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WORKING PAPER

A Genetic Algorithm for the Nurse Rerostering Problem

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May 2009

2009/590

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D/2009/7012/42

ABSTRACT

Due to the importance of reactive scheduling in personnel rostering, we propose an optimization tool for the nurse re-rostering problem. The scheduler must reassign other employees to cover the shift, while continuing to meet current demand and staffing requirements and time-related constraints guaranteeing the roster quality of the single personnel members. In our computational results, we show that the proposed procedure performs consistently well under many different circumstances. We test different optimization strategies and compare our procedure with the existing literature on a new benchmark dataset.

Keywords: *Manpower planning; Resource allocation; Hospitals*