

# Experimental Reports for *Sparkle*

*Sparkle*

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## 1 Introduction

*Sparkle* [2] is a multi-agent problem-solving platform based on Programming by Optimisation (PbO) [1], and would provide a number of effective algorithm optimisation techniques (such as automated algorithm configuration, portfolio-based algorithm selection, etc.) to accelerate the existing solvers.

This experimental report is automatically generated by *Sparkle*. This report presents experimental results of *Sparkle* parallel portfolio containing 5 solver(s).

## 2 Experimental Preliminaries

This section presents the experimental preliminaries, including the list of solvers in the portfolio(s), the list of instance sets and information about the experimental setup.

### 2.1 Solvers

There are 5 solver(s) included in *Sparkle*, as listed below.

1. **PbO-CCSAT-Generic-variation-0**
2. **PbO-CCSAT-Generic-variation-1**
3. **PbO-CCSAT-Generic-variation-2**
4. **PbO-CCSAT-Generic-variation-3**
5. **PbO-CCSAT-Generic-variation-4**

### 2.2 Instance Set(s)

There are 1 instance set(s) included in *Sparkle*, as listed below.

1. **PTN**, number of instances: 1

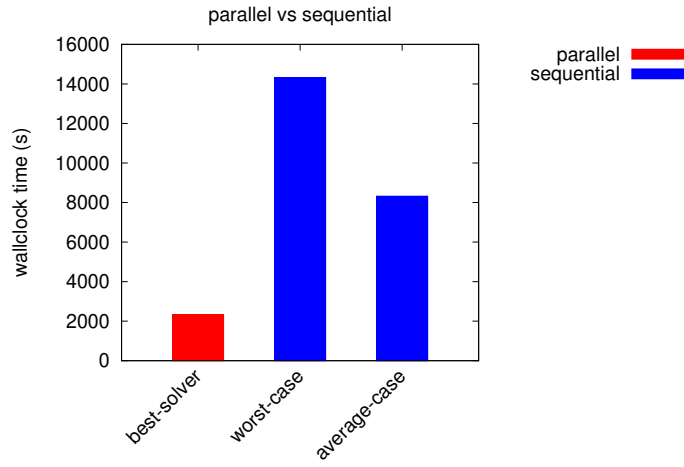
### 2.3 Experimental Setup

The experimental setup is described below.

**Performance computation:** *Sparkle* runs the portfolio one time on each instance. The cutoff time for the computation run is set to 3000 seconds. The outcome of the computation is listed below.

1. **Ptn-7824-b03.cnf**, was solved by: **PbO-CCSAT-Generic-variation-3** in 2322.36 seconds

## 2.4 Comparison between parallel and sequential



## References

- [1] Holger H. Hoos. Programming by optimization. *Communications of the ACM*, 55(2):70–80, 2012.
- [2] Holger H. Hoos. Sparkle: A pbo-based multi-agent problem-solving platform. Technical report, Department of Computer Science, University of British Columbia, 2015.