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Evolutionary programming made faster

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| # | Paper | IF | Citations |
|------|---|------|-----------|
| 2277 | Real-coded genetic algorithm with average-bound crossover and wavelet mutation for network parameters learning. | | 2 |
| 2276 | New Techniques and Future Directions. 2000 , 241-264 | | 1 |
| 2275 | A hybrid handwritten word recognition using self-organizing feature map, discrete HMM, and evolutionary programming. 2000 , | | 3 |
| 2274 | Using multiple representations in evolutionary algorithms. | | 10 |
| 2273 | Evolutionary computation with extinction: experiments and analysis. | | 10 |
| 2272 | An improved genetic algorithm performance with benchmark functions. | | |
| 2271 | Specifying intrinsically adaptive architectures. | | 1 |
| 2270 | A novel hybrid evolutionary programming method for function optimization. | | 23 |
| 2269 | Genetic network programming - application to intelligent agents. | | 31 |
| 2268 | Lamarckian evolution in global optimization. | | 1 |
| 2267 | Running races with Fraser's recombination. | | 2 |
| 2266 | A new model of simulated evolutionary computation-convergence analysis and specifications. <i>IEEE Transactions on Evolutionary Computation</i> , 2001 , 5, 3-16 | 15.6 | 26 |
| 2265 | Dynamics of infinite populations evolving in a landscape of uni- and bimodal fitness functions. <i>IEEE Transactions on Evolutionary Computation</i> , 2001 , 5, 398-409 | 15.6 | 16 |
| 2264 | On interpretation of graffiti commands for eBooks using a neural network and an improved genetic algorithm. | | 2 |
| 2263 | Digital filter design using multiple Pareto fronts. | | 4 |
| 2262 | . | | 104 |
| 2261 | Evolutionary algorithms with adaptive Levy mutations. | | 2 |

| | | |
|------|--|----|
| 2260 | Multiple-vector self-adaptation in evolutionary algorithms. 2001 , 61, 155-62 | 12 |
| 2259 | Applying evolutionary programming to structural optimization of atomic clusters. 2001 , 142, 214-218 | 20 |
| 2258 | Tuning of the structure and parameters of neural network using an improved genetic algorithm. | 18 |
| 2257 | Simultaneous stabilization using evolutionary programming and uniform design technique. | |
| 2256 | Application of evolutionary computation to aircraft control law design. | 1 |
| 2255 | Evolutionary dynamics of evolutionary programming in noisy environment. | 1 |
| 2254 | Convergence in evolutionary programs with self-adaptation. 2001 , 9, 147-57 | 29 |
| 2253 | Neural network ensembles and their application to traffic flow prediction in telecommunications networks. | 8 |
| 2252 | Diversity-based selection pooling scheme in evolution strategies. 2001 , | 3 |
| 2251 | Evolutionary diffusion optimization. II. Performance assessment. | |
| 2250 | Learning of neural network parameters using a fuzzy genetic algorithm. | 3 |
| 2249 | Swarm directions embedded in fast evolutionary programming. | 2 |
| 2248 | Local convergence rate of evolutionary algorithm with combined mutation operator. | |
| 2247 | Graffiti commands interpretation for eBooks using a self-structured neural network and genetic algorithm. | |
| 2246 | An improved evolutionary programming for optimization. | 5 |
| 2245 | On interpretation of graffiti digits and commands for eBooks: neural fuzzy network and genetic algorithm approach. | 1 |
| 2244 | . | |
| 2243 | Monte Carlo modelling of the spectral reflectance of the human eye. 2002 , 47, 2863-77 | 46 |

| | | |
|------|--|-----|
| 2242 | ESOW: parallel/distributed programming on the Web. | |
| 2241 | A novel GA-based neural network for short-term load forecasting. | 4 |
| 2240 | A novel evolutionary neural learning algorithm. | 4 |
| 2239 | Design and stability analysis of fuzzy model based nonlinear controller for nonlinear systems using genetic algorithm. | 3 |
| 2238 | A cascaded genetic algorithm for efficient optimization and pattern matching. 2002 , 20, 265-277 | 11 |
| 2237 | Universal multi-objective function for optimising superplastic-damage constitutive equations. 2002 , 125-126, 199-205 | 55 |
| 2236 | A Cauchy-based evolution strategy for solving the reactive power dispatch problem. 2002 , 24, 277-283 | 17 |
| 2235 | Generalized evolutionary programming with Levy-type mutation. 2002 , 147, 729-732 | 19 |
| 2234 | Performance improvement of self-adaptive evolutionary methods with a dynamic lower bound. 2002 , 82, 55-63 | 3 |
| 2233 | A novel evolutionary algorithm for determining unified creep damage constitutive equations. 2002 , 44, 987-1002 | 77 |
| 2232 | A modified evolutionary programming for flow shop scheduling. 2003 , 22, 522-527 | 25 |
| 2231 | Approximations with evolutionary pursuit. 2003 , 83, 465-481 | 10 |
| 2230 | An evolutionary approach to the automatic generation of mathematical models. 2003 , 3, 1-21 | 2 |
| 2229 | Efficiency speed-up strategies for evolutionary computation: fundamentals and fast-GAs. 2003 , 142, 341-388 | 17 |
| 2228 | Fast evolutionary programming techniques for short-term hydrothermal scheduling. 2003 , 66, 97-103 | 66 |
| 2227 | Fast evolutionary programming techniques for short-term hydrothermal scheduling. 2003 , 18, 214-220 | 131 |
| 2226 | A novel genetic-algorithm-based neural network for short-term load forecasting. 2003 , 50, 793-799 | 78 |
| 2225 | Short-term electric load forecasting based on a neural fuzzy network. 2003 , 50, 1305-1316 | 56 |

| | | |
|------|---|----------|
| 2224 | CIRG@UP OptiBench: a statistically sound framework for benchmarking optimisation algorithms. | 1 |
| 2223 | Entropy-Boltzmann selection in the genetic algorithms. 2003 , 33, 138-49 | 24 |
| 2222 | Evolutionary programming techniques for economic load dispatch. <i>IEEE Transactions on Evolutionary Computation</i> , 2003 , 7, 83-94 | 15.6 734 |
| 2221 | Directed variation in evolution strategies. <i>IEEE Transactions on Evolutionary Computation</i> , 2003 , 7, 356-366 | 5.6 8 |
| 2220 | Elitism-based compact genetic algorithms. <i>IEEE Transactions on Evolutionary Computation</i> , 2003 , 7, 367-385 | 131 |
| 2219 | Tuning of the structure and parameters of a neural network using an improved genetic algorithm. 2003 , 14, 79-88 | 435 |
| 2218 | Training DHMMs of mine and clutter to minimize landmine detection errors. 2003 , 41, 1016-1024 | 17 |
| 2217 | Multidimensional mutations in evolutionary algorithms based on real-valued representation. 2003 , 34, 469-483 | 11 |
| 2216 | Optimization of an automotive generator using evolutionary programming. 2003 , | 2 |
| 2215 | Numerical optimization using organizational evolutionary algorithm. | 1 |
| 2214 | Constrained Evolutionary Optimization. 2003 , 87-113 | 10 |
| 2213 | Global optimization of continuous problems using stochastic genetic algorithm. | |
| 2212 | Adapting mutations in genetic algorithms using gene flow principles. | 1 |
| 2211 | Evolving market design in zero-intelligence trader markets. | 5 |
| 2210 | Evolving Evolutionary Algorithms Using Multi Expression Programming. 2003 , 651-658 | 37 |
| 2209 | Advance Noise Path Analysis, A Robust Engine Mount Optimization Tool. 2003 , | 6 |
| 2208 | Application of evolutionary programming to optimize the rotor pole geometry of a wound rotor synchronous machine. | 1 |
| 2207 | A single-point mutation evolutionary programming. 2004 , 90, 293-299 | 18 |

| | | | |
|------|--|------|-----|
| 2206 | Visualization of hypersurfaces and multivariable (objective) functions by partial global optimization. 2004 , 20, 665-681 | | 9 |
| 2205 | A particle swarm optimizer with passive congregation. 2004 , 78, 135-47 | | 263 |
| 2204 | Study on the behaviour and implementation of parent centric crossover within the generalized generation gap model. | | |
| 2203 | Nonlinear system modelling via optimal design of neural trees. 2004 , 14, 125-37 | | 67 |
| 2202 | PSO embedded evolutionary programming technique for nonconvex economic load dispatch. | | 0 |
| 2201 | Hybrid estimation of distribution algorithm for global optimization. 2004 , 21, 91-107 | | 67 |
| 2200 | Partially Evaluated Genetic Algorithm Based on Fuzzy c-Means Algorithm. 2004 , 440-449 | | 8 |
| 2199 | Constrained dynamic economic dispatch solution using particle swarm optimization. | | 25 |
| 2198 | Evolutionary programming using mutations based on the Levy probability distribution. <i>IEEE Transactions on Evolutionary Computation</i> , 2004 , 8, 1-13 | 15.6 | 326 |
| 2197 | Quantum-inspired evolutionary algorithms with a new termination criterion, H/sub /spl epsi// gate, and two-phase scheme. <i>IEEE Transactions on Evolutionary Computation</i> , 2004 , 8, 156-169 | 15.6 | 335 |
| 2196 | . <i>IEEE Transactions on Evolutionary Computation</i> , 2004 , 8, 456-470 | 15.6 | 100 |
| 2195 | Statistical exploratory analysis of genetic algorithms. <i>IEEE Transactions on Evolutionary Computation</i> , 2004 , 8, 405-421 | 15.6 | 65 |
| 2194 | A multiagent genetic algorithm for global numerical optimization. 2004 , 34, 1128-41 | | 255 |
| 2193 | Parallel evolutionary programming. | | 2 |
| 2192 | Isotropic symmetric /spl alpha/-stable mutations for evolutionary algorithms. | | 2 |
| 2191 | Landscape classification and problem specific reasoning for genetic algorithms. 2005 , 34, 1469-1495 | | 4 |
| 2190 | Adaptive random search with intensification and diversification combined with genetic algorithm. | | 3 |
| 2189 | Time-series forecasting using flexible neural tree model. 2005 , 174, 219-235 | | 196 |

| | | |
|------|--|---------|
| 2188 | Clonal Strategy Algorithm Based on the Immune Memory. 2005 , 20, 728-734 | 8 |
| 2187 | Improved evolutionary programming with dynamic mutation and metropolis criteria for multi-objective reactive power optimisation. 2005 , 152, 291 | 12 |
| 2186 | Efficient evolutionary strategy optimisation procedure to solve the nonconvex economic dispatch problem with generator constraints. 2005 , 152, 653 | 140 |
| 2185 | Adaptive representation for single objective optimization. 2005 , 9, 594-605 | 3 |
| 2184 | Interval Branch and Bound with Local Sampling for Constrained Global Optimization. 2005 , 33, 61-82 | 12 |
| 2183 | Directional self-learning of genetic algorithm. 2005 , | |
| 2182 | Evolving evolutionary algorithms using linear genetic programming. 2005 , 13, 387-410 | 80 |
| 2181 | A model for parallel evolutionary search. 2005 , | |
| 2180 | Toward co-evolutionary training of a multi-class classifier. | 4 |
| 2179 | Multiple bit encoding-based search algorithms. | 3 |
| 2178 | COMPARISON OF PARTICLE SWARM AND EVOLUTIONARY PROGRAMMING AS THE GLOBAL CONFORMATION OPTIMIZER OF CLUSTERS. 2005 , 16, 591-606 | 3 |
| 2177 | Gaussian particle swarm with jumps. | 43 |
| 2176 | Adaptive cluster covering and evolutionary approach: comparison, differences and similarities. | 2 |
| 2175 | On the complexity of overcoming gaps with isotropic mutations and elitist selection. | 1 |
| 2174 | Autonomy-oriented computing (AOC): formulating computational systems with autonomous components. 2005 , 35, 879-902 | 32 |
| 2173 | Observing the evolution of neural networks learning to play the game of Othello. <i>IEEE Transactions on Evolutionary Computation</i> , 2005 , 9, 240-251 | 15.6 31 |
| 2172 | Behavioral diversity, choices and noise in the iterated prisoner's dilemma. <i>IEEE Transactions on Evolutionary Computation</i> , 2005 , 9, 540-551 | 15.6 64 |
| 2171 | Clustering and learning Gaussian distribution for continuous optimization. 2005 , 35, 195-204 | 48 |

| | | |
|------|--|-----|
| 2170 | Improved differential evolution algorithms for handling noisy optimization problems. | 38 |
| 2169 | Improving particle swarm optimization with differentially perturbed velocity. 2005, | 51 |
| 2168 | Efficiency of parallel exponential evolutionary programming. | 2 |
| 2167 | Parallel Gray code optimization for high dimensional problems. | |
| 2166 | Contextual classifier combination by Markov random fields-Bayes formalism and evolutionary programming. Application: image classification enhancement. | |
| 2165 | A compact multiagent system based on autonomy oriented computing. | 4 |
| 2164 | Two improved differential evolution schemes for faster global search. 2005, | 195 |
| 2163 | Competitive approaches to PSO algorithms via new acceleration co-efficient variant with mutation operators. | 9 |
| 2162 | A framework for design optimization using surrogates. 2005, 37, 685-703 | 39 |
| 2161 | Clonal Selection Algorithms: A Comparative Case Study Using Effective Mutation Potentials. 2005, 13-28 | 67 |
| 2160 | Search biases in constrained evolutionary optimization. 2005, 35, 233-243 | 287 |
| 2159 | Cooperative Co-evolutionary Differential Evolution for Function Optimization. 2005, 1080-1088 | 76 |
| 2158 | Quantum-Inspired Evolutionary Algorithm for Numerical Optimization. | 21 |
| 2157 | Nonconvex Economic Dispatch with Heuristic Load Patterns Using Improved Fast Evolutionary Program. 2006, 34, 37-45 | 18 |
| 2156 | In Search of the Essential Particle Swarm. | 18 |
| 2155 | PSO-E: Particle Swarm with Exponential Distribution. | 26 |
| 2154 | Genetic Algorithm-Based Text Clustering Technique. 2006, 779-782 | 10 |
| 2153 | . 2006, | 5 |

| | | | |
|------|--|------|------|
| 2152 | Evolutionary Programming With Only Using Exponential Mutation. | | 8 |
| 2151 | . 2006, | | 3 |
| 2150 | The gregarious particle swarm optimizer (G-PSO). 2006, | | 40 |
| 2149 | Genetic Algorithm-based Text Clustering Technique: Automatic Evolution of Clusters with High Efficiency. 2006, | | 6 |
| 2148 | A New Mutation Operator Based on the T Probability Distribution in Evolutionary Programming. 2006, | | 4 |
| 2147 | Opposition-Based Differential Evolution for Optimization of Noisy Problems. | | 40 |
| 2146 | Evolutionary Programming: The-State-of-the-Art. 2006, | | |
| 2145 | Taboo evolutionary programming: a new method of global optimization. 2006, 462, 3613-3627 | | 17 |
| 2144 | Current developments and future directions of bio-inspired computation and implications for ecoinformatics. 2006, 1, 9-22 | | 9 |
| 2143 | Evolutionary Paradigms. 2006, 111-145 | | 1 |
| 2142 | . <i>IEEE Transactions on Evolutionary Computation</i> , 2006, 10, 187-198 | 15.6 | 26 |
| 2141 | Comprehensive learning particle swarm optimizer for global optimization of multimodal functions. <i>IEEE Transactions on Evolutionary Computation</i> , 2006, 10, 281-295 | 15.6 | 2355 |
| 2140 | A Dynamical Particle Swarm Algorithm with Dimension Mutation. 2006, | | 2 |
| 2139 | Evolution strategies with exclusion-based selection operators and a Fourier series auxiliary function. 2006, 174, 1080-1109 | | 5 |
| 2138 | Self-Adapting Control Parameters in Differential Evolution: A Comparative Study on Numerical Benchmark Problems. <i>IEEE Transactions on Evolutionary Computation</i> , 2006, 10, 646-657 | 15.6 | 2235 |
| 2137 | Multiobjective optimization of the dynamic operation of an industrial steam reformer using the jumping gene adaptations of simulated annealing. 2006, 1, 21-31 | | 16 |
| 2136 | Advances in Design and Application of Spiking Neural Networks. 2006, 11, 239-248 | | 54 |
| 2135 | Multi-class ROC analysis from a multi-objective optimisation perspective. 2006, 27, 918-927 | | 108 |

| | | |
|------|---|----|
| 2134 | An evolutionary programming algorithm for continuous global optimization. 2006 , 168, 354-369 | 16 |
| 2133 | Recent Advances in Evolutionary Computation. 2006 , 21, 1-18 | 64 |
| 2132 | Comparison and improvement of evolutionary programming techniques for power system optimal reactive power flow. 2006 , 153, 228 | 19 |
| 2131 | Evaluation of alternative evolutionary programming techniques for optimization of an automotive alternator. 2006 , 55, 933-942 | 10 |
| 2130 | Parameter estimation in stochastic mammogram model by heuristic optimization techniques. 2006 , 10, 685-95 | 17 |
| 2129 | Population-Based Extremal Optimization with Adaptive Levy Mutation for Constrained Optimization. 2006 , | 11 |
| 2128 | Fully Informed Differential Evolution. 2006 , | |
| 2127 | Improved fast evolutionary program for optimum design of power transformer. 2006 , 25, 995-1006 | 3 |
| 2126 | Real coded clonal selection algorithm for unconstrained global optimization using a hybrid inversely proportional hypermutation operator. 2006 , | 36 |
| 2125 | Probabilistic runtime analysis of $(1 + \lambda)$ ES using isotropic mutations. 2006 , | 8 |
| 2124 | An analysis of mutative sigma-self-adaptation on linear fitness functions. 2006 , 14, 255-75 | 29 |
| 2123 | Canonical form functions as a simple means for genetic programming to evolve human-interpretable functions. 2006 , | 8 |
| 2122 | Fitness function for finding out robust solutions on time-varying functions. 2006 , | 6 |
| 2121 | EVOLUTIONARY DESIGN OF SPIKING NEURAL NETWORKS. 2006 , 02, 237-253 | 15 |
| 2120 | ECONOMIC LOAD DISPATCH BASED ON HYBRID EVOLUTIONARY ALGORITHM AND FUZZY NUMBER RANKING METHOD. 2006 , 14, 199-209 | 1 |
| 2119 | A Multiresolutional Estimated Gradient Architecture for Global Optimization. | 3 |
| 2118 | Differential Evolution with Local Neighborhood. | 32 |
| 2117 | Directed Evolutionary Programming: Towards an Improved Performance of Evolutionary Programming. | 5 |

| | | |
|------|--|-----|
| 2116 | Supervised Neural Network Training with a Hybrid Global Optimization Technique. 2006, | 2 |
| 2115 | A Variable Neighborhood Immune Algorithm for Solving Complex Function Optimization Problems. 2006, | 0 |
| 2114 | Meta Heuristic Search Algorithms for Short-Term Hydrothermal Scheduling. 2006, | 11 |
| 2113 | Real-Coded Genetic Algorithm for Constrained Optimization Problem. 2006, | 1 |
| 2112 | ODE: A Fast and Robust Differential Evolution Based on Orthogonal Design. 2006, 709-718 | 8 |
| 2111 | Neutrality and gradualism: encouraging exploration and exploitation simultaneously with Binary Decision Diagrams. | 7 |
| 2110 | A note on the extended Rosenbrock function. 2006, 14, 119-26 | 218 |
| 2109 | A Hybrid Evolutionary Algorithm Based on EDAs and Clustering Analysis. 2006, | |
| 2108 | THE PARTICLE SWARM AS COLLABORATIVE SAMPLING OF THE SEARCH SPACE. 2007, 10, 191-213 | 14 |
| 2107 | Self-adaptive barebones differential evolution. 2007, | 1 |
| 2106 | Evolutionary Computations for Designing Game Rules of the COMMONS GAME. 2007, | 1 |
| 2105 | A New Particle Swarm Optimization with Quadratic Interpolation. 2007, | 14 |
| 2104 | A hybrid evolutionary programming algorithm for spread spectrum radar polyphase codes design. 2007, | 5 |
| 2103 | Clouding Algorithm: A Novel Multi-population Evolution Model and its Applying to Global Numerical Optimization. 2007, | 1 |
| 2102 | Examining the Feasibility of Metasearch Based on Results of Human Judgements on Thai Queries. 2007, | 1 |
| 2101 | Low Dimensional Simplex Evolution--A Hybrid Heuristic for Global Optimization. 2007, | 6 |
| 2100 | Particle Swarm Optimization Based on Pheromone Courtship Mode. 2007, | |
| 2099 | Forecasted Particle Swarm Optimization. 2007, | 1 |

| | | |
|------|--|-----|
| 2098 | Evolving evolutionary algorithms using evolutionary algorithms. 2007, | 8 |
| 2097 | Improving metabolic flux estimation via evolutionary optimization for convex solution space. 2007, 23, 1115-23 | 7 |
| 2096 | A clustering entropy-driven approach for exploring and exploiting noisy functions. 2007, | 3 |
| 2095 | Opposition-based particle swarm algorithm with cauchy mutation. 2007, | 47 |
| 2094 | A Particle Swarm Optimization Algorithm with Differential Evolution. 2007, | 50 |
| 2093 | Efficient particle swarm optimization: a termination condition based on the decision-making approach. 2007, | 19 |
| 2092 | Opposition-Based Differential Evolution (ODE) with Variable Jumping Rate. 2007, | 28 |
| 2091 | Self-adaptation of mutation distribution in evolutionary algorithms. 2007, | 4 |
| 2090 | Immune Clonal Selection Optimization Method with Mixed Mutation Strategies. 2007, | 4 |
| 2089 | Quasi-oppositional Differential Evolution. 2007, | 159 |
| 2088 | Neural Networks Applied for Cork Tiles Image Classification. 2007, | |
| 2087 | A hybrid genetic algorithm for unconstrained global numerical optimisation. 2007, 50, 1021-1029 | 1 |
| 2086 | A Memetic Differential Evolutionary Algorithm for High Dimensional Functions' Optimization. 2007, | 22 |
| 2085 | Social Impact Theory Based Optimizer. 2007, 635-644 | 6 |
| 2084 | A New PSO Algorithm with Crossover Operator for Global Optimization Problems. 2007, 215-222 | 21 |
| 2083 | A Hybrid Evolutionary Algorithm With Simplex Local Search. 2007, | 7 |
| 2082 | Operator Adaptation in Evolutionary Programming. 2007, 90-99 | 3 |
| 2081 | A kinetic-dynamic model for regulatory RNA processing. 2007, 127, 488-95 | 5 |

| | | | |
|------|--|------|----|
| 2080 | An organizational evolutionary algorithm for numerical optimization. 2007 , 37, 1052-64 | | 26 |
| 2079 | An Evolutionary Algorithm for Global Optimization Based on Level-Set Evolution and Latin Squares. <i>IEEE Transactions on Evolutionary Computation</i> , 2007 , 11, 579-595 | 15.6 | 86 |
| 2078 | Multiple Choices and Reputation in Multiagent Interactions. <i>IEEE Transactions on Evolutionary Computation</i> , 2007 , 11, 689-711 | 15.6 | 43 |
| 2077 | Quantum-Inspired Evolutionary Algorithm for Numerical Optimization. 2007 , 19-37 | | 15 |
| 2076 | Evolutionary Programming in Electromagnetic Optimization: A Review. 2007 , 55, 523-537 | | 89 |
| 2075 | A Memetic PSO Algorithm for Scalar Optimization Problems. 2007 , | | 10 |
| 2074 | Constrained non-linear optimization by modified particle swarm optimization. 2007 , | | 4 |
| 2073 | A Fast Particle Swarm Optimization Algorithm with Cauchy Mutation and Natural Selection Strategy. 2007 , 334-343 | | 27 |
| 2072 | Annealed Differential Evolution. 2007 , | | 18 |
| 2071 | Covariance matrix repairing in Gaussian based EDAs. 2007 , | | 4 |
| 2070 | Evolutionary Computation on Multitask Reinforcement Learning Problems. 2007 , | | 3 |
| 2069 | A bacterial swarming algorithm for global optimization. 2007 , | | 18 |
| 2068 | Evolutionary Programming Techniques for Designing M-Channel Cosine Modulated Filter Banks. 2007 , | | 3 |
| 2067 | Hybridisation of evolutionary programming and machine learning with k-nearest neighbor estimation. 2007 , | | |
| 2066 | New Particle Swarm Optimization Algorithm Incorporating Reproduction Operator for Solving Global Optimization Problems. 2007 , | | |
| 2065 | A new hybrid Particle Swarm Optimization with wavelet theory based mutation operation. 2007 , | | 17 |
| 2064 | An Efficient Method of Genetic Algorithm for Text Clustering Based on Singular Value Decomposition. 2007 , | | 1 |
| 2063 | A Hybrid Particle Swarm Algorithm with Cauchy Mutation. 2007 , | | 80 |

| | | |
|------|--|-----|
| 2062 | Automatic Design of Hierarchical Takagi-Sugeno Type Fuzzy Systems Using Evolutionary Algorithms. 2007 , 15, 385-397 | 101 |
| 2061 | New Solution for Password Key Transferring in Steganography Methods. 2007 , | 1 |
| 2060 | Evolutionary Programming with Operator Adaptation. 2007 , | 1 |
| 2059 | Utilization of evolutionary algorithms for making the environmental game much more exciting. 2007 , | |
| 2058 | JADE: Self-adaptive differential evolution with fast and reliable convergence performance. 2007 , | 22 |
| 2057 | . 2007 , 37, 766-778 | 25 |
| 2056 | An Enhanced Particle Swarm Optimization Algorithm for Multi-Modal Functions. 2007 , | 2 |
| 2055 | A Comprehensive Fuzzy-Based Framework for Cancer Microarray Data Gene Expression Analysis. 2007 , | 9 |
| 2054 | Differential evolution for high-dimensional function optimization. 2007 , | 45 |
| 2053 | Using traceless genetic programming for solving multi-objective optimization problems. 2007 , 19, 227-248 | 2 |
| 2052 | Adaptive control of acceleration coefficients for particle swarm optimization based on clustering analysis. 2007 , | 16 |
| 2051 | A Novel Opposition-Based Particle Swarm Optimization for Noisy Problems. 2007 , | 38 |
| 2050 | A novel and practicable on-chip adaptive lossless image compression scheme using intrinsic evolvable hardware. 2007 , 19, 281-295 | 7 |
| 2049 | Solving real-valued optimisation problems using cartesian genetic programming. 2007 , | 10 |
| 2048 | Evolutionary Design of Digital Filters With Application to Subband Coding and Data Transmission. 2007 , 55, 1193-1203 | 20 |
| 2047 | Synergy of PSO and Bacterial Foraging Optimization I A Comparative Study on Numerical Benchmarks. 2007 , 255-263 | 95 |
| 2046 | CENTRAL FORCE OPTIMIZATION: A NEW METAHEURISTIC WITH APPLICATIONS IN APPLIED ELECTROMAGNETICS. 2007 , 77, 425-491 | 266 |
| 2045 | Genetic evolutionary algorithm for static traffic grooming to SONET over WDM optical networks. 2007 , 30, 3392-3402 | 9 |

| | | |
|------|---|-----|
| 2044 | Multi-objective optimization of an industrial fluidized-bed catalytic cracking unit (FCCU) using two jumping gene adaptations of simulated annealing. 2007 , 31, 1496-1515 | 34 |
| 2043 | A novel population initialization method for accelerating evolutionary algorithms. 2007 , 53, 1605-1614 | 188 |
| 2042 | Applying self-adaptive evolutionary algorithms to two-dimensional packing problems using a four corners heuristic. 2007 , 183, 1230-1248 | 14 |
| 2041 | Evolutionary programming using a mixed mutation strategy. 2007 , 177, 312-327 | 76 |
| 2040 | Evolutionary programming based on non-uniform mutation. 2007 , 192, 1-11 | 70 |
| 2039 | An extended mind evolutionary computation model for optimizations. 2007 , 185, 1038-1049 | 26 |
| 2038 | Global optimization by an improved differential evolutionary algorithm. 2007 , 188, 669-680 | 32 |
| 2037 | Iteration particle swarm optimization for contract capacities selection of time-of-use rates industrial customers. 2007 , 48, 1120-1131 | 17 |
| 2036 | Hardware implementation of a novel genetic algorithm. 2007 , 71, 95-106 | 8 |
| 2035 | Affinity genetic algorithm. 2007 , 13, 133-150 | 5 |
| 2034 | An Improved Genetic Algorithm with Average-bound Crossover and Wavelet Mutation Operations. 2007 , 11, 7-31 | 78 |
| 2033 | Evolving Evolutionary Algorithms with Patterns. 2007 , 11, 503-518 | 10 |
| 2032 | Performance comparison of self-adaptive and adaptive differential evolution algorithms. 2007 , 11, 617-629 | 140 |
| 2031 | Combinations of estimation of distribution algorithms and other techniques. 2007 , 4, 273-280 | 23 |
| 2030 | Ant colony algorithm based on genetic method for continuous optimization problem. 2007 , 11, 597-602 | 3 |
| 2029 | Exploration/Exploitation Tradeoff with cell-shift and Heuristic Crossover for Evolutionary Algorithms. 2007 , 20, 66-74 | 3 |
| 2028 | Empirical analysis of self-adaptive differential evolution. 2007 , 183, 785-804 | 114 |
| 2027 | A dynamic clustering based differential evolution algorithm for global optimization. 2007 , 183, 56-73 | 54 |

| | | |
|------|--|-----|
| 2026 | A novel elitist multiobjective optimization algorithm: Multiobjective extremal optimization. 2008 , 188, 637-651 | 59 |
| 2025 | Improved and generalized learning strategies for dynamically fast and statistically robust evolutionary algorithms. 2008 , 21, 525-547 | 12 |
| 2024 | Dispersed particle swarm optimization. 2008 , 105, 231-235 | 51 |
| 2023 | Genetic evolutionary algorithm for optimal allocation of wavelength converters in WDM optical networks. 2008 , 16, 31-42 | 11 |
| 2022 | A new and improved version of particle swarm optimization algorithm with global best parameters. 2008 , 16, 331-357 | 43 |
| 2021 | Population size reduction for the differential evolution algorithm. 2008 , 29, 228-247 | 259 |
| 2020 | Multiobjective optimization using population-based extremal optimization. 2008 , 17, 101-109 | 25 |
| 2019 | An implicit unitless error and step-size control method in integrating unified viscoplastic/creep ODE-type constitutive equations. 2008 , 73, 1094-1112 | 24 |
| 2018 | A chaotic immune algorithm with fuzzy adaptive parameters. 2008 , 3, 695-705 | 5 |
| 2017 | Improved particle swarm algorithms for global optimization. 2008 , 196, 578-593 | 72 |
| 2016 | Global-best harmony search. 2008 , 198, 643-656 | 573 |
| 2015 | A pseudo parallel ant algorithm with an adaptive migration controller. 2008 , 205, 677-687 | 6 |
| 2014 | Particle swarm optimization with FUSS and RWS for high dimensional functions. 2008 , 205, 98-108 | 34 |
| 2013 | Enhancing the performance of differential evolution using orthogonal design method. 2008 , 206, 56-69 | 88 |
| 2012 | Cell size determination in WCDMA systems using an evolutionary programming approach. 2008 , 35, 3758-3768 | 5 |
| 2011 | Modified immune algorithm for job selection and operation allocation problem in flexible manufacturing systems. 2008 , 39, 219-232 | 51 |
| 2010 | Fast clonal algorithm. 2008 , 21, 106-128 | 50 |
| 2009 | A comparison of memetic algorithms for the spread spectrum radar polyphase codes design problem. 2008 , 21, 1233-1238 | 14 |

| | | |
|------|---|-----|
| 2008 | Multi-strategy ensemble particle swarm optimization for dynamic optimization. 2008 , 178, 3096-3109 | 183 |
| 2007 | Unified eigen analysis on multivariate Gaussian based estimation of distribution algorithms. 2008 , 178, 3000-3023 | 46 |
| 2006 | Large scale evolutionary optimization using cooperative coevolution. 2008 , 178, 2985-2999 | 634 |
| 2005 | Special Issue on Nature Inspired Problem-Solving 2008 , 178, 2983-2984 | 6 |
| 2004 | Opposition versus randomness in soft computing techniques. 2008 , 8, 906-918 | 211 |
| 2003 | A study on formulation of objective functions for determining material models. 2008 , 50, 193-204 | 77 |
| 2002 | Hybrid particle swarm optimization with wavelet mutation and its industrial applications. 2008 , 38, 743-63 | 162 |
| 2001 | Making a Difference to Differential Evolution. 2007 , 397-414 | 58 |
| 2000 | Self-adaptive differential evolution with neighborhood search. 2008 , | 59 |
| 1999 | Evolving artificial neural network ensembles. 2008 , 3, 31-42 | 81 |
| 1998 | A novel evolutionary algorithm for global numerical optimization with continuous variables. 2008 , 18, 345-351 | 5 |
| 1997 | Hybrid Metaheuristics for Global Optimization: A Comparative Study. 2008 , 298-305 | 2 |
| 1996 | An Improved Genetic Algorithm for Document Clustering with Semantic Similarity Measure. 2008 , | 3 |
| 1995 | Solving Complex Computational Problems Using Multiagents Implemented in Hardware. 2008 , 10, 54-63 | 3 |
| 1994 | A novel information spread evolutionary algorithm applied to function optimization. 2008 , | |
| 1993 | Evaluation of novel adaptive evolutionary programming on four constraint handling techniques. 2008 , | 11 |
| 1992 | Opposition-Based Differential Evolution. 2008 , 155-171 | 24 |
| 1991 | A Self-adaptive Evolutionary Programming Based on Optimum Search Direction. 2008 , 9-18 | 1 |

