

Abstract

The Google Hash Code programming competition is an yearly ~~held~~ event that challenges teams to solve complex engineering problems within a limited time frame using any necessary tools. These problems, which are inspired by real-world issues and can be approached from both practical and theoretical perspectives, are of particular interest to this work. In the context of this thesis, we ~~hope~~ intend to solve some of these problems in a principled manner, with a particular focus on the modelling aspect and the clear separation between the concept of models and solvers. Additionally, there is interest in exploring the impact of this strategy on the development of general-purpose meta-heuristic solvers that can tackle these problems in a black-box fashion, making them more accessible for practitioners, researchers and developers.

Keywords

Meta-Heuristics • Modelling • Local Search • Constructive Search • Combinatorial Optimization • Intelligent Systems • Software Engineering