Autonomous Search: Towards the Easy Tuning of Constraint Programming Solvers

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Constraint programming (CP) allows users to solve combinatorial problems by simply launching the corresponding model in a search engine. However, achieving good results may clearly depend on the correct search engine configuration, which demands advanced knowledge from the modeler. Recently, Autonomous Search (AS) appeared as a new technique that enables a given search engine to control and adapt its own configuration based on self-tuning. The goal is to be more efficient without the knowledge of an expert user. In this paper, we illustrate how the integration of AS into CP is carried out, reducing as a consequence the user involvement in solver tuning.

Autonomous Search

Constraint Programming

Constraint Satisfaction

Constraint theory

Search engines

Autonomous searches

Combinatorial problem

Constraint programming

Constraint Satisfaction

Engine configuration

Expert users

Selftuning

User involvement

Computer programming