References


Keywords: anytime.


https://github.com/iridia-ulb/references


Keywords: hyper-heuristic.


Keywords: Ant colony optimization, Manufacturing, Material requirements planning, Mixed-integer programming.


https://github.com/iridia-ulb/references


Keywords: Archiving, Local search, Multicriteria TSP, Approximation algorithms.


Keywords: GGA.


Keywords: GGA++.


https://github.com/iridia-ulb/references


Keywords: mesh adaptive direct search; pattern search.


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


Keywords: digital annealer, multi-objective, bi-objective QAP, QUBO.


Keywords: F-race.


Annotation: Unreviewed paper.


Keywords: Genetic Edge Recombination (ERX).

https://github.com/iridia-ulb/references

Keywords: crashed simulation; latent gaussian process; automotive fan design; industrial application; GP classification; Expected Feasible Improvement with Gaussian Process Classification with signs; EFI GPC sign.


Keywords: Iterated Race.


Keywords: SPOT.


Keywords: F-race.


Keywords: BC-EMOA.
Annotation: Errata: DTLZ6 and DTLZ7 in the paper are actually DTLZ7 and DTLZ8 in [780].


[244] Valerie Belton, Jürgen Branke, Petri Eskelinen, Salvatore Greco, Julián Molina, Francisco Ruiz, and Roman Slowinski. Interactive Multiobjective Optimization from a Learning Perspective. In Jürgen Branke, Kalyannoy Deb, Kaisa Miettinen, and Roman Slowinski,


https://github.com/iridia-ulb/references
*Keywords:* Combinatorial optimization, Machine learning, Branch and bound, Mixed-integer programming solvers.


*Keywords:* Safe Optimization, SafeOpt.


https://github.com/iridia-ulb/references


[325] Mauro Birattari, Prasanna Balaprakash, and Marco Dorigo. *The ACO/F-RACE algorithm for combinatorial optimization under uncertainty*. In K. F. Doerner, M. Gendreau,


Keywords: F-race, iterated F-race, irace, tuning.


Keywords: PaGMO.


Keywords: PaGMO.


Keywords: continuous optimization, landscape analysis, algorithm selection.


[https://github.com/iridia-ulb/references](https://github.com/iridia-ulb/references)


Keywords: AI for TSP competition, Travelling salesman problem, Routing problem, Stochastic combinatorial optimization, Surrogate-based optimization, Deep reinforcement learning.


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


Annotation: Proposed SVM.

https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


Annotation: Extended version published as [454].

Annotation: Extended version published as [455].


Keywords: competitive ratio.

Annotation: Proof that all nondecreasing \((\mu + \lambda)\) archiving algorithms with \(\lambda < \mu\) are ineffective.


Keywords: hypervolume subset selection.


Keywords: unbounded archive.


Keywords: objective reduction.


Keywords: objective reduction.


Keywords: hypervolume, preference-based search, multi objective optimization, evolutionary algorithm.


Keywords: multiple criteria decision making, evolutionary multiobjective optimization.


Keywords: Broyden-Fletcher-Goldfarb-Shanno (BFGS) algorithm.


Keywords: BFGS.

Annotation: One of the four papers that proposed BFGS.


https://github.com/iridia-ulb/references


Annotation: Published as [525].


https://github.com/iridia-ulb/references


Keywords: computer social choice, mallows model, sample complexity.


https://github.com/iridia-ulb/references


Keywords: Estimation of distribution algorithms, Generalized Mallows model, Permutation flowshop scheduling problem, Permutations-based optimization problems.


Keywords: F-race.


Keywords: Portfolio optimisation, CCMVPOP, Efficient frontier.

https://github.com/iridia-ulb/references


Annotation: two co-evolving populations (two archive).


Annotation: Example of deterioration in archiving.


*Keywords*: IGD+.


*Keywords*: irace.


https://github.com/iridia-ulb/references


Keywords: 2003 international timetabling competition, F-race.


Keywords: irace.

[603] François Chollet et al. Keras. https://keras.io, 2015.


https://github.com/iridia-ulb/references


Annotation: Proposed a reproducibility taxonomy, defined reproducibility and taxonomy.


Annotation: Introduces Inverted Generational Distance (IGD).


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references

*Annotation:* multiplicity; multiple endpoints; multiple treatments; p-value adjustment; type I error; argues that if results are intended to be interpreted marginally, there may be no need for controlling experimentwise error rate.


