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Contact us

Source code:
https://github.com/IOHprofiler

Web-based version:
http://iohprofiler.liacs.nl

Email:
iohprofiler@liacs.leidenuniv.nl

Documentation:
https://arxiv.org/abs/1810.05281

IOHprofiler

Leiden University
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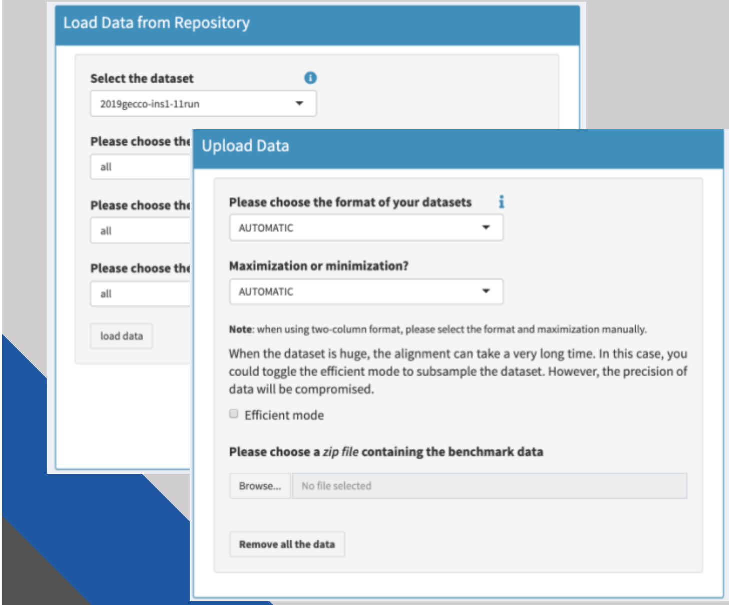
IOHprofiler is a novel tool for analyzing and comparing iterative optimization heuristics (IOHs), such as genetic algorithms, evolution strategies, local search algorithms, estimation of distribution algorithms, swarm optimization algorithms, etc. by providing detailed performance statistics.

IOHprofiler also allows to track the evolution of internal states of IOHs, e.g., current solution, function value, and algorithm parameters, making it particularly useful for the analysis, comparison, and design of optimization algorithms. This tool is implemented as two software packages: **IOHexperimenter** and **IOHanalyzer**.



Load Data from Repository

Select the dataset: 2019gecco-ins1-11run

Please choose the: all

Please choose the: all

Please choose the: all

Upload Data

Please choose the format of your datasets: AUTOMATIC

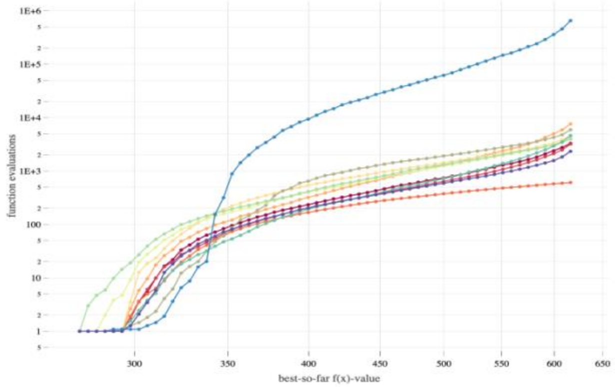
Maximization or minimization?: AUTOMATIC

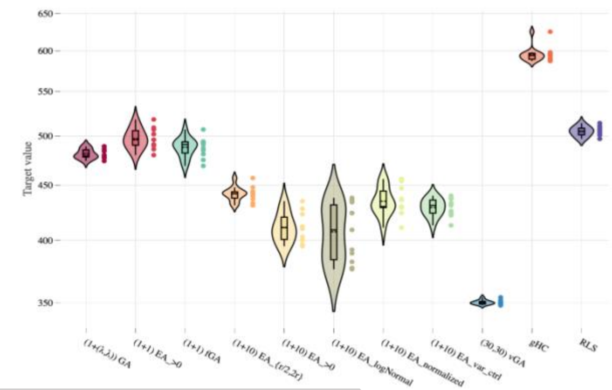
Note: when using two-column format, please select the format and maximization manually.