| | | | |
|------|--|------|------|
| 1990 | Opposition-Based Differential Evolution. <i>IEEE Transactions on Evolutionary Computation</i> , 2008 , 12, 64-79 | 15.6 | 1059 |
| 1989 | Accelerating Differential Evolution Using an Adaptive Local Search. <i>IEEE Transactions on Evolutionary Computation</i> , 2008 , 12, 107-125 | 15.6 | 465 |
| 1988 | Biogeography-Based Optimization. <i>IEEE Transactions on Evolutionary Computation</i> , 2008 , 12, 702-713 | 15.6 | 2388 |
| 1987 | Score-based resampling method for evolutionary algorithms. 2008 , 38, 1347-55 | | 1 |
| 1986 | Quantum-inspired immune clonal algorithm for global optimization. 2008 , 38, 1234-53 | | 92 |
| 1985 | On the improved performances of the particle swarm optimization algorithms with adaptive parameters, cross-over operators and root mean square (RMS) variants for computing optimal control of a class of hybrid systems. 2008 , 8, 324-336 | | 137 |
| 1984 | An improved Particle Swarm Optimization with adaptive jumps. 2008 , | | 4 |
| 1983 | Analysis the Impact of Genetic Operators in Evolution Strategies. 2008 , | | |
| 1982 | Novel Approach for the use of Small World Theory in Particle Swarm Optimization. 2008 , | | 4 |
| 1981 | Hybrid particle swarm optimizer with advance and retreat strategy and clonal mechanism for global numerical optimization. 2008 , | | 2 |
| 1980 | Simplified Intelligence Single Particle Optimization Based Neural Network for Digit Recognition. 2008 , | | 12 |
| 1979 | An Efficient Evolutionary Programming. 2008 , | | 1 |
| 1978 | A real-coded quantum-inspired evolutionary algorithm for global numerical optimization. 2008 , | | 5 |
| 1977 | Design of flexible neural trees using multi expression programming. 2008 , | | 1 |
| 1976 | Velocity self-adaptation made Particle Swarm Optimization faster. 2008 , | | 1 |
| 1975 | Low Dimensional Reproduction Strategy for Real-Coded Evolutionary Algorithms. 2008 , | | |
| 1974 | A Particle Swarm Optimization with Stagnation Detection and Dispersion. 2008 , | | 15 |
| 1973 | A novel particle swarm optimization algorithm with stochastic focusing search for real-parameter optimization. 2008 , | | 0 |

| | | |
|------|--|----|
| 1972 | Adaptive Computational Chemotaxis in Bacterial Foraging Algorithm. 2008, | 17 |
| 1971 | Iterated function system based adaptive Differential Evolution algorithm. 2008, | |
| 1970 | A differential evolutionary architecture for artificial neural trees with applications to medical data mining. 2008, | 1 |
| 1969 | Chaotic Time Series Prediction Using a Neuro-Fuzzy System with Time-Delay Coordinates. 2008, 20, 956-964 | 35 |
| 1968 | Evolution of Solitary and Group Transport Behaviors for Autonomous Robots Capable of Self-Assembling. 2008, 16, 285-305 | 36 |
| 1967 | Notes on the Distinction of Gaussian and Cauchy Mutations. 2008, | 8 |
| 1966 | Self-adaptive GA, quantitative semantic similarity measures and ontology-based text clustering. 2008, | |
| 1965 | . 2008, | |
| 1964 | Direction matters in high-dimensional optimisation. 2008, | 17 |
| 1963 | A Region Reproduction Algorithm for global numerical optimization. 2008, | |
| 1962 | Particle Swarm Optimization with a Novel Multi-Parent Crossover Operator. 2008, | 9 |
| 1961 | Evolving Artificial Neural Network Ensembles. 2008, 851-880 | 8 |
| 1960 | Application domain study of evolutionary algorithms in optimization problems. 2008, | 3 |
| 1959 | Adaptive Particle Swarm Optimization. 2008, 227-234 | 18 |
| 1958 | A Quick Scatter Search. 2008, | |
| 1957 | A Fast Bacterial Swarming Algorithm for high-dimensional function optimization. 2008, | 4 |
| 1956 | Convergent analysis on evolutionary algorithm with non-uniform mutation. 2008, | 8 |
| 1955 | Large Scale Global Optimization using Differential Evolution with self-adaptation and cooperative co-evolution. 2008, | 56 |

| | | |
|------|---|-----|
| 1954 | Model-based optimization revisited: Towards real-world processes. 2008, | 11 |
| 1953 | Particle Swarm Optimization and Differential Evolution Algorithms: Technical Analysis, Applications and Hybridization Perspectives. 2008, 1-38 | 161 |
| 1952 | A novel geometric center design method for genetic algorithm optimization. 2008, | |
| 1951 | Evolutionary programming with q-Gaussian mutation for dynamic optimization problems. 2008, | 3 |
| 1950 | NichingEDA: Utilizing the diversity inside a population of EDAs for continuous optimization. 2008, | 8 |
| 1949 | . 2008, | |
| 1948 | Using complicated, wide dynamic range driving to develop models of single neurons in single recording sessions. 2008, 99, 1871-83 | 27 |
| 1947 | Neighborhood sharing particle swarm optimization. 2009, | |
| 1946 | . 2009, | 26 |
| 1945 | Continuous non-revisiting genetic algorithm. 2009, | 7 |
| 1944 | Diversity enhanced Adaptive Evolutionary Programming for solving single objective constrained problems. 2009, | 5 |
| 1943 | . 2009, | 8 |
| 1942 | . 2009, | 1 |
| 1941 | Parallel ant colony for nonlinear function optimization with graphics hardware acceleration. 2009, | 14 |
| 1940 | A novel hybrid algorithm for global optimization based on EO and SFLA. 2009, | 1 |
| 1939 | Particle swarm optimization based on power mutation. 2009, | 8 |
| 1938 | A new modified PSO based on black stork foraging process. 2009, | 1 |
| 1937 | Particle Swarm with graphics hardware acceleration and local pattern search on bound constrained problems. 2009, | 9 |

| | | |
|------|--|----|
| 1936 | A Hybrid Particle Swarm Optimization for Numerical Optimization. 2009, | 3 |
| 1935 | Optimization based on dialectics. 2009, | 2 |
| 1934 | A statistical study of the Differential Evolution based on continuous generation model. 2009, | 7 |
| 1933 | A hybrid particle swarm optimizer. 2009, | |
| 1932 | Multi-start JADE with knowledge transfer for numerical optimization. 2009, | 10 |
| 1931 | A Scalability Test for Accelerated DE Using Generalized Opposition-Based Learning. 2009, | 22 |
| 1930 | An adaptive learning particle swarm optimizer for function optimization. 2009, | 25 |
| 1929 | A novel grid pattern matching technique with hybrid genetic algorithm. 2009, | |
| 1928 | A new Differential Evolution with wavelet theory based mutation operation. 2009, | 6 |
| 1927 | Accurate estimation of ICA weight matrix by implicit constraint imposition using Lie group. 2009, 20, 1565-80 | 2 |
| 1926 | Alignment particle swarm optimization. 2009, | 3 |
| 1925 | FAST CLUSTERING-BASED KERNEL FOLEYBAMMON TRANSFORM. 2009, 07, 75-87 | 4 |
| 1924 | Particle swarm optimization using adaptive local search. 2009, | 1 |
| 1923 | Particle Swarm Optimization Algorithm with Adaptive Threshold Mutation. 2009, | 5 |
| 1922 | A stochastic method for controlling the scaling parameters of Cauchy mutation in fast evolutionary programming. 2009, | |
| 1921 | An evolutionary space search algorithm (ESSA) for global numerical optimization. 2009, | |
| 1920 | Varying Number of Difference Vectors in Differential Evolution. 2009, | 7 |
| 1919 | A Harmony Search Algorithm with Ensemble of Parameter Sets. 2009, | 13 |

| | | |
|------|---|----------|
| 1918 | GA tuned differential evolution for economic load dispatch with non-convex cost function. 2009 , | 2 |
| 1917 | Multi-walk Parallel Pattern Search Approach on a GPU Computing Platform. 2009 , 984-993 | 1 |
| 1916 | ONE IMPROVED AGENT GENETIC ALGORITHM [RING-LIKE AGENT GENETIC ALGORITHM FOR GLOBAL NUMERICAL OPTIMIZATION. 2009 , 26, 479-502 | 2 |
| 1915 | A study of parallel evolution strategy. 2009 , | 8 |
| 1914 | Hessian approximation algorithms for hybrid optimization methods. 2009 , 41, 609-633 | 10 |
| 1913 | SRDE. 2009 , | 6 |
| 1912 | Equilibrium species counts and migration model tradeoffs for biogeography-based optimization. 2009 , | 23 |
| 1911 | A clustering-based adaptive parameter control method for continuous ant colony optimization. 2009 , | 6 |
| 1910 | An Enhanced Opposition-Based Particle Swarm Optimization. 2009 , | 13 |
| 1909 | A New Individual-Decision Cognitive Learning Factor Selection Strategy. 2009 , | |
| 1908 | A New Population Initialization Method Based on Space Transformation Search. 2009 , | 14 |
| 1907 | Probability Diffused Particle Swarm Optimization. 2009 , | |
| 1906 | Hybrid differential evolution based on fuzzy C-means clustering. 2009 , | 1 |
| 1905 | Space transformation search. 2009 , | 53 |
| 1904 | An Improved Self-adaptive Control Parameter of Differential Evolution for Global Optimization. 2009 , 215-224 | 18 |
| 1903 | A dynamic chain-like agent genetic algorithm for global numerical optimization and feature selection. 2009 , 72, 1214-1228 | 26 |
| 1902 | A Genetic Algorithm That Adaptively Mutates and Never Revisits. <i>IEEE Transactions on Evolutionary Computation</i> , 2009 , 13, 454-472 | 15.6 111 |
| 1901 | Differential Evolution Using a Neighborhood-Based Mutation Operator. <i>IEEE Transactions on Evolutionary Computation</i> , 2009 , 13, 526-553 | 15.6 812 |

| | | | |
|------|---|------|------|
| 1900 | A Probabilistic Memetic Framework. <i>IEEE Transactions on Evolutionary Computation</i> , 2009 , 13, 604-623 | 15.6 | 178 |
| 1899 | Preserving and Exploiting Genetic Diversity in Evolutionary Programming Algorithms. <i>IEEE Transactions on Evolutionary Computation</i> , 2009 , 13, 661-673 | 15.6 | 71 |
| 1898 | Differential Evolution Algorithm With Strategy Adaptation for Global Numerical Optimization. <i>IEEE Transactions on Evolutionary Computation</i> , 2009 , 13, 398-417 | 15.6 | 2435 |
| 1897 | Group Search Optimizer: An Optimization Algorithm Inspired by Animal Searching Behavior. <i>IEEE Transactions on Evolutionary Computation</i> , 2009 , 13, 973-990 | 15.6 | 478 |
| 1896 | JADE: Adaptive Differential Evolution With Optional External Archive. <i>IEEE Transactions on Evolutionary Computation</i> , 2009 , 13, 945-958 | 15.6 | 2130 |
| 1895 | . <i>IEEE Transactions on Evolutionary Computation</i> , 2009 , 13, 919-941 | 15.6 | 166 |
| 1894 | Memetic Algorithm With Extended Neighborhood Search for Capacitated Arc Routing Problems. <i>IEEE Transactions on Evolutionary Computation</i> , 2009 , 13, 1151-1166 | 15.6 | 138 |
| 1893 | Self-Organizing Migrating Strategies Applied to Reliability-Redundancy Optimization of Systems. 2009 , 58, 501-510 | | 11 |
| 1892 | An Immune Self-adaptive Differential Evolution Algorithm with Application to Estimate Kinetic Parameters for Homogeneous Mercury Oxidation. 2009 , 17, 232-240 | | 20 |
| 1891 | Bare bones differential evolution. 2009 , 196, 128-139 | | 156 |
| 1890 | Improved orthogonal array based simulated annealing for design optimization. 2009 , 36, 7379-7389 | | 19 |
| 1889 | System identification: DNA computing approach. 2009 , 48, 254-63 | | 7 |
| 1888 | A fast clonal selection algorithm for feature selection in hyperspectral imagery. 2009 , 12, 172-181 | | 6 |
| 1887 | Central force optimization: A new deterministic gradient-like optimization metaheuristic. 2009 , 46, 25-51 | | 57 |
| 1886 | Genetic algorithm for text clustering using ontology and evaluating the validity of various semantic similarity measures. 2009 , 36, 9095-9104 | | 66 |
| 1885 | Potential offspring production strategies: An improved genetic algorithm for global numerical optimization. 2009 , 36, 11088-11098 | | 12 |
| 1884 | Research of multi-population agent genetic algorithm for feature selection. 2009 , 36, 11570-11581 | | 45 |
| 1883 | A fuzzy clustering algorithm based on evolutionary programming. 2009 , 36, 11792-11800 | | 7 |

| | | |
|------|---|------|
| 1882 | Modified differential evolution based fuzzy clustering for pixel classification in remote sensing imagery. 2009 , 42, 2135-2149 | 133 |
| 1881 | Self-organizing migration algorithm applied to machining allocation of clutch assembly. 2009 , 80, 427-435 | 25 |
| 1880 | An efficient particle swarm approach for mixed-integer programming in reliability redundancy optimization applications. 2009 , 94, 830-837 | 151 |
| 1879 | Curve fitting using heuristics and bio-inspired optimization algorithms for experimental data processing in chemistry. 2009 , 96, 34-42 | 9 |
| 1878 | Spatial regression analysis of NOx and O3 concentrations in Madrid urban area using Radial Basis Function networks. 2009 , 99, 79-90 | 5 |
| 1877 | A survey of repair methods used as constraint handling techniques in evolutionary algorithms. 2009 , 3, 175-192 | 65 |
| 1876 | An effective multiagent evolutionary algorithm integrating a novel roulette inversion operator for engineering optimization. 2009 , 211, 392-416 | 28 |
| 1875 | HPBILc: A histogram-based EDA for continuous optimization. 2009 , 215, 973-982 | 7 |
| 1874 | Global optimization based on novel heuristics, low-discrepancy sequences and genetic algorithms. 2009 , 196, 413-422 | 40 |
| 1873 | GSA: A Gravitational Search Algorithm. 2009 , 179, 2232-2248 | 3731 |
| 1872 | Genetic algorithm for text clustering based on latent semantic indexing. 2009 , 57, 1901-1907 | 40 |
| 1871 | DESA: a new hybrid global optimization method and its application to analog integrated circuit sizing. 2009 , 44, 53-77 | 12 |
| 1870 | Financial contagion: evolutionary optimization of a multinational agent-based model. 2009 , 16, 111-125 | 9 |
| 1869 | A Novel Clonal Selection Algorithm for Global Optimization Problems. 2009 , | 2 |
| 1868 | Evolutionary Algorithms in Unreliable Memory. 2009 , | |
| 1867 | A Simple and Fast Particle Swarm Optimization and Its Application on Portfolio Selection. 2009 , | 5 |
| 1866 | Trusted Evolutionary Algorithm for Global Optimization. 2009 , | |
| 1865 | Comparison and Analysis of the Selection Mechanism in the Artificial Bee Colony Algorithm. 2009 , | 47 |

| | | |
|------|---|----|
| 1864 | Optimization of multimodal models in mechanical design by a Niche Hybrid Genetic Algorithm. 2009, | 1 |
| 1863 | Bare Bones Particle Swarm Optimization with Gaussian or Cauchy jumps. 2009, | 46 |
| 1862 | A Genetic Algorithm that Incorporates an Adaptive Mutation Based on an Evolutionary Model. 2009 , | 9 |
| 1861 | Biologically inspired optimization: a review. 2009, 31, 495-515 | 30 |
| 1860 | The Embodied Communication Prior: A characterization of general intelligence in the context of Embodied social interaction. 2009, | 2 |
| 1859 | A novel adaptive differential evolution algorithm with application to estimate kinetic parameters of oxidation in supercritical water. 2009, 41, 1051-1062 | 12 |
| 1858 | Optimal PID controller for high-speed rail pantograph system with notch filter. 2009, | 2 |
| 1857 | MHC-inspired Antibody Clone Algorithm for Multimodal Function Optimization. 2009, | 1 |
| 1856 | PSO-DV and Bacterial Foraging Optimization Based Dynamic Economic Dispatch with Non-smooth Cost Functions. 2009, | 3 |
| 1855 | Stochastic velocity threshold inspired by evolutionary programming. 2009, | 1 |
| 1854 | A Hybrid Particle Swarm Optimization Algorithm for Multimodal Function Optimization. 2009, | |
| 1853 | Dynamic economic dispatch solution using fast evolutionary programming with swarm direction. 2009, | 8 |
| 1852 | A Hybrid Differential Evolution for Numerical Optimization. 2009, | 2 |
| 1851 | Modified BBO and calculation of resonant frequency of circular microstrip antenna. 2009, | 11 |
| 1850 | IWO with Increased Deviation and Stochastic Selection (IWO-ID-SS) for global optimization of noisy fitness functions. 2009, | 2 |
| 1849 | Adaptive non-uniform, hyper-elitist evolutionary method for the optimization of plasmonic biosensors. 2009, | 5 |
| 1848 | Bacterial foraging optimization algorithm with particle swarm optimization strategy for global numerical optimization. 2009, | 20 |
| 1847 | Differential Evolution with Self-adaptation and Local Search for Constrained Multiobjective Optimization. 2009, | 44 |

| | | |
|------|---|------|
| 1846 | Particle Swarm Optimization with Adaptive Mutation. 2009 , | 22 |
| 1845 | Efficient population utilization strategy for particle swarm optimizer. 2009 , 39, 444-56 | 115 |
| 1844 | Adaptive particle swarm optimization. 2009 , 39, 1362-81 | 1163 |
| 1843 | . 2009 , 28, 1162-1175 | 39 |
| 1842 | . 2009 , 28, 1281-1294 | 31 |
| 1841 | Design of Sierpinski gasket fractal microstrip antenna using real coded genetic algorithm. 2009 , 3, 1133 | 23 |
| 1840 | Investigation of memory-based multi-objective optimization evolutionary algorithm in dynamic environment. 2009 , | 31 |
| 1839 | Intelligent Biogeography-Based Optimization for discrete variables. 2009 , | 6 |
| 1838 | Oppositional biogeography-based optimization. 2009 , | 133 |
| 1837 | Dynamic Population-Based Particle Swarm Optimization Combined with Crossover Operator. 2009 , | 2 |
| 1836 | A Novel Clone Selection Algorithm for High-Dimensional Global Optimization Problems. 2009 , | 0 |
| 1835 | Variance priority based cooperative co-evolution differential evolution for large scale global optimization. 2009 , | 13 |
| 1834 | Heuristic search strategy of evolutionary programming. 2010 , | |
| 1833 | Notice of Retraction: Particle Swarm Optimization Based on an Improved Learning Strategy. 2010 , | |
| 1832 | Some improvement to the mutation donor of differential evolution. 2010 , 27, 225-242 | 4 |
| 1831 | A New Clonal Selection Immune Algorithm with Perturbation Guiding Search and Non-uniform Hypermutation. 2010 , 3, 1-17 | |
| 1830 | An Adaptive Niching EDA with Balance Searching Based on Clustering Analysis. 2010 , E93-A, 1792-1799 | |
| 1829 | Optimization Techniques for Planar Antennas. 2010 , 79-111 | |

| | | | |
|------|--|------|-----|
| 1828 | A novel coding method for genetic algorithms based on redundant binary numbers. 2010 , 15, 306-308 | | 1 |
| 1827 | Latent semantic analysis for vector space expansion and fuzzy logic-based genetic clustering. 2010 , 22, 347-369 | | 11 |
| 1826 | Multi-population co-genetic algorithm with double chain-like agents structure for parallel global numerical optimization. 2010 , 32, 292-310 | | 18 |
| 1825 | DE/BBO: a hybrid differential evolution with biogeography-based optimization for global numerical optimization. 2010 , 15, 645-665 | | 257 |
| 1824 | Multi-strategy ensemble evolutionary algorithm for dynamic multi-objective optimization. 2010 , 2, 3-24 | | 57 |
| 1823 | An immune memory clonal algorithm for numerical and combinatorial optimization. 2010 , 4, 536-559 | | 3 |
| 1822 | A fast memoryless interval-based algorithm for global optimization. 2010 , 47, 247-271 | | 3 |
| 1821 | Discrete and continuous optimization based on multi-swarm coevolution. 2010 , 9, 659-682 | | 26 |
| 1820 | BGSA: binary gravitational search algorithm. 2010 , 9, 727-745 | | 473 |
| 1819 | Ensemble of Constraint Handling Techniques. <i>IEEE Transactions on Evolutionary Computation</i> , 2010 , 14, 561-579 | 15.6 | 313 |
| 1818 | Population-Based Algorithm Portfolios for Numerical Optimization. <i>IEEE Transactions on Evolutionary Computation</i> , 2010 , 14, 782-800 | 15.6 | 131 |
| 1817 | A Dual-Population Genetic Algorithm for Adaptive Diversity Control. <i>IEEE Transactions on Evolutionary Computation</i> , 2010 , 14, 865-884 | 15.6 | 56 |
| 1816 | Novel deseasonalizing models for improving the prediction of total ozone in column using evolutionary programming and neural networks. 2010 , 72, 1333-1340 | | 1 |
| 1815 | Design and optimization of phase plates for shaping partially coherent beams by adaptive genetic algorithms. 2010 , 42, 317-321 | | 3 |
| 1814 | Uncovering delayed patterns in noisy and irregularly sampled time series: An astronomy application. 2010 , 43, 1165-1179 | | 11 |
| 1813 | Convergence guarantees for generalized adaptive stochastic search methods for continuous global optimization. 2010 , 207, 1187-1202 | | 13 |
| 1812 | Analysis of the reproduction operator in an artificial bacterial foraging system. 2010 , 215, 3343-3355 | | 14 |
| 1811 | A Single Component Mutation Evolutionary Programming. 2010 , 215, 3759-3768 | | 3 |

| | | |
|------|---|-----|
| 1810 | A self-adaptive global best harmony search algorithm for continuous optimization problems. 2010 , 216, 830-848 | 287 |
| 1809 | A real-coded biogeography-based optimization with mutation. 2010 , 216, 2749-2758 | 123 |
| 1808 | A novel particle swarm optimizer hybridized with extremal optimization. 2010 , 10, 367-373 | 99 |
| 1807 | Two coding based adaptive parallel co-genetic algorithm with double agents structure. 2010 , 23, 526-542 | 10 |
| 1806 | Improved performance of PSO with self-adaptive parameters for computing the optimal design of Water Supply Systems. 2010 , 23, 727-735 | 53 |
| 1805 | Ensemble strategies with adaptive evolutionary programming. 2010 , 180, 1571-1581 | 91 |
| 1804 | An analysis of the equilibrium of migration models for biogeography-based optimization. 2010 , 180, 3444-3464 | 166 |
| 1803 | Power Mutation Embedded Modified PSO for Global Optimization Problems. 2010 , 139-146 | 2 |
| 1802 | UDE: Differential Evolution with Uniform Design. 2010 , | 2 |
| 1801 | The utility of scale factor adaptation in differential evolution. 2010 , | 3 |
| 1800 | . 2010 , | |
| 1799 | A Hybrid Differential Evolution Algorithm for Solving Function Optimization. 2010 , 439-440, 315-320 | |
| 1798 | A Hybrid Particle Swarm Optimization Algorithm Based on Space Transformation Search and a Modified Velocity Model. 2010 , 522-527 | 9 |
| 1797 | Average Gene Method for increasing the convergence speed of discrete genetic algorithms. 2010 , | 1 |
| 1796 | A mixed strategy for Evolutionary Programming based on local fitness landscape. 2010 , | 12 |
| 1795 | A local-best harmony search algorithm with dynamic subpopulations. 2010 , 42, 101-117 | 65 |
| 1794 | Particle swarm optimization based on an improved diversity mechanism. 2010 , | |
| 1793 | Experimental study on PSO diversity. 2010 , | 7 |

| | | |
|------|---|----|
| 1792 | Continuous non-revisiting genetic algorithm with random search space re-partitioning and one-gene-flip mutation. 2010, | 3 |
| 1791 | Self-adaptive particle swarm optimization algorithm for global optimization. 2010, | 2 |
| 1790 | Modified particle swarm optimization for unconstrained optimization. 2010, | 1 |
| 1789 | A new self-adaptive approach for evolutionary multiobjective optimization. 2010, | 1 |
| 1788 | Evolving cognitive and social experience in Particle Swarm Optimization through Differential Evolution. 2010, | 14 |
| 1787 | Modifications of particle swarm optimization for global optimization. 2010, | 1 |
| 1786 | Evolutionary Programming using a mixed strategy with incomplete information. 2010, | |
| 1785 | A Hybrid Variants Particle Swarm Optimization Algorithm. 2010, | |
| 1784 | A Improved Evolutionary Programming for Global Optimization. 2010, | |
| 1783 | Design evaluation by neural trees. 2010, | |
| 1782 | A novel differential evolution algorithm for global search and sensor selection. 2010, | 1 |
| 1781 | An advanced Quantum-behaved Particle Swarm Optimization algorithm utilizing cooperative strategy. 2010, | 1 |
| 1780 | High-dimensional Function Optimisation by Reinforcement Learning. 2010, | 5 |
| 1779 | MHC-INSPIRED ANTIBODY CLONE ALGORITHM. 2010, 07, 299-318 | 3 |
| 1778 | Advanced Evolutionary Algorithms. 2010, 39-132 | |
| 1777 | A UNIFORM ENHANCEMENT APPROACH FOR OPTIMIZATION ALGORITHMS: SMOOTHING FUNCTION METHOD. 2010, 24, 1111-1131 | 4 |
| 1776 | Diversity-guided bilateral objective function and its application to optimal planning of cogeneration. 2010, | |
| 1775 | Are long jumps of Cauchy mutations effective in fast evolutionary programming?. 2010, | |

| | | |
|------|--|----|
| 1774 | A New Differential Evolution with self-terminating ability using fuzzy control and k-nearest neighbors. 2010, | |
| 1773 | . 2010, | 4 |
| 1772 | Quantum-Inspired Evolutionary Algorithms applied to numerical optimization problems. 2010, | 8 |
| 1771 | . 2010, | 1 |
| 1770 | JEAF: A Java Evolutionary Algorithm Framework. 2010, | 16 |
| 1769 | Fighting noise with noise: DE with individuals shaking to tackle noisy problems. 2010, | |
| 1768 | An adaptive niching EDA based on clustering analysis. 2010, | 6 |
| 1767 | Particle swarm optimizer with adaptive tabu and mutation. 2010, 5, 1-27 | 11 |
| 1766 | Self-adaptive differential evolution based on PSO learning strategy. 2010, | 22 |
| 1765 | Adaptive strategy selection in differential evolution. 2010, | 30 |
| 1764 | Virtual Enterprise Risk Management Using Artificial Intelligence. 2010, 2010, 1-20 | 6 |
| 1763 | Improved particle swarm algorithm with a novel local search. 2010, | |
| 1762 | Estimating the runtime of evolutionary programming based on uniform mutation. 2010, | |
| 1761 | Chaotic Clonal Selection Algorithm for function optimization. 2010, | 0 |
| 1760 | On the hybridization of particle swarm optimization. 2010, | 1 |
| 1759 | A new hybrid evolutionary algorithm with quasi-simplex technique. 2010, | |
| 1758 | A hierarchical differential evolution algorithm with multiple sub-population parallel search mechanism. 2010, | |
| 1757 | Evaluations of mutations in evolutionary programming. 2010, | 0 |

| | | |
|------|---|-----|
| 1756 | Novel immune optimization based on lifespan mechanism for global numerical optimization problems. 2010, | |
| 1755 | Differential Evolution with Neighborhood Search. 2010, | |
| 1754 | A new coevolutionary programming using operators of single-point and particle swarm. 2010, | |
| 1753 | Evolving solutions in evolutionary optimization based on a dynamic system model. 2010, | |
| 1752 | AOAB. 2010, | |
| 1751 | Genetic algorithm with multi-colony dynamic reproduction. 2010, | |
| 1750 | A novel differential evolution using a mixed mutation strategy. 2010, | |
| 1749 | Opposition based PSO and mutation operators. 2010, | 10 |
| 1748 | Robust subpixel image registration of different-exposed images. 2010, 46, 1270 | 1 |
| 1747 | Multi-Agent Evolutionary Model for Global Numerical Optimization. 2010, 13-48 | |
| 1746 | A new hybrid PSOGSA algorithm for function optimization. 2010, | 269 |
| 1745 | A Directed Mutation Operator for Real Coded Genetic Algorithms. 2010, 491-500 | 7 |
| 1744 | NW-based Particle Swarm Optimization. 2010, | |
| 1743 | Stochastic Optimal Power Flow using a Paired-Bacteria Optimizer. 2010, | 6 |
| 1742 | Operation Condition Optimization of p-Xylene Oxidation Reaction Process Based on a Fuzzy Adaptive Immune Algorithm. 2010, 49, 5683-5693 | 10 |
| 1741 | Pump scheme for gain-flattened Raman fiber amplifiers using improved particle swarm optimization and modified shooting algorithm. 2010, 18, 11033-45 | 15 |
| 1740 | Fixed-point digital IIR filter design using multi-objective optimization evolutionary algorithm. 2010, | 3 |
| 1739 | Quantum-Inspired Particle Swarm Optimization for Valve-Point Economic Load Dispatch. 2010, 25, 215-222 | 177 |

| | | |
|------|--|-----|
| 1738 | Enhanced Biogeography-Based Optimization using modified clear duplicate operator. 2010, | 4 |
| 1737 | Coupled simulated annealing. 2010, 40, 320-35 | 227 |
| 1736 | SamACO: variable sampling ant colony optimization algorithm for continuous optimization. 2010, 40, 1555-66 | 50 |
| 1735 | Wind Driven Optimization (WDO): A novel nature-inspired optimization algorithm and its application to electromagnetics. 2010, | 72 |
| 1734 | Optimal solution for non-convex combined heat and power dispatch problems using Differential Evolution. 2010, | 3 |
| 1733 | A New Strategy to Improve Particle Swarm Optimization Exploration Ability. 2010, | 6 |
| 1732 | Real-Valued Multimodal Fitness Landscape Characterization for Evolution. 2010, 567-574 | 11 |
| 1731 | Multi objective evolutionary programming to solve environmental economic dispatch problem. 2010, | 6 |
| 1730 | Serial configuration of genetic algorithm and particle swarm optimization to increase the convergence speed and accuracy. 2010, | 4 |
| 1729 | A linear map-based mutation scheme for real coded genetic algorithms. 2010, | 1 |
| 1728 | Hybrid Bacteria Foraging-DE based algorithm for Economic Load Dispatch with non-convex loads. 2010, | 2 |
| 1727 | A smoothing evolutionary algorithm based on square search and filled function for global optimization. 2010, | |
| 1726 | Comparing lbest PSO niching algorithms using different position update rules. 2010, | 11 |
| 1725 | An Enhanced Particle Swarm Optimization Algorithm with Passive Congregation. 2010, | 1 |
| 1724 | Differential Evolution enhanced by neighborhood search. 2010, | 5 |
| 1723 | Solving nonlinear optimization problems by Differential Evolution with a rotation-invariant crossover operation using Gram-Schmidt process. 2010, | 9 |
| 1722 | A Smoothing Evolutionary Algorithm with Circle Search for Global Optimization. 2010, | 3 |
| 1721 | Supervisory evolutionary optimization strategy for adaptive maintenance schedules. 2011, | 1 |

| | | |
|------|--|----|
| 1720 | Group-decided particle swarm optimization. 2011, | |
| 1719 | Intelligence decision systems in enterprise information management. 2011, 24, 360-379 | 32 |
| 1718 | Economic load dispatch using intelligent optimization with fuzzy control. 2011, | 1 |
| 1717 | Intelligent controller design for PM DC motor position control using evolutionary programming. 2011, | 1 |
| 1716 | Diversity control in particle swarm optimization. 2011, | 32 |
| 1715 | An EP algorithm for learning highly interpretable classifiers. 2011, | 5 |
| 1714 | DMEA [An algorithm that combines differential mutation with the fitness proportionate selection. 2011, | 5 |
| 1713 | . 2011, | 2 |
| 1712 | Improved differential evolution algorithm with adaptive mutation and control parameters. 2011, | 1 |
| 1711 | Spiking DNA neural trees with applications to conceptual design. 2011, | |
| 1710 | A Modified Estimation of Distribution Algorithm for Numeric Optimization. 2011, | |
| 1709 | An evolutionary performance-enhanced PSO approach by using a BP neural-learning-based PID controller. 2011, 23, 45-63 | 12 |
| 1708 | . 2011, | 3 |
| 1707 | Multi-objective immune algorithm with dynamic memetic Cauchy mutation. 2011, | 0 |
| 1706 | A differential covariance matrix adaptation evolutionary algorithm for global optimization. 2011, | 8 |
| 1705 | Evaluation of Two-Stage Ensemble Evolutionary Algorithm for Numerical Optimization. 2011, 539-548 | |
| 1704 | Opposition-Based Learning in Compact Differential Evolution. 2011, 264-273 | 10 |
| 1703 | Integral-Controlled Particle Swarm Optimization. 2011, 175-199 | |

1702 Parallel exploitation in estimated basins of attraction. **2011**,

1701 An improved artificial bee colony algorithm. **2011**,

0

1700 Advanced Differential Evolution algorithm for global numerical optimization. **2011**,

3

1699 Symbolic Density Models of One-in-a-Billion Statistical Tails via Importance Sampling and Genetic Programming. **2011**, 161-173

1698 A novel hybrid biogeography-based optimization with differential mutation. **2011**,

1

1697 Memetic algorithm and its application to function optimization and noise removal. **2011**,

0

1696 Adaptive evolutionary artificial neural networks for pattern classification. **2011**, 22, 1823-36

62

1695 Exploratory power of the harmony search algorithm: analysis and improvements for global numerical optimization. **2011**, 41, 89-106