Keywords: Approximation algorithms, Borda’s method, feedback arc set problem, rank aggregation, tournaments.


https://github.com/iridia-ulb/references


*Annotation:* First mention of the term hyper-heuristic.


*Keywords:* reproducibility.


Annotation: Supervised by Patrick De Causmaecker.


Keywords: ranking.


https://github.com/iridia-ulb/references

Keywords: F-race.


https://github.com/iridia-ulb/references

[777] Kalyanmoy Deb, Lothar Thiele, Marco Laumanns, and Eckart Zitzler. Scalable Test Problems for Evolutionary Multi-Objective Optimization. Technical Report 112, Computer Engineering and Networks Laboratory (TIK), Swiss Federal Institute of Technology (ETH), Zürich, Switzerland, 2001. Keywords: DTLZ benchmark. Do not cite this TR! It is incorrect and it is superseded by [780].


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


Keywords: BOPS, CEGO.


Annotation: Supervised by Dr. Martine Labbé.


https://github.com/iridia-ulb/references


[824] https://github.com/iridia-ulb/references


*Keywords:* Evolutionary multi-objective optimization, Production planning, Robust optimization, Simulation-based optimization, Uncertainty modelling.


*Keywords:* Genetic algorithms, Combinatorial optimization, Production planning, Simulation-based optimization, Uncertainty modelling.


*Keywords:* Genetic algorithms, Combinatorial optimization, Production planning, Simulation-based optimization, Uncertainty modelling.


*Annotation:* Comments on [1874].


Keywords: Benchmarking; Heuristics.


Keywords: Performance profiles; convergence.

Annotation: This methodology has been criticized in https://doi.org/10.1145/2950048.

https://github.com/iridia-ulb/references


*Keywords:* swarm intelligence, ant colony optimization.

*Keywords:* ant colony optimization, swarm intelligence.


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references

Keywords: metaheuristics, evolutionary computation, software framework, automated algorithm design.


Keywords: Pareto local search.


Annotation: Evolutionary optimization of car bodies at General Motors.


https://github.com/iridia-ulb/references


*Keywords*: Adaptive Control, Constrained Bayesian Optimization, Safety, Gaussian Process, Particle Swarm Optimization, Policy Search, Reinforcement learning.

*Annotation*: 20th IFAC World Congress.


*Keywords*: Kemeny ranking, multi-word queries, rank aggregation, ranking functions, spam.


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


[992] Annotation: Extended version published as [1041].


https://github.com/iridia-ulb/references


*Annotation*: First to mention exponential number of nondominated solutions with respect to many objectives?


*Annotation*: Proposed GRASP.


*Keywords:* GRASP.


*Keywords:* irace.


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references Page 81


Annotation: Proposed F-AUC and F-SR.


Annotation: Example of NSGA-III deteriorating.


Annotation: unbounded archives.


https://github.com/iridia-ulb/references


Annotation: BFGS.

Keywords: BFGS.  
Annotation: One of the four papers that proposed BFGS.


Keywords: Mallows model, ranking, probabilistic models.


Annotation: Proposed symmetric mean absolute percentage error (SMAPE).


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references

Keywords: Swarm robotics; Automatic design; AutoMoDe.


Annotation: fully dynamic and online algorithm selection technique, with no separate training phase: all candidate algorithms are run in parallel, while a model incrementally learns their runtime distributions.


https://github.com/iridia-ulb/references


*Keywords: harmony search algorithm, traffic light scheduling.*


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


Keywords: BFGS.

Annotation: One of the four papers that proposed BFGS.


https://github.com/iridia-ulb/references


Keywords: Intuitionistic fuzzy preference relation, Utility function, Ranking, Multiplicative consistency, Non-archimedean infinitesimal.

Annotation: Special Issue on intelligent decision-making and consensus under uncertainty in inconsistent and dynamic environments.


Keywords: multiple criteria decision making, evolutionary multiobjective optimization.

https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


Keywords: hypervolume, empiricial attainment function.


Keywords: EAF.

Annotation: Proposed looking at anytime behavior as a multi-objective problem.


Keywords: Environmental engineering, Life cycle assessment, Multi-objective optimization, Objective reduction.


Annotation: The reproducibility guidelines can be found here: https://folk.idi.ntnu.no/odderik/reproducibility_guidelines.pdf and a short how-to can be found here: https://folk.idi.ntnu.no/odderik/reproducibility_guidelines_how_to.html.


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


*Keywords*: bipop-cma-es.

*Keywords*: CMA-ES.

