



Robust Mine Scheduling with Parametric Regret Minimisation: Method and Example

ABSTRACT

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Decision making under uncertainty in mine design and production scheduling is a common critical issue for mining ventures. Minimising the so-called parametric regret is an approach examined here to support decision making. Parametric regret is defined as the performance gap between the “obtained solution” and the “optimal solution” and can be used to formulate a minimal parametric regret mine production schedule. This framework is computationally intensive, even if uncertainty is defined through a finite number of representations (orebody models); however, it is attractive as it leads to a schedule which has a robust maximum NPV in the presence of grade uncertainty. The computational complexity as well as key aspects of this framework is discussed in this paper through an example using data from a copper deposit.