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Exploratory analysis of stochastic local search algorithms in biobjective optimization. (English) [\[Zbl 1208.90154\]](#)

Bartz-Beielstein, Thomas (ed.) et al., Experimental methods for the analysis of optimization algorithms. With forewords by Catherine C. McGeoch and Hans Paul Schwefel. Berlin: Springer (ISBN 978-3-642-02537-2/hbk; 978-3-642-02538-9/ebook). 209-222 (2010).

Summary: This chapter introduces two Perl programs that implement graphical tools for exploring the performance of stochastic local search algorithms for biobjective optimization problems. These tools are based on the concept of the empirical attainment function (EAF), which describes the probabilistic distribution of the outcomes obtained by a stochastic algorithm in the objective space. In particular, we consider the visualization of attainment surfaces and differences between the first-order EAFs of the outcomes of two algorithms. This visualization allows us to identify certain algorithmic behaviors in a graphical way. We explain the use of these visualization tools and illustrate them with examples arising from practice.

For the entire collection see [\[Zbl 1203.68003\]](#).

MSC:

90C29 Multi-objective and goal programming
68P10 Searching and sorting

Cited in **6** Documents

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