*Keywords*: Evolution strategies, Evolutionary algorithms, self-adaptation, stochastic processes, Covariance matrix, matrix algebra, derandomised adaptation, mutation distribution, rotation invariance, electronic switching systems. 
*Annotation*: Proposed CMA-ES.


*Keywords*: benchmarking, black-box optimization.


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


Keywords: support vector machine;metric regression;support vector learning;ordinal regression;information retrieval;risk functional;machine learning;pattern classification;.
Annotation: Proposed the pairwise transform for learning-to-rank.


Keywords: archiving, multimodal.


Keywords: genetic algorithms, real coding, continuous search spaces, mutation, recombination.

https://github.com/iridia-ulb/references

[1386] Francisco Herrera, Manuel Lozano, and Daniel Molina. **Test suite for the special issue of Soft Computing on scalability of evolutionary algorithms and other metaheuristics for large scale continuous optimization problems.** [http://sci2s.ugr.es/eamhco/](http://sci2s.ugr.es/eamhco/), 2010. **Keywords:** SOCO benchmark.


https://github.com/iridia-ulb/references


Annotation: Proposed epsilon-box.


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


Keywords: irace.


https://github.com/iridia-ulb/references
Keywords: multi-objectivization.


Keywords: evolutionary algorithm, evolutionary dynamic multi-objective optimisation, dynamic environment, Multi-objective optimisation.


Keywords: Evolutionary computation,Expensive optimization problems,Machine learning,Meta-models,Model management,Surrogates.

https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references
*Keywords*: Bayesian design.


*Keywords*: EGO. 
*Annotation*: Proposed EGO algorithm.


*Keywords*: Metaheuristics; Simulation; Combinatorial optimization; Stochastic problems.


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


Keywords: TDEA.


Keywords: Meta-heuristics, Machine learning, Combinatorial optimization problems, State-of-the-art.


https://github.com/iridia-ulb/references


Keywords: scenario-based.


Keywords: scenario-based.


Keywords: Ant colony optimization, Ant system, Heuristics, Team orienteering problem.


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


**Keywords:** F-race.


**Keywords:** Deep RL, TSP, prize collecting, PCTSP, CVRP, routing, attention model.


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


Keywords: machine decision making.


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


Annotation: Proposed KUR benchmark.


Keywords: project management, research and development.


Keywords: irace.


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references

Keywords: archiving, ε-dominance, ε-approximation, ε-Pareto.
Annotation: Proposed ε-approx and ε-Pareto archivers.


https://github.com/iridia-ulb/references


Annotation: First example of modern algorithm selection for optimisation?

https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


Annotation: Proposed SDE indicator algorithm.


Annotation: Proposed PCI indicator.


Annotation: highly degenerate Pareto fronts.


https://github.com/iridia-ulb/references


Annotation: Evolutionary optimization of antennas for NASA.


Keywords: Ant colony optimization, Travelling salesman problem with time windows, Hybridization.


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references Page 148


https://github.com/iridia-ulb/references
*Keywords*: Combinatorics, heuristic based on priority rules, Multiproject scheduling, Operation Research/Decision Theory, Project management, project management software, Resource allocation, Theory of Computation.

*Keywords*: genetic algorithm, multi-mode resource-constrained project scheduling.


*Keywords*: SHAP, interpretable AI.


*Keywords*: Multiobjective combinatorial optimization, Hybrid metaheuristics, TSP, Local search, Speed-up techniques.


https://github.com/iridia-ulb/references


Annotation: Crowding archive.


Keywords: Global optimization, Heuristics, Harmony search algorithm, Mathematical programming.


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


Keywords: Algorithms, Software reliability, Certification.


Keywords: water supply; pumps; Markov processes; cost optimal control.


Keywords: experimental analysis of algorithms, move-to-front rule, self-organizing sequential search, statistical analysis of algorithms, transpose rule, variance reduction techniques.


https://github.com/iridia-ulb/references


Annotation: TR: http://hdl.handle.net/2003/26671.

Keywords: continuous optimization, landscape analysis, instance features.


Keywords: irace.


Keywords: Nevergrad, NGOpt.


Keywords: nevergrad, NGOpt.


https://github.com/iridia-ulb/references


Annotation: Proposed Bayesian optimization.


Annotation: Proposed Bayesian optimization (but later than [2124]).


Keywords: Vorob’ev expectation.

Annotation: Proposed g-NSGA-II.


https://github.com/iridia-ulb/references


Keywords: Ant colony optimization, Car-sequencing problem, Pheromone trail, Scheduling.

