

# Schema for constraint relaxation with instantiations for partial constraints partial constraint satisfaction and schedule optimization

National Library of Canada - Iterative flattening search for resource constrained scheduling, Journal of Intelligent Manufacturing

**What is a Constraint Satisfaction Problem?**

- A constraint satisfaction problem (CSP) is defined by:
  - A set of variables  $X_1, \dots, X_n$
  - Each variable  $X_i$  has a domain  $D_i$  with its possible values
  - A set of constraints  $C_1, \dots, C_m$
  - Each constraint involves a subset of the variables it specifies the allowed combinations of values for this subset
  - A k-ary constraint  $C$  on a set of variables  $X_1, \dots, X_k$  is a subset of the Cartesian product  $D_1 \times \dots \times D_k$
  - The set of variables in a constraint is called the **constraint scope**
- Binary and non-binary (or n-ary) constraint satisfaction problems

KNOWLEDGE REPRESENTATION & REASONING

Description: -

-schema for constraint relaxation with instantiations for partial constraints partial constraint satisfaction and schedule optimization

- Canadian theses = -- Thèses canadiennes schema for constraint relaxation with instantiations for partial constraints partial constraint satisfaction and schedule optimization

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## Constraint satisfaction problems: Algorithms and applications

Eur J Op Res 130: 202—213. Optimal Instruction Scheduling Using Constraint Logic Programming.

## Five pitfalls of empirical scheduling research

Parkes, Takayuki Ito, Nicholas R.

## A brief overview of over

We claim that a key to relaxation is recognition that a constraint can be modified in a variety of ways and that each modification potentially carries a different impact for both the quality of the solution and the problem solving process. Zheng, Mikhail Bilenko This paper presents a simple, general technique for improving the efficiency of hyper-parameter tuning by minimizing the number of resampled evaluations at each configuration. Abstract We investigate constraint relaxation within a general constraint model.

## A Constraint Satisfaction Approach to a Circuit Design Problem, Journal of Global Optimization

Kolaitis Motivated by considerations in quantum mechanics, we introduce the class of robust constraint satisfaction problems in which the question is whether every partial assignment of a certain length can be extended to a solution, provided the partial assignment does not violate any of the constraints of the given instance.

## Related Books

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