Some Comments on Discrete Sequential Search with Group Activities

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Abstract

We comment on a paper by Wagner and Davis (Decision Sciences, 2001), who present an IP-model for a singleitem discrete sequential search problem with so-called 'group activities'. They conjecture that the problem can be solved as a linear program. We provide a counterexample for this conjecture, we show that the problem is strongly NP-hard both for 'conjunctive' as well as for 'disjunctive' group activities, and we discuss some special cases that can be solved in polynomial time.

Keywords

Discrete sequential search, group activities, NP-hard, single-machine scheduling, bipartite precedence graph

Biography

Kris Coolen received his Master degree in Mathematics in 2007. Currently, he is working as a doctoral researcher for the research group Operations Research and Business Statistics of the Faculty of Economics and Business at the University of Leuven (KU Leuven). His current research topics are scheduling under uncertainty and sequential testing problems.

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