

Mathematical model and simulated
annealing algorithm for Chinese high
school timetabling problems under the
new curriculum innovation

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Problems & Ideas

- Chinese High School Timetabling Problems under the New Curriculum Innovation
 - Introduction of the optional subjects
 - Problem modelling
 - Representation design for solutions
 - Algorithm design
- Ideas: New constraints & Two-part representation & Two-phase SA
 - New constraints for teachers
 - One part for the compulsory timetable, another for the optional timetable
 - The first phase aims at finding feasible timetable while the second it to find optimal timetable

Main Contributions

- **New model of the CHSTPs**
- **A two-part representation for timetables in CHSTPs was designed**
- **A two-phase SA was adopted**
- **Models, representation, and adopted algorithm were examined on both synthetic datasets and real-world timetabling problems**