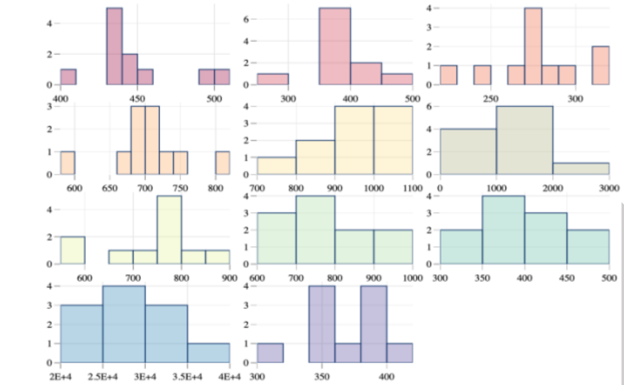
When the dataset is huge, the alignment can take a very long time. In this case, you could toggle the efficient mode to subsample the dataset. However, the precision of data will be compromised.

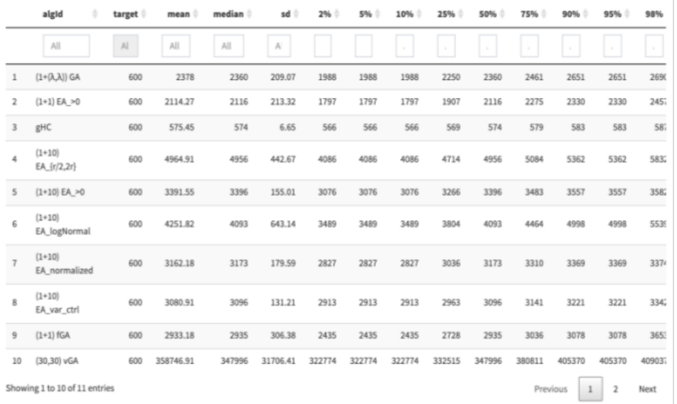
□ Efficient mode

Please choose a *zip file* containing the benchmark data









	algId	target	mean	median	sd	2%	5%	10%	25%	50%	75%	90%	95%	98%
	All	Al	All	All	A									
1	(1+(λ,λ)) GA	600	2378	2360	209.07	1988	1988	1988	2250	2360	2461	2651	2651	269
2	(1+1) EA_>0	600	2114.27	2116	213.32	1797	1797	1797	1907	2116	2275	2330	2330	245
3	gHC	600	575.45	574	6.65	566	566	566	569	574	579	583	583	58
4	(1+10) EA_{r/2,2r}	600	4964.91	4956	442.67	4086	4086	4086	4714	4956	5084	5362	5362	583
5	(1+10) EA_>0	600	3391.55	3396	155.01	3076	3076	3076	3266	3396	3483	3557	3557	358
6	(1+10) EA_logNormal	600	4251.82	4093	643.14	3489	3489	3489	3804	4093	4464	4998	4998	553
7	(1+10) EA_normalized	600	3162.18	3173	179.59	2827	2827	2827	3036	3173	3310	3369	3369	337
8	(1+10) EA_var_ctrl	600	3080.91	3096	131.21	2913	2913	2913	2963	3096	3141	3221	3221	334
9	(1+1) fGA	600	2933.18	2935	306.38	2435	2435	2435	2728	2935	3036	3078	3078	365
10	(30,30) vGA	600	358746.91	347996	31706.41	322774	322774	322774	332515	347996	380811	405370	405370	40903

Showing 1 to 10 of 11 entries

IOHanalyzer is the data analysis and visualization module. A web-based version is hosted at http://iohprofiler.liacs.nl. It takes the data set generated by IOHexperimenter or COCO[1] and generates statistics for fixed-target running time / fixed-budget function value (mean, quantiles, etc.). ECDF curves are also available. More statistical procedures will be added.

IOHexperimenter provides an extensible experiment environment for generating performance data that can be interpreted by **IOHanalyzer**. It allows for testing your own algorithm on your own benchmark problems, or comparing to available data from the repository. A data repository is maintained at https://github.com/IOHprofiler/IOHdata, currently containing results from 11 algorithms on 23 functions and 4 dimensions.

[1] https://github.com/numbbo/coco