177

1694 Enhanced differential evolution with adaptive strategies for numerical optimization. **2011**, 41, 397-413

162

1693 A new particle swarm algorithm and its globally convergent modifications. **2011**, 41, 1334-51

54

1692 Recurring two-stage evolutionary programming: a novel approach for numeric optimization. **2011**, 41, 1352-65

11

1691 Co-Evolutionary Algorithms Based on Mixed Strategy. **2011**, 4, 17-30

1690 Convergence Time Analysis of Particle Swarm Optimization Based on Particle Interaction. **2011**, 2011, 1-7

6

1689 Operation Allocation in Flexible Manufacturing System Using Immune Algorithm. **2011**, 95-121

1688 A New Framework with FDPP-LX Crossover for Real-Coded Genetic Algorithm. **2011**, E94-A, 1417-1425

4

1687 Disruption: A new operator in gravitational search algorithm. **2011**, 18, 539-548

135

1686 An Evolutionary Algorithm That Makes Decision Based on the Entire Previous Search History. *IEEE Transactions on Evolutionary Computation*, **2011**, 15, 741-769

15.6 45

1685 Orthogonal Learning Particle Swarm Optimization. *IEEE Transactions on Evolutionary Computation*, **2011**, 15, 832-847

15.6 491

| | | | |
|------|---|------|-----|
| 1684 | Compact Differential Evolution. <i>IEEE Transactions on Evolutionary Computation</i> , 2011 , 15, 32-54 | 15.6 | 191 |
| 1683 | Enhancing Differential Evolution Utilizing Proximity-Based Mutation Operators. <i>IEEE Transactions on Evolutionary Computation</i> , 2011 , 15, 99-119 | 15.6 | 295 |
| 1682 | . <i>IEEE Transactions on Evolutionary Computation</i> , 2011 , 15, 557-570 | 15.6 | 27 |
| 1681 | DNA Sequence Compression Using Adaptive Particle Swarm Optimization-Based Memetic Algorithm. <i>IEEE Transactions on Evolutionary Computation</i> , 2011 , 15, 643-658 | 15.6 | 83 |
| 1680 | Adaptive strategy selection in differential evolution for numerical optimization: An empirical study. 2011 , 181, 5364-5386 | | 112 |
| 1679 | A perturb biogeography based optimization with mutation for global numerical optimization. 2011 , 218, 598-609 | | 74 |
| 1678 | Quantum-inspired space search algorithm (QSSA) for global numerical optimization. 2011 , 218, 2516-2532 | | 19 |
| 1677 | GHS+LEM: Global-best Harmony Search using learnable evolution models. 2011 , 218, 2558-2578 | | 31 |
| 1676 | A dynamic system model of biogeography-based optimization. 2011 , 11, 5652-5661 | | 48 |
| 1675 | Differential evolution for parameterized procedural woody plant models reconstruction. 2011 , 11, 4904-4912 | | 33 |
| 1674 | MOX: A novel global optimization algorithm inspired from Oviposition site selection and egg hatching inhibition in mosquitoes. 2011 , 11, 4614-4625 | | 11 |
| 1673 | A hybrid particle swarm optimization algorithm for high-dimensional problems. 2011 , 61, 1117-1122 | | 56 |
| 1672 | Quantum-inspired evolutionary algorithms: a survey and empirical study. 2011 , 17, 303-351 | | 166 |
| 1671 | Adaptive Impedance Control for Upper-Limb Rehabilitation Robot Using Evolutionary Dynamic Recurrent Fuzzy Neural Network. 2011 , 62, 501-525 | | 50 |
| 1670 | An improved multi-agent genetic algorithm for numerical optimization. 2011 , 10, 487-506 | | 4 |
| 1669 | Scalability of generalized adaptive differential evolution for large-scale continuous optimization. 2011 , 15, 2141-2155 | | 82 |
| 1668 | Improving the performance of differential evolution algorithm using Cauchy mutation. 2011 , 15, 991-1007 | | 63 |
| 1667 | Use of the q-Gaussian mutation in evolutionary algorithms. 2011 , 15, 1523-1549 | | 8 |

| | | |
|------|---|-----|
| 1666 | Classification-based self-adaptive differential evolution with fast and reliable convergence performance. 2011 , 15, 1581-1599 | 18 |
| 1665 | A discrete shuffled frog optimization algorithm. 2011 , 36, 267-284 | 18 |
| 1664 | A unified framework for population-based metaheuristics. 2011 , 186, 231-262 | 24 |
| 1663 | Multidisciplinary design of a small satellite launch vehicle using particle swarm optimization. 2011 , 44, 773-784 | 22 |
| 1662 | Blended biogeography-based optimization for constrained optimization. 2011 , 24, 517-525 | 206 |
| 1661 | Self-adaptive learning based particle swarm optimization. 2011 , 181, 4515-4538 | 243 |
| 1660 | Controller design for synchronization of an array of delayed neural networks using a controllable probabilistic PSO. 2011 , 181, 4715-4732 | 49 |
| 1659 | Adaptive fuzzy particle swarm optimization for global optimization of multimodal functions. 2011 , 181, 4539-4549 | 65 |
| 1658 | An effective memetic differential evolution algorithm based on chaotic local search. 2011 , 181, 3175-3187 | 149 |
| 1657 | A clustering-based differential evolution for global optimization. 2011 , 11, 1363-1379 | 101 |
| 1656 | A new asynchronous parallel global optimization method based on simulated annealing and differential evolution. 2011 , 11, 1481-1489 | 29 |
| 1655 | Composed compact differential evolution. 2011 , 4, 17-29 | 9 |
| 1654 | Surrogate-assisted clonal selection algorithms for expensive optimization problems. 2011 , 4, 81-97 | 17 |
| 1653 | Genetic algorithm with automatic termination and search space rotation. 2011 , 3, 111-127 | 9 |
| 1652 | Efficient multi-swarm PSO algorithms for dynamic environments. 2011 , 3, 163-174 | 26 |
| 1651 | Immigrant schemes for evolutionary algorithms in dynamic environments: Adapting the replacement rate. 2011 , 54, 1352-1364 | 4 |
| 1650 | Reactive power planning with voltage stability enhancement using covariance matrix adapted evolution strategy. 2011 , 21, 1343-1360 | 12 |
| 1649 | Analysis of migration models of biogeography-based optimization using Markov theory. 2011 , 24, 1052-1060 | 52 |

| | | |
|------|--|-----|
| 1648 | A Multi-Swarm Self-Adaptive and Cooperative Particle Swarm Optimization. 2011 , 24, 958-967 | 63 |
| 1647 | Parameters identification of unknown delayed genetic regulatory networks by a switching particle swarm optimization algorithm. 2011 , 38, 2523-2535 | 73 |
| 1646 | Short term wind speed prediction based on evolutionary support vector regression algorithms. 2011 , 38, 4052-4057 | 146 |
| 1645 | Improved framework for particle swarm optimization: Swarm intelligence with diversity-guided random walking. 2011 , 38, 12214-12220 | 10 |
| 1644 | Cellular particle swarm optimization. 2011 , 181, 4460-4493 | 133 |
| 1643 | Disturbed Exploitation compact Differential Evolution for limited memory optimization problems. 2011 , 181, 2469-2487 | 104 |
| 1642 | Rosenbrock artificial bee colony algorithm for accurate global optimization of numerical functions. 2011 , 181, 3508-3531 | 250 |
| 1641 | A hybrid differential evolution algorithm integrated with an ant system and its application. 2011 , 62, 32-43 | 7 |
| 1640 | A differential evolution algorithm with self-adapting strategy and control parameters. 2011 , 38, 394-408 | 121 |
| 1639 | Two-stage update biogeography-based optimization using differential evolution algorithm (DBBO). 2011 , 38, 1188-1198 | 49 |
| 1638 | Particle swarm optimization: Hybridization perspectives and experimental illustrations. 2011 , 217, 5208-5226 | 179 |
| 1637 | Central Force Optimization with variable initial probes and adaptive decision space. 2011 , 217, 8866-8872 | 19 |
| 1636 | Nonlinear optimization with a massively parallel Evolution Strategy Pattern Search algorithm on graphics hardware. 2011 , 11, 1770-1781 | 10 |
| 1635 | Digital IIR filter design using multi-objective optimization evolutionary algorithm. 2011 , 11, 1851-1857 | 29 |
| 1634 | Agent oriented petroleum supply chain coordination: Co-evolutionary Particle Swarm Optimization based approach. 2011 , 38, 6132-6145 | 33 |
| 1633 | Center Based Genetic Algorithm and its application to the stiffness equivalence of the aircraft wing. 2011 , 38, 6254-6261 | 14 |
| 1632 | Simulated annealing algorithm with adaptive neighborhood. 2011 , 11, 1827-1836 | 80 |
| 1631 | RFID network planning using a multi-swarm optimizer. 2011 , 34, 888-901 | 72 |

| | | |
|------|---|-----|
| 1630 | A hybrid shuffled complex evolution approach with pattern search for unconstrained optimization. 2011 , 81, 1901-1909 | 19 |
| 1629 | Seeding evolutionary algorithms with heuristics for optimal wind turbines positioning in wind farms. 2011 , 36, 2838-2844 | 103 |
| 1628 | On evolutionary strategy based on hybrid crossover operators. 2011 , | 4 |
| 1627 | Multi-population differential evolution with adaptive parameter control for global optimization. 2011 , | 14 |
| 1626 | Adaptive parameter selection for strategy adaptation in differential evolution. 2011 , | |
| 1625 | Differential evolution with improved population reduction. 2011 , | 2 |
| 1624 | Index-based genetic algorithm for continuous optimization problems. 2011 , | 1 |
| 1623 | Fuzzy c-means clustering and partition entropy for species-best strategy and search mode selection in nonlinear optimization by differential evolution. 2011 , | 11 |
| 1622 | JDEL: Differential Evolution with Local Search Mechanism for High-Dimensional Optimization Problems. 2011 , 347-352 | 0 |
| 1621 | An adaptive multi-objective evolutionary algorithm with human-like reasoning for enhanced decision-making in building design. 2011 , | |
| 1620 | Efficient nonlinear optimization by differential evolution with a rotation-invariant local sampling operation. 2011 , | 1 |
| 1619 | An estimation of distribution algorithm based on nonparametric density estimation. 2011 , | 6 |
| 1618 | Particle swarm optimization with a novel mutation operator. 2011 , | 1 |
| 1617 | An improved genetic algorithm for hydrological model calibration. 2011 , | 1 |
| 1616 | A Multi-Swarm Cooperative Perturbed Particle Swarm Optimization. 2011 , 225-226, 619-622 | |
| 1615 | Catastrophe-Based Antibody Clone Algorithm. 2011 , 121-126, 4415-4420 | |
| 1614 | Self-adaptive uniform differential evolution for optimizing the initial integral point of the EarthMoon low-energy transfer. 2011 , 225, 1263-1276 | 1 |
| 1613 | Modeling and Analysis of the Current Generated by Compensatory Anticathode in the Electric Fields Protection of Ship. 2011 , 110-116, 3074-3079 | |

| | | |
|------|---|----|
| 1612 | A GENERALIZED HYBRID GENERATION SCHEME OF DIFFERENTIAL EVOLUTION FOR GLOBAL NUMERICAL OPTIMIZATION. 2011 , 10, 35-65 | 4 |
| 1611 | Experimental Study on Boundary Constraints Handling in Particle Swarm Optimization. 2011 , 2, 43-69 | 49 |
| 1610 | An empirical study on Differential Evolution algorithm and its several variants. 2011 , | 2 |
| 1609 | Group Search Optimizer with Interactive Dynamic Neighborhood. 2011 , 212-219 | 3 |
| 1608 | An adaptive differential evolution with unsymmetrical mutation. 2011 , | 1 |
| 1607 | Directed differential evolution based on directional derivative for numerical optimization problems. 2011 , | 3 |
| 1606 | DISTURBANCE CHAOTIC ANT SWARM. 2011 , 21, 2597-2622 | 4 |
| 1605 | Constitutive equations for modelling superplastic forming of metals. 2011 , 154-183 | 1 |
| 1604 | A probabilistic analysis of a simplified biogeography-based optimization algorithm. 2011 , 19, 167-88 | 78 |
| 1603 | An Improved Differential Evolution and its Application in Function Optimization Problem. 2011 , 267, 632-634 | 1 |
| 1602 | Hybrid particle swarm optimisation based on history information sharing. 2011 , | 2 |
| 1601 | Application of a Fast Evolutionary Algorithm to Short-term Hydro-thermal Generation Scheduling. 2011 , 6, 395-405 | 20 |
| 1600 | Determining unified constitutive equations for modelling hot forming of steel. 2012 , 180-209 | |
| 1599 | An Algorithm for Global Optimization Inspired by Collective Animal Behavior. 2012 , 2012, 1-24 | 38 |
| 1598 | A Dynamic Multistage Hybrid Swarm Intelligence Optimization Algorithm for Function Optimization. 2012 , 2012, 1-22 | 5 |
| 1597 | Optimal Reservoir Operation Based on Improved Particle Swarm Optimization Algorithm. 2012 , 212-213, 502-508 | 1 |
| 1596 | Differential Evolution with Mixed Distribution Mutation Operation. 2012 , | |
| 1595 | Distance measures for HyperGP with fitness sharing. 2012 , | 2 |

| | | |
|------|---|----|
| 1594 | Adaptive differential evolution with optimization state estimation. 2012, | 6 |
| 1593 | Adaptive genetic algorithm based on density distribution of population. 2012, | |
| 1592 | Incremental attribute based particle swarm optimization. 2012, | 5 |
| 1591 | Differential evolution with dynamic strategy and parameter selection by detecting landscape modality. 2012, | 11 |
| 1590 | Estimating the evolution direction of populations to improve genetic algorithms. 2012, | 3 |
| 1589 | A new adaptive bacterial foraging optimizer based on field. 2012, | 0 |
| 1588 | A hybrid pattern search method for solving unconstrained optimization problems. 2012, | 1 |
| 1587 | Guided mutation operation based on search degree and fitness estimation. 2012, | |
| 1586 | Adaptive system of swarm intelligent with Genetic Algorithm for global optimization. 2012, | 1 |
| 1585 | Improving particle swarm algorithm with cognitive information-based parameter tuning. 2012, | 1 |
| 1584 | A Simple Calibration Approach to Single View Height Estimation. 2012, | 5 |
| 1583 | Parameter self-adaptive Differential Evolution algorithm with Secondary population. 2012, | |
| 1582 | A Negative Selection Algorithm Integrated with Immune Network Theory. 2012, | |
| 1581 | Intelligent fuzzy particle swarm optimization with cross-mutated operation. 2012, | 7 |
| 1580 | Selection strategies and random perturbations in differential evolution. 2012, | |
| 1579 | A self-adaptive differential evolution algorithm based on ant system with application to estimate kinetic parameters. 2012, 61, 99-126 | 4 |
| 1578 | A Particle Swarm Optimization with diversity-guided convergence acceleration and stagnation avoidance. 2012, | 4 |
| 1577 | Dynamical exploitation space reduction in particle swarm optimization for solving large scale problems. 2012, | 15 |

| | | | |
|------|--|------|-----|
| 1576 | A smoothing approximation for LSVM. 2012, | | |
| 1575 | SS-ADC: Scatter search with adaptive diversity control. 2012, | | |
| 1574 | A neuroevolutionary approach to stochastic inventory control in multi-echelon systems. 2012, 50, 2150-2160 | 4 | |
| 1573 | A modified brain storm optimization. 2012, | | 96 |
| 1572 | A COMPARISON BETWEEN QUANTUM INSPIRED BACTERIAL FORAGING ALGORITHM AND GA-LIKE ALGORITHM FOR GLOBAL OPTIMIZATION. 2012, 11, 1250016 | | 3 |
| 1571 | A Multiswarm Optimizer for Distributed Decision Making in Virtual Enterprise Risk Management. 2012, 2012, 1-24 | | 4 |
| 1570 | An Efficient Evolutionary Approach to Parameter Identification in a Building Thermal Model. 2012, 42, 957-969 | | 15 |
| 1569 | Bacterial Colony Optimization. 2012, 2012, 1-28 | | 67 |
| 1568 | A Study of Collapse in Bare Bones Particle Swarm Optimization. <i>IEEE Transactions on Evolutionary Computation</i> , 2012, 16, 354-372 | 15.6 | 77 |
| 1567 | Real-Coded Chemical Reaction Optimization. <i>IEEE Transactions on Evolutionary Computation</i> , 2012, 16, 339-353 | 15.6 | 119 |
| 1566 | Memetic Algorithm with PSO or BFO's chemotaxis mechanism as local search for function optimization. 2012, | | |
| 1565 | A self-learning particle swarm optimizer for global optimization problems. 2012, 42, 627-46 | | 235 |
| 1564 | A Weak Filled Function Algorithm for Unconstrained Searching Optimization. 2012, | | |
| 1563 | Biogeography-based optimization with ensemble of migration models for global numerical optimization. 2012, | | 4 |
| 1562 | Tabu search with multi-level neighborhood structures for high dimensional problems. 2012, 37, 189-206 | | 29 |
| 1561 | A multi-swarm PSO using charged particles in a partitioned search space for continuous optimization. 2012, 53, 271-295 | | 38 |
| 1560 | Differential Evolution with Adaptive Mutation and Parameter Control Using Levy Probability Distribution. 2012, 27, 1035-1055 | | 17 |
| 1559 | Artificial Movements Inspired for Global Optimization. 2012, 41, 312-318 | | |

| | | |
|------|--|---------|
| 1558 | A hybrid Niching-based evolutionary PSO for numerical optimization problems. 2012, | |
| 1557 | Real-coded chemical reaction optimization with different perturbation functions. 2012, | 6 |
| 1556 | Local cooperation delivers global optimization. 2012, | |
| 1555 | A PSO-based algorithm with local search for multimodal optimization without constraints. 2012, | 1 |
| 1554 | A new adaptive bacterial swarm algorithm. 2012, | 4 |
| 1553 | A crown jewel defense strategy based particle swarm optimization. 2012, | |
| 1552 | Enhancing the performance of evolutionary algorithms: A novel maturity-based adaptation strategy. 2012, | |
| 1551 | Population diversity based inertia weight adaptation in Particle Swarm Optimization. 2012, | 9 |
| 1550 | Hybridizing Differential Evolution and Particle Swarm Optimization to Design Powerful Optimizers: A Review and Taxonomy. 2012, 42, 744-767 | 118 |
| 1549 | Population diversity based study on search information propagation in particle swarm optimization. 2012, | 21 |
| 1548 | Multiple band antenna optimization using heuristics and bio-inspired optimization algorithms. 2012 | 3 |
| 1547 | Enhancement of continuous estimation of distribution algorithms by density ensembles. 2012, 44, 1303-1320 | 1 |
| 1546 | A Modified Harmony Search Algorithm for Optimization Problems. 2012, | 2 |
| 1545 | A hybrid evolutionary programming approach for optimal worst case tolerance design of magnetic devices. 2012, 12, 2425-2434 | 2 |
| 1544 | Grey particle swarm optimization. 2012, 12, 2985-2996 | 57 |
| 1543 | An Efficient Resource Allocation Scheme Using Particle Swarm Optimization. <i>IEEE Transactions on Evolutionary Computation</i> , 2012, 16, 801-816 | 15.6 87 |
| 1542 | Exponential Inertia Weight for Particle Swarm Optimization. 2012, 83-90 | 17 |
| 1541 | Sizing optimization of PV-FC-Battery system with hybrid PSO-EO algorithm. 2012, | 3 |

| | | |
|------|--|------|
| 1540 | Maximum Power Point Tracking (MPPT) via Weightless Swarm Algorithm (WSA) on cloudy days. 2012, | 3 |
| 1539 | Intelligent daily load forecasting with fuzzy neural network and particle swarm optimization. 2012, | 7 |
| 1538 | Self Adaptive Artificial Bee Colony for Global Numerical Optimization. 2012, 1, 59-65 | 7 |
| 1537 | Convergence analysis and performance of an extended central force optimization algorithm. 2012, 219, 2246-2259 | 17 |
| 1536 | Multi-operator based biogeography based optimization with mutation for global numerical optimization. 2012, 64, 2833-2844 | 40 |
| 1535 | Krill herd: A new bio-inspired optimization algorithm. 2012, 17, 4831-4845 | 1162 |
| 1534 | Light Ray Optimization Algorithm Based on Annealing Strategy. 2012, 461, 435-439 | |
| 1533 | Brain Storm Optimization Algorithm with Modified Step-Size and Individual Generation. 2012, 243-252 | 41 |
| 1532 | Differential evolution with controlled search direction. 2012, 19, 3516-3523 | 4 |
| 1531 | A diversification operator for genetic algorithms. 2012, 49, 299-313 | 1 |
| 1530 | Design of intelligent long-term load forecasting with fuzzy neural network and particle swarm optimization. 2012, | 3 |
| 1529 | Lion pride optimizer: An optimization algorithm inspired by lion pride behavior. 2012, 55, 2369-2389 | 47 |
| 1528 | Continuous non-revisiting genetic algorithm with overlapped search sub-region. 2012, | 2 |
| 1527 | Optimization of IIR digital filters using Particle Swarm Optimization. 2012, | 5 |
| 1526 | Applying evolution programming Search Based Software Engineering (SBSE) in selecting the best open source software maintainability metrics. 2012, | 3 |
| 1525 | A swarm optimization approach for flexible flow shop scheduling with multiprocessor tasks. 2012, 62, 267-277 | 27 |
| 1524 | Clonal selection: an immunological algorithm for global optimization over continuous spaces. 2012, 53, 769-808 | 38 |
| 1523 | Chemical Reaction Optimization: a tutorial. 2012, 4, 3-17 | 123 |

| | | |
|------|---|-----|
| 1522 | CLA-DE: a hybrid model based on cellular learning automata for numerical optimization. 2012 , 36, 735-748 | 42 |
| 1521 | Coupled eagle strategy and differential evolution for unconstrained and constrained global optimization. 2012 , 63, 191-200 | 100 |
| 1520 | Novel selection schemes for harmony search. 2012 , 218, 6095-6117 | 70 |
| 1519 | Wind speed reconstruction from synoptic pressure patterns using an evolutionary algorithm. 2012 , 89, 347-354 | 15 |
| 1518 | A novel clustering-based differential evolution with 2 multi-parent crossovers for global optimization. 2012 , 12, 663-681 | 36 |
| 1517 | Diversity Guided Evolutionary Programming: A novel approach for continuous optimization. 2012 , 12, 1693-1707 | 21 |
| 1516 | An improved shuffled frog-leaping algorithm with extremal optimisation for continuous optimisation. 2012 , 192, 143-151 | 68 |
| 1515 | A Differential Covariance Matrix Adaptation Evolutionary Algorithm for real parameter optimization. 2012 , 182, 199-219 | 66 |
| 1514 | A cooperative particle swarm optimizer with statistical variable interdependence learning. 2012 , 186, 20-39 | 47 |
| 1513 | An Intelligent Tuned Harmony Search algorithm for optimisation. 2012 , 196, 47-72 | 137 |
| 1512 | A note on teaching-learning-based optimization algorithm. 2012 , 212, 79-93 | 194 |
| 1511 | An intelligent augmentation of particle swarm optimization with multiple adaptive methods. 2012 , 213, 68-83 | 54 |
| 1510 | An alternative differential evolution algorithm for global optimization. 2012 , 3, 149-165 | 60 |
| 1509 | An effective hybrid genetic algorithm with flexible allowance technique for constrained engineering design optimization. 2012 , 39, 6041-6051 | 34 |
| 1508 | Feedback controlled particle swarm optimization and its application in time-series prediction. 2012 , 39, 8557-8572 | 6 |
| 1507 | The success of ePortfolio-based programming learning style diagnosis: Exploring the role of a heuristic fuzzy knowledge fusion. 2012 , 39, 8698-8706 | 8 |
| 1506 | Efficient aerodynamic design through evolutionary programming and support vector regression algorithms. 2012 , 39, 10700-10708 | 49 |
| 1505 | A hybrid harmony search algorithm for the spread spectrum radar polyphase codes design problem. 2012 , 39, 11089-11093 | 21 |

| | | |
|------|---|----------|
| 1504 | Evaluating the generalisation capability of a CMOS based synapse. 2012 , 83, 188-197 | 5 |
| 1503 | Multi-objective learning of Relevance Vector Machine classifiers with multi-resolution kernels. 2012 , 45, 3535-3543 | 7 |
| 1502 | An adaptive differential evolution algorithm with novel mutation and crossover strategies for global numerical optimization. 2012 , 42, 482-500 | 407 |
| 1501 | Cooperatively Coevolving Particle Swarms for Large Scale Optimization. <i>IEEE Transactions on Evolutionary Computation</i> , 2012 , 16, 210-224 | 15.6 459 |
| 1500 | Learning-enhanced differential evolution for numerical optimization. 2012 , 16, 303-330 | 41 |
| 1499 | An inertia-adaptive particle swarm system with particle mobility factor for improved global optimization. 2012 , 21, 237-250 | 22 |
| 1498 | Kernel clustering using a hybrid memetic algorithm. 2013 , 12, 605-615 | 5 |
| 1497 | Differential evolution with ranking-based mutation operators. 2013 , 43, 2066-81 | 301 |
| 1496 | A high performance genetic algorithm using bacterial conjugation operator (HPGA). 2013 , 14, 395-427 | 5 |
| 1495 | A new hybrid differential evolution with simulated annealing and self-adaptive immune operation. 2013 , 66, 1948-1960 | 15 |
| 1494 | Success-history based parameter adaptation for Differential Evolution. 2013 , | 376 |
| 1493 | Accelerating IEC and EC searches with elite obtained by dimensionality reduction in regression spaces. 2013 , 6, 27-40 | 16 |
| 1492 | A prediction-based adaptive grouping differential evolution algorithm for constrained numerical optimization. 2013 , 17, 2293-2309 | 8 |
| 1491 | Performance comparisons of intelligent load forecasting structures and its application to energy-saving load regulation. 2013 , 17, 1797-1815 | 4 |
| 1490 | Improving artificial bee colony with one-position inheritance mechanism. 2013 , 5, 187-211 | 20 |
| 1489 | A novel memetic algorithm and its application to data clustering. 2013 , 5, 65-78 | 12 |
| 1488 | Accelerating artificial bee colony algorithm by using an external archive. 2013 , | 1 |
| 1487 | Hierarchical bare bones particle swarm for solving constrained optimization problems. 2013 , | 2 |

| | | |
|------|---|-----|
| 1486 | Particle swarm optimization with adaptive mutation for multimodal optimization. 2013 , 221, 296-305 | 54 |
| 1485 | Exploration and exploitation in evolutionary algorithms. 2013 , 45, 1-33 | 640 |
| 1484 | Gases Brownian Motion Optimization: an Algorithm for Optimization (GBMO). 2013 , 13, 2932-2946 | 72 |
| 1483 | Free Pattern Search for global optimization. 2013 , 13, 3853-3863 | 10 |
| 1482 | MPSO: Median-oriented Particle Swarm Optimization. 2013 , 219, 5817-5836 | 39 |
| 1481 | Particle swarm optimization based on intermediate disturbance strategy algorithm and its application in multi-threshold image segmentation. 2013 , 250, 82-112 | 51 |
| 1480 | An efficient Ant Colony Optimization algorithm for function optimization. 2013 , | 1 |
| 1479 | On the benefits of Laplace samples in solving a rare event problem using cross-entropy method. 2013 , 225, 843-859 | 1 |
| 1478 | An Evolutionary Approach for Document Clustering. 2013 , 4, 370-375 | 14 |
| 1477 | A mixed mutation approach for evolutionary programming based on guided selection strategy. 2013 , | 1 |
| 1476 | An efficient evolutionary programming algorithm using mixed mutation operators for numerical optimization. 2013 , | 1 |
| 1475 | An improved monkey algorithm with dynamic adaptation. 2013 , 222, 645-657 | 9 |
| 1474 | Space-based initialization strategy for particle swarm optimization. 2013 , | 1 |
| 1473 | Optimization Algorithm Based on Biology Life Cycle Theory. 2013 , 561-570 | 2 |
| 1472 | An interpretable classification rule mining algorithm. 2013 , 240, 1-20 | 39 |
| 1471 | Studying the effect of using low-discrepancy sequences to initialize population-based optimization algorithms. 2013 , 56, 457-480 | 4 |
| 1470 | Re-sampled inheritance search: high performance despite the simplicity. 2013 , 17, 2235-2256 | 25 |
| 1469 | An Adaptive Differential Evolution Algorithm Based on New Diversity. 2013 , 6, 1094-1107 | 1 |

| | | |
|------|--|-----|
| 1468 | An Improved Artificial Bee Colony Algorithm for Optimal Design of Electromagnetic Devices. 2013 , 49, 4811-4816 | 37 |
| 1467 | Adaptive artificial bee colony optimization. 2013 , | 5 |
| 1466 | Accelerating parameter identification of proton exchange membrane fuel cell model with ranking-based differential evolution. 2013 , 59, 356-364 | 39 |
| 1465 | VCE-PSO: Virtual Cloud Embedding through a Meta-heuristic Approach. 2013 , | 2 |
| 1464 | A new gravitational search algorithm using fuzzy logic to parameter adaptation. 2013 , | 60 |
| 1463 | Preserving rotation invariant properties in differential evolution algorithm. 2013 , | |
| 1462 | Parameter optimization of PID controllers by reinforcement learning. 2013 , | 1 |
| 1461 | Solution clustering analysis in brain storm optimization algorithm. 2013 , | 28 |
| 1460 | Gaussian Bare-Bones Differential Evolution. 2013 , 43, 634-47 | 252 |
| 1459 | Modified Artificial Bee Colony Algorithm using differential evolution and polynomial mutation for real-parameter optimization. 2013 , | 2 |
| 1458 | Self-adaptive mutation strategy for evolutionary programming based on fitness tracking scheme. 2013 , | 1 |
| 1457 | Improved Quantum-Inspired Tabu Search Algorithm for Solving Function Optimization Problem. 2013 , | 3 |
| 1456 | Evolutionary Algorithm Based on Automatically Designing of Genetic Operators. 2013 , | 1 |
| 1455 | A differential evolution algorithm with minimum distance mutation operator. 2013 , | 1 |
| 1454 | A Multiobjective Estimation of Distribution Algorithm Based on Artificial Bee Colony. 2013 , | 2 |
| 1453 | Adaptive Plan system using Differential Evolution with Genetic Algorithm. 2013 , | 0 |
| 1452 | An improved gravitational search algorithm based on neighbor search. 2013 , | |
| 1451 | An Adaptive Learning Automata for Genetic Operators Allocation Probabilities. 2013 , | 2 |

| | | |
|------|--|-----|
| 1450 | A (□)evolutionary and particle swarm hybrid algorithm, with an application to dinosaur gait optimization. 2013 , | |
| 1449 | Using modified fruit fly optimisation algorithm to perform the function test and case studies. 2013 , 25, 151-160 | 65 |
| 1448 | A differential evolution algorithm with intersect mutation operator. 2013 , 13, 390-401 | 80 |
| 1447 | Dynamic group-based differential evolution using a self-adaptive strategy for global optimization problems. 2013 , 39, 41-56 | 39 |
| 1446 | Variations of biogeography-based optimization and Markov analysis. 2013 , 220, 492-506 | 28 |
| 1445 | The Wind Driven Optimization Technique and its Application in Electromagnetics. 2013 , 61, 2745-2757 | 200 |
| 1444 | Risk-invoked self-scheduling of a Genco in a day-ahead energy and spinning reserve market. 2013 , 8, 40-48 | |
| 1443 | Eden's Bees: Parallelizing Artificial Bee Colony in a Functional Environment. 2013 , 18, 661-670 | 2 |
| 1442 | Dynamic Diversity Enhancement in Particle Swarm Optimization (DDEPSO) Algorithm for Preventing from Premature Convergence. 2013 , 24, 54-65 | 8 |
| 1441 | An improved self-adaptive differential evolution algorithm and its application. 2013 , 128, 66-76 | 35 |
| 1440 | Adaptive evolutionary programming with p-best mutation strategy. 2013 , 9, 58-68 | 10 |
| 1439 | Adaptive Configuration of evolutionary algorithms for constrained optimization. 2013 , 222, 680-711 | 37 |
| 1438 | A chaotic particle-swarm krill herd algorithm for global numerical optimization. 2013 , 42, 962-978 | 99 |
| 1437 | Enhancing distributed differential evolution with multicultural migration for global numerical optimization. 2013 , 247, 72-93 | 54 |
| 1436 | An analysis of selection methods in memory consideration for harmony search. 2013 , 219, 10753-10767 | 30 |
| 1435 | A team-oriented approach to particle swarms. 2013 , 13, 3776-3791 | 7 |
| 1434 | Sub-pixel mapping based on artificial immune systems for remote sensing imagery. 2013 , 46, 2902-2926 | 48 |
| 1433 | Accelerated biogeography-based optimization with neighborhood search for optimization. 2013 , 13, 2318-2342 | 42 |

