Solving sudokus via metaheuristics and AC3

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The Sudoku puzzle consists in filling a square matrix with 9 rows and 9 columns, divided into 9 3×3 regions, so that each column, row, and region contains different digits from 1 to 9. Such a puzzle belongs to the NP-complete class of problems, existing different exact and approximate methods able to solve it. This paper reports recent results for solving Sudokus achieved by combining metaheuristics and a filtering technique coming from the constraint programming domain named AC3.

Arc-consistency

Constraint Satisfaction

Sudoku

Computer programming

Constraint theory

Approximate methods

Arc consistency

Constraint programming

Constraint Satisfaction

Filtering technique

Meta heuristics

Square matrices

Sudoku

Heuristic algorithms