



A Rule-Based Local Search Algorithm for General Shift Design Problems in Airport Ground Handling

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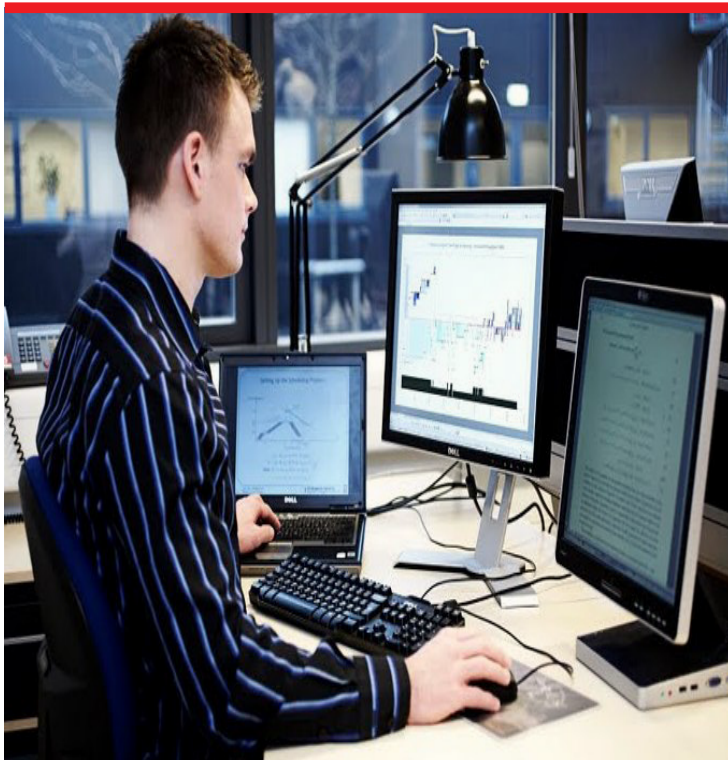
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A Rule-Based Local Search Algorithm for General Shift Design Problems in Airport Ground Handling



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DTU Management Engineering

Tommy Clausen
August 2010

We consider a generalized version of the shift design problem where shifts are created to cover a multiskilled demand and fit the parameters of the workforce. We present a collection of constraints and objectives for the generalized shift design problem. A local search solution framework with multiple neighborhoods and a loosely coupled rule engine based on simulated annealing is presented. Computational experiments on real-life data from various airport ground handling organization show the performance and flexibility of the proposed algorithm.

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