| | | |
|------|--|-----|
| 1432 | Function optimisation by learning automata. 2013 , 220, 379-398 | 17 |
| 1431 | A survey on optimization metaheuristics. 2013 , 237, 82-117 | 862 |
| 1430 | A novel combination of Particle Swarm Optimization and Genetic Algorithm for Pareto optimal design of a five-degree of freedom vehicle vibration model. 2013 , 13, 2577-2591 | 45 |
| 1429 | Multi-decadal variability in a centennial reconstruction of daily wind. 2013 , 105, 30-46 | 11 |
| 1428 | A novel hybrid genetic algorithm with Tabu search for optimizing multi-dimensional functions and point pattern recognition. 2013 , 221, 28-48 | 12 |
| 1427 | A parameter control method of evolutionary algorithms using exploration and exploitation measures with a practical application for fitting Sovova's mass transfer model. 2013 , 13, 3792-3805 | 65 |
| 1426 | An intelligent noise reduction method for chaotic signals based on genetic algorithms and lifting wavelet transforms. 2013 , 218, 103-118 | 43 |
| 1425 | A novel artificial bee colony algorithm with Powell's method. 2013 , 13, 3763-3775 | 98 |
| 1424 | Many Flights and Global Optimization. 2013 , 49-72 | 18 |
| 1423 | A novel artificial bee colony algorithm based on modified search equation and orthogonal learning. 2013 , 43, 1011-24 | 283 |
| 1422 | Diversity-maintained differential evolution embedded with gradient-based local search. 2013 , 17, 1511-1535 | 15 |
| 1421 | Evolutionary Programming Using Distribution-Based and Differential Mutation Operators. 2013 , 244-245 | |
| 1420 | A Directed Genetic Algorithm for global optimization. 2013 , 219, 7348-7364 | 31 |
| 1419 | A region-based quantum evolutionary algorithm (RQEA) for global numerical optimization. 2013 , 239, 1-11 | 11 |
| 1418 | A dual mutation strategy embedded Evolutionary Programming for continuous optimization. 2013 , | 1 |
| 1417 | . 2013 , | 25 |
| 1416 | Differential Evolution based on population reduction with minimum distance. 2013 , | 1 |
| 1415 | On the equivalences and differences of evolutionary algorithms. 2013 , 26, 2397-2407 | 35 |

| | | | |
|------|--|------|----|
| 1414 | Scaling Up Estimation of Distribution Algorithms for Continuous Optimization. <i>IEEE Transactions on Evolutionary Computation</i> , 2013 , 17, 797-822 | 15.6 | 61 |
| 1413 | Small-world particle swarm optimization with topology adaptation. 2013 , | | 10 |
| 1412 | Solving resource-constrained project scheduling problem with evolutionary programming. 2013 , 64, 1327-1335 | | 13 |
| 1411 | A modification to classical evolutionary programming by shifting strategy parameters. 2013 , 38, 175-192 | | 8 |
| 1410 | Fitness tracking based evolutionary programming. 2013 , | | |
| 1409 | A coevolutionary approach to learn animal behavior through controlled interaction. 2013 , | | 4 |
| 1408 | Simulated Annealing-Based Krill Herd Algorithm for Global Optimization. 2013 , 2013, 1-11 | | 17 |
| 1407 | Differential Evolution Algorithm with Self-Adaptive Population Resizing Mechanism. 2013 , 2013, 1-14 | | 15 |
| 1406 | Biogeography-Based Optimization with Orthogonal Crossover. 2013 , 2013, 1-20 | | 8 |
| 1405 | Fly-Flight Krill Herd Algorithm. 2013 , 2013, 1-14 | | 41 |
| 1404 | A Mutual-Evaluation Genetic Algorithm for Numerical and Routing Optimization. 2013 , 2013, 1-14 | | 1 |
| 1403 | A Novel Hybrid Bat Algorithm with Harmony Search for Global Numerical Optimization. 2013 , 2013, 1-21 | | 99 |
| 1402 | A Novel Bi-Group Particle Swarm Optimizer for Speaker Identification. 2013 , 380-384, 1298-1301 | | |
| 1401 | A Particle Pair Optimization Algorithm. 2013 , 655-657, 959-962 | | |
| 1400 | Chaotic Differential Evolution Algorithm Based On Competitive Coevolution And Its Application To Dynamic Optimization Of Chemical Processes. 2013 , 19, 85-98 | | 4 |
| 1399 | New genetic algorithm with a maximal information coefficient based mutation. 2013 , | | |
| 1398 | Particle Swarm Optimization with Crossover Operator for Global Optimization Problems. 2013 , 373-375, 1131-1134 | | |
| 1397 | Incorporating Great Deluge with Harmony Search for Global Optimization Problems. 2013 , 275-286 | | 1 |

| | | |
|------|--|----|
| 1396 | A Simple and Efficient Artificial Bee Colony Algorithm. 2013 , 2013, 1-9 | 34 |
| 1395 | A Cooperative Coevolutionary Cuckoo Search Algorithm for Optimization Problem. 2013 , 2013, 1-9 | 6 |
| 1394 | Improving Performance of Evolutionary Algorithms with Application to Fuzzy Control of Truck Backer-Upper System. 2013 , 2013, 1-9 | 1 |
| 1393 | Modified Biogeography-Based Optimization with Local Search Mechanism. 2013 , 2013, 1-24 | 8 |
| 1392 | Cellular Harmony Search for Optimization Problems. 2013 , 2013, 1-20 | 18 |
| 1391 | Adaptive Differential Evolution with Competent Leaders. 2013 , | |
| 1390 | Coevolutionary particle swarm optimization using AIS and its application in multiparameter estimation of PMSM. 2013 , 43, 1921-35 | 42 |
| 1389 | Evaluation of a randomized parameter setting strategy for island-model evolutionary algorithms. 2013 , | 9 |
| 1388 | A robust search paradigm with Enhanced Vine Creeping Optimization. 2013 , 45, 225-244 | 2 |
| 1387 | Chaotic Optimization Method without Initial Sampling Parameter Tuning - Empirical Comparisons of Two Approaches in Various Problems. 2013 , | |
| 1386 | Evaluating the performance of SHADE on CEC 2013 benchmark problems. 2013 , | 86 |
| 1385 | Efficient design of a double-band coplanar hybrid antenna using multi-objective evolutionary programming. 2013 , 26, 620-629 | 3 |
| 1384 | Differential Evolution with Mutation Operators Based on Truncation. 2013 , | |
| 1383 | (□)evolutionary and particle swarm hybrid algorithm over cloud computing, with an application to dinosaur gait optimization. 2013 , | |
| 1382 | A Novel Two-Layer Hierarchical Differential Evolution Algorithm for Global Optimization. 2013 , | 1 |
| 1381 | An Efficient Binary Differential Evolution with Parameter Adaptation. 2013 , 6, 328-336 | 6 |
| 1380 | An intelligent multi-restart memetic algorithm for box constrained global optimisation. 2013 , 21, 107-47 | 50 |
| 1379 | Use of self-organizing suppression and q-Gaussian mutation in artificial immune systems. 2013 , 6, 296-322 | 2 |

| | | |
|------|--|----|
| 1378 | A Novel Self-Adaptation Hybrid Artificial Fish-Swarm Algorithm. 2013 , 46, 583-588 | 5 |
| 1377 | Multi-Objective Optimization Based on Brain Storm Optimization Algorithm. 2013 , 4, 1-21 | 44 |
| 1376 | An adaptive Cauchy differential evolution algorithm for global numerical optimization. 2013 , 2013, 969734 | 26 |
| 1375 | An effective hybrid firefly algorithm with harmony search for global numerical optimization. 2013 , 2013, 125625 | 35 |
| 1374 | An Analysis of Black-Box Optimization Problems in Reinsurance: Evolutionary-Based Approaches. 2013 , | 1 |
| 1373 | A Study of Normalized Population Diversity in Particle Swarm Optimization. 2013 , 4, 1-34 | 29 |
| 1372 | Adaptive Randomness: A New Population Initialization Method. 2014 , 2014, 1-14 | 3 |
| 1371 | Memetic Algorithm with Local Search as Modified Swine Influenza Model-Based Optimization and Its Use in ECG Filtering. 2014 , 2014, 1-22 | 2 |
| 1370 | On the Convergence of Biogeography-Based Optimization for Binary Problems. 2014 , 2014, 1-11 | 6 |
| 1369 | A particle swarm optimization variant with an inner variable learning strategy. 2014 , 2014, 713490 | 3 |
| 1368 | The coral reefs optimization algorithm: a novel metaheuristic for efficiently solving optimization problems. 2014 , 2014, 739768 | 93 |
| 1367 | Effectively Tackling Reinsurance Problems by Using Evolutionary and Swarm Intelligence Algorithms. 2014 , 2, 132-145 | 10 |
| 1366 | Parallelizing Particle Swarm Optimization in a Functional Programming Environment. 2014 , 7, 554-581 | 7 |
| 1365 | A multistrategy optimization improved artificial bee colony algorithm. 2014 , 2014, 129483 | 3 |
| 1364 | Effect of Multivariate Cauchy Mutation in Evolutionary Programming. 2014 , E97.D, 821-829 | 1 |
| 1363 | Automatic parameter estimation of multicompartmental neuron models via minimization of trace error with control adjustment. 2014 , 112, 2332-48 | 16 |
| 1362 | Non-convex dynamic economic/environmental dispatch with plug-in electric vehicle loads. 2014 , | 3 |
| 1361 | Particle swarm optimisation failure prediction based on fitness landscape characteristics. 2014 , | 13 |

| | | |
|------|--|----|
| 1360 | A self-adaptive differential evolution algorithm for continuous optimization problems. 2014 , 19, 201-208 | 6 |
| 1359 | Direct back propagation neural dynamic programming-based particle swarm optimisation. 2014 , 26, 367-388 | 3 |
| 1358 | A self-learning TLBO based dynamic economic/environmental dispatch considering multiple plug-in electric vehicle loads. 2014 , 2, 298-307 | 71 |
| 1357 | A New Compact Teaching-Learning-Based Optimization Method. 2014 , 717-726 | 5 |
| 1356 | A Group Search Optimization Method for Data Clustering. 2014 , | 2 |
| 1355 | Improved Cooperative Group Search Optimization Based on Divide-and-Conquer Strategy. 2014 , | 2 |
| 1354 | ELA: A new swarm intelligence algorithm. 2014 , | 2 |
| 1353 | Modified Krill Herd Optimization algorithm using chaotic parameters. 2014 , | 4 |
| 1352 | Demonstrator selection in a social learning particle swarm optimizer. 2014 , | 3 |
| 1351 | A modified differential evolution algorithm based on a new mutation strategy and chaos local search for optimization problems. 2014 , | 4 |
| 1350 | Selecting strategies in particle swarm optimization by sampling-based landscape modality detection using inner products. 2014 , | 1 |
| 1349 | An Evolutionary Algorithm for the Texture Analysis of Cubic System Materials Derived by the Maximum Entropy Principle. 2014 , 16, 6477-6496 | |
| 1348 | An Improved Central Force Optimization Algorithm for Multimodal Optimization. 2014 , 2014, 1-12 | 12 |
| 1347 | Composite Differential Search Algorithm. 2014 , 2014, 1-15 | 7 |
| 1346 | A Novel BFO Optimization Algorithm with Neighborhood Learning. 2014 , 543-547, 1888-1891 | |
| 1345 | Fusion Global-Local-Topology Particle Swarm Optimization for Global Optimization Problems. 2014 , 2014, 1-19 | 11 |
| 1344 | A GS-MPSO-WKNN method for missing data imputation in wireless sensor networks monitoring manufacturing conditions. 2014 , 36, 1083-1092 | 6 |
| 1343 | Lifecycle-Based Swarm Optimization Method for Numerical Optimization. 2014 , 2014, 1-11 | 2 |

| | | |
|------|--|-----|
| 1342 | A Thermodynamical Selection-Based Discrete Differential Evolution for the 0-1 Knapsack Problem. 2014 , 16, 6263-6285 | 10 |
| 1341 | Differential evolution with M-fitness method. 2014 , | |
| 1340 | . 2014 , | |
| 1339 | A novel improved accelerated particle swarm optimization algorithm for global numerical optimization. 2014 , 31, 1198-1220 | 102 |
| 1338 | Mixing PSO and Tabu search technique and its application to estimation of carrier frequency offsets for uplink OFDMA system. 2014 , | |
| 1337 | An adaptive differential evolution considering correlation of two algorithm parameters. 2014 , | 4 |
| 1336 | Speeded-up cuckoo search using opposition-based learning. 2014 , | 2 |
| 1335 | A tribal ecosystem inspired algorithm (TEA) for global optimization. 2014 , | 1 |
| 1334 | A step size based self-adaptive mutation operator for evolutionary programming. 2014 , | 5 |
| 1333 | Multi-swarm particle swarm optimization with multiple learning strategies. 2014 , | 1 |
| 1332 | Applications of computational intelligence to mechanical engineering. 2014 , | 6 |
| 1331 | Magnetotactic bacteria optimization algorithm based on best-rand scheme. 2014 , | |
| 1330 | On the pathological behavior of adaptive differential evolution on hybrid objective functions. 2014 , | 1 |
| 1329 | Differential Evolution with adaptive population size. 2014 , | 2 |
| 1328 | An inter-molecular adaptive collision scheme for Chemical Reaction Optimization. 2014 , | 1 |
| 1327 | A locally weighted metamodel for pre-selection in evolutionary optimization. 2014 , | 2 |
| 1326 | Identification of vehicle suspension parameters by design optimization. 2014 , 46, 669-686 | 11 |
| 1325 | Solving unit commitment problem by a binary shuffled frog leaping algorithm. 2014 , 8, 1050-1060 | 20 |

| | | |
|------|--|----|
| 1324 | ARTIFICIAL BEE COLONY ALGORITHM WITH IMPROVED EXPLORATIONS: A NOVEL APPROACH FOR NUMERICAL OPTIMIZATION. 2014 , 13, 1450010 | |
| 1323 | A dynamic history-driven evolutionary algorithm. 2014 , | |
| 1322 | A population diversity maintaining strategy based on dynamic environment evolutionary model for dynamic multiobjective optimization. 2014 , | 12 |
| 1321 | An improved JADE algorithm for global optimization. 2014 , | 4 |
| 1320 | Maintaining population diversity in brain storm optimization algorithm. 2014 , | 26 |
| 1319 | A niching two-layered differential evolution with self-adaptive control parameters. 2014 , | |
| 1318 | A novel improvement of particle swarm optimization using Dual Factors strategy. 2014 , | |
| 1317 | An Improved Genetic Algorithm for Text Clustering. 2014 , 989-994, 1853-1856 | |
| 1316 | . 2014 , | 2 |
| 1315 | A novel gravitational search algorithm with modified step-size and Explosion-Birth operator. 2014 , | 1 |
| 1314 | Particle swarm optimization with generalized opposition based learning in particle's pbest position. 2014 , | 5 |
| 1313 | Comparative analysis of a modified differential evolution algorithm based on bacterial mutation scheme. 2014 , | 2 |
| 1312 | Neural Networks for Normative Knowledge Source of Cultural Algorithm. 2014 , 7, 979-992 | |
| 1311 | Grammatical Swarm Based-Adaptable Velocity Update Equations in Particle Swarm Optimizer. 2014 , 197-206 | 8 |
| 1310 | Computational Intelligence Techniques and Applications. 2014 , 3-26 | 3 |
| 1309 | Improving Enhanced Fireworks Algorithm with New Gaussian Explosion and Population Selection Strategies. 2014 , 53-63 | 19 |
| 1308 | The Enhanced Vector of Convergence for Particle Swarm Optimization based on constrict factor. 2014 , | 1 |
| 1307 | Quantum-inspired genetic algorithm with two search supportive schemes and artificial entanglement. 2014 , | 2 |

| | | |
|------|--|-----|
| 1306 | Multi-strategy ensemble artificial bee colony algorithm. 2014 , 279, 587-603 | 175 |
| 1305 | Evaluating center-seeking and initialization bias: The case of particle swarm and gravitational search algorithms. 2014 , 278, 802-821 | 13 |
| 1304 | An ensemble algorithm with self-adaptive learning techniques for high-dimensional numerical optimization. 2014 , 231, 329-346 | 15 |
| 1303 | An improved TLBO with elite strategy for parameters identification of PEM fuel cell and solar cell models. 2014 , 39, 3837-3854 | 166 |
| 1302 | DE-VNS: Self-adaptive Differential Evolution with crossover neighborhood search for continuous global optimization. 2014 , 52, 157-169 | 34 |
| 1301 | A multi-swarm cooperative multistage perturbation guiding particle swarm optimizer. 2014 , 22, 77-93 | 31 |
| 1300 | Improved particle swarm optimization based approach for bilevel programming problem-an application on supply chain model. 2014 , 5, 281-292 | 34 |
| 1299 | CAPSO: Centripetal accelerated particle swarm optimization. 2014 , 258, 54-79 | 62 |
| 1298 | An optimization algorithm inspired by the States of Matter that improves the balance between exploration and exploitation. 2014 , 40, 256-272 | 138 |
| 1297 | Parameter optimization of PEMFC model with improved multi-strategy adaptive differential evolution. 2014 , 27, 28-40 | 47 |
| 1296 | An efficient differential evolution using speeded-up k-nearest neighbor estimator. 2014 , 18, 35-49 | 15 |
| 1295 | Time series prediction with improved neuro-endocrine model. 2014 , 24, 1465-1475 | 14 |
| 1294 | Incorporating mutation scheme into krill herd algorithm for global numerical optimization. 2014 , 24, 853-871 | 161 |
| 1293 | Localized biogeography-based optimization. 2014 , 18, 2323-2334 | 44 |
| 1292 | FRPSO: FletcherReeves based particle swarm optimization for multimodal function optimization. 2014 , 18, 2227-2243 | 6 |
| 1291 | Enhancing differential evolution with role assignment scheme. 2014 , 18, 2209-2225 | 20 |
| 1290 | Improving particle swarm optimization using multi-layer searching strategy. 2014 , 274, 70-94 | 55 |
| 1289 | An improved global-best harmony search algorithm for faster optimization. 2014 , 41, 5788-5803 | 49 |

| | | |
|------|---|---------|
| 1288 | An analysis of the velocity updating rule of the particle swarm optimization algorithm. 2014 , 20, 417-452 | 39 |
| 1287 | Directed Bee Colony Optimization Algorithm. 2014 , 17, 60-73 | 12 |
| 1286 | Repairing the crossover rate in adaptive differential evolution. 2014 , 15, 149-168 | 79 |
| 1285 | A novel class of niche hybrid Cultural Algorithms for continuous engineering optimization. 2014 , 267, 158-190 | 24 |
| 1284 | Teaching and peer-learning particle swarm optimization. 2014 , 18, 39-58 | 71 |
| 1283 | Comparing large number of metaheuristics for artificial neural networks training to predict water temperature in a natural river. 2014 , 64, 136-151 | 30 |
| 1282 | Frequency Fitness Assignment. <i>IEEE Transactions on Evolutionary Computation</i> , 2014 , 18, 226-243 | 15.6 10 |
| 1281 | Quadratic interpolation based orthogonal learning particle swarm optimization algorithm. 2014 , 13, 17-37 | 6 |
| 1280 | Hybrid krill herd algorithm with differential evolution for global numerical optimization. 2014 , 25, 297-308 | 143 |
| 1279 | Teaching Learning-based optimization with dynamic group strategy for global optimization. 2014 , 273, 112-131 | 90 |
| 1278 | An adaptive two-layer particle swarm optimization with elitist learning strategy. 2014 , 273, 49-72 | 53 |
| 1277 | Stud krill herd algorithm. 2014 , 128, 363-370 | 178 |
| 1276 | Hybridizing Harmony Search algorithm with different mutation operators for continuous problems. 2014 , 232, 1166-1182 | 30 |
| 1275 | A new improved krill herd algorithm for global numerical optimization. 2014 , 138, 392-402 | 120 |
| 1274 | An effective krill herd algorithm with migration operator in biogeography-based optimization. 2014 , 38, 2454-2462 | 187 |
| 1273 | KGMO: A swarm optimization algorithm based on the kinetic energy of gas molecules. 2014 , 275, 127-144 | 29 |
| 1272 | Chaotic Krill Herd algorithm. 2014 , 274, 17-34 | 380 |
| 1271 | Differential Evolution algorithms applied to Neural Network training suffer from stagnation. 2014 , 21, 382-406 | 67 |

| | | |
|------|---|------|
| 1270 | Nonlinear multivariable modeling of locomotive proton exchange membrane fuel cell system. 2014 , 39, 13777-13786 | 26 |
| 1269 | Ecogeography-based optimization: Enhancing biogeography-based optimization with ecogeographic barriers and differentiations. 2014 , 50, 115-127 | 79 |
| 1268 | An analysis of the migration rates for biogeography-based optimization. 2014 , 254, 111-140 | 45 |
| 1267 | Enhancing the performance of biogeography-based optimization using polyphyletic migration operator and orthogonal learning. 2014 , 41, 125-139 | 48 |
| 1266 | Bird mating optimizer: An optimization algorithm inspired by bird mating strategies. 2014 , 19, 1213-1228 | 111 |
| 1265 | Grey Wolf Optimizer. 2014 , 69, 46-61 | 6256 |
| 1264 | Particle swarm optimization with increasing topology connectivity. 2014 , 27, 80-102 | 65 |
| 1263 | A Fast Global Group Search Optimizer algorithm. 2014 , | 1 |
| 1262 | Evolutionary Algorithms. 2014 , 4, 178-195 | 25 |
| 1261 | Bare bones particle swarm optimization with scale matrix adaptation. 2014 , 44, 1567-78 | 48 |
| 1260 | A hybrid biogeography-based optimization and fireworks algorithm. 2014 , | 31 |
| 1259 | Improved Biogeography-Based Optimization approach to secondary protein prediction. 2014 , | 3 |
| 1258 | Biogeography-based particle swarm optimization with fuzzy elitism and its applications to constrained engineering problems. 2014 , 46, 1465-1484 | 35 |
| 1257 | Self-navigation of multi-robot system using artificial bee colony algorithm. 2014 , | |
| 1256 | An incremental-PID-controlled particle swarm optimization algorithm for EEG-data-based estimation of operator functional state. 2014 , 14, 272-284 | 9 |
| 1255 | Magnetic-inspired optimization algorithms: Operators and structures. 2014 , 19, 82-101 | 14 |
| 1254 | Simulated Raindrop algorithm for global optimization. 2014 , | 9 |
| 1253 | Binary Artificial Bee Colony optimization using bitwise operation. 2014 , 76, 360-365 | 38 |

| | | |
|------|---|-----|
| 1252 | VARIANCE-BASED HARMONY SEARCH ALGORITHM FOR UNIMODAL AND MULTIMODAL OPTIMIZATION PROBLEMS WITH APPLICATION TO CLUSTERING. 2014 , 45, 486-511 | 17 |
| 1251 | Multi-reservoir real-time operation rules: a new genetic programming approach. 2014 , 167, 561-576 | 45 |
| 1250 | Superior solution guided particle swarm optimization combined with local search techniques. 2014 , 41, 7536-7548 | 68 |
| 1249 | Energy saving dispatch with complex constraints: Prohibited zones, valve point effect and carbon tax. 2014 , 63, 657-666 | 15 |
| 1248 | A Particle Swarm Optimization Algorithm with Variable Random Functions and Mutation. 2014 , 40, 1339-1347 | 10 |
| 1247 | Forward and inverse solutions of a conductive, convective and radiative cylindrical porous fin. 2014 , 87, 96-106 | 60 |
| 1246 | A new self-adaptation scheme for differential evolution. 2014 , 146, 2-16 | 37 |
| 1245 | Enhanced comprehensive learning particle swarm optimization. 2014 , 242, 265-276 | 42 |
| 1244 | Particle swarm optimization with adaptive time-varying topology connectivity. 2014 , 24, 623-642 | 34 |
| 1243 | A new evolutionary algorithm based on contraction method for many-objective optimization problems. 2014 , 245, 191-205 | 21 |
| 1242 | OptiFel: A Convergent Heterogeneous Particle Swarm Optimization Algorithm for TakagiFugeno Fuzzy Modeling. 2014 , 22, 919-933 | 73 |
| 1241 | Heuristic Approach for Optimizing Emergency Medical Services in Road Safety within Large Urban Networks. 2014 , 140, 04014043 | 7 |
| 1240 | Black Hole: A New Operator for Gravitational Search Algorithm. 2014 , 7, 809-826 | 33 |
| 1239 | Adaptive computational chemotaxis based on field in bacterial foraging optimization. 2014 , 18, 797-807 | 171 |
| 1238 | Biogeography-based optimisation with chaos. 2014 , 25, 1077-1097 | 185 |
| 1237 | Binary optimization using hybrid particle swarm optimization and gravitational search algorithm. 2014 , 25, 1423-1435 | 127 |
| 1236 | Biogeography-based optimization with improved migration operator and self-adaptive clear duplicate operator. 2014 , 41, 563-581 | 20 |
| 1235 | Multithreaded Parallel Dual Population Genetic Algorithm (MPDPGA) for unconstrained function optimizations on multi-core system. 2014 , 243, 936-949 | 12 |

| | | |
|------|--|-----|
| 1234 | Optimization of blood supply chain with shortened shelf lives and ABO compatibility. 2014 , 153, 113-129 | 77 |
| 1233 | Hybrid biogeography-based evolutionary algorithms. 2014 , 30, 213-224 | 33 |
| 1232 | Bare-bones particle swarm optimization with disruption operator. 2014 , 238, 106-122 | 38 |
| 1231 | An improved fruit fly optimization algorithm for continuous function optimization problems. 2014 , 62, 69-83 | 156 |
| 1230 | Autonomous Particles Groups for Particle Swarm Optimization. 2014 , 39, 4683-4697 | 91 |
| 1229 | Heuristic correction of wind speed mesoscale models simulations for wind farms prospecting and micro-siting. 2014 , 130, 1-15 | 5 |
| 1228 | A biogeography-based optimization algorithm with mutation strategies for model parameter estimation of solar and fuel cells. 2014 , 86, 1173-1185 | 182 |
| 1227 | SIS epidemic model-based optimization. 2014 , 5, 32-50 | 6 |
| 1226 | Population-based Algorithm Portfolios with automated constituent algorithms selection. 2014 , 279, 94-104 | 49 |
| 1225 | A comparative study of variation operators used for evolutionary multi-objective optimization. 2014 , 273, 33-48 | 6 |
| 1224 | Bidirectional teaching and peer-learning particle swarm optimization. 2014 , 280, 111-134 | 31 |
| 1223 | Parameter adaptive harmony search algorithm for unimodal and multimodal optimization problems. 2014 , 5, 144-155 | 67 |
| 1222 | An effective query recommendation approach using semantic strategies for intelligent information retrieval. 2014 , 41, 366-372 | 9 |
| 1221 | Global Dynamic Harmony Search algorithm: GDHS. 2014 , 228, 195-219 | 50 |
| 1220 | Evolutionary support vector regression algorithm applied to the prediction of the thickness of the chromium layer in a hard chromium plating process. 2014 , 227, 164-170 | 14 |
| 1219 | An evolutionary membrane algorithm for global numerical optimization problems. 2014 , 276, 219-241 | 30 |
| 1218 | Differential evolution with two-level parameter adaptation. 2014 , 44, 1080-99 | 188 |
| 1217 | Binary bat algorithm. 2014 , 25, 663-681 | 351 |

| | | |
|------|---|----|
| 1216 | Patch-Levy-based initialization algorithm for Bees Algorithm. 2014 , 23, 104-121 | 25 |
| 1215 | Parameter fitting of PEMFC models based on adaptive differential evolution. 2014 , 62, 189-198 | 35 |
| 1214 | Improved range selection method for evolutionary algorithm based adaptive filtering of EEG/ERP signals. 2014 , 144, 282-294 | 7 |
| 1213 | hABCDE: A hybrid evolutionary algorithm based on artificial bee colony algorithm and differential evolution. 2014 , 238, 370-386 | 36 |
| 1212 | Enhancing the performance of cuckoo search algorithm using orthogonal learning method. 2014 , 24, 1233-1247 | 95 |
| 1211 | ONMCGP: Orthogonal Neighbourhood Mutation Cartesian Genetic Programming for Evolvable Hardware. 2014 , 490, 012194 | |
| 1210 | From the social learning theory to a social learning algorithm for global optimization. 2014 , | 6 |
| 1209 | Development of Backtracking Search Optimization Algorithm Toolkit in LabVIEW. 2015 , 57, 241-248 | 10 |
| 1208 | Optimal Choice of Parameters for Fireworks Algorithm. 2015 , 70, 334-340 | 7 |
| 1207 | Tuning differential evolution for cheap, medium, and expensive computational budgets. 2015 , | 15 |
| 1206 | Chaotic inertia weight in black hole algorithm for function optimization. 2015 , | 7 |
| 1205 | A Nature Inspired Heuristic Optimization Algorithm Based on Lightning. 2015 , | 2 |
| 1204 | Artificial immune system optimisation of complete bandgap of bidimensional anisotropic photonic crystals. 2015 , 9, 333-340 | 3 |
| 1203 | Unconstrained optimization with improved differential evolution algorithm having variable dynamic non-linear increased crossover. 2015 , | 1 |
| 1202 | A co-evolutionary algorithm based on mixed mutation strategy for WDP in combinatorial auction. 2015 , | |
| 1201 | Surface wind speed reconstruction from synoptic pressure fields: machine learning versus weather regimes classification techniques. 2015 , 18, 1531-1544 | 2 |
| 1200 | Improving an adaptive differential evolution using hill-valley detection. 2015 , | 1 |
| 1199 | An Efficient Power Scheduling Scheme for Residential Load Management in Smart Homes. 2015 , 5, 1134-1163 | 81 |

| | | |
|------|--|----|
| 1198 | A Novel Quantum-Behaved Lightning Search Algorithm Approach to Improve the Fuzzy Logic Speed Controller for an Induction Motor Drive. 2015 , 8, 13112-13136 | 26 |
| 1197 | An Analytical Framework for Runtime of a Class of Continuous Evolutionary Algorithms. 2015 , 2015, 485215 | 1 |
| 1196 | Parallel and Cooperative Particle Swarm Optimizer for Multimodal Problems. 2015 , 2015, 1-10 | 4 |
| 1195 | Multiswarm Particle Swarm Optimization with Transfer of the Best Particle. 2015 , 2015, 904713 | 4 |
| 1194 | Adaptive Central Force Optimization Algorithm Based on the Stability Analysis. 2015 , 2015, 1-10 | 1 |
| 1193 | Grey Wolf Optimizer Based on Powell Local Optimization Method for Clustering Analysis. 2015 , 2015, 1-17 | 40 |
| 1192 | A Modification Artificial Bee Colony Algorithm for Optimization Problems. 2015 , 2015, 1-14 | 7 |
| 1191 | A seed-based plant propagation algorithm: the feeding station model. 2015 , 2015, 904364 | 20 |
| 1190 | The Algorithm for Algorithms: An Evolutionary Algorithm Based on Automatic Designing of Genetic Operators. 2015 , 2015, 1-15 | 2 |
| 1189 | An Enhanced Differential Evolution Algorithm Based on Multiple Mutation Strategies. 2015 , 2015, 285730 | 15 |
| 1188 | An Enhanced Differential Evolution with Elite Chaotic Local Search. 2015 , 2015, 583759 | 12 |
| 1187 | A Review on Automatic Mammographic Density and Parenchymal Segmentation. 2015 , 2015, 276217 | 29 |
| 1186 | An Improved Quantum-Behaved Particle Swarm Optimization Algorithm with Elitist Breeding for Unconstrained Optimization. 2015 , 2015, 326431 | 17 |
| 1185 | Artificial Bee Colony Algorithm Combined with Grenade Explosion Method and Cauchy Operator for Global Optimization. 2015 , 2015, 1-14 | 2 |
| 1184 | A Multi-Learning Immune Algorithm for Numerical Optimization. 2015 , E98.A, 362-377 | 8 |
| 1183 | A Local Best Particle Swarm Optimization Based on Crown Jewel Defense Strategy. 2015 , 6, 41-63 | 4 |
| 1182 | A novel sequential approximate optimization approach using data mining for engineering design optimization. 2015 , 30, 1255-1275 | 7 |
| 1181 | Parameter extraction of different fuel cell models with transferred adaptive differential evolution. 2015 , 86, 139-151 | 45 |

| | | |
|------|--|----|
| 1180 | An Improved Cat Swarm Optimization Algorithm for Clustering. 2015 , 187-197 | 3 |
| 1179 | Differential evolution with hybrid linkage crossover. 2015 , 320, 244-287 | 46 |
| 1178 | Diversity-Based Dual-Population Genetic Algorithm (DPGA): A Review. 2015 , 219-229 | |
| 1177 | Enhanced differential evolution using random-based sampling and neighborhood mutation. 2015 , 19, 2173-2192 | 11 |
| 1176 | A novel hybrid system for feature selection based on an improved gravitational search algorithm and k-NN method. 2015 , 31, 293-307 | 55 |
| 1175 | A novel approach for fuzzy logic PV inverter controller optimization using lightning search algorithm. 2015 , 168, 435-453 | 28 |
| 1174 | Adaptive differential evolution: A visual comparison. 2015 , | 5 |
| 1173 | A new implementation of cultural algorithms based on inter-personal interaction influence. 2015 , | |
| 1172 | A Hybrid PBIL-Based Krill Herd Algorithm. 2015 , | 7 |
| 1171 | An Improved Method for Comprehensive Learning Particle Swarm Optimization. 2015 , | 7 |
| 1170 | OpenMP-Based Multi-core Parallel Cooperative PSO with ICS Using Machine Learning for Global Optimization Problem. 2015 , | 1 |
| 1169 | Differential Evolution Enhanced by the Closeness Centrality: Initial Study. 2015 , | 5 |
| 1168 | Greedy adaptation of control parameters in differential evolution for global optimization problems. 2015 , | 8 |
| 1167 | Differential evolution with adaptive repository of strategies and parameter control schemes. 2015 , | |
| 1166 | A hybrid differential evolution with grey wolf optimizer for continuous global optimization. 2015 , | 20 |
| 1165 | Automatic Tuning of Algorithms Through Sensitivity Minimization. 2015 , 14-25 | 3 |
| 1164 | Greedy particle swarm and biogeography-based optimization algorithm. 2015 , 8, 28-49 | 9 |
| 1163 | An effective cooperative coevolution framework integrating global and local search for large scale optimization problems. 2015 , | 6 |

