

On the Coupled Task Problem

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Abstract: The coupled task problem is to schedule jobs on a single machine where each job consists of two subtasks and where the second subtask has to be started after a given time gap with respect to the first one. The problem has several applications and is in general NP-hard. In this talk we give a survey on the current state of research. We discuss complexity issues of variants and point to open questions concerning approximative algorithms. Furthermore we compare possibilities of solving coupled tasks problems to optimality. In particular, we present three linear integer models and a branch-and-bound algorithm and present computational results.

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