# RaÃ°l BaÃ±os

## List of Publications by Year
in descending order

| 89 papers | 3,352 citations | 218677<br>26 h-index | 149698<br>56 g-index |
| --- | --- | --- | --- |
| 92 all docs | 92 docs citations | 92 times ranked | 4009 citing authors |

| # | Article | IF | Citations |
|---|---------|-----|-----------|
| 1 | Optimization methods applied to renewable and sustainable energy: A review. Renewable and Sustainable Energy Reviews, 2011, 15, 1753-1766. | 16.4 | 1,276 |
| 2 | A hybrid meta-heuristic for multi-objective vehicle routing problems with time windows. Computers and Industrial Engineering, 2013, 65, 286-296. | 6.3 | 118 |
| 3 | Renewable energy production in Spain: A review. Renewable and Sustainable Energy Reviews, 2014, 33, 509-531. | 16.4 | 104 |
| 4 | A Simulated Annealing-based parallel multi-objective approach to vehicle routing problems with time windows. Expert Systems With Applications, 2013, 40, 1696-1707. | 7.6 | 101 |
| 5 | Application of Several Meta-Heuristic Techniques to the Optimization of Real Looped Water Distribution Networks. Water Resources Management, 2008, 22, 1367-1379. | 3.9 | 100 |
| 6 | A fast method for identifying worldwide scientific collaborations using the Scopus database. Telematics and Informatics, 2018, 35, 168-185. | 5.8 | 98 |
| 7 | Adaptive community detection in complex networks using genetic algorithms. Neurocomputing, 2017, 266, 101-113. | 5.9 | 95 |
| 8 | An overview of research and energy evolution for small hydropower in Europe. Renewable and Sustainable Energy Reviews, 2017, 75, 476-489. | 16.4 | 87 |
| 9 | Green Packaging from Consumer and Business Perspectives. Sustainability, 2021, 13, 1356. | 3.2 | 80 |
| 10 | Wind turbine selection for wind farm layout using multi-objective evolutionary algorithms. Expert Systems With Applications, 2014, 41, 6585-6595. | 7.6 | 77 |
| 11 | A memetic algorithm applied to the design of water distribution networks. Applied Soft Computing Journal, 2010, 10, 261-266. | 7.2 | 70 |
| 12 | Resilience Indexes for Water Distribution Network Design: A Performance Analysis Under Demand Uncertainty. Water Resources Management, 2011, 25, 2351-2366. | 3.9 | 67 |
| 13 | Power quality techniques research worldwide: A review. Renewable and Sustainable Energy Reviews, 2016, 54, 846-856. | 16.4 | 60 |
| 14 | The research on energy in spain: A scientometric approach. Renewable and Sustainable Energy Reviews, 2014, 29, 173-183. | 16.4 | 53 |
| 15 | OpenZmeter: An Efficient Low-Cost Energy Smart Meter and Power Quality Analyzer. Sustainability, 2018, 10, 4038. | 3.2 | 48 |
| 16 | Optimal Design of Gravity-Fed Looped Water Distribution Networks Considering the Resilience Index. Journal of Water Resources Planning and Management - ASCE, 2008, 134, 234-238. | 2.6 | 44 |
| 17 | Minimization of voltage deviation and power losses in power networks using Pareto optimization methods. Engineering Applications of Artificial Intelligence, 2010, 23, 695-703. | 8.1 | 42 |
| 18 | A Pareto-based multi-objective evolutionary algorithm for automatic rule generation in network intrusion detection systems. Soft Computing, 2013, 17, 255-263. | 3.6 | 42 |

