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

Clausen, Tommy

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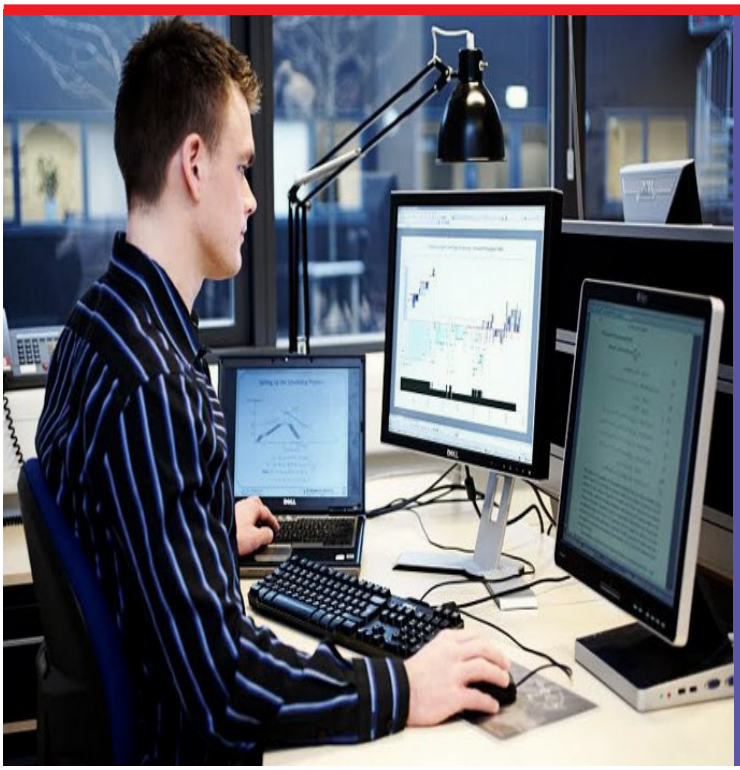

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Tommy Clausen
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We consider a generalized version of the shift design problem where shifts are created to cover a multiskilled demand and fit the parameters of the workforce. We present a collection 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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DTU Management Engineering
Department of Management Engineering
Technical University of Denmark

Produktionstorvet
Building 424
DK-2800 Kongens Lyngby
Denmark
Tel. +45 45 25 48 00
Fax +45 45 93 34 35

www.man.dtu.dk