| | | |
|------|---|---------|
| 1162 | Non-parametric particle swarm optimization for global optimization. 2015 , 28, 345-359 | 48 |
| 1161 | Evolutionary population dynamics and grey wolf optimizer. 2015 , 26, 1257-1263 | 190 |
| 1160 | Designing benchmark problems for large-scale continuous optimization. 2015 , 316, 419-436 | 82 |
| 1159 | Emergency Railway Transportation Planning Using a Hyper-Heuristic Approach. 2015 , 16, 321-329 | 23 |
| 1158 | Targeting High Value Customers While Under Resource Constraint: Partial Order Constrained Optimization with Genetic Algorithm. 2015 , 29, 27-37 | 13 |
| 1157 | Modified particle swarm optimization for nonconvex economic dispatch problems. 2015 , 69, 304-312 | 51 |
| 1156 | Soccer game optimization with substitute players. 2015 , 283, 79-90 | 10 |
| 1155 | Biogeography-based optimization in noisy environments. 2015 , 37, 190-204 | 12 |
| 1154 | How effective is the Grey Wolf optimizer in training multi-layer perceptrons. 2015 , 43, 150-161 | 377 |
| 1153 | Heterozygous differential evolution with Taguchi local search. 2015 , 19, 3273-3291 | 23 |
| 1152 | Automatically Terminated Particle Swarm Optimization with Principal Component Analysis. 2015 , 14, 171-194 | 4 |
| 1151 | Study of Lagrangian and Evolutionary Parameters in Krill Herd Algorithm. 2015 , 111-128 | 7 |
| 1150 | A Bi-Level Branch and Bound Method for Economic Dispatch With Disjoint Prohibited Zones Considering Network Losses. 2015 , 30, 2841-2855 | 48 |
| 1149 | Modified artificial bee colony optimization with block perturbation strategy. 2015 , 47, 642-655 | 5 |
| 1148 | An Adaptive Invasive Weed Optimization Algorithm. 2015 , 29, 1559004 | 9 |
| 1147 | A new differential evolution algorithm with a hybrid mutation operator and self-adapting control parameters for global optimization problems. 2015 , 42, 642-660 | 48 |
| 1146 | Adaptive differential evolution with directional strategy and cloud model. 2015 , 42, 369-388 | 5 |
| 1145 | An Estimation of Distribution Algorithm With Cheap and Expensive Local Search Methods. <i>IEEE Transactions on Evolutionary Computation</i> , 2015 , 19, 807-822 | 15.6 48 |

| | | |
|------|--|---------|
| 1144 | The Ant Lion Optimizer. 2015 , 83, 80-98 | 1556 |
| 1143 | A novel global harmony search method based off-line tuning of RFNN for adaptive control of uncertain nonlinear systems. 2015 , 8, 69-98 | 2 |
| 1142 | Improving Estimation of Distribution Algorithm on Multimodal Problems by Detecting Promising Areas. 2015 , 45, 1438-49 | 38 |
| 1141 | Lightning search algorithm. 2015 , 36, 315-333 | 221 |
| 1140 | Dichotomy Guided Based Parameter Adaptation for Differential Evolution. 2015 , | 4 |
| 1139 | Cooperative differential evolution with fast variable interdependence learning and cross-cluster mutation. 2015 , 36, 300-314 | 15 |
| 1138 | Computational scheduling methods for integrating plug-in electric vehicles with power systems: A review. 2015 , 51, 396-416 | 127 |
| 1137 | GPU-Accelerated Parallel Coevolutionary Algorithm for Parameters Identification and Temperature Monitoring in Permanent Magnet Synchronous Machines. 2015 , 11, 1220-1230 | 40 |
| 1136 | . <i>IEEE Transactions on Evolutionary Computation</i> , 2015 , 19, 746-758 | 15.6 84 |
| 1135 | Moth-flame optimization algorithm: A novel nature-inspired heuristic paradigm. 2015 , 89, 228-249 | 1923 |
| 1134 | Cuckoo search with varied scaling factor. 2015 , 9, 623-635 | 33 |
| 1133 | Composite Particle Swarm Optimizer With Historical Memory for Function Optimization. 2015 , 45, 2350-63 | 124 |
| 1132 | Evolution Strategies. 2015 , 871-898 | 62 |
| 1131 | A new modified differential evolution algorithm scheme-based linear frequency modulation radar signal de-noising. 2015 , 47, 771-787 | 6 |
| 1130 | Harmony Search algorithm: a variant with Self-regulated Fretwidth. 2015 , 266, 1127-1152 | 13 |
| 1129 | A novel parallel multi-swarm algorithm based on comprehensive learning particle swarm optimization. 2015 , 45, 33-45 | 68 |
| 1128 | Biomimicry of parasitic behavior in a coevolutionary particle swarm optimization algorithm for global optimization. 2015 , 32, 224-240 | 23 |
| 1127 | The gradient evolution algorithm: A new metaheuristic. 2015 , 316, 246-265 | 43 |

| | | |
|------|---|-----|
| 1126 | Application of Fixed Length Gene Genetic Programming (FLGGP) in Hydropower Reservoir Operation. 2015 , 29, 3357-3370 | 17 |
| 1125 | Function optimization algorithm based on SIRQV epidemic dynamic model. 2015 , 8, 62-92 | 2 |
| 1124 | Black Hole Algorithm and Its Applications. 2015 , 147-170 | 28 |
| 1123 | A Walk into Metaheuristics for Engineering Optimization: Principles, Methods and Recent Trends. 2015 , 8, 606-636 | 50 |
| 1122 | Ions motion algorithm for solving optimization problems. 2015 , 32, 72-79 | 127 |
| 1121 | Adaptive division of labor particle swarm optimization. 2015 , 42, 5887-5903 | 18 |
| 1120 | Vector-based swarm optimization algorithm. 2015 , 37, 911-922 | 3 |
| 1119 | Nested evolutionary algorithms for joint structure design and operation of micro-grids under variable electricity prices scenarios. 2015 , | |
| 1118 | An Improved Particle Swarm Optimization Approach for Solving Machine Loading Problem in Flexible Manufacturing System. 2015 , 14, 167-187 | 4 |
| 1117 | General Relativity Search Algorithm: A Global Optimization Approach. 2015 , 14, 1550017 | 13 |
| 1116 | A modified Gravitational Search Algorithm and its application. 2015 , | 2 |
| 1115 | An interactive evolutionary algorithm with adaptive evaluation mechanism. 2015 , | 1 |
| 1114 | Hybrid collaborative optimization based on selection strategy of initial point and adaptive relaxation. 2015 , 29, 3841-3854 | 5 |
| 1113 | Artificial bee colony algorithm with multiple search strategies. 2015 , 271, 269-287 | 47 |
| 1112 | Notice of Removal: A new hybrid CS-GSA algorithm for function optimization. 2015 , | |
| 1111 | An improved Artificial Bee Colony algorithm with incorporating information of qualified solutions. 2015 , | |
| 1110 | Chaotic fruit fly optimization algorithm. 2015 , 89, 446-458 | 119 |
| 1109 | An Efficient Genetic Algorithm for Optimization Problems with Time-Consuming Fitness Evaluation. 2015 , 12, 1350106 | 9 |

| | | |
|------|---|-----|
| 1108 | Digital IIR Filter Design with Fix-Point Representation Using Effective Evolutionary Local Search Enhanced Differential Evolution. 2015 , 131-157 | |
| 1107 | Artificial Bee Colony Algorithm Based on Information Learning. 2015 , 45, 2827-39 | 94 |
| 1106 | An Improved Artificial Bee Colony Algorithm Based on Particle Swarm Optimization and Differential Evolution. 2015 , 24-35 | 2 |
| 1105 | A new adaptive Cuckoo search algorithm. 2015 , | 26 |
| 1104 | A multi-swarm bat algorithm for global optimization. 2015 , | 19 |
| 1103 | Accelerating Artificial Bee Colony Algorithm for Global Optimization. 2015 , 451-458 | 1 |
| 1102 | Two-phase anticipatory system design based on extended species abundance model of biogeography for intelligent battlefield preparation. 2015 , 89, 420-445 | 2 |
| 1101 | Memetic binary particle swarm optimization for discrete optimization problems. 2015 , 299, 58-84 | 73 |
| 1100 | Adaptive comprehensive learning bacterial foraging optimization and its application on vehicle routing problem with time windows. 2015 , 151, 1208-1215 | 47 |
| 1099 | Regarding the rankings of optimization heuristics based on artificially-constructed benchmark functions. 2015 , 297, 191-201 | 30 |
| 1098 | A multi-start central force optimization for global optimization. 2015 , 27, 92-98 | 12 |
| 1097 | Opposition versus randomness in binary spaces. 2015 , 27, 28-37 | 17 |
| 1096 | A variant with a time varying PID controller of particle swarm optimizers. 2015 , 297, 21-49 | 18 |
| 1095 | A teaching-learning-based optimization algorithm with producer-consumer model for global optimization. 2015 , 19, 745-762 | 17 |
| 1094 | How important is a transfer function in discrete heuristic algorithms. 2015 , 26, 625-640 | 48 |
| 1093 | Drift analysis of mutation operations for biogeography-based optimization. 2015 , 19, 1881-1892 | 14 |
| 1092 | Competitive and cooperative particle swarm optimization with information sharing mechanism for global optimization problems. 2015 , 293, 370-382 | 133 |
| 1091 | Particle swarm optimization with dual-level task allocation. 2015 , 38, 88-110 | 27 |

| | | |
|------|---|----------|
| 1090 | Group search optimizer with intraspecific competition and Lévy walk. 2015 , 73, 44-51 | 9 |
| 1089 | An improved teaching-learning-based optimization algorithm for solving global optimization problem. 2015 , 297, 171-190 | 67 |
| 1088 | An opposition-based algorithm for function optimization. 2015 , 37, 293-306 | 39 |
| 1087 | A social learning particle swarm optimization algorithm for scalable optimization. 2015 , 291, 43-60 | 401 |
| 1086 | A novel modified hybrid PSO-GSA based on fuzzy logic for non-convex economic dispatch problem with valve-point effect. 2015 , 64, 121-135 | 67 |
| 1085 | Efficient collision-free path-planning of multiple mobile robots system using efficient artificial bee colony algorithm. 2015 , 79, 47-56 | 76 |
| 1084 | Stochastic Fractal Search: A powerful metaheuristic algorithm. 2015 , 75, 1-18 | 289 |
| 1083 | . <i>IEEE Transactions on Evolutionary Computation</i> , 2015 , 19, 560-574 | 15.6 183 |
| 1082 | A modified gravitational search algorithm based on sequential quadratic programming and chaotic map for ELD optimization. 2015 , 42, 689-708 | 10 |
| 1081 | Algorithms for randomized time-varying knapsack problems. 2016 , 31, 95-117 | 24 |
| 1080 | Optimization of a Conical Corrugated Antenna Using Multiobjective Heuristics for Radio-Astronomy Applications. 2016 , 2016, 1-13 | 1 |
| 1079 | Lévy-Flight Moth-Flame Algorithm for Function Optimization and Engineering Design Problems. 2016 , 2016, 1-22 | 34 |
| 1078 | Multilevel Image Segmentation Based on an Improved Firefly Algorithm. 2016 , 2016, 1-12 | 19 |
| 1077 | Particle Swarm Optimization with Double Learning Patterns. 2016 , 2016, 6510303 | 9 |
| 1076 | Improving an adaptive differential evolution using hill-valley detection. 2016 , 13, 1-13 | 1 |
| 1075 | Using GM (1,1) Optimized by MFO with Rolling Mechanism to Forecast the Electricity Consumption of Inner Mongolia. 2016 , 6, 20 | 46 |
| 1074 | A Novel Hybrid Firefly Algorithm for Global Optimization. 2016 , 11, e0163230 | 76 |
| 1073 | A Novel Flexible Inertia Weight Particle Swarm Optimization Algorithm. 2016 , 11, e0161558 | 15 |

| | | |
|------|---|-----|
| 1072 | Using Genetic Programming with Prior Formula Knowledge to Solve Symbolic Regression Problem. 2016 , 2016, 1021378 | 3 |
| 1071 | A Competitive Divide-and-Conquer Algorithm for Unconstrained Large-Scale Black-Box Optimization. 2016 , 42, 1-24 | 109 |
| 1070 | BFPART: Best-First PART. 2016 , 367-368, 927-952 | 7 |
| 1069 | Adapting Differential Evolution Algorithms For Continuous Optimization Via Greedy Adjustment Of Control Parameters. 2016 , 6, 103-118 | 22 |
| 1068 | Efficient reconstruction of subsurface elliptical-cylindrical targets using evolutionary programming. 2016 , | 1 |
| 1067 | Automatically Designing More General Mutation Operators of Evolutionary Programming for Groups of Function Classes Using a Hyper-Heuristic. 2016 , | 3 |
| 1066 | A failure remember-driven differential evolution. 2016 , | 1 |
| 1065 | Improved shuffled frog leaping algorithm by using orthogonal experimental design. 2016 , | 1 |
| 1064 | Convolution by Evolution. 2016 , | 39 |
| 1063 | A cooperative learning artificial bee colony algorithm with multiple search mechanisms. 2016 , 13, 113-124 | 8 |
| 1062 | Enhanced multiobjective population-based incremental learning with applications in risk treaty optimization. 2016 , 9, 153-165 | 2 |
| 1061 | An inline surface measurement method for membrane mirror fabrication using two-stage trained Zernike polynomials and elitist teaching-learning-based optimization. 2016 , 27, 124005 | 2 |
| 1060 | . 2016 , | 15 |
| 1059 | Mixed mutation strategy evolutionary programming based on Shapley value. 2016 , | 4 |
| 1058 | A hybrid estimation of distribution algorithm with differential evolution for global optimization. 2016 , | |
| 1057 | An enhanced bacterial foraging optimization with adaptive elimination-dispersal probability and PSO strategy. 2016 , | 2 |
| 1056 | Classification guided differential evolution. 2016 , | 1 |
| 1055 | Clonal Selection Algorithm with Adaptive Levy Mutation Operator. 2016 , | |

| | | |
|------|---|----|
| 1054 | A grouping genetic algorithm [Extreme learning machine approach for optimal wave energy prediction. 2016, | 2 |
| 1053 | Modified firefly algorithm using randomized mechanisms. 2016, | 1 |
| 1052 | Metaheuristic Techniques. 2016, 693-750 | 10 |
| 1051 | Adaptive hybrid differential evolution with circular sliding window for large scale optimization. 2016, | |
| 1050 | Fitness and diversity guided particle swarm optimization for global optimization and training artificial neural networks. 2016, | 0 |
| 1049 | An estimation of distribution algorithm guided by mean shift. 2016, | 2 |
| 1048 | An improved genetic algorithm with dynamic topology. 2016, 25, 128904 | 3 |
| 1047 | An evolutionary sampling approach with adaptive Levy probability distribution. 2016, | |
| 1046 | CFO: A new compact swarm intelligent algorithm for global optimization and optimal bipedal robots walking. 2016, | 0 |
| 1045 | Fuzzy Krill Herd (FKH): An improved optimization algorithm. 2016, 20, 153-165 | 4 |
| 1044 | Recent Advances in Evolutionary Programming. 2016, 191-203 | |
| 1043 | An adaptive differential evolution with adaptive archive selection and hill-valley detection. 2016, | |
| 1042 | Enhanced Multiobjective Population-Based Incremental Learning with Applications in Risk Treaty Optimization. 2016, 3-18 | |
| 1041 | An improved krill herd algorithm with global exploration capability for solving numerical function optimization problems and its application to data clustering. 2016, 46, 230-245 | 41 |
| 1040 | A clustering-based differential evolution with random-based sampling and Gaussian sampling. 2016 , 205, 229-246 | 16 |
| 1039 | Negatively Correlated Search. 2016, 34, 542-550 | 53 |
| 1038 | A novel Grouping Genetic Algorithm[Extreme Learning Machine approach for global solar radiation prediction from numerical weather models inputs. 2016, 132, 129-142 | 78 |
| 1037 | MCOA: mutated and self-adaptive cuckoo optimization algorithm. 2016, 9, 21-36 | 3 |

| | | |
|------|---|----|
| 1036 | An Efficient Hybrid Algorithm Based on HS and SFLA. 2016 , 30, 1659012 | 13 |
| 1035 | Sympathetic Trippings Blocking in Over Current Relay Coordination Algorithm during Steady State & Transient Network Topologies. 2016 , 17, 311-326 | 1 |
| 1034 | Metropolis biogeography-based optimization. 2016 , 360, 73-95 | 23 |
| 1033 | A population initialization method for evolutionary algorithms based on clustering and Cauchy deviates. 2016 , 60, 294-310 | 20 |
| 1032 | Feature Selection with a Grouping Genetic Algorithm [Extreme Learning Machine Approach for Wind Power Prediction. 2016 , 373-382 | 1 |
| 1031 | Dynamic Small World Network Topology for Particle Swarm Optimization. 2016 , 30, 1660009 | 6 |
| 1030 | Grey wolf optimization algorithm with invasion-based migration operation. 2016 , | 9 |
| 1029 | Optimal control for an alkali/surfactant/polymer flooding system. 2016 , | 1 |
| 1028 | Particle swarm optimization using multi-information characteristics of all personal-best information. 2016 , 5, 1632 | 3 |
| 1027 | An efficient metaheuristic optimization approach to the problem of PID tuning for automatic voltage regulator systems. 2016 , | 3 |
| 1026 | Learning Features for Discriminative Behavior Analysis of Evolutionary Algorithms via Slow Feature Analysis. 2016 , | 1 |
| 1025 | An Improved Multi-strategy Ensemble Artificial Bee Colony Algorithm with Neighborhood Search. 2016 , 489-496 | 2 |
| 1024 | Particle swarm optimization using dynamic tournament topology. 2016 , 48, 584-596 | 71 |
| 1023 | Modern meta-heuristics based on nonlinear physics processes: A review of models and design procedures. 2016 , 655, 1-70 | 92 |
| 1022 | Particle swarm optimization with mutation operations controlled by landscape modality estimation using hill-valley detection. 2016 , 21, 423-433 | |
| 1021 | A Modified Particle Swarm Optimization Based on Eagle Foraging Behavior. 2016 , 15, 703-727 | 2 |
| 1020 | Hybrid Artificial Bee Colony Algorithm with Differential Evolution and Free Search for Numerical Function Optimization. 2016 , 25, 1650020 | 5 |
| 1019 | Dolphin swarm algorithm. 2016 , 17, 717-729 | 40 |

| | | |
|------|--|----|
| 1018 | Interleaving of particle swarm optimization and differential evolution algorithm for global optimization. 2016 , 38, 116-133 | 2 |
| 1017 | A modified estimation distribution algorithm based on extreme elitism. 2016 , 150, 149-166 | 3 |
| 1016 | Particle swarm optimization-based solution updating strategy for biogeography-based optimization. 2016 , | 4 |
| 1015 | Cloud glaciation temperature estimation from passive remote sensing data with evolutionary computing. 2016 , 121, 13,591-13,608 | 11 |
| 1014 | Searching for structural bias in particle swarm optimization and differential evolution algorithms. 2016 , 10, 307-353 | 14 |
| 1013 | References. 2016 , 297-314 | |
| 1012 | A novel Coral Reefs Optimization algorithm with substrate layers for optimal battery scheduling optimization in micro-grids. 2016 , 20, 4287-4300 | 29 |
| 1011 | A new approach in image registration. 2016 , | 0 |
| 1010 | Benchmarking heuristic search and optimisation algorithms in Matlab. 2016 , | 2 |
| 1009 | Application of the gravity search algorithm to multi-reservoir operation optimization. 2016 , 98, 173-185 | 45 |
| 1008 | A novel adaptive genetic algorithm for global optimization of mathematical test functions and real-world problems. 2016 , 19, 2002-2021 | 18 |
| 1007 | An efficient hybrid algorithm based on harmony search and invasive weed optimization. 2016 , | 2 |
| 1006 | Adaptive cuckoo search algorithm for continuous function optimization problems. 2016 , | 2 |
| 1005 | A variant of group search optimizer for global optimization. 2016 , 16, 219-230 | 4 |
| 1004 | A Compact Flower Pollination Algorithm Optimization. 2016 , | 3 |
| 1003 | Differential evolution based on the node degree of its complex network: Initial study. 2016 , | 1 |
| 1002 | Chaotic grey wolf optimization. 2016 , | 7 |
| 1001 | How effective is Cauchy-EDA in high dimensions?. 2016 , | 3 |

| | | |
|------|--|------|
| 1000 | Enhancing distributed differential evolution with a space-driven topology. 2016, | 5 |
| 999 | IADE-Micro adaptive differential evolution to solve constrained optimization problems. 2016, | |
| 998 | Differential evolution with a dimensional mutation strategy for global optimization. 2016, | |
| 997 | An Enhanced Approach for Parameter Estimation: Using Immune Dynamic Learning Swarm Optimization Based on Multicore Architecture. 2016, 2, 26-33 | 8 |
| 996 | A New Stochastic Optimization Approach IDolphin Swarm Optimization Algorithm. 2016, 15, 1650011 | 25 |
| 995 | Significant wave height and energy flux prediction for marine energy applications: A grouping genetic algorithm IExtreme Learning Machine approach. 2016, 97, 380-389 | 51 |
| 994 | An improved artificial bee colony and its application. 2016, 107, 14-31 | 45 |
| 993 | Biogeography-based optimization with covariance matrix based migration. 2016, 45, 71-85 | 39 |
| 992 | Differential evolution with Gaussian mutation for combined heat and power economic dispatch. 2016, 20, 681-688 | 39 |
| 991 | Biogeographic harmony search for emergency air transportation. 2016, 20, 967-977 | 17 |
| 990 | Gaussian bare-bones artificial bee colony algorithm. 2016, 20, 907-924 | 47 |
| 989 | ODMA: a novel swarm-evolutionary metaheuristic optimizer inspired by open source development model and communities. 2016, 20, 727-747 | 10 |
| 988 | Hybridizing harmony search algorithm with cuckoo search for global numerical optimization. 2016, 20, 273-285 | 186 |
| 987 | SAMCCTLBO: a multi-class cooperative teachingIlearning-based optimization algorithm with simulated annealing. 2016, 20, 1921-1943 | 23 |
| 986 | A novel metaheuristic for continuous optimization problems: Virus optimization algorithm. 2016, 48, 73-93 | 34 |
| 985 | A novel global Harmony Search method based on Ant Colony Optimisation algorithm. 2016, 28, 215-238 | 6 |
| 984 | Estimation of parameters in a fin with temperature-dependent thermal conductivity and radiation. 2016, 230, 474-485 | 14 |
| 983 | Dragonfly algorithm: a new meta-heuristic optimization technique for solving single-objective, discrete, and multi-objective problems. 2016, 27, 1053-1073 | 1214 |

| | | |
|-----|--|------|
| 982 | The Collective Animal Behavior method. 2016 , 55-81 | |
| 981 | Reduction of Function Evaluations by using an evolutionary computation algorithm. 2016 , 121-152 | |
| 980 | A States of Matter Algorithm for Global Optimization. 2016 , 35-54 | |
| 979 | A Hybrid Group Search Optimizer with Opposition-Based Learning and Differential Evolution. 2016 , 3-12 | 2 |
| 978 | Backtracking biogeography-based optimization for numerical optimization and mechanical design problems. 2016 , 44, 894-903 | 7 |
| 977 | Multiple learning particle swarm optimization with space transformation perturbation and its application in ethylene cracking furnace optimization. 2016 , 96, 156-170 | 31 |
| 976 | Data-Driven Modeling for UGI Gasification Processes via an Enhanced Genetic BP Neural Network With Link Switches. 2016 , 27, 2718-2729 | 22 |
| 975 | Optimum Features Selection for oil Spill Detection in SAR Image. 2016 , 44, 775-787 | 12 |
| 974 | Controlling of Local search Methods Parameters in Memetic Algorithms Using the Principles of Simulated Annealing. 2016 , 136, 70-76 | 23 |
| 973 | A hybrid bat algorithm with natural-inspired algorithms for continuous optimization problem. 2016 , 21, 112-119 | 12 |
| 972 | The Whale Optimization Algorithm. 2016 , 95, 51-67 | 4197 |
| 971 | A new unconstrained global optimization method based on clustering and parabolic approximation. 2016 , 55, 493-507 | 7 |
| 970 | Extending standard evolutionary programming with self-adaptive stable distributions. 2016 , 31, 114-142 | |
| 969 | Stability analysis of particle dynamics in gravitational search optimization algorithm. 2016 , 337-338, 25-43 | 27 |
| 968 | A quantum behaved particle swarm optimization for flexible job shop scheduling. 2016 , 93, 36-44 | 85 |
| 967 | Genetic search for optimally-constrained multiple-line fitting of discrete data points. 2016 , 40, 236-251 | 5 |
| 966 | Biogeography-based optimization for identifying promising compounds in chemical process. 2016 , 174, 494-499 | 8 |
| 965 | An efficient modified harmony search algorithm with intersect mutation operator and cellular local search for continuous function optimization problems. 2016 , 44, 725-753 | 29 |

| | | |
|-----|--|---------|
| 964 | SCA: A Sine Cosine Algorithm for solving optimization problems. 2016 , 96, 120-133 | 1916 |
| 963 | Fuzzy performance evaluation of Evolutionary Algorithms based on extreme learning classifier. 2016 , 175, 371-382 | 2 |
| 962 | An Improved Evolutionary Algorithm for Reducing the Number of Function Evaluations. 2016 , 22, 177-192 | 3 |
| 961 | Improved Particle Swarm Optimization for Global Optimization of Unimodal and Multimodal Functions. 2016 , 97, 525-535 | 3 |
| 960 | Average Convergence Rate of Evolutionary Algorithms. <i>IEEE Transactions on Evolutionary Computation</i> , 2016 , 20, 316-321 | 15.6 31 |
| 959 | Opposition-based Magnetic Optimization Algorithm with parameter adaptation strategy. 2016 , 26, 97-119 | 7 |
| 958 | Obstacles and difficulties for robust benchmark problems: A novel penalty-based robust optimisation method. 2016 , 328, 485-509 | 17 |
| 957 | Dispersive Flies Optimisation and Medical Imaging. 2016 , 183-203 | 7 |
| 956 | A novel adaptive cuckoo search algorithm for intrinsic discriminant analysis based face recognition. 2016 , 38, 661-675 | 95 |
| 955 | A Modified Biogeography Based Optimization. 2016 , 227-238 | 5 |
| 954 | Teaching-learning-based optimization with variable-population scheme and its application for ANN and global optimization. 2016 , 173, 1096-1111 | 27 |
| 953 | Genetic Learning Particle Swarm Optimization. 2016 , 46, 2277-2290 | 268 |
| 952 | Accelerating particle swarm optimization using crisscross search. 2016 , 329, 52-72 | 56 |
| 951 | Across neighborhood search for numerical optimization. 2016 , 329, 597-618 | 60 |
| 950 | Layered Ensemble Architecture for Time Series Forecasting. 2016 , 46, 270-83 | 24 |
| 949 | Effective multi-objective optimization with the coral reefs optimization algorithm. 2016 , 48, 966-984 | 8 |
| 948 | (mu)JADE: adaptive differential evolution with a small population. 2016 , 20, 4111-4120 | 19 |
| 947 | Statistical Mechanics Approximation of Biogeography-Based Optimization. 2016 , 24, 427-58 | 5 |

| | | |
|-----|--|------|
| 946 | A novel PSO algorithm based on an incremental-PID-controlled search strategy. 2016 , 20, 991-1005 | 6 |
| 945 | Bolstering efficient SSGAs based on an ensemble of probabilistic variable-wise crossover strategies. 2016 , 20, 2149-2176 | 3 |
| 944 | Multi-Verse Optimizer: a nature-inspired algorithm for global optimization. 2016 , 27, 495-513 | 1079 |
| 943 | Medical image registration based on watershed transform from greyscale marker and multi-scale parameter search. 2017 , 5, 138-156 | 5 |
| 942 | Enhancing the modified artificial bee colony algorithm with neighborhood search. 2017 , 21, 2733-2743 | 31 |
| 941 | Conceptual and numerical comparisons of swarm intelligence optimization algorithms. 2017 , 21, 3081-3100 | 25 |
| 940 | Improved imperialist competitive algorithm with mutation operator for continuous optimization problems. 2017 , 28, 1667-1682 | 13 |
| 939 | Interactive Markov Models of Optimization Search Strategies. 2017 , 47, 808-825 | |
| 938 | A survey of biogeography-based optimization. 2017 , 28, 1909-1926 | 38 |
| 937 | Fireworks Algorithm with Enhanced Fireworks Interaction. 2017 , 14, 42-55 | 34 |
| 936 | Multimodal Estimation of Distribution Algorithms. 2017 , 47, 636-650 | 96 |
| 935 | Adaptive multi-context cooperatively coevolving particle swarm optimization for large-scale problems. 2017 , 21, 4735-4754 | 23 |
| 934 | Neighborhood guided differential evolution. 2017 , 21, 4769-4812 | 17 |
| 933 | Self-adaptive differential evolution with global neighborhood search. 2017 , 21, 3759-3768 | 19 |
| 932 | Differential evolution dynamics analysis by complex networks. 2017 , 21, 1817-1831 | 17 |
| 931 | Global harmony search with generalized opposition-based learning. 2017 , 21, 2129-2137 | 29 |
| 930 | A Novel Consensus-Based Particle Swarm Optimization-Assisted Trust-Tech Methodology for Large-Scale Global Optimization. 2017 , 47, 2717-2729 | 25 |
| 929 | Particle Swarm Optimization with Enhanced Global Search and Local Search. 2017 , 26, 421-432 | 1 |

| | | |
|-----|--|-----|
| 928 | Novel migration operators of biogeography-based optimization and Markov analysis. 2017 , 21, 6605-6632 | 4 |
| 927 | An improved extremal optimization based on the distribution knowledge of candidate solutions. 2017 , 16, 135-149 | |
| 926 | A novel local exploitation scheme for conditionally breeding real-coded genetic algorithm. 2017 , 76, 17955-17969 | 9 |
| 925 | Human behavior-based optimization: a novel metaheuristic approach to solve complex optimization problems. 2017 , 28, 233-244 | 30 |
| 924 | Artificial bee colony algorithm with strategy and parameter adaptation for global optimization. 2017 , 28, 349-364 | 6 |
| 923 | The variants of the Bees Algorithm (BA): a survey. 2017 , 47, 67-121 | 21 |
| 922 | Satin bowerbird optimizer: A new optimization algorithm to optimize ANFIS for software development effort estimation. 2017 , 60, 1-15 | 105 |
| 921 | Sampling-based adaptive bounding evolutionary algorithm for continuous optimization problems. 2017 , 382-383, 216-233 | 7 |
| 920 | An enhanced optimization kernel for analog IC design automation using the shrinking circles technique. 2017 , 58, 62-78 | 7 |
| 919 | An adaptive heuristic optimization algorithm based on politics. 2017 , 11, 127-136 | 1 |
| 918 | Since CEC 2005 competition on real-parameter optimisation: a decade of research, progress and comparative analysis—weakness. 2017 , 21, 5573-5583 | 41 |
| 917 | Chaotic gravitational constants for the gravitational search algorithm. 2017 , 53, 407-419 | 155 |
| 916 | A novel fuzzy adaptive configuration of particle swarm optimization to solve large-scale optimal reactive power dispatch. 2017 , 53, 441-456 | 80 |
| 915 | Memetic Algorithm with Constrained Local Search for Large-Scale Global Optimization. 2017 , 26, 287-300 | 1 |
| 914 | Efficient player selection strategy based diversified particle swarm optimization algorithm for global optimization. 2017 , 397-398, 69-90 | 13 |
| 913 | Global Optimization of Microwave Filters Based on a Surrogate Model-Assisted Evolutionary Algorithm. 2017 , 65, 1976-1985 | 58 |
| 912 | Ant colony optimization with different crossover schemes for global optimization. 2017 , 20, 1247-1257 | 7 |
| 911 | Dolphin Swarm Extreme Learning Machine. 2017 , 9, 275-284 | 21 |

| | | |
|-----|--|-----|
| 910 | Application of mutation operators to flower pollination algorithm. 2017 , 79, 112-129 | 75 |
| 909 | A fuzzy hierarchical operator in the grey wolf optimizer algorithm. 2017 , 57, 315-328 | 131 |
| 908 | A novel meta-heuristic optimization algorithm: Thermal exchange optimization. 2017 , 110, 69-84 | 245 |
| 907 | Continuous Adaptive Population Reduction (CAPR) for Differential Evolution Optimization. 2017 , 22, 289-305 | 7 |
| 906 | Self-adaptive differential evolution algorithm with improved mutation mode. 2017 , 47, 644-658 | 27 |
| 905 | Parameters identification of photovoltaic models using self-adaptive teaching-learning-based optimization. 2017 , 145, 233-246 | 142 |
| 904 | Membrane Algorithms. 2017 , 33-115 | 4 |
| 903 | An adaptive elitism-based immigration for grey wolf optimization algorithm. 2017 , | 4 |
| 902 | Human mental search: a new population-based metaheuristic optimization algorithm. 2017 , 47, 850-887 | 65 |
| 901 | An improvement of genetic algorithm for optimization problem. 2017 , | 6 |
| 900 | A grey artificial bee colony algorithm. 2017 , 60, 1-17 | 20 |
| 899 | Distance-Based Tournament Selection. 2017 , 705-714 | |
| 898 | An astrophysics-inspired Grey wolf algorithm for numerical optimization and its application to engineering design problems. 2017 , 112, 231-254 | 48 |
| 897 | Development of an Enhanced Ant Lion Optimization Algorithm and its Application in Antenna Array Synthesis. 2017 , 59, 153-173 | 30 |
| 896 | Alternative Kriging-HDMR optimization method with expected improvement sampling strategy. 2017 , 34, 1807-1828 | 12 |
| 895 | A modified approach to cross entropy method: Elitist stepped distribution algorithm. 2017 , 58, 756-769 | 8 |
| 894 | Decentralizing and coevolving differential evolution for large-scale global optimization problems. 2017 , 47, 1208-1223 | 11 |
| 893 | Neighborhood-adaptive differential evolution for global numerical optimization. 2017 , 59, 659-706 | 22 |

