THE INVERSE PROBLEM OF THE TOTAL WEIGHTED COMPLETION TIME PROBLEM WITH UNIT PROCESSING TIME ON IDENTICAL PARALLEL MACHINES

Pham Hong Truong, Lu Xi Wen

TÓM TẮT:

In inverse scheduling problems, a job sequence is given and the objective isto determine the minimal perturbation to processing times on weights of jobs so that thegiven sequence becomes optimal with respect to a pre-selected objective function. In thispaper we study the inverse problem of the total weighted completion time problem withunit processing time on identical parallel machines. The weights are minimally adjusted so that a given target job sequence becomes an optimal schedule for dierent norms under theconstraints that the resulting objective value based on the adjusted weights is no larger than the original objective value.