Selection Hyper-heuristics: A hands-on approach using Matlab and the MatHH framework

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Hyper-heuristics are a fairly recent approach at solving complex optimization problems. They have been mostly used for tackling Combinatorial Optimization Problems (COPs), such as knapsack, bin packing, and scheduling problems, among others. In this tutorial, we will discuss some generalities about hyper-heuristics and we will focus our attention on those of a selective nature. Moreover, we shall discuss how to create sequence-based and rule-based selection hyper-heuristics for a couple COPs, and in a step by step fashion. Finally, we will use the MatHH framework to deploy some of these hyper-heuristics and analyze some of the tools that MatHH provides.

Feel free to bring your laptop so that you can follow the examples.