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## WORKING PAPER

# Days on and days off scheduling of pilots under a variable workload

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## **Abstract**

Personnel costs typically are the second largest costs for airline operations after fuel costs. Since efficient crew employment can drastically reduce operational costs of airline companies, the crew scheduling problem in the airline industry has been extensively investigated in the operations research literature. This problem typically consists of assigning duties to crew members securing the safety of all flights minimizing the corresponding overall cost for personnel. Due to the typical size and complexity of the crew rostering problem, airline companies want to adopt scheduling policies that roster crew members according to fixed days on and days off patterns. However, as the distribution of work duties over the planning horizon is typically highly variable in airline operations, the scheduling according to these fixed work patterns is seriously hindered. In this chapter, we give an overview of different measures that help to schedule airline crew under a variable workload using fixed days on and days off patterns.