| | | |
|-----|---|---------|
| 892 | Parallel population-based algorithm portfolios: An empirical study. 2017 , 247, 115-125 | 13 |
| 891 | Memetic Algorithm with Normalized RBF ANN for Approximation of Objective Function and Secondary RBF ANN for Error Mapping. 2017 , 177, 540-547 | 10 |
| 890 | Enhanced harmony search with dual strategies and adaptive parameters. 2017 , 21, 4431-4445 | 8 |
| 889 | Particle Swarm Optimization with Intelligent Mutation for Nonlinear Mixed-Integer Reliability-Redundancy Allocation. 2017 , 16, 1750003 | 5 |
| 888 | Efficient Resource Allocation in Cooperative Co-Evolution for Large-Scale Global Optimization. <i>IEEE Transactions on Evolutionary Computation</i> , 2017 , 21, 493-505 | 15.6 66 |
| 887 | Risk-aware short term hydro-wind-thermal scheduling using a probability interval optimization model. 2017 , 189, 534-554 | 44 |
| 886 | Rain-fall optimization algorithm: A population based algorithm for solving constrained optimization problems. 2017 , 19, 31-42 | 87 |
| 885 | Global optimization method using adaptive and parallel ensemble of surrogates for engineering design optimization. 2017 , 66, 1135-1155 | 9 |
| 884 | Hybridizing cuckoo search algorithm with hill climbing for numerical optimization problems. 2017 , | 27 |
| 883 | Solving the Optimal Power Flow Quadratic Cost Functions using Vortex Search Algorithm. 2017 , 50, 239-244 | 7 |
| 882 | A Study of Parameter Dynamic Adaptation with Fuzzy Logic for the Grey Wolf Optimizer Algorithm. 2017 , 228-238 | 1 |
| 881 | Opposition based Laplacian Ant Lion Optimizer. 2017 , 23, 71-90 | 35 |
| 880 | Fast genetic algorithms. 2017 , | 84 |
| 879 | Weighted distance grey wolf optimization with immigration operation for global optimization problems. 2017 , | 2 |
| 878 | A New Quantum-Behaved Particle Swarm Optimization with a Chaotic Operator. 2017 , 164-170 | |
| 877 | Particle swarm optimizer with two differential mutation. 2017 , 61, 314-330 | 54 |
| 876 | Salp Swarm Algorithm: A bio-inspired optimizer for engineering design problems. 2017 , 114, 163-191 | 1826 |
| 875 | Cognitive Radio Engine Design for IoT Using Real-Coded Biogeography-Based Optimization and Fuzzy Decision Making. 2017 , 97, 1813-1833 | 13 |

| | | |
|-----|--|-----|
| 874 | Entanglement-Enhanced Quantum-Inspired Tabu Search Algorithm for Function Optimization. 2017 , 5, 13236-13252 | 16 |
| 873 | Dynamic social behavior algorithm for real-parameter optimization problems and optimization of hyper beamforming of linear antenna arrays. 2017 , 64, 401-414 | 3 |
| 872 | I Ching philosophy inspired optimization. 2017 , | |
| 871 | Optimal path planning for motion robots based on bees pollen optimization algorithm. 2017 , 1, 351-366 | 5 |
| 870 | Cuckoo search with search strategies and proper objective function for brightness preserving image enhancement. 2017 , 27, 695-712 | 21 |
| 869 | PlatEMO: A MATLAB Platform for Evolutionary Multi-Objective Optimization [Educational Forum]. 2017 , 12, 73-87 | 645 |
| 868 | Dynamic simultaneous adaptation of parameters in the grey wolf optimizer using fuzzy logic. 2017 , | 3 |
| 867 | A Crossover Improved Genetic Algorithm and Its Application in Non-Uniform Linear Antenna Arrays. 2017 , 16, 1750027 | 3 |
| 866 | Adaptive Cauchy Differential Evolution with Strategy Adaptation and Its Application to Training Large-Scale Artificial Neural Networks. 2017 , 502-510 | 7 |
| 865 | Design of Metaheuristic Based on Machine Learning: A Unified Approach. 2017 , | 5 |
| 864 | A surface-simplex swarm evolution algorithm. 2017 , 22, 38-50 | 2 |
| 863 | An effective hybrid particle swarm optimization with Gaussian mutation. 2017 , 11, 271-280 | |
| 862 | Improved particle swarm optimization through orthogonal experimental design. 2017 , | 2 |
| 861 | A review on the coral reefs optimization algorithm: new development lines and current applications. 2017 , 6, 1-15 | 41 |
| 860 | Hybridizing Cartesian Genetic Programming and Harmony Search for adaptive feature construction in supervised learning problems. 2017 , 52, 760-770 | 9 |
| 859 | Heterogeneous Strategy Particle Swarm Optimization. 2017 , 64, 467-471 | 35 |
| 858 | IIR model identification using a modified inclined planes system optimization algorithm. 2017 , 48, 237-259 | 18 |
| 857 | A Heterogeneous Network Access Selection Algorithm Based on Attribute Dependence. 2017 , 92, 1163-1176 | 5 |

| | | |
|-----|--|-----|
| 856 | Adaptive stable differential evolution in numerical optimization. 2017 , 16, 637-657 | 9 |
| 855 | Enhancing social emotional optimization algorithm using local search. 2017 , 21, 7393-7404 | 8 |
| 854 | Improved biogeography-based optimization with random ring topology and Powell's method. 2017 , 41, 630-649 | 24 |
| 853 | Collective decision optimization algorithm: A new heuristic optimization method. 2017 , 221, 123-137 | 38 |
| 852 | Optimal power flow using moth swarm algorithm. 2017 , 142, 190-206 | 245 |
| 851 | A new hybrid algorithm for analog ICs optimization based on the shrinking circles technique. 2017 , 56, 148-166 | 8 |
| 850 | Snap-drift cuckoo search: A novel cuckoo search optimization algorithm. 2017 , 52, 771-794 | 81 |
| 849 | Termite spatial correlation based particle swarm optimization for unconstrained optimization. 2017 , 33, 93-107 | 4 |
| 848 | Hybrid Gravitational Search Algorithm Based on Fuzzy Logic. 2017 , 5, 24520-24532 | 3 |
| 847 | Quantum-behaved lightning search algorithm to improve indirect field-oriented fuzzy-PI control for IM drive. 2017 , | 3 |
| 846 | A proposed whale search algorithm with adaptive random walk. 2017 , | 7 |
| 845 | Fast Convergence Evolutionary Programming for Multi-area Economic Dispatch. 2017 , 45, 1629-1637 | 11 |
| 844 | Quantum inspired evolutionary algorithms with improved rotation gates for real-coded synthetic and real world optimization problems. 2017 , 24, 203-223 | 16 |
| 843 | An Improved Evolutionary Approach for Document Clustering. 2017 , | 0 |
| 842 | Five-elements cycle optimization algorithm for solving continuous optimization problems. 2017 , | 2 |
| 841 | A competitive swarm optimizer integrated with Cauchy and Gaussian mutation for large scale optimization. 2017 , | 4 |
| 840 | Parallelized linear time variant acceleration coefficients of PSO algorithm for global optimization. 2017 , | |
| 839 | . 2017 , | |

| | | |
|-----|--|----|
| 838 | An adaptive differential evolution with exploitation and exploration by extreme individuals. 2017, | |
| 837 | Biogeography-Based Optimization: A 10-Year Review. 2017, 1, 391-407 | 67 |
| 836 | Artificial Prey-Predator (APP): An efficient approach for numerical function optimization. 2017, | 2 |
| 835 | Revised Gravitational Search Algorithms Based on Evolutionary-Fuzzy Systems. 2017, 10, 44 | 21 |
| 834 | A Hybrid Lightning Search Algorithm-Simplex Method for Global Optimization. 2017, 2017, 1-23 | 7 |
| 833 | Enhancing the Performance of Biogeography-Based Optimization Using Multitopology and Quantitative Orthogonal Learning. 2017, 2017, 1-23 | 3 |
| 832 | Chicken Swarm Optimization Based on Elite Opposition-Based Learning. 2017, 2017, 1-20 | 15 |
| 831 | Multiswarm comprehensive learning particle swarm optimization for solving multiobjective optimization problems. 2017, 12, e0172033 | 8 |
| 830 | Fast convergence evolutionary programming for economic dispatch problems. 2017, 11, 4009-4017 | 25 |
| 829 | Particle Swarm Optimization with Gaussian Disturbance. 2017, | 3 |
| 828 | Multiple-Population Jaya Algorithm for Continuous Function Optimization. 2017, | 1 |
| 827 | Gravitational Search Algorithm With Chaos. 2017, 1-16 | 1 |
| 826 | Combining a novel feeding operator and recent advances to improve the fish school search. 2017, | |
| 825 | A Mixed Strategies Differential Evolution Based on Fitness Landscapes Features. 2017, | 1 |
| 824 | Multiple Chaos Embedded Gravitational Search Algorithm. 2017, E100.D, 888-900 | 27 |
| 823 | Bibliography. 2017, 309-323 | |
| 822 | Self-Adaptive Evolutionary Computation Methods for GARCH Model Optimization. 2017, | |
| 821 | Multiobjective thermal power load dispatch using adaptive predator-prey optimization. 2018, 66, 370-383 | 10 |

| | | |
|-----|--|----|
| 820 | Orthogonal learning competitive swarm optimizer for economic dispatch problems. 2018 , 66, 134-148 | 56 |
| 819 | Particle swarm optimizer with crossover operation. 2018 , 70, 159-169 | 73 |
| 818 | Next Generation Metaheuristic: Jaguar Algorithm. 2018 , 6, 9975-9990 | 4 |
| 817 | An Extended Version of Flower Pollination Algorithm. 2018 , 43, 7573-7603 | 11 |
| 816 | A new effective operator for the hybrid algorithm for solving global optimisation problems. 2018 , 49, 1088-1102 | 0 |
| 815 | Intelligent Grey Wolf Optimizer Development and application for strategic bidding in uniform price spot energy market. 2018 , 69, 1-13 | 45 |
| 814 | Shuffled Complex-Self Adaptive Hybrid Evolution (SC-SAHEL) optimization framework. 2018 , 104, 215-235 | 23 |
| 813 | Control of the reactor core power in PWR using optimized PID controller with the real-coded GA. 2018 , 118, 107-121 | 27 |
| 812 | Grey wolf optimizer with cellular topological structure. 2018 , 107, 89-114 | 83 |
| 811 | Cat swarm optimization with normal mutation for fast convergence of multimodal functions. 2018 , 66, 473-491 | 30 |
| 810 | Hybrid Particle Swarm Optimization Combined With Genetic Operators for Flexible Job-Shop Scheduling Under Uncertain Processing Time for Semiconductor Manufacturing. 2018 , 31, 32-41 | 67 |
| 809 | Democratic joint operations algorithm for optimal power extraction of PMSG based wind energy conversion system. 2018 , 159, 312-326 | 54 |
| 808 | Wild Goats Algorithm: An Evolutionary Algorithm to Solve the Real-World Optimization Problems. 2018 , 14, 2951-2961 | 19 |
| 807 | Elephant swarm water search algorithm for global optimization. 2018 , 43, 1 | 16 |
| 806 | Denosing of point cloud data for computer-aided design, engineering, and manufacturing. 2018 , 34, 523-541 | 9 |
| 805 | Theoretical Analysis and Experimental Evidence of Opposite-Center Learning. 2018 , 6, 34948-34966 | 3 |
| 804 | Active vibration control design using the Coral Reefs Optimization with Substrate Layer algorithm. 2018 , 157, 14-26 | 19 |
| 803 | Adaptive multi-context cooperatively coevolving in differential evolution. 2018 , 48, 2719-2729 | 6 |

| | | |
|-----|---|-----|
| 802 | An Effective and Efficient Hybrid Algorithm Based on HS[WO for Global Optimization. 2018 , 32, 1859006 | 3 |
| 801 | Optimization of V-Trough photovoltaic concentrators through genetic algorithms with heuristics based on Weibull distributions. 2018 , 212, 122-140 | 10 |
| 800 | SQG-Differential Evolution for Difficult Optimization Problems under a Tight Function Evaluation Budget. 2018 , 322-336 | 4 |
| 799 | Chaotic whale optimization algorithm. 2018 , 5, 275-284 | 200 |
| 798 | Particle swarm optimization for constrained circular-arc/line-segment fitting of discrete data points. 2018 , 38, 25-37 | 1 |
| 797 | A hierarchy in mutation of genetic algorithm and its application to multi-objective analog/RF circuit optimization. 2018 , 94, 27-47 | 2 |
| 796 | An effective gbest-guided gravitational search algorithm for real-parameter optimization and its application in training of feedforward neural networks. 2018 , 143, 192-207 | 27 |
| 795 | Dynamic Group Optimization Algorithm With Embedded Chaos. 2018 , 6, 22728-22743 | 6 |
| 794 | Is Evolutionary Computation Evolving Fast Enough?. 2018 , 13, 42-51 | 6 |
| 793 | Electrical resistivity imaging inversion: An ISFLA trained kernel principal component wavelet neural network approach. 2018 , 104, 114-123 | 32 |
| 792 | Whale Optimization Algorithm for Constrained Economic Load Dispatch ProblemsA Cost Optimization. 2018 , 353-366 | 6 |
| 791 | Focus Group: An Optimization Algorithm Inspired by Human Behavior. 2018 , 17, 1850002 | 6 |
| 790 | A multi-level splitting algorithm based on differential evolution. 2018 , 09, 1850021 | |
| 789 | Information fusion in offspring generation: A case study in DE and EDA. 2018 , 42, 99-108 | 14 |
| 788 | Improved real coded genetic algorithm for dynamic economic dispatch. 2018 , 5, 349-362 | 15 |
| 787 | A new hybrid memetic multi-objective optimization algorithm for multi-objective optimization. 2018 , 448-449, 164-186 | 21 |
| 786 | Coral Reef Optimization with substrate layers for medical Image Registration. 2018 , 42, 138-159 | 24 |
| 785 | Frequency Domain Inverse Profiling of Buried Dielectric Elliptical-Cylindrical Objects Using Evolutionary Programming. 2018 , 15, 503-507 | 8 |

| | | |
|-----|---|---------|
| 784 | Adaptive harmony search with best-based search strategy. 2018 , 22, 1335-1349 | 20 |
| 783 | Hybridizing artificial bee colony with monarch butterfly optimization for numerical optimization problems. 2018 , 30, 163-181 | 32 |
| 782 | Evolutionary programming with a simulated-conformist mutation strategy. 2018 , 22, 659-676 | |
| 781 | Turning High-Dimensional Optimization Into Computationally Expensive Optimization. <i>IEEE Transactions on Evolutionary Computation</i> , 2018 , 22, 143-156 | 15.6 55 |
| 780 | Random Controlled Pool base Differential Evolution algorithm (RCPDE). 2018 , 24, 377-390 | |
| 779 | An evolutionary algorithm using spherical inversions. 2018 , 22, 1993-2014 | 4 |
| 778 | A novel feature selection method for brain tumor MR image classification based on the Fisher criterion and parameter-free Bat optimization. 2018 , 29, 193-206 | 30 |
| 777 | A comprehensive survey of Crow Search Algorithm and its applications. 2021 , 54, 2669-2716 | 20 |
| 776 | A novel x-shaped binary particle swarm optimization. 2021 , 25, 3013-3042 | 4 |
| 775 | Adaptive levy-assisted salp swarm algorithm: Analysis and optimization case studies. 2021 , 181, 380-409 | 11 |
| 774 | Multi-task processing oriented production layout based on evolutionary programming mechanism. 2021 , 98, 106896 | 2 |
| 773 | Global optimization with one-class classification-assisted selection. 2021 , 60, 100801 | 0 |
| 772 | Application of mutation operators to salp swarm algorithm. 2021 , 169, 114368 | 7 |
| 771 | A Cauchy-Gaussian Quantum-Behaved Bat Algorithm Applied to Solve the Economic Load Dispatch Problem. 2021 , 9, 3207-3228 | 6 |
| 770 | Historical knowledge-based MBO for global optimization problems and its application to clustering optimization. 2021 , 25, 3485-3501 | 2 |
| 769 | Molten steel temperature prediction using a hybrid model based on information interaction-enhanced cuckoo search. 2021 , 33, 6487-6509 | 1 |
| 768 | An improved real-coded genetic algorithm with random walk based mutation for solving combined heat and power economic dispatch. 2021 , 12, 8561-8584 | 8 |
| 767 | A solution to statistical and multidisciplinary design optimization problems using hGWO-SA algorithm. 2021 , 33, 3799-3824 | 2 |

| | | |
|-----|---|----|
| 766 | Trust-aware energy-efficient stable clustering approach using fuzzy type-2 Cuckoo search optimization algorithm for wireless sensor networks. 2021 , 27, 151-174 | 5 |
| 765 | A novel hybrid dynamic fireworks algorithm with particle swarm optimization. 2021 , 25, 2371-2398 | 4 |
| 764 | hPSO-SA: hybrid particle swarm optimization-simulated annealing algorithm for relay node selection in wireless body area networks. 2021 , 51, 1410-1438 | 9 |
| 763 | Pearson correlation coefficient-based pheromone refactoring mechanism for multi-colony ant colony optimization. 2021 , 51, 752-774 | 10 |
| 762 | Nature Inspired Techniques and Applications in Intrusion Detection Systems: Recent Progress and Updated Perspective. 2021 , 28, 2897-2919 | 0 |
| 761 | I-GWO and Ex-GWO: improved algorithms of the Grey Wolf Optimizer to solve global optimization problems. 2021 , 37, 509-532 | 21 |
| 760 | Oppositional Crow Search Algorithm with mutation operator for global optimization and application in designing FOPID controller. 2021 , 12, 463-488 | 7 |
| 759 | A novel hybrid BPSOBCA approach for feature selection. 2021 , 20, 39-61 | 16 |
| 758 | A Novel Sigmoid-Function-Based Adaptive Weighted Particle Swarm Optimizer. 2021 , 51, 1085-1093 | 62 |
| 757 | ELM-Based Frame Synchronization in Nonlinear Distortion Scenario Using Superimposed Training. 2021 , 9, 53530-53539 | 2 |
| 756 | A Developed Approach to Solve Economic and Emission Dispatch Problems Based on Moth-Flame Algorithm. 2021 , 49, 94-107 | 2 |
| 755 | Modified Salp Swarm Algorithm-Optimized Fractional-Order Adaptive Fuzzy PID Controller for Frequency Regulation of Hybrid Power System with Electric Vehicle. 2021 , 32, 416-438 | 8 |
| 754 | A Dynamic Neighborhood-Based Switching Particle Swarm Optimization Algorithm. 2020 , PP, | 42 |
| 753 | Hash Bit Selection Based on Collaborative Neurodynamic Optimization. 2021 , PP, | 1 |
| 752 | Variable Fragments Evolution in Differential Evolution. 2021 , 358-367 | |
| 751 | Thermal Exchange Metaheuristic Optimization Algorithm. 2021 , 733-782 | 1 |
| 750 | On Restricting Real-Valued Genotypes in Evolutionary Algorithms. 2021 , 3-16 | 2 |
| 749 | Comparative Study on Single and Multiple Chaotic Maps Incorporated Grey Wolf Optimization Algorithms. 2021 , 9, 77416-77437 | 10 |

| | | |
|-----|--|----|
| 748 | Enhancing the competitive swarm optimizer with covariance matrix adaptation for large scale optimization. 2021 , 51, 4984-5006 | 4 |
| 747 | A new MSGSA-optimized dynamic window of Spatio-temporal scan statistics for disease outbreak detection. 2021 , 1-1 | |
| 746 | Grasshopper Optimization Algorithm: Theory, Variants, and Applications. 2021 , 9, 50001-50024 | 38 |
| 745 | Modern optimization techniques for performance enhancement in welding. 2021 , 265-290 | |
| 744 | A surrogate-based optimization method for mixed-variable aircraft design. 1-21 | 3 |
| 743 | Controlling Population Diversity of Harris Hawks Optimization Algorithm Using Self-adaptive Clustering Approach. 2021 , 163-175 | |
| 742 | Artificial Intelligence Approaches to Estimate the Transport Energy Demand in Turkey. 2021 , 46, 2443-2476 | 2 |
| 741 | An Improved Genetic Algorithm for Document Clustering on the Cloud. 2021 , 181-189 | |
| 740 | Spherical Search Algorithm: A Metaheuristic for Bound-Constrained Optimization. 2021 , 421-441 | 0 |
| 739 | A Hybrid Whale Optimization with Seagull Algorithm for Global Optimization Problems. 2021 , 2021, 1-31 | 8 |
| 738 | A Developmental Evolutionary Learning Framework for Robotic Chinese Stroke Writing. 2021 , 1-1 | 0 |
| 737 | Fast parameter free Smart particle swarm optimization (SPSO). 2021 , | |
| 736 | A Chaos Sparrow Search Algorithm with Logarithmic Spiral and Adaptive Step for Engineering Problems. 2021 , 129, 1-34 | 4 |
| 735 | A Multi-Restart Dynamic Harris Hawk Optimization Algorithm for the Economic Load Dispatch Problem. 2021 , 9, 122180-122206 | 0 |
| 734 | A modified multi-level cross-entropy algorithm for optimization of problems with discrete variables. 1 | 0 |
| 733 | A bioinformatic variant fruit fly optimizer for tackling optimization problems. 2021 , 213, 106704 | 15 |
| 732 | Harris hawks optimization: a comprehensive review of recent variants and applications. 2021 , 33, 8939-8980 | 35 |
| 731 | Semi-Supervised Ensemble Classifier with Improved Sparrow Search Algorithm and Its Application in Pulmonary Nodule Detection. 2021 , 2021, 1-18 | 12 |

| | | |
|-----|---|----|
| 730 | Nature-inspired algorithms for Wireless Sensor Networks: A comprehensive survey. 2021 , 39, 100342 | 35 |
| 729 | Horse herd optimization algorithm: A nature-inspired algorithm for high-dimensional optimization problems. 2021 , 213, 106711 | 58 |
| 728 | A leader Harris hawks optimization for 2-D Masi entropy-based multilevel image thresholding. 1 | 7 |
| 727 | A Modified Niching Crow Search Approach to Well Placement Optimization. 2021 , 14, 857 | 2 |
| 726 | A Multiswarm Intelligence Algorithm for Expensive Bound Constrained Optimization Problems. 2021 , 2021, 1-18 | 2 |
| 725 | HSCWMA: A New Hybrid SCA-WMA Algorithm for Solving Optimization Problems. 2021 , 20, 775-808 | 3 |
| 724 | Effect of parametric enhancements on naked mole-rat algorithm for global optimization. 1 | 0 |
| 723 | A new improved salp swarm algorithm using logarithmic spiral mechanism enhanced with chaos for global optimization. 1 | 4 |
| 722 | Quantum Henry gas solubility optimization algorithm for global optimization. 1 | 3 |
| 721 | Chaotic Evolutionary Programming for an Engineering Optimization Problem. 2021 , 11, 2717 | 2 |
| 720 | hSMA-PS: a novel memetic approach for numerical and engineering design challenges. 1 | 4 |
| 719 | A chaotic and hybrid gray wolf-whale algorithm for solving continuous optimization problems. 2021 , 10, 349-374 | 6 |
| 718 | Heat transfer relation-based optimization algorithm (HTOA). 2021 , 25, 8129-8158 | 10 |
| 717 | Seagull-Cuckoo Search Algorithm for Function Optimization. 2021 , | 0 |
| 716 | An Improved Artificial Bee Colony for Feature Selection in QSAR. 2021 , 14, 120 | 3 |
| 715 | Sine cosine adopted Harris' hawks optimization for function optimization and power system frequency controller design. 2021 , 31, e12915 | 3 |
| 714 | A New Set of Mutation Operators for Dragonfly Algorithm. 2021 , 46, 8761-8802 | 0 |
| 713 | Advanced metaheuristic optimization techniques in applications of deep neural networks: a review. 2021 , 33, 14079 | 14 |

| | | |
|-----|---|----|
| 712 | Minimum Free Energy Coding for DNA Storage. 2021 , 20, 212-222 | 16 |
| 711 | Quantum inspired Particle Swarm Optimization with guided exploration for function optimization. 2021 , 102, 107122 | 7 |
| 710 | Research trends in combinatorial optimization. | 2 |
| 709 | A hybrid constrained coral reefs optimization algorithm with machine learning for optimizing multi-reservoir systems operation. 2021 , 286, 112250 | 7 |
| 708 | A New Good and Bad Groups-Based Optimizer For Solving Various Optimization Problems. 2021 , 11, 4382 | 7 |
| 707 | An effective solution to numerical and multi-disciplinary design optimization problems using chaotic slime mold algorithm. 2021 , 1-39 | 7 |
| 706 | A new population initialisation method based on the Pareto 80/20 rule for meta-heuristic optimisation algorithms. 2021 , 15, 323-347 | 2 |
| 705 | Improvement of Firefly Algorithm using Particle Swarm Optimization and Gravitational Search Algorithm. 2021 , 9, 123-130 | |
| 704 | A Comprehensive Review on Scatter Search: Techniques, Applications, and Challenges. 2021 , 2021, 1-21 | 3 |
| 703 | The Colony Predation Algorithm. 2021 , 18, 674-710 | 77 |
| 702 | A Novel Multiobjective GDWCN-PSO Algorithm and Its Application to Medical Data Security. 2021 , 21, 1-28 | 12 |
| 701 | Development and application of Quantum Entanglement inspired Particle Swarm Optimization. 2021 , 219, 106859 | 5 |
| 700 | Political optimizer with interpolation strategy for global optimization. 2021 , 16, e0251204 | 1 |
| 699 | An Intensive and Comprehensive Overview of JAYA Algorithm, its Versions and Applications. 2021 , 1-30 | 15 |
| 698 | A hierarchical knowledge guided backtracking search algorithm with self-learning strategy. 2021 , 102, 104268 | 4 |
| 697 | A comprehensive survey of sine cosine algorithm: variants and applications. 2021 , 54, 1-72 | 22 |
| 696 | Artırsal Populyasyonlu Karga Arama Algoritması | |
| 695 | An Adaptive Differential Evolution Algorithm Utilizing Failure Information and Success Information. 2021 , | |

| | | |
|-----|--|----|
| 694 | Self-referential quality diversity through differential MAP-Elites. 2021 , | 0 |
| 693 | Stock exchange trading optimization algorithm: a human-inspired method for global optimization. 2021 , 1-50 | 2 |
| 692 | BEHAVIORAL FUNCTIONS IMPLEMENTATION ON SPIKING NEURAL NETWORKS. 2021 , 20, 591-622 | 1 |
| 691 | An IB-PSO algorithm for unconstrained nonlinear programming problems. 2021 , | |
| 690 | Proposal and experimental case study on building ventilating fan fault diagnosis based on cuckoo search algorithm optimized extreme learning machine. 2021 , 45, 100975 | 8 |
| 689 | Dingo Optimizer: A Nature-Inspired Metaheuristic Approach for Engineering Problems. 2021 , 2021, 1-12 | 18 |
| 688 | A Hybrid Whale Optimization Algorithm for Global Optimization. 2021 , 9, 1477 | 2 |
| 687 | Single and multi-objective optimization of nanofluid flow in flat tube to enhance heat transfer using antlion optimizer algorithms. 2021 , 12, 1026 | |
| 686 | Multi-swarm and chaotic whale-particle swarm optimization algorithm with a selection method based on roulette wheel. e12779 | 9 |
| 685 | Hybrid algorithms based on combining reinforcement learning and metaheuristic methods to solve global optimization problems. 2021 , 223, 107044 | 16 |
| 684 | Average convergence rate of evolutionary algorithms in continuous optimization. 2021 , 562, 200-219 | 3 |
| 683 | EA-MSCA: An effective energy-aware multi-objective modified sine-cosine algorithm for real-time task scheduling in multiprocessor systems: Methods and analysis. 2021 , 173, 114699 | 6 |
| 682 | Parallel exploration via negatively correlated search. 2021 , 15, 1 | 3 |
| 681 | Gravity inversion of basement relief using imperialist competitive algorithm with hybrid techniques. 1 | |
| 680 | Opposition-based Laplacian Equilibrium Optimizer with application in Image Segmentation using Multilevel Thresholding. 2021 , 174, 114766 | 14 |
| 679 | Teamwork Optimization Algorithm: A New Optimization Approach for Function Minimization/Maximization. 2021 , 21, | 15 |
| 678 | . 2021 , 18, 1478-1491 | 3 |
| 677 | Prediction of axial load capacity of rectangular concrete-filled steel tube columns using machine learning techniques. 1 | 16 |

| | | |
|-----|---|----|
| 676 | Neural Architecture Search Based on Evolutionary Algorithms with Fitness Approximation. 2021, | 1 |
| 675 | A gentle introduction to theory (for non-theoreticians). 2021, | |
| 674 | Equilibrium optimizer of interswarm interactive learning strategy. 1-25 | 0 |
| 673 | Controlling an SSB-SC Amplitude Modulator Using a Second-Order Control System. 2022, 487-497 | |
| 672 | Particle Swarm Optimization Enhanced with Kernel Principal Component Analysis. 2021, | |
| 671 | Binary MOGWO Based On Competition and Teaching for Computationally Complex Engineering Applications. 2021, | |
| 670 | Optimization of a deteriorated two-warehouse inventory problem with all-unit discount and shortages via tournament differential evolution. 2021, 107, 107388 | 11 |
| 669 | Multi-strategy gravitational search algorithm for constrained global optimization in coordinative operation of multiple hydropower reservoirs and solar photovoltaic power plants. 2021, 107, 107315 | 9 |
| 668 | Literature Review. 2022, 5-10 | |
| 667 | Cooperative meta-heuristic algorithms for global optimization problems. 2021, 176, 114788 | 4 |
| 666 | A Learning-Based Hybrid Framework for Dynamic Balancing of Exploration-Exploitation: Combining Regression Analysis and Metaheuristics. 2021, 9, 1976 | 0 |
| 665 | Rubber bushing optimization by using a novel chaotic krill herd optimization algorithm. 2021, 25, 14333 | 1 |
| 664 | A Coordinated Charging Scheduling of Electric Vehicles Considering Optimal Charging Time for Network Power Loss Minimization. 2021, 14, 5336 | 5 |
| 663 | Study of the Optimal Waveforms for Non-Destructive Spectral Analysis of Aqueous Solutions by Means of Audible Sound and Optimization Algorithms. 2021, 11, 7301 | 0 |
| 662 | A novel meta-heuristic algorithm for solving numerical optimization problems: Ali Baba and the forty thieves. 1 | 11 |
| 661 | Emphasizing the importance of shift invariance in metaheuristics by using whale optimization algorithm as a test bed. 2021, 25, 14209 | 0 |
| 660 | An Improved Hybrid Aquila Optimizer and Harris Hawks Algorithm for Solving Industrial Engineering Optimization Problems. 2021, 9, 1551 | 27 |
| 659 | Symbiotic organisms search algorithm using random walk and adaptive Cauchy mutation on the feature selection of sleep staging. 2021, 176, 114887 | 4 |

| | | |
|-----|--|--------|
| 658 | A new meta-heuristic optimization algorithm based on a paradigm from physics: string theory. 2021 , 41, 1657-1675 | 2 |
| 657 | Hyper-heuristic approach: automatically designing adaptive mutation operators for evolutionary programming. 1 | 0 |
| 656 | An opposition equilibrium optimizer for context-sensitive entropy dependency based multilevel thresholding of remote sensing images. 2021 , 65, 100907 | 4 |
| 655 | Bio-inspired computation for big data fusion, storage, processing, learning and visualization: state of the art and future directions. 2021 , 1-31 | 4 |
| 654 | An improved bat algorithm hybridized with extremal optimization and Boltzmann selection. 2021 , 175, 114812 | 9 |
| 653 | An adaptive hybrid atom search optimization with particle swarm optimization and its application to optimal no-load PID design of hydro-turbine governor. 2021 , 8, 1204-1233 | 6 |
| 652 | . <i>IEEE Transactions on Evolutionary Computation</i> , 2021 , 25, 630-650 | 15.6 9 |
| 651 | Adaptive opposition slime mould algorithm. 2021 , 25, 14297 | 9 |
| 650 | IWOSSA: An improved whale optimization salp swarm algorithm for solving optimization problems. 2021 , 176, 114901 | 15 |
| 649 | The optimal multi-degree reduction of Ball Bézier curves using an improved squirrel search algorithm. 1 | 1 |
| 648 | A four-step decision-making grey wolf optimization algorithm. 2021 , 25, 14375 | 1 |
| 647 | Global sensing search for nonlinear global optimization. 1 | 1 |
| 646 | Real power loss reduction by enhanced Apple Maggot optimization algorithm. 2021 , 12, 1385 | 1 |
| 645 | An Adaptive Parallel Arithmetic Optimization Algorithm for Robot Path Planning. 2021 , 2021, 1-22 | 10 |
| 644 | Boosted kernel search: Framework, analysis and case studies on the economic emission dispatch problem. 2021 , 107529 | 7 |
| 643 | Spark-based parallel processing whale optimization algorithm. e6607 | 1 |
| 642 | Optimal Rescheduling of Generators to Alleviate Congestion in Transmission System: A Novel Modified Whale Optimization Approach. 1 | 2 |
| 641 | Dual preferred learning embedded asynchronous differential evolution with adaptive parameters for engineering applications. 2021 , 46, 1 | |

