

Title: A heuristic room matching algorithm in generating enhanced initial seed for the university course timetabling problem

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Abstract: The University Course Timetabling Problem (UCTP) such as the curriculum-based course timetabling problem is both an NP-hard and NP-complete scheduling problem. The nature of the problem concerns with the assignment of lecturers-courses to available teaching space in an academic institution. The Curriculum-Based University Course Timetabling Problem (CB-UCTP) has a high conflict-density and searching for an improved solution is not trivial. In this study, the authors propose a heuristic room matching algorithm which improves the seed of the CB-UCTP. The objective is to provide a reasonable search point to carry out any improvement phase and the results obtained indicate that the matching algorithm is able to provide very promising results as the fitness score of the solution is significantly enhanced in a very short period of time.