Keywords: Bayesian prediction.


Keywords: artificial DM, Interactive.
Annotation: The purpose of this study was to systematically evaluate a number of multiobjective programming concepts relative to reflection of utility, assurance of nondominated solutions and practicality for larger problems using conventional software. In the problem used, the nonlinear simulated DM utility function applied resulted in a nonextreme point solution. Very often, the preferred solution could end up being an extreme point solution, in which case the techniques relying upon LP concepts would work as well if not better than utilizing constrained objective attainments. The point is that there is no reason to expect linear or near linear utility.

https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


Keywords: jMetal, Multi-objective metaheuristics, Open source, Optimization framework.


Keywords: cognition, Turing, search, problem solving, symbols, heuristics, list processing, computer science, artificial intelligence, science, empirical.


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


Keywords: TPOT.


https://github.com/iridia-ulb/references


Keywords: multi-objective optimization; nearly optimal solutions; non-epsilon dominance; multimodality; decision space diversity; archiving strategy; evolutionary algorithm; non-linear parametric identification.


https://github.com/iridia-ulb/references


Keywords: Pareto local search, PLS.

https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


**Keywords:** Multiobjective evolutionary algorithms, Pollution, Simulation, Traffic flow.


**Annotation:** Supervised by Thomas Stützle and Manuel López-Ibáñez.


https://github.com/iridia-ulb/references
Keywords: reproducibility; software engineering; ReScience C; Ten Years Reproducibility Challenge; code reusability.


Annotation: Evolutionary optimization of turbine design of the Boeing 777 GE.


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


Keywords: Benchmarking, Two-variable non-parametric tests, Evolutionary algorithms, Dominance, Stochastic optimization, Numerical optimization, Mann-Whitney test.


Keywords: molecular discovery, resource constraints, expensive optimization, production costs.


Keywords: parameter importance.


Keywords: Kriging; Entropy; Design of experiments; Space-filling; Sphere packing; Maximin design; Minimax design.

https://github.com/iridia-ulb/references


Annotation: First to mention NSGA-II failure to deal with many-objectives. Mentions exponential number of nondominated solutions with respect to many objectives (but [999] already did).


Annotation: Best paper award at PPSN2018.

Keywords: algorithm configuration.


Annotation: Uses an external population.


Keywords: Evolutionary computations, Scheduling, Utility theory, Preventive maintenance, Multi-objective optimization, ranking-based, interactive.


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


Keywords: artificial DM, interactive.


Keywords: Ant colony Optimization, Capacitated minimum spanning tree problem.


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


Keywords: Quantifying Homogeneity; Empirical Analysis; Parameter Optimization; Algorithm Configuration.


Annotation: Proposed Safe Active Learning (SAL) algorithm.


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


Keywords: BFGS.
Annotation: One of the four papers that proposed BFGS.


Annotation: For some reason, this was not actually published in the LNCS Proceedings of EA.


Keywords: Benchmarking; Evolving instances; Graph colouring; Instance space; Test instances.


*Keywords:* test instance diversity, benchmarking, timetabling, Algorithm footprints, MATLAB, software as a service, meta-heuristics, algorithm selection, meta-learning.


*Keywords:* Algorithm selection; Instance Space Analysis; Graph coloring; Heuristics; Performance prediction.


*Keywords:* 0-1 Knapsack problem; Algorithm portfolio; Algorithm selection; Instance difficulty; Instance generation; Instance Space Analysis; Performance evaluation.


*Keywords:* ACOR.

*Annotation:* Proposed ACOR (ACO$_h$).


https://github.com/iridia-ulb/references


Keywords: active schedules, Branch-and-bound methods, non-delay schedules, Resource-constrained project scheduling, Semi-active schedules.

Keywords: branch-and-bound, multi-mode resource-constrained project scheduling, project scheduling.


Keywords: irace.

https://github.com/iridia-ulb/references


*Keywords*: Evolutionary algorithm, Road traffic, Smart city, Smart mobility, Traffic light, WiFi connections.

*Keywords*: Evolutionary algorithm, SUMO, Smart city, Smart mobility, Traffic simulation.

*Annotation*: Proposed differential evolution.


*Keywords*: vowels, accent features, dialect leveling, Random forest (bagging), Feature selection.


**Keywords:** automatic design, automatic configuration.


*Keywords*: CEC'05 benchmark.

