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A Column Generation Approach for Solving the Examination-Timetabling Problem

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Highlights

- We present a student-centric ETP with improve exam spread by dynamically allowing more versions of exams.
- We propose two column generation algorithms to solve exam-timetabling problems.
- Both models include dynamic spreading of exams by using spreading costs.
- Second model has post-processing: either by heuristic or integer program(IP).
- Model 2 performs marginally better than Model 1, but is less scalable.
- Student spreading costs for existing data sets were improved at the cost of more exam versions.

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