

“The Periodic Event Scheduling Problem”

The task is to give an overview of the Periodic Event Scheduling Problem (PESP), which aims to schedule a number of events (e.g. the arrival and departures of trains in stations) within a cyclic framework and methods to solve it. First, the advantages and shortcomings of periodic timetables should be highlighted. Next, the basic concept and possibilities to use the PESP in a railway context should be presented in detail. Furthermore, ways to extend the PESP to overcome the shortcomings of periodic timetables and to improve timetable robustness should be explained. Finally, a periodic timetable should be designed in a realistic example, using the methods described previously.