*Annotation*: Also known as KanGAL Report Number 2005005 (Kanpur Genetic Algorithms Laboratory, IIT Kanpur).

https://github.com/iridia-ulb/references
Keywords: Safe Optimization, SafeOpt.

Keywords: Safe Optimization, StageOpt, Published as [2782].

Keywords: StageOpt.


Keywords: LS-SVM.


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references

*Annotation:* Available from [https://the-turing-way.netlify.app](https://the-turing-way.netlify.app). This work was supported by The UKRI Strategic Priorities Fund under the EPSRC Grant EP/T001569/1, particularly the "Tools, Practices and Systems" theme within that grant, and by The Alan Turing Institute under the EPSRC grant EP/N510129/1.


*Annotation:* IGD-based archiver.


**Keywords:** algorithm portfolio, corpus features, topic modelling.


https://github.com/iridia-ulb/references


Annotation: Two archive; two populations; decision space diversity.


Simon Urbanek. ** multicore: Parallel Processing of R Code on Machines with Multiple Cores or CPUs, 2010.** [http://www.rforge.net/multicore/]. R package version 0.1-3.


https://github.com/iridia-ulb/references


*Keywords*: hyperparameter optimization, meta-learning, hyperparameter importance.

[2914] Sander van Rijn. Modular CMA-ES framework from [2915], v0.3.0. [https://github.com/sjvrijn/ModEA](https://github.com/sjvrijn/ModEA), 2018. Available also as pypi package at [https://pypi.org/project/ModEA/0.3.0/](https://pypi.org/project/ModEA/0.3.0/).


*Keywords*: automated design, automatic configuration, CMA-ES, Gaussian distribution.


*Keywords*: generational distance.


[https://github.com/iridia-ulb/references](https://github.com/iridia-ulb/references)


https://github.com/iridia-ulb/references


*Annotation*: Supervised by Dr. Martine Labbé and Dr. Lorenzo Castelli.


*Keywords*: Markov Decision Process, Gaussian Processes.

https://github.com/iridia-ulb/references


Keywords: graph theory; search problems; local search; minimum vertex cover solver; network classes; straightforward alternative approach; benchmark sets; graphs; algorithm portfolio; single integrated approach; Training; Portfolios; Algorithm design and analysis; Prediction algorithms; Machine learning algorithms; Optimization; Benchmark testing; smac; paramils.


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


https://github.com/iridia-ulb/references


Annotation: Showed that fraction of Pareto-optimal increases with number of objectives.


Keywords: anytime.

https://github.com/iridia-ulb/references


*Keywords*: automated algorithm design; portfolio-based algorithm selection; automated algorithm configuration; SAT; stochastic local search.


*Keywords*: HARKing; PARKing.


*Keywords*: Bayesian Optimisation with preferences.


*Annotation*: epsilon-grid.


*Keywords*: Evolutionary programming (Computer science); Neural networks (Computer science); Evolutionary computation.


[https://github.com/iridia-ulb/references](https://github.com/iridia-ulb/references)

Keywords: irace.


https://github.com/iridia-ulb/references


Keywords: CEGO, Bayesian optimization.


Keywords: CEGO, Bayesian optimization.

Annotation: Proposed CEGO algorithm.


https://github.com/iridia-ulb/references

Annotation: Introduces penalty-based boundary intersection (PBI) function.


Annotation: Proposed UF benchmark.


Keywords: model selection, multi-objective optimization, racing algorithm, sequential probability ratio test.

Annotation: Extended version published as [3087].


Keywords: multi-modal, IGDX.


Keywords: performance profiles.


https://github.com/iridia-ulb/references
Heiner Zille, Hisao Ishibuchi, Sanaz Mostaghim, and Yusuke Nojima. Mutation operators based on variable grouping for multi-objective large-scale optimization. In Xuewen Chen and Andreas Stafylopatis, editors, Computational Intelligence (SSCI), 2016 IEEE Symposium Series on, pages 1–8, 2016. doi:10.1109/SSCI.2016.7850214.

Annotation: linked polynomial mutation.


Annotation: Proposed hypervolume measure.


Keywords: ZDT benchmark.


Annotation: Published as [3102].


Annotation: Proposed SPEA2.


Annotation: Proposed the combination of quality indicators; proposed epsilon-indicator.

https://github.com/iridia-ulb/references


Keywords: Performance assessment; Preference articulation; refinement; Set Partitioning; Set-preference.

Annotation: Proposed SPAM and explores combination of quality indicators.


Keywords: Machine Decision Maker.