97, 242-250. | 2.5 | 6 |
| 81 | Vulnerability analysis of critical infrastructure network. International Journal of Critical Infrastructure Protection, 2021, 35, 100472. | 2.9 | 6 |
| 82 | Topological network and GIS approach to modeling earthquake risk of infrastructure systems: A case study in Japan. Applied Geography, 2021, 127, 102392. | 1.7 | 6 |
| 83 | Modeling of a magneto-rheological (MR) damper using genetic programming. Journal of Vibroengineering, 2017, 19, 3169-3177. | 0.5 | 6 |
| 84 | Computational Geometric Modeling and Unfolding of 3-D Folded Structures. , 2002, , 123. | | 5 |
| 85 | Unfolding and Flat Layout Design of Non-Manifold 3D Folded Structures. Computer-Aided Design and Applications, 2004, 1, 439-447. | 0.4 | 5 |
| 86 | Evaluating the reliability of infrastructure networks by resilience analysis. , 2012, , . | | 5 |
| 87 | Multi-criteria probability collectives. International Journal of Bio-Inspired Computation, 2014, 6, 369. | 0.6 | 5 |
| 88 | A Structural Optimization Problem Formulation for Design of Compliant Gripper Using a Genetic Algorithm. , 2006, , 456-456. | | 5 |
| 89 | On the Modelling of Fuel Cell-Fed Power System in Electrified Vessels. , 2020, , . | | 5 |
| 90 | A bit-array representation GA for structural topology optimization. , 0, , . | | 4 |

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| 91 | A framework for optimization using approximate functions. , 0, , . | | 4 |
| 92 | A novel evolutionary approach in modeling wear depth of laser engineering titanium coatings. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2016, 230, 1066-1075. | 1.5 | 4 |
| 93 | Analyzing Impact on Critical Infrastructure Using Input-Output Interdependency Model: Case Studies. ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering, 2017, 3, 04017016. | 1.1 | 4 |
| 94 | Topology optimization for maximum natural frequency using simulated annealing and morphological representation. , 2000, , . | | 3 |
| 95 | Target geometry matching problem with conflicting objectives for multiobjective topology design optimization using GA. , 2008, , . | | 3 |
| 96 | Hybrid genetic algorithm for designing structures subjected to uncertainty. Conference Proceedings IEEE International Conference on Systems, Man, and Cybernetics, 2008, , . | 0.0 | 3 |
| 97 | Investigation of mechanical strength of 2D nanoscale structures using a molecular dynamics based computational intelligence approach. International Journal of Modern Physics B, 2015, 29, 1450242. | 1.0 | 3 |
| 98 | Evaluation of supply chain resilience enhancement with multi-tier supplier selection policy using agent-based modeling. , 2016, , . | | 3 |
| 99 | True stress measurement of nuclear fuel rod cladding material subjected to DSA regime. Neural Computing and Applications, 2017, 28, 119-126. | 3.2 | 3 |
| 100 | Optimal design of electro-hydraulic active steering system for intelligent transportation environment. Energy, 2021, 214, 118911. | 4.5 | 3 |
| 101 | An Improved Multi-Gene Genetic Programming Approach for the Evolution of Generalized Model in Modelling of Rapid Prototyping Process. Lecture Notes in Computer Science, 2014, , 218-226. | 1.0 | 3 |
| 102 | On the Study of Machining Characteristics of 2-D Nanoscale Material. Nanoscience and Nanotechnology Letters, 2014, 6, 1079-1086. | 0.4 | 3 |
| 103 | Numerical study of some approaches to shape design sensitivity analysis using boundary elements. Journal of Strain Analysis for Engineering Design, 1996, 31, 361-369. | 1.0 | 2 |
| 104 | An ensemble evolutionary approach in evaluation of surface finish reduction of vibratory finishing process. Engineering Computations, 2015, 32, 1214-1229. | 0.7 | 2 |
| 105 | Topology optimization for maximum natural frequency using simulated annealing and morphological representation. AIAA Journal, 2002, 40, 586-589. | 1.5 | 2 |
| 106 | Integrated Design Optimization and Analysis Using a Spreadsheet Application. International Journal of Mechanical Engineering Education, 1999, 27, 29-40. | 0.6 | 1 |
| 107 | Dynamic analysis and design optimisation of a washing machine. International Journal of Computer Applications in Technology, 2000, 13, 324. | 0.3 | 1 |
| 108 | RADIAL POINT INTERPOLATION COLLOCATION METHOD (RPICM) USING UPWIND BIASED LOCAL SUPPORT SCHEME FOR SOLVING CONVECTION-DOMINATED EQUATIONS. , 2006, , 1541-1546. | | 1 |

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| 109 | Probability Collectives: A Distributed Optimization Approach. Intelligent Systems Reference Library, 2015, , 15-35. | 1.0 | 1 |
| 110 | A lifecycle cost model considering both component and system burn-in for operationally unreparable systems. International Journal of Quality and Reliability Management, 2022, 39, 2081-2103. | 1.3 | 1 |
| 111 | Constraint handling in probability collectives using a modified feasibility-based rule. International Journal of Computational Science and Engineering, 2016, 13, 303. | 0.4 | 1 |
| 112 | Development and testing of a morphological geometric representation scheme for topology design optimization using a genetic algorithm. , 0, , . | | 0 |
| 113 | Optimization of structures under load uncertainties based on hybrid genetic algorithm. , 2008, , . | | 0 |
| 114 | Hybrid GA multiobjective optimization for the design of compliant micro-actuators. Conference Proceedings IEEE International Conference on Systems, Man, and Cybernetics, 2008, , . | 0.0 | 0 |
| 115 | Introduction to Optimization. Intelligent Systems Reference Library, 2015, , 1-13. | 1.0 | 0 |
| 116 | Constraint handling in probability collectives using a modified feasibility-based rule. International Journal of Computational Science and Engineering, 2016, 13, 303. | 0.4 | 0 |
| 117 | Material yield strain identification using energy absorption. Journal of Strain Analysis for Engineering Design, 2018, 53, 463-469. | 1.0 | 0 |
| 118 | THE SOLUTION FOR CONVECTION-DIFFUSION EQUATIONS USING THE QUASI-INTERPOLATION SCHEME WITH LOCAL POLYNOMIAL REPRODUCTION BASED ON MOVING LEAST SQUARES. , 2002, , . | | 0 |
| 119 | Probability Collectives for Discrete and Mixed Variable Problems. Intelligent Systems Reference Library, 2015, , 95-125. | 1.0 | 0 |
| 120 | Constrained Probability Collectives with a Penalty Function Approach. Intelligent Systems Reference Library, 2015, , 61-72. | 1.0 | 0 |
| 121 | Constrained Probability Collectives: A Heuristic Approach. Intelligent Systems Reference Library, 2015, , 37-60. | 1.0 | 0 |
| 122 | Constrained Probability Collectives with Feasibility Based Rule. Intelligent Systems Reference Library, 2015, , 73-93. | 1.0 | 0 |
| 123 | Modelling critical infrastructure network interdependencies and failure. International Journal of Critical Infrastructures, 2019, 15, 1. | 0.1 | 0 |
| 124 | Evaluation and comparison of geometry representation methods for structural topology optimization. , 2003, , 2387-2389. | | 0 |