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|---|---------|-----|-----------|
| 19 | An Open Hardware Design for Internet of Things Power Quality and Energy Saving Solutions. Sensors, 2019, 19, 627. | 3.8 | 42 |
| 20 | Parallel alternatives for evolutionary multi-objective optimization in unsupervised feature selection. Expert Systems With Applications, 2015, 42, 4239-4252. | 7.6 | 38 |
| 21 | Multi-objective crop planning using pareto-based evolutionary algorithms. Agricultural Economics (United Kingdom), 2011, 42, 649-656. | 3.9 | 34 |
| 22 | Energy benchmarking for shopping centers in Gulf Coast region. Energy Policy, 2016, 91, 247-255. | 8.8 | 34 |
| 23 | The research of water use in Spain. Journal of Cleaner Production, 2016, 112, 4719-4732. | 9.3 | 31 |
| 24 | Power Quality: Scientific Collaboration Networks and Research Trends. Energies, 2018, 11, 2067. | 3.1 | 31 |
| 25 | Implementation of scatter search for multi-objective optimization: a comparative study. Computational Optimization and Applications, 2009, 42, 421-441. | 1.6 | 28 |
| 26 | A parallel multi-objective algorithm for two-dimensional bin packing with rotations and load balancing. Expert Systems With Applications, 2013, 40, 5169-5180. | 7.6 | 28 |
| 27 | Genetic algorithm for S-transform optimisation in the analysis and classification of electrical signal perturbations. Expert Systems With Applications, 2013, 40, 6766-6777. | 7.6 | 28 |
| 28 | Community detection in national-scale high voltage transmission networks using genetic algorithms. Advanced Engineering Informatics, 2018, 38, 232-241. | 8.0 | 28 |
| 29 | A hybrid method for solving multi-objective global optimization problems. Journal of Global Optimization, 2007, 38, 265-281. | 1.8 | 27 |
| 30 | A Parallel Multilevel Metaheuristic for Graph Partitioning. Journal of Heuristics, 2004, 10, 315-336. | 1.4 | 25 |
| 31 | A Mixed Heuristic for Circuit Partitioning. Computational Optimization and Applications, 2002, 23, 321-340. | 1.6 | 23 |
| 32 | Multilevel Heuristic Algorithm for Graph Partitioning. Lecture Notes in Computer Science, 2003, , 143-153. | 1.3 | 22 |
| 33 | Analysis of Research Topics and Scientific Collaborations in Renewable Energy Using Community Detection. Sustainability, 2018, 10, 4510. | 3.2 | 21 |
| 34 | Design of a Snort-Based Hybrid Intrusion Detection System. Lecture Notes in Computer Science, 2009, , 515-522. | 1.3 | 20 |
| 35 | Analysis of OpenMP and MPI implementations of meta-heuristics for vehicle routing problems. Applied Soft Computing Journal, 2016, 43, 262-275. | 7.2 | 18 |
| 36 | Analysis of Research Topics and Scientific Collaborations in Energy Saving Using Bibliometric Techniques and Community Detection. Energies, 2019, 12, 2030. | 3.1 | 18 |

