

An implementation of duty and workstation rostering considering preferences and fairness at a department of anesthesiology

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This research addresses an implementation of a personnel scheduling problem at a large German hospital. We present two mixed integer linear programming models – a duty-roster and a workstation-roster model. The duty-roster model determines the assignment of physicians to 24h- and late-duties whereas the workstations-roster model assigns physicians to actual workstations as operating rooms. The former serves as an input for the latter. In both models we maximize the number of assignments subject to labor regulations and internal department specific scheduling rules. Furthermore, we consider experience levels and qualifications in our models. To promote for job satisfaction we take into account fairness aspects as well as individual physician preferences. We present the current status of the implementation and an evaluation of our approach for an exemplary month.