You have to get wet to learn how to swim applied to bridging the gap between the research into personnel scheduling and its implementation in practice

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Abstract Personnel scheduling problems have attracted research interests for several decades, since 1950s. They have been considerably changed since then, accommodating a variety of constraints related to legal and organisation requirements, part-time staff, flexible hours of staff, staff preferences, etc. This led to a myriad of approaches developed for solving personnel scheduling problems including optimisation, meta-heuristics, artificial intelligence, decision-support, and also hybrids of these approaches.

However, this still does not imply that this research has a large impact on practice and that state-of-the art models and algorithms are widely in use in organisations. One can find a reasonably large number of software packages that aim to assist in personnel scheduling. A classification of this software based on its purpose will be given accompanied with a discussion about the level of support that this software offers to schedulers.

Generally, the available software does not benefit from the wealth of developed models and algorithms, with some exceptions. The presentation will be followed by insights into some characteristics of real-world scheduling problems, which, in the authors opinion, have not been given a due attention in the personnel scheduling research community. In order to bridge the gap that still exists between the research into personnel scheduling and practice, we need to engage more with schedulers in practice; one may say we need to get wet if we want to learn how to swim.

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