

# Easy Modeling of Open Pit Mining Problems via Constraint Programming

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The open pit mining problem aims at correctly identifying the set of blocks of a given mine to be extracted in order to maximize the net present value of the production. During the last years, different techniques have been proposed to solve mining problems, which range from the classic mathematical programming to more recent ones such as the metaheuristics. In this paper we illustrate how this problem can easily be solved by a relatively modern and declarative programming paradigm called constraint programming. © Springer International Publishing Switzerland 2014.

Constraint Programming

Manufacturing Cell Design

Metaheuristics

Constraint theory

Heuristic algorithms

Mathematical programming

Open pit mining

Constraint programming

Declarative Programming

Meta heuristics

Mining problems

Net present value

Computer programming