Parameter tuning of the SILS algorithm

Given the stochastic nature of metaheuristic algorithms, we first calibrated the parameters of the SILS algorithm. This algorithm has two parameters to be tuned: $iterMax$ and $attemptMax$. To determine the best values for these parameters, we used the Irace tool (**?**). The Irace package receives a set of representative problem instances and values for the algorithm's parameters as input. It then returns the best values found from those provided.

For the calibration experiments, three representative instances of the dataset were selected: instances 1, 3, and 10. The values given to Irace and the corresponding results returned by the tool are presented in Table 1.

Table 1.: Description of the parameters, its values given to Irace, and the values returned by it.

Parameter	Description	Set of Values	Values Returned
$iterMax$	Maximum number of iterations without improvement in SILS	{100, 200, 300}	300
$attemptMax$	Maximum number of attempts at the same SILS level	{5, 15, 30}	30

Thus, the SILS input parameters were set to the following values: i) $iterMax = 300$; and ii) $attemptsMax = 30$.