

Solving acyclic days off scheduling problems with a given workforce size

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March 17, 2006

Abstract

This paper studies the days off allocation problem when the demand for staffing fluctuates from day to another and when the number of worked days is fixed in advance for each employee. The scheduling problem is then to allocate rests to employees with different days off policies: (1) two or three consecutive days off for each employee per week and (2) at least three consecutive days off for each employee per month. For each one, we propose a polynomial time algorithm to construct a solution if it exists.

Workforce Scheduling, Discrete Tomography, Maximum Flow, Polynomial Time Algorithm.

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