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| 37 | Analysis of power flow under non-sinusoidal conditions in the presence of harmonics and interharmonics using geometric algebra. International Journal of Electrical Power and Energy Systems, 2019, 111, 486-492. | 5.5 | 15 |
| 38 | Student Response Systems: A Multidisciplinary Analysis Using Visual Analytics. Education Sciences, 2020, 10, 348. | 2.6 | 15 |
| 39 | A Memetic Algorithm for Water Distribution Network Design. , 2007, , 279-289. | | 15 |
| 40 | Energies and Its Worldwide Research. Energies, 2020, 13, 6700. | 3.1 | 14 |
| 41 | Quadrature Current Compensation in Non-Sinusoidal Circuits Using Geometric Algebra and Evolutionary Algorithms. Energies, 2019, 12, 692. | 3.1 | 12 |
| 42 | A new approach to single-phase systems under sinusoidal and non-sinusoidal supply using geometric algebra. Electric Power Systems Research, 2020, 189, 106605. | 3.6 | 12 |
| 43 | Ant Colony Optimization for Water Distribution Network Design: A Comparative Study. Lecture Notes in Computer Science, 2011, , 300-307. | 1.3 | 12 |
| 44 | Vector Geometric Algebra in Power Systems: An Updated Formulation of Apparent Power under Non-Sinusoidal Conditions. Mathematics, 2021, 9, 1295. | 2.2 | 11 |
| 45 | Parallelization of population-based multi-objective meta-heuristics: An empirical study. Applied Mathematical Modelling, 2006, 30, 578-592. | 4.2 | 10 |
| 46 | Leveraging cooperation for parallel multiâ€objective feature selection in highâ€dimensional EEG data. Concurrency Computation Practice and Experience, 2015, 27, 5476-5499. | 2.2 | 10 |
| 47 | Determination of Instantaneous Powers From a Novel Time-Domain Parameter Identification Method of Non-Linear Single-Phase Circuits. IEEE Transactions on Power Delivery, 2022, 37, 3608-3619. | 4.3 | 10 |
| 48 | Feature selection in high-dimensional EEG data by parallel multi-objective optimization. , 2014, , . | | 9 |
| 49 | A Pareto-based memetic algorithm for optimization of looped water distribution systems. Engineering Optimization, 2010, 42, 223-240. | 2.6 | 7 |
| 50 | The assessment of evolutionary algorithms for analyzing the positional accuracy and uncertainty of maps. Expert Systems With Applications, 2014, 41, 6346-6360. | 7.6 | 7 |
| 51 | Simulation of power quality disturbances through the wavelet transform. , 2018, , . | | 7 |
| 52 | Optimization Methods Applied to Power Systems. Energies, 2019, 12, 2302. | 3.1 | 7 |
| 53 | Evolutionary Algorithms for Community Detection in Continental-Scale High-Voltage Transmission Grids. Symmetry, 2019, 11, 1472. | 2.2 | 7 |
| 54 | Aprendizaje cooperativo a travÃ©s de las nuevas tecnologÃas: Una revisiÃ³n. @tic: Revista D'InnovaciÃ³ Educativa, 2018, , 16. | 0.3 | 7 |

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|---|---------|-----|-----------|
| 55 | Parallelism on multicore processors using Parallel.FX. Advances in Engineering Software, 2011, 42, 259-265. | 3.8 | 6 |
| 56 | Annealing-tabu PAES: a multi-objective hybrid meta-heuristic. Optimization, 2011, 60, 1473-1491. | 1.7 | 6 |
| 57 | Multi-Objective Evolutionary Algorithms to Find Community Structures in Large Networks. Mathematics, 2020, 8, 2048. | 2.2 | 6 |
| 58 | Detection of Communities within the Multibody System Dynamics Network and Analysis of Their Relations. Symmetry, 2019, 11, 1525. | 2.2 | 6 |
| 59 | Cooperative learning and electronic group portfolio: tutoring tools, development of competences and assessment. International Journal of Learning Technology, 2011, 6, 46. | 0.2 | 5 |
| 60 | Engaging students in computer-supported cooperative learning. International Journal of Learning Technology, 2013, 8, 297. | 0.2 | 5 |
| 61 | Rampant Arch and Its Optimum Geometrical Generation. Symmetry, 2019, 11, 627. | 2.2 | 5 |
| 62 | Geometric Algebra Framework Applied to Symmetrical Balanced Three-Phase Systems for Sinusoidal and Non-Sinusoidal Voltage Supply. Mathematics, 2021, 9, 1259. | 2.2 | 5 |
| 63 | Parallel heuristic search in multilevel graph partitioning. , 2004, , . | | 4 |
| 64 | A Multi-Objective Evolutionary Algorithm for Network Intrusion Detection Systems. Lecture Notes in Computer Science, 2011, , 73-80. | 1.3 | 4 |
| 65 | Web GIS to enhance relational capital: the case of general merchandise retailers. Journal of Knowledge Management, 2016, 20, 578-593. | 5.1 | 4 |
| 66 | A Hybrid Active Filter Using the Backstepping Controller for Harmonic Current Compensation. Symmetry, 2019, 11, 1161. | 2.2 | 4 |
| 67 | Geometric Algebra in Nonsinusoidal Power Systems: A Case of Study for Passive Compensation. Symmetry, 2019, 11, 1287. | 2.2 | 4 |
| 68 | A New Memetic Algorithm for the Two-Dimensional Bin-Packing Problem with Rotations. Advances in Intelligent and Soft Computing, 2010, , 541-548. | 0.2 | 4 |
| 69 | Geometric Algebra Applied to Multiphase Electrical Circuits in Mixed Time–Frequency Domain by Means of Hypercomplex Hilbert Transform. Mathematics, 2022, 10, 1419. | 2.2 | 4 |
| 70 | A parallel evolutionary algorithm for circuit partitioning. , 2003, , . | | 3 |
| 71 | IMPROVING THE PERFORMANCE OF MULTI-OBJECTIVE EVOLUTIONARY ALGORITHMS USING THE ISLAND PARALLEL MODEL. Parallel Processing Letters, 2007, 17, 127-139. | 0.6 | 3 |
| 72 | Higher-order statistics for power systems: Effects of the sampling frequency on ergodicity. Applied Mathematical Modelling, 2016, 40, 6924-6933. | 4.2 | 3 |