| | | |
|-----|---|-----|
| 640 | Oppositional tunicate fuzzy C-means algorithm and logistic regression for intrusion detection on cloud. e6624 | 0 |
| 639 | Nonlinear-based Chaotic Harris Hawks Optimizer: Algorithm and Internet of Vehicles application. 2021 , 109, 107574 | 10 |
| 638 | A self-adaptive hybridized differential evolution naked mole-rat algorithm for engineering optimization problems. 2021 , 383, 113916 | 3 |
| 637 | Search trajectory networks: A tool for analysing and visualising the behaviour of metaheuristics. 2021 , 109, 107492 | 13 |
| 636 | Optimizing the Flight Route of UAV Using Biology Migration Algorithm. 2021 , 2025, 012052 | |
| 635 | A new hybrid multi-level cross-entropy-based moth-flame optimization algorithm. 2021 , 25, 14245 | 1 |
| 634 | A Bio-Inspired Method for Engineering Design Optimization Inspired by Dingoes Hunting Strategies. 2021 , 2021, 1-19 | 9 |
| 633 | Past present future: a new human-based algorithm for stochastic optimization. 2021 , 25, 12915-12976 | 5 |
| 632 | Hunger games search: Visions, conception, implementation, deep analysis, perspectives, and towards performance shifts. 2021 , 177, 114864 | 203 |
| 631 | A hybrid particle swarm optimization with crisscross learning strategy. 2021 , 105, 104418 | 6 |
| 630 | An Enhanced Social Spider Colony Optimization for Global Optimization. 2022 , 775-793 | |
| 629 | Dynamic soft sensor modeling method fusing process feature information based on an improved intelligent optimization algorithm. 2021 , 217, 104415 | 2 |
| 628 | An improved dynamic multi-objective optimization approach for nonlinear equation systems. 2021 , 576, 204-227 | 1 |
| 627 | Quantum marine predators algorithm for addressing multilevel image segmentation. 2021 , 110, 107598 | 3 |
| 626 | Review of meta-heuristic algorithms for wind power prediction: Methodologies, applications and challenges. 2021 , 301, 117446 | 16 |
| 625 | A new optimization method based on COOT bird natural life model. 2021 , 183, 115352 | 44 |
| 624 | Enhanced Harris hawks optimization with multi-strategy for global optimization tasks. 2021 , 185, 115499 | 7 |
| 623 | A Modified Jellyfish Search Optimizer With Orthogonal Learning Strategy. 2021 , 192, 697-708 | 1 |

| | | |
|-----|--|----|
| 622 | Monitor system and Gaussian perturbation teaching-learning-based optimization algorithm for continuous optimization problems. 1 | 0 |
| 621 | An enhanced pathfinder algorithm for engineering optimization problems. 1 | 6 |
| 620 | Differential evolution with quasi-reflection-based mutation. 2021 , 18, 2425-2441 | 3 |
| 619 | An orthogonal opposition-based-learning YinYang-pair optimization algorithm for engineering optimization. 1 | 6 |
| 618 | A Review on Ensemble Methods and their Applications to Optimization Problems. 2021 , 25-45 | |
| 617 | StegColNet: Steganalysis Based on an Ensemble Colorspace Approach. 2021 , 313-323 | |
| 616 | The influence of fitness landscape characteristics on particle swarm optimisers. 1 | 3 |
| 615 | Variable Neighborhood Programming as a Tool of Machine Learning. 2021 , 221-271 | |
| 614 | Recent optimal power flow algorithms. 2021 , 389-410 | |
| 613 | Teaching-learning-based pathfinder algorithm for function and engineering optimization problems. 2021 , 51, 5040-5066 | 11 |
| 612 | Optimal GENCO's bidding strategy in a power exchange facilitating combined power and emission trading using Intelligent Programmed Genetic Algorithm. 2020 , 30, e12463 | 3 |
| 611 | A Game-Theoretic Approach for Designing Mixed Mutation Strategies. 2005 , 279-288 | 10 |
| 610 | Evolving Crossover Operators for Function Optimization. 2006 , 97-108 | 10 |
| 609 | Evolving the Structure of the Particle Swarm Optimization Algorithms. 2006 , 25-36 | 16 |
| 608 | An Immunological Algorithm for Global Numerical Optimization. 2006 , 284-295 | 17 |
| 607 | When Do Heavy-Tail Distributions Help?. 2006 , 62-71 | 17 |
| 606 | Using the Ring Neighborhood Topology with Self-adaptive Differential Evolution. 2006 , 976-979 | 14 |
| 605 | Immune Clonal Strategies Based on Three Mutation Methods. 2006 , 114-121 | 2 |

| | | |
|-----|---|----|
| 604 | Hybridisation of Particle Swarm Optimization and Fast Evolutionary Programming. 2006 , 392-399 | 2 |
| 603 | A Parallel Immune Algorithm for Global Optimization. 2006 , 467-475 | 4 |
| 602 | Evolutionary Design Calibration. 2001 , 26-37 | 2 |
| 601 | Search Trajectory Networks of Population-Based Algorithms in Continuous Spaces. 2020 , 70-85 | 12 |
| 600 | Global-Best Leading Artificial Bee Colony Algorithms. 2021 , 55-70 | 1 |
| 599 | Parameter Control in Evolutionary Optimisation. 2021 , 357-385 | 1 |
| 598 | Particle Swarm Optimization with Levy Flight and Adaptive Polynomial Mutation in gbest Particle. 2014 , 275-282 | 3 |
| 597 | Differential Evolution and Bacterial Foraging Optimization Based Dynamic Economic Dispatch with Non-smooth Fuel Cost Functions. 2013 , 583-594 | 2 |
| 596 | Investigation of Mutation Strategies in Differential Evolution for Solving Global Optimization Problems. 2014 , 372-383 | 17 |
| 595 | Diversity Rate of Change Measurement for Particle Swarm Optimisers. 2014 , 86-97 | 4 |
| 594 | Self-Adaptive Genotype-Phenotype Maps: Neural Networks as a Meta-Representation. 2014 , 110-119 | 9 |
| 593 | Reevaluating Exponential Crossover in Differential Evolution. 2014 , 201-210 | 12 |
| 592 | A Hybrid Global Optimization Algorithm: Particle Swarm Optimization in Association with a Genetic Algorithm. 2015 , 45-86 | 4 |
| 591 | An Adaptive Cauchy Differential Evolution Algorithm with Population Size Reduction and Modified Multiple Mutation Strategies. 2015 , 13-26 | 10 |
| 590 | Orthogonal Predictive Differential Evolution. 2015 , 141-154 | 2 |
| 589 | Grid Dispatching of Energy Saving and Environmental Protection Based on Thermodynamic System Model with Flow Dimension. 2015 , 333-341 | 3 |
| 588 | The Effect of Swapping Vectors During Mutation in Differential Evolution. 2015 , 534-546 | 1 |
| 587 | An Experimental Assessment of Hybrid Genetic-Simulated Annealing Algorithm. 2016 , 595-602 | 1 |

| | | |
|-----|--|----|
| 586 | A Study of Parameters of the Grey Wolf Optimizer Algorithm for Dynamic Adaptation with Fuzzy Logic. 2017 , 371-390 | 13 |
| 585 | A Gravitational Search Algorithm Using Type-2 Fuzzy Logic for Parameter Adaptation. 2017 , 127-138 | 4 |
| 584 | A Parallel Swarm Library Based on Functional Programming. 2017 , 3-15 | 2 |
| 583 | Modified Cuckoo Search Algorithm for Solving Global Optimization Problems. 2018 , 561-570 | 11 |
| 582 | An Improved Brain Storm Optimization with Learning Strategy. 2017 , 511-518 | 7 |
| 581 | Teaching-Learning-Feedback-Based Optimization. 2017 , 71-79 | 3 |
| 580 | Benchmarking and Evaluating MATLAB Derivative-Free Optimisers for Single-Objective Applications. 2017 , 75-88 | 2 |
| 579 | Performance Optimization of a Clustering Adaptive Gravitational Search Scheme for Wireless Sensor Networks. 2017 , 420-431 | 2 |
| 578 | Introduction. 2018 , 1-5 | 1 |
| 577 | An Evolution Strategy Using a Continuous Version of the Gray-Code Neighbourhood Distribution. 2004 , 725-736 | 12 |
| 576 | Searching for a Practical Evidence of the No Free Lunch Theorems. 2004 , 472-483 | 7 |
| 575 | An Evolutionary Approach to Modeling Radial Brightness Distributions in Elliptical Galaxies. 2004 , 591-601 | 3 |
| 574 | A Selected Introduction to Evolutionary Computation. 2005 , 3-12 | 0 |
| 573 | An Analysis of the Control Parameters Adaptation in DE. 2008 , 89-110 | 12 |
| 572 | Differential Evolution Via Exploiting Opposite Populations. 2008 , 143-160 | 7 |
| 571 | Immune Algorithm Versus Differential Evolution: A Comparative Case Study Using High Dimensional Function Optimization. 2007 , 93-101 | 7 |
| 570 | Population-Based Extremal Optimization with Adaptive Levy Mutation for Constrained Optimization. 2007 , 144-155 | 6 |
| 569 | A Self-adaptive Mutations with Multi-parent Crossover Evolutionary Algorithm for Solving Function Optimization Problems. 2007 , 157-168 | 4 |

| | | |
|-----|---|----|
| 568 | A Multiagent Quantum Evolutionary Algorithm for Global Numerical Optimization. 2007 , 380-389 | 4 |
| 567 | Experimental Analysis of the Aging Operator for Static and Dynamic Optimisation Problems. 2007 , 804-811 | 6 |
| 566 | Quantum-Inspired Evolutionary Algorithm for Numerical Optimization. 2008 , 115-132 | 6 |
| 565 | Central Force Optimization: A New Nature Inspired Computational Framework for Multidimensional Search and Optimization. 2008 , 221-238 | 53 |
| 564 | An Island Based Hybrid Evolutionary Algorithm for Optimization. 2008 , 180-189 | 4 |
| 563 | Differential Evolution Algorithm: Foundations and Perspectives. 2009 , 63-110 | 2 |
| 562 | Implementation of Parallel Genetic Algorithms on Graphics Processing Units. 2009 , 197-216 | 23 |
| 561 | Particle Swarm Optimization: Performance Tuning and Empirical Analysis. 2009 , 101-128 | 18 |
| 560 | An Improved Diversity Guided Particle Swarm Optimization. 2009 , 623-630 | 2 |
| 559 | An Analysis of Dynamic Mutation Operators for Conformational Sampling. 2009 , 291-323 | 2 |
| 558 | Parallel Particle Swarm Optimization with Adaptive Asynchronous Migration Strategy. 2009 , 490-501 | 5 |
| 557 | Neuroevolutionary Inventory Control in Multi-Echelon Systems. 2009 , 402-413 | 2 |
| 556 | A Faster Clonal Selection Algorithm for Expensive Optimization Problems. 2010 , 130-143 | 1 |
| 555 | An Information-Theoretic Approach for Clonal Selection Algorithms. 2010 , 144-157 | 4 |
| 554 | Self-adapting Differential Evolution Algorithm with Chaos Random for Global Numerical Optimization. 2010 , 112-122 | 7 |
| 553 | Cellular Differential Evolution Algorithm. 2010 , 293-302 | 6 |
| 552 | Fast Evolutionary Algorithms. 2003 , 45-94 | 38 |
| 551 | Random Lines: A Novel Population Set-Based Evolutionary Global Optimization Algorithm. 2011 , 97-107 | 2 |

| | | |
|-----|---|----|
| 550 | On the Performance of the EGA Extreme Learning Machines in Regression Problems. 2011 , 153-160 | 1 |
| 549 | Inertia Weight Adaption in Particle Swarm Optimization Algorithm. 2011 , 71-79 | 5 |
| 548 | Enhancing the Local Exploration Capabilities of Artificial Bee Colony Using Low Discrepancy Sobol Sequence. 2011 , 158-168 | 3 |
| 547 | Power Mean Based Crossover Rate Adaptive Differential Evolution. 2011 , 34-41 | 1 |
| 546 | Immune Gravitation Inspired Optimization Algorithm. 2011 , 178-185 | 4 |
| 545 | Promoting Diversity in Particle Swarm Optimization to Solve Multimodal Problems. 2011 , 228-237 | 15 |
| 544 | PSO Based Memetic Algorithm for Unimodal and Multimodal Function Optimization. 2011 , 127-134 | 5 |
| 543 | Double Layered Genetic Algorithm for Document Clustering. 2011 , 212-218 | 4 |
| 542 | Unpacking and Understanding Evolutionary Algorithms. 2012 , 60-76 | 7 |
| 541 | Brain Storm Optimization Algorithm for Multi-objective Optimization Problems. 2012 , 513-519 | 44 |
| 540 | Artificial Bee Colony Algorithm with Improved Explorations for Numerical Function Optimization. 2012 , 1-8 | 2 |
| 539 | Genetic Programming of Augmenting Topologies for Hypercube-Based Indirect Encoding of Artificial Neural Networks. 2013 , 63-72 | 1 |
| 538 | CSA/IE: Novel Clonal Selection Algorithm with Information Exchange for High Dimensional Global Optimization Problems. 2012 , 218-231 | 1 |
| 537 | Evolving Flexible Beta Operator Neural Trees (FBONT) for Time Series Forecasting. 2012 , 17-24 | 6 |
| 536 | DEAL: A Direction-Guided Evolutionary Algorithm. 2012 , 148-157 | 2 |
| 535 | PSO-Tuned Control Parameter in Differential Evolution Algorithm. 2012 , 417-424 | 1 |
| 534 | Weightless Swarm Algorithm (WSA) for Dynamic Optimization Problems. 2012 , 508-515 | 12 |
| 533 | Automated Design of Probability Distributions as Mutation Operators for Evolutionary Programming Using Genetic Programming. 2013 , 85-96 | 14 |

| | | |
|-----|--|----|
| 532 | A Simplified Biogeography-Based Optimization Using a Ring Topology. 2013 , 330-337 | 4 |
| 531 | Evolving Aggregation Behaviors in Multi-Robot Systems with Binary Sensors. 2014 , 355-367 | 22 |
| 530 | An Adaptive Differential Evolution Algorithm with Automatic Population Resizing for Global Numerical Optimization. 2014 , 68-72 | 4 |
| 529 | On PBIL, DE and PSO for Optimization of Reinsurance Contracts. 2014 , 227-238 | 6 |
| 528 | Dynamic Diversity Population Based Flower Pollination Algorithm for Multimodal Optimization. 2016 , 440-448 | 5 |
| 527 | Bees and Pollens with Communication Strategy for Optimization. 2016 , 651-660 | 3 |
| 526 | SEVO: Bio-inspired Analytical Tool for Uni-modal and Multimodal Optimization. 2012 , 557-566 | 2 |
| 525 | Differential Evolution Algorithm with the Second Order Difference Vector. 2016 , 219-228 | 1 |
| 524 | Decentralized Differential Evolutionary Algorithm for Large-Scale Networked Systems. 2019 , 407-417 | 1 |
| 523 | Evaluating PSO and MOPSO Equipped with Evolutionary Population Dynamics. 2020 , 61-88 | 2 |
| 522 | Improved Flower Pollination Algorithm for Linear Antenna Design Problems. 2020 , 79-89 | 11 |
| 521 | A self-adaptive virus optimization algorithm for continuous optimization problems. 2020 , 24, 13147-13166 | 9 |
| 520 | Binary multi-verse optimization algorithm for global optimization and discrete problems. 2019 , 10, 3445-3465 | 37 |
| 519 | Multiswarm spiral leader particle swarm optimisation algorithm for PV parameter identification. 2020 , 225, 113388 | 20 |
| 518 | A novel bat algorithm with double mutation operators and its application to low-velocity impact localization problem. 2020 , 90, 103505 | 14 |
| 517 | Feature Selection Optimization of HealthCare Software Product Line using BBO. 2020 , 167, 1696-1704 | 3 |
| 516 | A Novel Bat Algorithm using Sobol Sequence for the Initialization of Population. 2020 , | 5 |
| 515 | An Efficient Artificial Bee Colony Algorithm With an Improved Linkage Identification Method. 2020 , PP, | 10 |

| | | |
|-----|---|----|
| 514 | An Overview on Nature-Inspired Optimization Algorithms and Their Possible Application in Image Processing Domain. 2020 , 30, 614-631 | 5 |
| 513 | Simulee. 2020 , | 5 |
| 512 | Specific single- and multi-objective evolutionary algorithms for the chance-constrained knapsack problem. 2020 , | 5 |
| 511 | Multiagent diffusion and distributed optimization. 2003 , | 10 |
| 510 | What Else Is the Evolution of PSO Telling Us?. 2008 , 2008, 1-12 | 6 |
| 509 | Metodologías Analíticas y Heurísticas para la Solución del Problema de Programación de Tareas con Recursos Restringidos (RCPSP): una revisión. Parte 2. 2014 , 10, 203-227 | 1 |
| 508 | Generating Random Pattern for Homogenization of Fiber Reinforced Composites Using Memetic Algorithm. 2017 , 17, 354-360 | 1 |
| 507 | Efficient Bag-of-Features using Improved Whale Optimization Algorithm for Histopathological Image Classification. 2019 , 12, 269-279 | 1 |
| 506 | A New Auto Adaptive Fuzzy Hybrid Particle Swarm Optimization and Genetic Algorithm. 2020 , 10, 95-111 | 15 |
| 505 | Computational Intelligence: Past, Today, and Future. 2010 , 1-46 | 6 |
| 504 | A Hybrid Artificial Grasshopper Optimization (HAGOA) Meta-Heuristic Approach: A Hybrid Optimizer For Discover the Global Optimum in Given Search Space. 2019 , 4, 471-488 | 6 |
| 503 | The SOS Platform: Designing, Tuning and Statistically Benchmarking Optimisation Algorithms. 2020 , 8, 785 | 12 |
| 502 | DGO: Dice Game Optimizer. 2019 , 32, 871-882 | 16 |
| 501 | M-Elite Coevolutionary Algorithm for Numerical Optimization. 2009 , 20, 2925-2938 | 10 |
| 500 | An Improved Particle Swarm Optimization Algorithm with Search Space Zoomed Factor and Attractor. 2011 , 34, 115-130 | 9 |
| 499 | Soccer Game Optimization. 2013 , 386-420 | 11 |
| 498 | An Optimization Algorithm Based on Brainstorming Process. 2015 , 1-35 | 22 |
| 497 | Population Diversity of Particle Swarm Optimizer Solving Single- and Multi-Objective Problems. 2015 , 71-98 | 2 |

| | | |
|-----|---|----|
| 496 | Experimental Study on Boundary Constraints Handling in Particle Swarm Optimization from a Population Diversity Perspective. 2015 , 99-127 | 1 |
| 495 | Soccer Game Optimization. 1434-1469 | 1 |
| 494 | A Hybrid Meta-Heuristic Method Based on Firefly Algorithm and Krill Herd. 2016 , 505-524 | 5 |
| 493 | Extrapolated Biogeography-Based Optimization (eBBO) for Global Numerical Optimization and Microstrip Patch Antenna Design. 2010 , 1, 1-26 | 3 |
| 492 | Population Diversity of Particle Swarm Optimizer Solving Single and Multi-Objective Problems. 2012 , 3, 23-60 | 21 |
| 491 | A Novel Differential Evolution with Uniform Design for Continuous Global Optimization. 2012 , 7, | 13 |
| 490 | Adaptive Parameter Selection for Strategy Adaptation in Differential Evolution for Continuous Optimization. 2012 , 7, | 2 |
| 489 | Baldwin Effect based Particle Swarm Optimizer for Multimodal Optimization. 2012 , 7, | 4 |
| 488 | Adaptive Bacterial Foraging Optimization Algorithm Based on Social Foraging Strategy. 2014 , 9, | 4 |
| 487 | Hybrid Differential Evolution with Convex Mutation. 2011 , 6, | 3 |
| 486 | Continuous Time Chaotic Systems for Whale Optimization Algorithm. 2018 , 18, 49-56 | 2 |
| 485 | Economic Dispatch Using Hybrid Particle Swarm Optimization with Prohibited Operating Zones and Ramp Rate Limit Constraints. 2015 , 10, 1441-1452 | 5 |
| 484 | New Trends in Artificial Intelligence: Applications of Particle Swarm Optimization in Biomedical Problems. | 2 |
| 483 | BMOA: Binary Magnetic Optimization Algorithm. 2012 , 204-208 | 36 |
| 482 | Hill Climbing Grey Wolf Optimizer. 2021 , 311-320 | 1 |
| 481 | Boosting vector quantization technique using fast directional shrinking search optimization (DSSO) algorithm. 2021 , | |
| 480 | Probabilistic Multimodal Optimization. 2021 , 191-228 | 0 |
| 479 | An Expanded Heterogeneous Particle Swarm Optimization Based on Adaptive Inertia Weight. 2021 , 2021, 1-24 | 1 |

| | | |
|-----|--|----|
| 478 | An efficient equilibrium optimizer with support vector regression for stock market prediction. | 4 |
| 477 | Multiple Strategies Based Salp Swarm Algorithm for Optimal Operation of Multiple Hydropower Reservoirs. 2021 , 13, 2753 | 3 |
| 476 | An improved sine cosine algorithm with dynamic selection pressure. 2021 , 55, 101477 | |
| 475 | Whale optimization algorithm based on dynamic pinhole imaging and adaptive strategy. 1 | 0 |
| 474 | Tuna Swarm Optimization: A Novel Swarm-Based Metaheuristic Algorithm for Global Optimization. 2021 , 2021, 9210050 | 11 |
| 473 | Mutation Strategy Based on Step Size and Survival Rate for Evolutionary Programming. 2021 , 2021, 1-13 | 0 |
| 472 | SPMS-ALS: A Single-Point Memetic structure with accelerated local search for instance reduction. 2021 , 100991 | 1 |
| 471 | Energy-Efficient Delay-Aware Task Offloading in Fog-Cloud Computing System for IoT Sensor Applications. 2022 , 30, 1 | 4 |
| 470 | Self-adaptively commensal learning-based Jaya algorithm with multi-populations and its application. 2021 , 25, 15163 | 0 |
| 469 | Deep Ensemble of Slime Mold Algorithm and Arithmetic Optimization Algorithm for Global Optimization. 2021 , 9, 1774 | 22 |
| 468 | Multi-ant colony optimization algorithm based on hybrid recommendation mechanism. 1 | 2 |
| 467 | A dual opposition-based learning for differential evolution with protective mechanism for engineering optimization problems. 2021 , 113, 107942 | 1 |
| 466 | An entropy minimization based multilevel colour thresholding technique for analysis of breast thermograms using equilibrium slime mould algorithm. 2021 , 113, 107955 | 7 |
| 465 | Multi-Dimensional Gaussian and Cauchy Mutations. 2001 , 133-142 | 0 |
| 464 | From Evolutionary Computation to Natural Computation. 2002 , 41-50 | |
| 463 | Genetic Programming Applied to Model Identification. 2002 , 271-335 | |
| 462 | Evolving Agents for Global Optimization. 2003 , 281-292 | |
| 461 | Increasing Robustness of Binary-coded Genetic Algorithm. 2003 , 123, 1625-1630 | |

460 An Adaptive Random Search Algorithm with Tuning Capabilities. **2003**, 2003, 148-153

459 The Influence of Gaussian, Uniform, and Cauchy Perturbation Functions in the Neural Network Evolution. **2004**, 199-204

458 A Comparison of Several Algorithms and Representations for Single Objective Optimization. **2004**, 788-789

457 On Multi-class Classification by Way of Niching. **2004**, 581-592

3

456 Global Optimization Using Evolutionary Algorithm Based on Level Set Evolution and Latin Square. **2005**, 540-545

455 A Mixed Mutation Strategy Evolutionary Programming Combined with Species Conservation Technique. **2005**, 593-602

2

454 The Convergence of a Multi-objective Evolutionary Algorithm Based on Grids. **2005**, 1015-1024

453 Enhancing Cellular Automata by an Embedded Generalized Multi-layer Perceptron. **2005**, 343-348

1

452 Adaptive Velocity Threshold Particle Swarm Optimization. **2006**, 327-332

2

451 Simulated Annealing Algorithm with Biased Neighborhood Distribution for Training Profile Models. **2006**, 642-651

450 Make Fast Evolutionary Programming Robust by Search Step Control. **2006**, 806-815

449 Numerical Optimization Using Organizational Particle Swarm Algorithm. **2006**, 150-157

1

448 Towards Intrinsic Evolvable Hardware for Predictive Lossless Image Compression. **2006**, 632-639

2

447 Global Optimization Algorithms Using Fourier Smoothing. **2006**, 901-906

446 Adaptive Random Search with Intensification and Diversification Combined with Genetic Algorithm. **2006**, 10, 921-930

1

445 A Novel Lower-Dimensional-Search Algorithm for Numerical Optimization. **2007**, 214-223

444 COMMONS GAME Made More Exciting by an Intelligent Utilization of the Two Evolutionary Algorithms. **2007**, 1-16

4

443 Differential Evolution Based on Improved Learning Strategy. **2008**, 880-889

1

- 442 Correlation between Mutations and Self-adaptation in Evolutionary Programming. **2008**, 58-66 2
- 441 Dynamic Clonal and Chaos-Mutation Evolutionary Algorithm for Function Optimization. **2008**, 19-27
- 440 A Novel Genetic Algorithm with Orthogonal Prediction for Global Numerical Optimization. **2008**, 31-40 4
- 439 A Novel Evolutionary Algorithm Based on Multi-parent Crossover and Space Transformation Search. **2009**, 201-210
- 438 Clonal and Cauchy-mutation Evolutionary Algorithm for Global Numerical Optimization. **2009**, 217-227 1
- 437 Self-adaptation in Fast Evolutionary Programming. **2009**, 232-239
- 436 An Adaptive Evolutionary Programming Algorithm Based on Q Learning. **2009**, 34, 819-822 0
- 435 Multi-user detection algorithm based on simulated annealing parallel evolutionary programming. **2009**, 2009, 103-106
- 434 Hybrid Differential Evolution for Global Numerical Optimization. **2010**, 566-573
- 433 Evolutionary Programming Improved by an Individual Random Difference Mutation. **2010**, 338-343
- 432 Particle Swarm Optimization with Watts-Strogatz Model. **2010**, 506-513
- 431 MP-EDA: A Robust Estimation of Distribution Algorithm with Multiple Probabilistic Models for Global Continuous Optimization. **2010**, 85-94 4
- 430 A New Evolutionary Algorithms for Global Numerical Optimization Based on Ito Process. **2010**, 57-67 1
- 429 A New Particle Swarm Optimization Algorithm and Its Numerical Analysis. **2010**, 60-67 2
- 428 Measurements in Fast Evolutionary Programming. **2010**, 79-86
- 427 Evolutionary Algorithms with Stable Mutations Based on a Discrete Spectral Measure. **2010**, 181-188 1
- 426 Discrete Variables Function Optimization Using Accelerated Biogeography-Based Optimization. **2010**, 322-329 1
- 425 Effects of Initial Search Bound on the Performance of Self-adaptive Evolutionary Computation Methods. **2010**, 314-324

424 Runtime Analysis of Evolutionary Programming Based on Cauchy Mutation. **2010**, 222-229

423 Improved Real Quantum Evolutionary Algorithm for Optimum Economic Load Dispatch with Non-convex Loads. **2010**, 689-700

1

422 An Improved Evolutionary Programming with Voting and Elitist Dispersal Scheme. **2010**, 206-213

421 An Agent-Based Parallel Ant Algorithm with an Adaptive Migration Controller. **2010**, 161-177

420 Hybrid Evolutionary Algorithms Design Based on Their Advantages. **2010**, 200-210

419 Evolutionary Computation Methods for Fuzzy Decision Making on Load Dispatch Problems. **2010**, 301-323

418 Taguchi-Particle Swarm Optimization for Numerical Optimization. **2010**, 1, 18-33

417 References. **2010**, 597-639

416 Solution of Economic Load Dispatch Problem Using Lbest-Particle Swarm Optimization with Dynamically Varying Sub-swarms. **2011**, 191-198

1

415 Adaptive Learning Differential Evolution for Numeric Optimization. **2011**, 424-430

414 Taboo Evolutionary Programming Approach to Optimal Transfer from Earth to Mars. **2011**, 122-131

1

413 Solving DOPF in VSWGs Integrated Power System Using Improved Evolutionary Programming. **2011**, 6,

1

412 Multi-population coevolutionary algorithm for numerical optimization. **2011**, 31, 660-665

411 High-dimensional optimization problems via disturbance chaotic ant swarm algorithm. **2011**, 31, 1084-1089

410 Newman-Watts Particle Swarm Optimization with Group Decision. **2011**, 6,

409 An Enhanced Genetic Algorithm Integrated with Orthogonal Design. **2012**, 177-197

408 Optimization of Customer Satisfaction Using an Improved Simulation Annealing. **2012**, 163-176

407 A Coevolutionary Memetic Particle Swarm Optimizer. **2012**, 91-100

1

- 406 Evolutionary Programming. **2012**, 699-708 3
- 405 Neighborhood Search Based Artificial Bee Colony Algorithm for Numerical Function Optimization. **2012**, 232-239
- 404 An Improved Differential Evolution and Its Industrial Application. **2012**, 04, 81-97 1
- 403 Differential Evolution Using Opposite Point for Global Numerical Optimization. **2012**, 04, 1-19 1
- 402 Ubiquity symposium: Evolutionary computation and the processes of life. **2012**, 2012, 1-8
- 401 Symbolic Function Network. **2013**, 293-324
- 400 Experimental Study on Boundary Constraint Handling in Particle Swarm Optimization. **2013**, 96-124
- 399 A Bacterial Colony Chemotaxis Algorithm with Self-adaptive Mechanism. **2013**, 579-586
- 398 Fast Convergence in Function Optimization Using Modified Velocity Updating in PSO Algorithm. **2013**, 515-521 1
- 397 Optimal Velocity Requirements for Earth to Venus Mission Using Taboo Evolutionary Programming. **2013**, 762-772
- 396 Review on Heart Studies. **2014**, 113-128
- 395 Metaheuristics in Process Engineering: A Historical Perspective. **2014**, 1-38
- 394 A Very Fast Convergent Evolutionary Algorithm for Satisfactory Solutions. **2014**, 258-266
- 393 Imperialist Competitive Algorithm with Trading Mechanism for Optimization. **2014**, 87-98
- 392 Intelligent Detection of Heart Disorders. **2014**, 129-158
- 391 A Membrane-Inspired Evolutionary Algorithm Based on Artificial Bee Colony Algorithm. **2014**, 395-410 0
- 390 A Unified Matrix-Based Stochastic Optimization Algorithm. **2014**, 64-73
- 389 Metodologías Analíticas y Heurísticas para la Solución del Problema de Programación de Tareas con Recursos Restringidos (RCPS): una revisión Parte 1. **2014**, 10, 247-271

- 388 Multivariate Cauchy EDA Optimisation. **2014**, 449-456 4
- 387 Fuzzy Relevance Vector Machines with Application to Surface Electromyographic Signal Classification. **2014**, 188-203
- 386 Process Optimization of MTBE Reactive Distillation Using GSA. **2014**, 5, 457-461 2
- 385 Recent Advances in Global Optimization for Combinatorial Discrete Problems. **2015**, 06, 1842-1856
- 384 A Numerical Optimization Algorithm Based on Bacterial Reproduction. **2015**, 654-661
- 383 A Particle Swarm Optimization with an Improved Updating Strategy. **2016**, 532-540
- 382 Differential Evolution Improved with Adaptive Control Parameters and Double Mutation Strategies. **2016**, 186-198 0
- 381 Gray-Coded Clonal Selection Algorithm for Optimization Problem. **2016**, 267-273
- 380 Evolutionary Strategies. **2016**, 83-91
- 379 Learning to Describe Collective Search Behavior of Evolutionary Algorithms in Solution Space. **2017**, 196-207 0
- 378 Bayesian Optimization of a Hybrid Prediction System for Optimal Wave Energy Estimation Problems. **2017**, 648-660
- 377 Improving Multi-layer Particle Swarm Optimization Using Powell Method. **2017**, 166-173
- 376 Generalized Hybrid Evolutionary Algorithm Framework with a Mutation Operator Requiring no Adaptation. **2017**, 486-498
- 375 Differential Evolution Algorithm with Space Reduction for Solving Large-Scale Global Optimization Problems. **2017**, 671-694
- 374 Cooperative PSOGSA Using Multiple Groups Approach for Functions Optimization. **2017**, 83-96
- 373 Improving Particle Swarm Optimization Using Co-Optimization of Particles and Acceleration Constants. **2017**, 578-587
- 372 An Adaptive Differential Evolution with Learning Parameters According to Groups Defined by the Rank of Objective Values. **2017**, 411-419 1
- 371 A Novel Strategy to Control Population Diversity and Convergence for Genetic Algorithm. **2017**, 362-369

