

ABSTRACT IFORS 2011

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Knock, knock, knock-on on railway networks

In our study about robust railway timetables, knock-on delays or delay propagation are of high importance. Interdependencies among trains and their paths cause delays, however small, to propagate in space and time. Identifying possible conflicts and accounting for the applied dispatching strategy, knock-on delays can be modeled. We created a delay propagation model for one of Europe's major railway bottlenecks, the Brussels' area. This model enables us to improve the robustness of a timetable by avoiding knock-on delays as much as possible. We validated our results using real-time data.

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