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|---|---------|-----|-----------|
| 73 | Optimization of the Contracted Electric Power by Means of Genetic Algorithms. Energies, 2019, 12, 1270. | 3.1 | 3 |
| 74 | OptimizaciÃ³n de TensiÃ³n en Redes de DistribuciÃ³n utilizando TÃ©cnicas de OptimizaciÃ³n Evolutiva. Informacion Tecnologica (discontinued), 2006, 17, . | 0.3 | 3 |
| 75 | Experiencias de Aprendizaje Cooperativo en MatemÃ¡ticas \| Cooperative learning experiences in mathematics. Espiral Cuadernos Del Profesorado, 2018, 11, 99-108. | 0.8 | 3 |
| 76 | A memetic algorithm for two-dimensional multi-objective bin-packing with constraints. , 2011, , . | | 2 |
| 77 | Symmetry in Engineering Sciences. Symmetry, 2019, 11, 797. | 2.2 | 2 |
| 78 | Symmetry in Engineering Sciences II. Symmetry, 2020, 12, 1077. | 2.2 | 2 |
| 79 | Geometric Algebra for teaching AC Circuit Theory. International Journal of Circuit Theory and Applications, 2021, 49, 3473-3487. | 2.0 | 2 |
| 80 | A MATLAB application for monitoring the operation and power quality of electrical machines. , 2018, , . | | 1 |
| 81 | Environmental Energy Sustainability at Universities. Sustainability, 2020, 12, 9219. | 3.2 | 1 |
| 82 | Electronics and Its Worldwide Research. Electronics (Switzerland), 2020, 9, 977. | 3.1 | 1 |
| 83 | A New Pareto-Based Algorithm for Multi-objective Graph Partitioning. Lecture Notes in Computer Science, 2004, , 779-788. | 1.3 | 1 |
| 84 | Performance Analysis of Parallel Strategies for Bi-objective Network Partitioning. Advances in Intelligent and Soft Computing, 2006, , 291-300. | 0.2 | 1 |
| 85 | Multi-Objective Evolutionary Algorithms Used in Greenhouse Planning for Recycling Biomass into Energy. Advances in Intelligent and Soft Computing, 2010, , 463-470. | 0.2 | 1 |
| 86 | Geometric Power and Poynting Vector: a Physical Derivation for Harmonic Power Flow using Geometric Algebra. , 2022, , . | | 1 |
| 87 | Online Store Locator: An Essential Resource for Retailers in the 21st Century. Social Sciences, 2019, 8, 53. | 1.4 | 0 |
| 88 | Parallel Cooperation for Large-Scale Multiobjective Optimization on Feature Selection Problems. Lecture Notes in Computer Science, 2015, , 693-705. | 1.3 | 0 |
| 89 | Adapting Multi-Objective Meta-Heuristics for Graph Partitioning. , 2006, , 123-132. | | 0 |