- 370 Interval Type-2 Fuzzy Logic for Parameter Adaptation in the Gravitational Search Algorithm. **2017**, 239-249
- 369 Fast Multiobjective Hybrid Evolutionary Algorithm Based on Mixed Sampling Strategy. **2018**, 106-116
- 368 An Analysis on Fireworks Algorithm Solving Problems With Shifts in the Decision Space and Objective Space. **2018**, 119-153
- 367 Machine Learning Approach to Evolutionary Computation. **2018**, 105-178
- 366 Rugged Landscape: Complexity, Evolution and Self-Adaptation.
- 365 ACTIVE POWER LOSS REDUCTION BY BETTER-QUALITY PARTICLE SWARM OPTIMIZATION ALGORITHM. **2018**, 6, 329-337
- 364 Methodology. **2018**, 81-113
- 363 The States of Matter Search (SMS). **2018**, 93-118
- 362 City Group Optimization. **2018**, 73-96
- 361 Optimizing Resource Allocation of Wireless Networks with Carrier Aggregation Using Evolutionary Programming. **2019**, 27-41 1
- 360 Stable Mutation with the Discrete Spectral Measure. **2019**, 107-121
- 359 Introduction. **2019**, 1-8
- 358 Foundations of Evolutionary Algorithms. **2019**, 9-22
- 357 Biogeography-Based Optimization. **2019**, 27-49 1
- 356 Hybrid Biogeography-Based Optimization Algorithms. **2019**, 89-115 0
- 355 Ecogeography-Based Optimization: Enhanced by Ecogeographic Barriers and Differentiations. **2019**, 69-87 1
- 354 Localized Biogeography-Based Optimization: Enhanced By Local Topologies. **2019**, 51-67
- 353 Isotropic Stable Mutation. **2019**, 77-106

| | | |
|-----|--|---|
| 352 | An Adapting Quantum Field Surrogate for Evolution Strategies. 2019 , 3-23 | |
| 351 | A Cooperative Particle Swarm Optimization Algorithm Based on Greedy Disturbance. 2019 , 52-61 | |
| 350 | Optimization of Fixed Time Control of Road Intersection by Evolution Strategies. 2019 , 151-164 | 1 |
| 349 | A Novel Hybrid Moth Flame Optimization with Sequential Quadratic Programming Algorithm for Solving Economic Load Dispatch Problem. 2019 , 38, 129-142 | 2 |
| 348 | Nöherik Optimizasyon için Kaotik Altın Sinüs Algoritması 2019 , 31, 91-97 | 1 |
| 347 | A New Binomial Crossover Considering Correlation Among Decision Variables for Adaptive Differential Evolution. 2019 , 2019, 159-166 | |
| 346 | Kaotik Harita Temelli Altın Tohum Algoritması 2019 , 31, 325-334 | |
| 345 | A modified algorithm for computation issues in UAV-enabled wireless communications. 2019 , 2019, | 1 |
| 344 | Evolutionary Computation. 2020 , 681-803 | 1 |
| 343 | Comparison of Artificial Intelligence-Based Solutions Applied to Economic Load Dispatch Problem. 2020 , 210-229 | 0 |
| 342 | Best Polynomial Harmony Search with Best Hill Climbing Algorithm. 2020 , 30, 1-17 | 1 |
| 341 | Enhanced Differential Evolution Algorithm with Local Search Based on Hadamard Matrix. 2021 , 2021, 8930980 | 1 |
| 340 | Multiple Cyclic Swarming Optimization for Uni- and Multi-modal Functions. 2020 , 887-898 | 1 |
| 339 | Optimal Design of Linear Quadratic Regulator Controller Based on Adaptive Cuckoo Search Algorithm. 2020 , | |
| 338 | Performance Analysis of Cost and Accuracy for Whale Swarm and RMSprop Optimizer. 993, 012080 | 0 |
| 337 | Hybridization of Chaotic Maps and Gravitational Search Algorithm for Constrained Mechanical and Civil Engineering Design Frameworks. 2022 , 13, 0-0 | |
| 336 | A chaotic strategy-based quadratic Opposition-Based Learning adaptive variable-speed whale optimization algorithm. 2022 , 193, 71-99 | 8 |
| 335 | Experimental Study on Boundary Constraints Handling in Particle Swarm Optimization. 2020 , 217-246 | 0 |

- 334 An Analysis of Fireworks Algorithm Solving Problems With Shifts in the Decision Space and Objective Space. **2020**, 277-311
- 333 A Study of Normalized Population Diversity in Particle Swarm Optimization. **2020**, 345-381
- 332 Short-Term Hydrothermal Scheduling Using Bio-inspired Computing: A Review. **2020**, 115-129
- 331 Population Diversity of Particle Swarm Optimization Algorithm on Solving Single and Multi-Objective Problems. **2020**, 312-344
- 330 An enhanced version of Harris Hawks Optimization by dimension learning-based hunting for Breast Cancer Detection. **2021**, 11, 21933 4
- 329 A shuffled frog leaping algorithm with contraction factor and its application in mechanical optimum design. 1
- 328 Cluster-centroid-based mutation strategies for Differential Evolution. 1
- 327 A gentle introduction to theory (for non-theoreticians). **2020**,
- 326 Taguchi-Particle Swarm Optimization for Numerical Optimization. 44-59
- 325 Extrapolated Biogeography-Based Optimization (eBBO) for Global Numerical Optimization and Microstrip Patch Antenna Design. 165-191
- 324 Co-Evolutionary Algorithms Based on Mixed Strategy. 75-88
- 323 Analytics on Fireworks Algorithm Solving Problems with Shifts in the Decision Space and Objective Space. 1008-1038
- 322 Optimising Data-Driven Safety Related Systems. **2006**, 217-230
- 321 Benchmarking Differential Evolution. **2005**, 135-187
- 320 Multi-Objective Optimisation for Receiver Operating Characteristic Analysis. **2006**, 533-556 3
- 319 Perceptive Particle Swarm Optimization: A New Learning Method from Birds Seeking. **2007**, 1130-1137
- 318 Re-diversification Based Particle Swarm Algorithm with Cauchy Mutation. **2007**, 362-371 3
- 317 Immune Clonal Strategy Based on the Adaptive Mean Mutation. **2007**, 108-116 2

| | | |
|-----|---|--------|
| 316 | A New Recurring Multistage Evolutionary Algorithm for Solving Problems Efficiently. 2007 , 97-106 | 1 |
| 315 | Evolutionary programming in image restoration via reduced order model Kalman filtering. | |
| 314 | Enhanced Sparrow Search Algorithm With Mutation Strategy for Global Optimization. 2021 , 1-1 | 3 |
| 313 | Biomedical image segmentation using fuzzy multilevel soft thresholding system coupled modified cuckoo search. 2022 , 72, 103324 | 0 |
| 312 | Review on Nature-Inspired Algorithms. 2021 , 2, 1 | 4 |
| 311 | EWOA-OPF: Effective Whale Optimization Algorithm to Solve Optimal Power Flow Problem. 2021 , 10, 2975 | 13 |
| 310 | Research on Optimal Control of Fractional Order PID Parameters of SCR Denitrification System. 2021 , | |
| 309 | Structural Attack against Graph Based Android Malware Detection. 2021 , | 0 |
| 308 | Design of tunnel FET architectures for low power application using improved Chimp optimizer algorithm. 1 | 1 |
| 307 | Combined heat and power economic dispatch using an adaptive cuckoo search with differential evolution mutation. 2021 , 307, 118057 | 4 |
| 306 | New Binary Particle Swarm Optimization Algorithm for Surveillance and Camera Situation Assessments. 1 | |
| 305 | A Hybrid Preaching Optimization Algorithm Based on Kapur Entropy for Multilevel Thresholding Color Image Segmentation.. 2021 , 23, | 2 |
| 304 | An improved weighted optimization approach for large-scale global optimization. 1 | |
| 303 | HunterPrey optimization: algorithm and applications. 1 | 12 |
| 302 | Northern Goshawk Optimization: A New Swarm-Based Algorithm for Solving Optimization Problems. 2021 , 1-1 | 7 |
| 301 | A review of population-based metaheuristics for large-scale black-box global optimization: Part A. <i>IEEE Transactions on Evolutionary Computation</i> , 2021 , 1-1 | 15.6 3 |
| 300 | Search Trajectory Networks Applied to the Cyclic Bandwidth Sum Problem. 2021 , 9, 151266-151277 | 2 |
| 299 | EOSMA: An Equilibrium Optimizer Slime Mould Algorithm for Engineering Design Problems. 1 | 5 |

| | | |
|-----|---|---|
| 298 | A Beta Distribution Based Optimization Algorithm and Its Application in Power Load Forecasting. 2022 , 25-35 | |
| 297 | Learning-based monarch butterfly optimization algorithm for solving numerical optimization problems. 1 | 2 |
| 296 | Novel phasianidae inspired peafowl (Pavo muticus/cristatus) optimization algorithm: Design, evaluation, and SOFC models parameter estimation. 2022 , 50, 101825 | 1 |
| 295 | Improved Genetic Algorithm for Bundle Adjustment in Photogrammetry. 2020 , | |
| 294 | Optimization of Electricity Consumption using Grey Wolf Algorithm. 2020 , | 1 |
| 293 | A Shuffled Frog Leaping Algorithm based on the Improved Simplex Method. 2020 , | 1 |
| 292 | A differential evolution SAF-DE algorithm which jumps out of local optimal. 2020 , | |
| 291 | Extending the Whale optimization Algorithm with Chaotic Local Search. 2020 , | |
| 290 | A Novel Metaheuristic: Fast Jaguar Algorithm. 2021 , | 0 |
| 289 | Search in forest optimizer: a bioinspired metaheuristic algorithm for global optimization problems. 2022 , 26, 2325 | 1 |
| 288 | A Comprehensive Survey on the Recent Variants and Applications of Membrane-Inspired Evolutionary Algorithms. 1 | 2 |
| 287 | Improved gradual change-based Harris Hawks optimization for real-world engineering design problems. 1 | 0 |
| 286 | Arithmetic optimization algorithm based on elementary function disturbance for solving economic load dispatch problem in power system. 1 | 2 |
| 285 | Design and implementation of a crop recommendation system using nature-inspired intelligence for Rajasthan, India. 2022 , 109-128 | |
| 284 | Information-utilization strengthened equilibrium optimizer. 1 | 0 |
| 283 | Meta-heuristic optimization algorithms for solving real-world mechanical engineering design problems: a comprehensive survey, applications, comparative analysis, and results. 2022 , 34, 4081 | 8 |
| 282 | A study of exploratory and stability analysis of artificial electric field algorithm. 1 | 1 |
| 281 | An efficient IDS in cloud environment using feature selection based on DM algorithm. 1 | 0 |

| | | |
|-----|--|---|
| 280 | An Enhanced Grey Wolf Optimizer with a Velocity-Aided Global Search Mechanism. 2022 , 10, 351 | 5 |
| 279 | A Novel Biologically Inspired Approach for Clustering and Multi-Level Image Thresholding: Modified Harris Hawks Optimizer. 1 | 0 |
| 278 | Transfer Learning Analysis of Multi-Class Classification for Landscape-Aware Algorithm Selection. 2022 , 10, 432 | 4 |
| 277 | Competitive search algorithm: a new method for stochastic optimization. 1 | 0 |
| 276 | Mutation-driven grey wolf optimizer with modified search mechanism. 2022 , 194, 116450 | 3 |
| 275 | Research on Microgrid Scheduling Based on Improved Crow Search Algorithm. 2022 , 2022, 1-21 | 1 |
| 274 | A Novel Ensemble Machine Learning and an Evolutionary Algorithm in Modeling the COVID-19 Epidemic and Optimizing Government Policies. 2022 , 1-11 | 0 |
| 273 | Improved whale optimization algorithm based on variable spiral position update strategy and adaptive inertia weight. 2022 , 42, 1501-1517 | 0 |
| 272 | Visible Particle Series Search Algorithm and Its Application in Structural Damage Identification.. 2022 , 22, | 1 |
| 271 | A hybrid salp swarm algorithm based on TLBO for reliability redundancy allocation problems. 1 | 0 |
| 270 | A Meta-Heuristic Optimization Based Less Imperceptible Adversarial Attack on Gait Based Surveillance Systems. 1 | 1 |
| 269 | Hierarchical Optimization Algorithm and Applications of Spacecraft Trajectory Optimization. 2022 , 9, 81 | 2 |
| 268 | Evolutionary deep learning: A survey. 2022 , 483, 42-58 | 7 |
| 267 | Implementation of Memetic Algorithms into Structural Optimization. 2016 , 18, 64-69 | 3 |
| 266 | Shared seagull optimization algorithm with mutation operators for global optimization. 2021 , 11, 125217 | 2 |
| 265 | Tasmanian Devil Optimization: A New Bio-Inspired Optimization Algorithm for Solving Optimization Algorithm. 2022 , 10, 19599-19620 | 8 |
| 264 | Eurasian oystercatcher optimiser: New meta-heuristic algorithm. 2022 , 31, 332-344 | |
| 263 | An Adaptive Whale Optimization Algorithm with Mahalanobis Distance for Optimization Problems. 2022 , | |

| | | |
|-----|---|---|
| 262 | An efficient SGM based IDS in cloud environment. 2022 , 104, 553-576 | 0 |
| 261 | Dynamic exploitation Gaussian bare-bones bat algorithm for optimal reactive power dispatch to improve the safety and stability of power system. | |
| 260 | A novel approach for face recognition using biogeography based optimization with extinction and evolution. 2022 , 81, 10561-10588 | 0 |
| 259 | Subpopulation Particle Swarm Optimization with a Hybrid Mutation Strategy.. 2022 , 2022, 9599417 | 1 |
| 258 | Selecting Some Variables to Update-Based Algorithm for Solving Optimization Problems.. 2022 , 22, | 1 |
| 257 | A Novel Intelligent Inversion Method of Hydrogeological Parameters Based on the Disturbance-Inspired Equilibrium Optimizer. 2022 , 14, 3267 | 0 |
| 256 | Anti-coronavirus optimization algorithm.. 2022 , 1-33 | 0 |
| 255 | A Multipopulation Dynamic Adaptive Coevolutionary Strategy for Large-Scale Complex Optimization Problems.. 2022 , 22, | |
| 254 | An Improved Tunicate Swarm Algorithm with Best-random Mutation Strategy for Global Optimization Problems. 1 | 3 |
| 253 | Fast Mutation in Crossover-Based Algorithms. 1 | 1 |
| 252 | A multipopulation cooperative coevolutionary whale optimization algorithm with a two-stage orthogonal learning mechanism. 2022 , 108664 | 0 |
| 251 | An Improved Teaching-Learning-Based Optimization Algorithm with Reinforcement Learning Strategy for Solving Optimization Problems.. 2022 , 2022, 1535957 | 4 |
| 250 | A novel arithmetic optimization algorithm based on chaotic maps for global optimization. 1 | 1 |
| 249 | Mitigation of Voltage Level and Real Power Loss in Transmission System via Optimal UPFC Placement. 2022 , | |
| 248 | A boosted chimp optimizer for numerical and engineering design optimization challenges.. 2022 , 1-52 | 2 |
| 247 | Unequally Spaced Antenna Array Synthesis Using Accelerating Gaussian Mutated Cat Swarm Optimization. 2022 , 1, 99-109 | |
| 246 | Adaptive Relative Reflection Harris Hawks Optimization for Global Optimization. 2022 , 10, 1145 | 0 |
| 245 | Marine Propeller Design Using Evolving Chaotic Autonomous Particle Swarm Optimization. 1 | |

| | | |
|-----|--|----|
| 244 | A Linearly Adaptive Sine-Cosine Algorithm with Application in Deep Neural Network for Feature Optimization in Arrhythmia Classification using ECG Signals. 2022 , 242, 108411 | 0 |
| 243 | Covariance matrix adapted grey wolf optimizer tuned eXtreme gradient boost for bi-directional modelling of direct metal deposition process. 2022 , 116971 | 1 |
| 242 | Advanced orthogonal opposition-based learning-driven dynamic salp swarm algorithm: Framework and case studies. | 2 |
| 241 | Hybrid leader based optimization: a new stochastic optimization algorithm for solving optimization applications.. 2022 , 12, 5549 | 2 |
| 240 | A meta-inspired termite queen algorithm for global optimization and engineering design problems. 2022 , 111, 104805 | 0 |
| 239 | A dynamic stochastic search algorithm for high-dimensional optimization problems and its application to feature selection. 2022 , 244, 108517 | 0 |
| 238 | Biogeography-based optimization with adaptive migration and adaptive mutation with its application in sidelobe reduction of antenna arrays. 2022 , 121, 108772 | 0 |
| 237 | GGWO: Gaze cues learning-based grey wolf optimizer and its applications for solving engineering problems. 2022 , 61, 101636 | 11 |
| 236 | Adaptive evolution strategy with ensemble of mutations for Reinforcement Learning. 2022 , 245, 108624 | 0 |
| 235 | A ranking-based fuzzy adaptive hybrid crow search algorithm for combined heat and power economic dispatch. 2022 , 197, 116625 | 0 |
| 234 | An enhanced fuzzy-based clustering protocol with an improved shuffled frog leaping algorithm for WSNs. 2022 , 198, 116767 | |
| 233 | Golden jackal optimization: A novel nature-inspired optimizer for engineering applications. 2022 , 198, 116924 | 17 |
| 232 | Enhanced sine cosine algorithm with crossover: A comparative study and empirical analysis. 2022 , 198, 116856 | 0 |
| 231 | An individual-dependent differential evolution with dual information guidance. 2021 , | |
| 230 | COVID-19 Confirmed Cases Prediction in China Based on Barnacles Mating Optimizer-Least Squares Support Vector Machines. 2021 , 21, 62-76 | 0 |
| 229 | RLEPSO:Reinforcement learning based Ensemble particle swarm optimizer?. 2021 , | |
| 228 | MTV-MFO: Multi-Trial Vector-Based Moth-Flame Optimization Algorithm. 2021 , 13, 2388 | 10 |
| 227 | A Hybrid Butterfly Optimization Algorithm for Numerical Optimization Problems.. 2021 , 2021, 7981670 | 3 |

| | | |
|-----|--|---|
| 226 | An Improved Grey Wolves Optimization Algorithm for Dynamic Community Detection and Data Clustering. 1-22 | 1 |
| 225 | Multi-membrane search algorithm. 2021 , 16, e0260512 | 1 |
| 224 | Harris Hawks Optimization with Multi-Strategy Search and Application. 2021 , 13, 2364 | 1 |
| 223 | Chimp Optimization Algorithm to Optimize a Convolutional Neural Network for Recognizing Persian/Arabic Handwritten Words. 2022 , 2022, 1-12 | |
| 222 | An efficient metaheuristic method based on the BitTorrent communication protocol (EM-BT). 1 | 0 |
| 221 | Whale optimization algorithm based on Levy flight and memory for static smooth path planning. | 0 |
| 220 | Sand Cat swarm optimization: a nature-inspired algorithm to solve global optimization problems. 1 | 8 |
| 219 | Multi-Objective Optimisation for Receiver Operating Characteristic Analysis. 2006 , 531-556 | |
| 218 | Mud Ring Algorithm: A new meta-heuristic optimization algorithm for solving mathematical and engineering challenges. 2022 , 1-1 | 1 |
| 217 | Three-Periods Optimization Algorithm: A New Method for Solving Various Optimization Problems. 1-15 | |
| 216 | Adaptive Dimensional Learning with a Tolerance Framework for the Differential Evolution Algorithm. 2022 , 2, 59-77 | 1 |
| 215 | Opposition Based Group Search Optimized Optimal Scheduling of Fixed Head hydrothermal Power System. 2022 , | |
| 214 | Research on Coverage Optimization in a WSN Based on an Improved COOT Bird Algorithm.. 2022 , 22, | 5 |
| 213 | A sparrow search algorithm with intelligent weight factors and mutation operators and applications to image classification. 2022 , 1-27 | |
| 212 | Modified Harris Hawks Optimization Algorithm with Exploration Factor and Random Walk Strategy.. 2022 , 2022, 4673665 | 0 |
| 211 | A novel intelligent hyper-heuristic algorithm for solving optimization problems. 2022 , 42, 5041-5053 | 0 |
| 210 | A novel hybrid algorithm based on rat swarm optimization and pattern search for parameter extraction of solar photovoltaic models. | 6 |
| 209 | Enhanced Salp Swarm Algorithm for Multimodal Optimization and Fuzzy Based Grid Frequency Controller Design. 2022 , 15, 3210 | 0 |

| | | |
|-----|---|---|
| 208 | Boosted Harris Hawks gravitational force algorithm for global optimization and industrial engineering problems. | 0 |
| 207 | A Curve Approximation Approach Using Bio-inspired Polar Coordinate Bald Eagle Search Algorithm. 2022 , 15, 1 | 0 |
| 206 | Critical review of bio-inspired data optimization techniques: An image steganalysis perspective. | |
| 205 | An enhanced honey badger algorithm based on Lévy flight and refraction opposition-based learning for engineering design problems. 2022 , 1-24 | 1 |
| 204 | All particles driving particle swarm optimization: Superior particles pulling plus inferior particles pushing. 2022 , 108849 | 0 |
| 203 | An efficient rotational direction heap-based optimization with orthogonal structure for medical diagnosis.. 2022 , 146, 105563 | 0 |
| 202 | A two-stage cooperative scatter search algorithm with multi-population hierarchical learning mechanism. 2022 , 203, 117444 | 1 |
| 201 | A ranking-based adaptive cuckoo search algorithm for unconstrained optimization. 2022 , 117428 | 2 |
| 200 | Application of Memetic Algorithms in Multi-Criteria Structural Optimization. 2017 , 19, 106-111 | |
| 199 | Improved whale optimization algorithm and its application in vehicle structural crashworthiness. 1-15 | 0 |
| 198 | A Comparative Analysis of Hybrid Computational Models Constructed with Swarm Intelligence Algorithms for Estimating Soil Compression Index. | 0 |
| 197 | An efficient Planet Optimization Algorithm for solving engineering problems.. 2022 , 12, 8362 | 4 |
| 196 | Cumulative learning-based competitive swarm optimizer for large-scale optimization. | |
| 195 | An Enhanced Grey Wolf Optimization Algorithm for Photovoltaic Maximum Power Point Tracking Control Under Partial Shading Conditions. 2022 , 1-1 | 2 |
| 194 | Gradient eigendecomposition invariance biogeography-based optimization for mobile robot path planning. | |
| 193 | Optimal Sizing of Hybrid Energy System Using Random Exploratory Search-Centred Harris Hawks Optimizer with Improved Exploitation Capability. 2022 , 2022, 1-22 | 0 |
| 192 | Binary Aquila Optimizer for Selecting Effective Features from Medical Data: A COVID-19 Case Study. 2022 , 10, 1929 | 6 |
| 191 | An island parallel Harris hawks optimization algorithm. | 0 |

- 190 A survey on firefly algorithms. **2022**, 500, 662-678 2
- 189 Improved Control System Based on PSO and ANN for Social Distancing for Patients With COVID-19. **2022**, 10, 63797-63811
- 188 A new index-based hyper-heuristic algorithm for global optimisation problems.
- 187 Recent Advances in Harris Hawks Optimization: A Comparative Study and Applications. **2022**, 11, 1919 7
- 186 A new human-based metaheuristic algorithm for solving optimization problems on the base of simulation of driving training process. **2022**, 12, 7
- 185 Adaptive MOMEDA model based variational mode decomposition for Pelton wheel fault detection. **2022**, 4, 025044 1
- 184 An adaptive rejuvenation of bacterial foraging algorithm for global optimization.
- 183 Ameliorated Follow The Leader: Algorithm and Application to Truss Design Problem. **2022**, 42, 181-204 2
- 182 An efficient differential evolution with fitness-based dynamic mutation strategy and control parameters. **2022**, 251, 109280 1
- 181 Optimization Algorithms Surpassing Metaphor. **2022**, 3-33
- 180 Evaluating and improving neural program-smoothing-based fuzzing. **2022**, 0
- 179 The cheetah optimizer: a nature-inspired metaheuristic algorithm for large-scale optimization problems. **2022**, 12, 2
- 178 Chaotic self-governing particle swarm optimization for marine propeller design.
- 177 Multi-strategies Boosted Mutative Crow Search Algorithm for Global Tasks: Cases of Continuous and Discrete Optimization. 0
- 176 Design of a fuzzy-based proportional integral derivative controller with optimal membership function scaling for respiratory ventilation system. **2022**, 78, 103938
- 175 A gentle introduction to theory (for non-theoreticians). **2022**,
- 174 Slime Mould-Seagull Optimizer. **2022**, 0
- 173 Solar cell parameter identification based on opposition-based chaotic whale optimization algorithm. **2022**,

| | | |
|-----|---|---|
| 172 | Online DGA Sensor Calibration Using GANN and Data Augmentation. 2022, | |
| 171 | A Hybrid SVR-Based Prediction Model for the Interfacial Bond Strength of Externally Bonded FRP Laminates on Grooves with Concrete Prisms. 2022, 14, 3097 | 0 |
| 170 | Special Relativity Search: A novel metaheuristic method based on special relativity physics. 2022, 109484 | 3 |
| 169 | Modelling Compression Strength of Waste PET and SCM Blended Cementitious Grout Using Hybrid of LSSVM Models. 2022, 15, 5242 | 1 |
| 168 | INNA: An improved neural network algorithm for solving reliability optimization problems. | 0 |
| 167 | Recent advances of bat-inspired algorithm, its versions and applications. | 1 |
| 166 | Optimization of a non-instantaneous deteriorating inventory problem with time and price dependent demand over finite time horizon via hybrid DESGO algorithm. 2022, 118676 | 0 |
| 165 | Single candidate optimizer: a novel optimization algorithm. | 2 |
| 164 | Optimal Design of Damped Structure with Inerter System Based on Modified Harmony Search Algorithm. 2022, 2022, 1-17 | |
| 163 | Advanced environmental adaptation method. | |
| 162 | An enhanced whale optimization algorithm with improved dynamic opposite learning and adaptive inertia weight strategy. | 0 |
| 161 | Dynamic elite strategy mayfly algorithm. 2022, 17, e0273155 | 0 |
| 160 | Optimization method for a moving-coil electromagnetic linear actuator using an improved Macaca thibetana behavior-based hierarchical GABSO algorithm. 2022, 65, | 0 |
| 159 | A new hybrid optimization technique based on antlion and grasshopper optimization algorithms. | |
| 158 | Quantum firefly algorithm with stochastic search strategies. 2022, 132, 074401 | 0 |
| 157 | Assessing ranking and effectiveness of evolutionary algorithm hyperparameters using global sensitivity analysis methodologies. 2022, 74, 101130 | 0 |
| 156 | Probabilistic slope stability analysis of Heavy-haul freight corridor using a hybrid machine learning paradigm. 2022, 37, 100815 | 0 |
| 155 | Heap-based optimizer based on three new updating strategies. 2022, 209, 118222 | 1 |

- 154 Parameters identification for photovoltaic system via improved electromagnetism-like approach and quadrature technique. ○
- 153 A new movement strategy of grey wolf optimizer for optimization problems and structural damage identification. **2022**, 173, 103276 4
- 152 The effect of chaotic mapping on naked mole-rat algorithm for energy efficient smart city wireless sensor network. **2022**, 173, 108655 ○
- 151 WOASCALF: A new hybrid whale optimization algorithm based on sine cosine algorithm and levy flight to solve global optimization problems. **2022**, 173, 103272 3
- 150 An adaptive framework to select the coordinate systems for evolutionary algorithms. **2022**, 129, 109585 ○
- 149 Hybrid Global Optimization Algorithm for Feature Selection. **2023**, 74, 2021-2037 ○
- 148 Chaotic-SCA Salp Swarm Algorithm Enhanced with Opposition Based Learning: Application to Decrease Carbon Footprint in Patient Flow. **2022**, 1-29 ○
- 147 Clouded Leopard Optimization: A New Nature-Inspired Optimization Algorithm. **2022**, 10, 102876-102906 ○
- 146 A Modified Whale Optimisation Algorithm to Solve Global Optimisation Problems. **2022**, 465-477 ○
- 145 A New Optimization Method Based on the Lotka-Volterra System Equations. **2022**, 317-332 ○
- 144 A Novel Essential Mutation Method for Evolutionary Algorithms. **2022**, ○
- 143 Proposed and application of the Dragonfly algorithm for the camera placement problem. **2022**, ○
- 142 Crosshair Optimizer. **2022**, ○
- 141 A Surrogate Model Assisted Estimation of Distribution Algorithm with Mutil-acquisition Functions for Expensive Optimization. **2022**, ○
- 140 A Comparative Study on Evolutionary Algorithms and Mathematical Programming Methods for Continuous Optimization. **2022**, ○
- 139 Nature-Inspired Metaheuristic Search Algorithms for Optimizing Benchmark Problems: Inclined Planes System Optimization to State-of-the-Art Methods. ○
- 138 Evaluation of Lateral Displacement Induced by Jet Grouting using Improved Random Forest. ○
- 137 A novel Hybrid Harris hawk sine cosine optimization algorithm for reactive power optimization problem. 1-37 ○

| | | |
|-----|--|---|
| 136 | Egret Swarm Optimization Algorithm: An Evolutionary Computation Approach for Model Free Optimization. 2022 , 7, 144 | 2 |
| 135 | Development of incremental average differential evolution algorithm for photovoltaic system identification. 2022 , 244, 242-254 | 0 |
| 134 | A New Human-Inspired Metaheuristic Algorithm for Solving Optimization Problems Based on Mimicking Sewing Training. | 0 |
| 133 | Sea-horse optimizer: a novel nature-inspired meta-heuristic for global optimization problems. | 2 |
| 132 | Hybridizing slime mould algorithm with simulated annealing algorithm: a hybridized statistical approach for numerical and engineering design problems. | 0 |
| 131 | Binary Equilibrium Optimizer: theory and application in building optimal control problems. 2022 , 112503 | 1 |
| 130 | Swarming genetic algorithm: A nested fully coupled hybrid of genetic algorithm and particle swarm optimization. 2022 , 17, e0275094 | 1 |
| 129 | Application of an improved sparrow search algorithm in BP network classification of strip steel surface defect images. | 0 |
| 128 | Improved bald eagle search algorithm with dimension learning-based hunting for autonomous vehicle including vision dynamics. | 0 |
| 127 | Boxing Match Algorithm: a new meta-heuristic algorithm. | 0 |
| 126 | Feature Selection Based on Gaussian Ant Lion Optimizer for Fault Identification in Centrifugal Pump. 2023 , 295-310 | 0 |
| 125 | Diversified sine cosine algorithm based on differential evolution for multidimensional knapsack problem. 2022 , 109682 | 1 |
| 124 | A comparative study by separating and combining swarm-based algorithms into modules. 2022 , 207, 956-965 | 0 |
| 123 | Coati Optimization Algorithm: A new bio-inspired metaheuristic algorithm for solving optimization problems. 2022 , 110011 | 4 |
| 122 | A survey of designing convolutional neural network using evolutionary algorithms. | 0 |
| 121 | An aphid inspired metaheuristic optimization algorithm and its application to engineering. 2022 , 12, | 0 |
| 120 | A Novel Metaheuristic Method: Gravitational-based Global Optimization. | 0 |
| 119 | An enhanced grey wolf optimizer with fusion strategies for identifying the parameters of photovoltaic models. 2022 , 1-16 | 1 |

| | | |
|-----|--|---|
| 118 | An Adaptive Sinusoidal Disturbance Strategy Sparrow Search Algorithm and Its Application. | 0 |
| 117 | A new human-inspired metaheuristic algorithm for solving optimization problems based on mimicking sewing training. 2022 , 12, | 2 |
| 116 | An improved Harris Hawks optimizer combined with extremal optimization. | 0 |
| 115 | A Modified Gorilla Troops Optimizer for Global Optimization Problem. 2022 , 12, 10144 | 2 |
| 114 | Investigate an imperfect green production system considering rework policy via Teaching-Learning-Based Optimizer Algorithm. 2022 , 119143 | 0 |
| 113 | Sardine Optimization Algorithm with Agile Locality and Globality Strategies for Real Optimization Problems. | 1 |
| 112 | Micro-level dynamics in hidden action situations with limited information. 2022 , 204, 372-393 | 0 |
| 111 | EvoDCMMO: Benchmarking and solving dynamic constrained multimodal optimization problems. 2022 , 75, 101184 | 0 |
| 110 | Multi-period dynamic multi-objective emergency material distribution model under uncertain demand. 2023 , 117, 105530 | 0 |
| 109 | Performance optimization of water cycle algorithm for multilevel lupus nephritis image segmentation. 2023 , 80, 104139 | 0 |
| 108 | Young's double-slit experiment optimizer : A novel metaheuristic optimization algorithm for global and constraint optimization problems. 2023 , 403, 115652 | 0 |
| 107 | Gravity particle swarm optimization algorithm for solving shop visit balancing problem for repairable equipment. 2023 , 117, 105543 | 0 |
| 106 | Multiple individual guided differential evolution with time varying and feedback information-based control parameters. 2023 , 259, 110091 | 0 |
| 105 | Special Relativity Search for applied mechanics and engineering. 2023 , 403, 115734 | 1 |
| 104 | Optimizing SVM Hyperparameters using Predatory Swarms Algorithms for Use Case Points Estimation. 2022 , | 0 |
| 103 | An Adaptive Sinusoidal-Disturbance-Strategy Sparrow Search Algorithm and Its Application. 2022 , 22, 8787 | 0 |
| 102 | An improved whale algorithm based on multi-strategy competition mechanism. | 0 |
| 101 | Characterizing the Vs Profile from Surface Wave Data Using a Customized Artificial Jellyfish Search Algorithm. | 0 |

- 100 Biomedical Image Segmentation Using Fuzzy Artificial Cell Swarm Optimization (FACSO). ○
- 99 Stochasticity agnostic solution to the AC optimal power flow by recursive bound tightening with top-down heuristically inducted binary decision trees. ○
- 98 An Improved Particle-Swarm-Optimization Algorithm for a Prediction Model of Steel Slab Temperature. **2022**, 12, 11550 ○
- 97 An Evolutionary Dynamic Control Cuckoo Search Algorithm for Solving the Constrained Engineering Design Problems. **2022**, 13, 1-25 ○
- 96 On Improving Adaptive Problem Decomposition Using Differential Evolution for Large-Scale Optimization Problems. **2022**, 10, 4297 1
- 95 FPGA-Based Hardware Modeling on Pigeon-Inspired Optimization Algorithm. **2022**, 407-423 ○
- 94 Improved Spotted Hyena Optimizer Fused with Multiple Strategies. **2022**, 142-159 ○
- 93 Language Education Optimization: A New Human-Based Metaheuristic Algorithm for Solving Optimization Problems. **2023**, 1-47 ○
- 92 Cooperative path planning optimization for multiple UAVs with communication constraints. **2023**, 260, 110164 1
- 91 Groundwater Flow Algorithm: A Novel Hydro-Geology Based Optimization Algorithm. **2022**, 10, 132193-132211 ○
- 90 JAYA Algorithm and its Performance on Energy Efficiency for Wireless Sensor Networks. **2022**, ○
- 89 Improved Grasshopper Optimization Framework for Optimal Power flow Considering Multi Objective Functions. **2022**, ○
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- 85 GMO: Geometric Mean Optimizer for Solving Engineering Problems. ○
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- 67 Cauchy mutation boosted Harris hawk algorithm: Optimal performance design and engineering applications. ○
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|----|---|---|
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|----|--|---|
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