# CP Papers on Scheduling

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January 31, 2024

# 1 Introduction

# 2 Paper List

Table 1 lists relevant papers on CP and Scheduling from the CP and CPAIOR conferences. It gives the author names and title of the paper, the reference to the published paper, the year and conference or journal where the paper was published. It also lists the CP systems that were used in the paper, and states if data and/or code of the paper is available online. A link to the stored location is given where it is known.

Table 1: List of Papers

| Authors | Title | Cite | Year | Conf Journal | Pages | CP System | Data Avail | Code Avail | Based On | Classification | Constraints |
|---|---|---|---|---|---|---|---|---|---|---|---|
| C. Juvin, E. Hebrard, L. Houssin, P. Lopez | An Efficient Constraint Programming Approach to Preemptive Job Shop Scheduling | [13] | 2023 | CP | 16 | CP Opt Mistral | (y) | | | preemptive Job Shop | endBeforeStart span noOverlap |
| G. Povéda, N. Álvarez, C. Artigues | Partially Preemptive Multi Skill/Mode Resource-Constrained Project Scheduling with Generalized Precedence Relations and Calendars | [22] | 2023 | CP | 21 | | y | y | | PP-MS-MMRCPSP/max-cal | |
| Y. Aalian, G. Pesant, M. Gamache | Optimization of Short-Term Underground Mine Planning Using Constraint Programming | [1] | 2023 | CP | 16 | CP Opt | n | n | | | |
| R. Kameugne, S. Fetgo, T. Noulamo, C. Djamégni | Horizontally Elastic Edge Finder Rule for Cumulative Constraint Based on Slack and Density | [15] | 2023 | CP | 17 | | | | | RCPSPs | |
| N. Efthymiou, N. Yorke-Smith | Predicting the Optimal Period for Cyclic Hoist Scheduling Problems | [7] | 2023 | CPAIOR | | | | | | | |
| S. Squillaci, C. Pralet, S. Roussel | Scheduling Complex Observation Requests for a Constellation of Satellites: Large Neighborhood Search Approaches | [23] | 2023 | CPAIOR | | | | | | | |
| D. Kim, Y. Choi, K. Moon, M. Lee, K. Lee, M. Pinedo | Iterated Greedy Constraint Programming for Scheduling Steelmaking Continuous Casting | [16] | 2023 | CPAIOR | | | | | | | |
| C. Juvin, L. Houssin, P. Lopez | Constraint Programming for the Robust Two-Machine Flow-Shop Scheduling Problem with Budgeted Uncertainty | [14] | 2023 | CPAIOR | | | | | | | |
| F.Tardivo, A. Dovier, A. Formisano, L. Michel, E.Pontelli | Constraint Propagation on GPU: A Case Study for the Cumulative Constraint | [24] | 2023 | CPAIOR | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| R. Boudreault, V. Simard, D. Lafond, C. Quimper | A Constraint Programming Approach to Ship Refit Project Scheduling | [6] | 2022 | CP | 16 | MiniZinc Chuffed | | y | - | RCPSP | cumulative |
| L. Popovic, A. Côté, M. Gaha, F. Nguewouo, Q. Cappart | Scheduling the Equipment Maintenance of an Electric Power Transmission Network Using Constraint Programming | [21] | 2022 | CP | 15 | CP Opt | n | n | - | TMS | alwaysIn noOverlap |
| F. Winter, S. Meiswinkel, N. Musliu, D. Walkiewicz | Modeling and Solving Parallel Machine Scheduling with Contamination Constraints in the Agricultural Industry | [25] | 2022 | CP | 18 | Cplex Gurobi CP Opt Sim Anneal | y | y | - | PMSP | alternative noOverlap |
| E. Armstrong, M. Garraffa, B. O'Sullivan, H. Simonis | A Two-Phase Hybrid Approach for the Hybrid Flexible Flowshop with Transportation Times | [4] | 2022 | CPAIOR | 13 | CP Opt | (y) | - | [3] | $HFFm|tt|C_{\max}$ | endBeforeStart alternative cumulative noOverlap |
| M. Geitz, C. Grozea, W. Steigerwald, R. Stöhr, A. Wolf | Solving the Extended Job Shop Scheduling Problem with AGVs - Classical and Quantum Approaches | [9] | 2022 | CPAIOR | | | | | | | |
| Y. Ouellet, C. Quimper | A MinCumulative Resource Constraint | [20] | 2022 | CPAIOR | | | | | | | |
| E. Armstrong, M. Garraffa, B. O'Sullivan, H. Simonis | The Hybrid Flexible Flowshop with Transportation Times | [3] | 2021 | CP | 18 | MiniZinc Chuffed CP Opt SICStus | y | y | - | $HFFm|tt|C_{\max}$ | cumulative diffn table |
| V. Antuori, E. Hebrard, M. Huguet, S. Essodaigui, A. Nguyen | Combining Monte Carlo Tree Search and Depth First Search Methods for a Car Manufacturing Workshop Scheduling Problem | [2] | 2021 | CP | 16 | MCTS | y | y | [] | | |
| B. Kovács, P. Tassel, W. Kohlenbrein, P. Schrott-Kostwein, M. Gebser | Utilizing Constraint Optimization for Industrial Machine Workload Balancing | [18] | 2021 | CP | 17 | Gurobi Cplex CP Opt OR-Tools | y | y | - | | cumulative |
| M. Lackner, C. Mrkvicka, N. Musliu, D. Walkiewicz, F. Winter | Minimizing Cumulative Batch Processing Time for an Industrial Oven Scheduling Problem | [19] | 2021 | CP | 18 | CP Opt Chuffed OR-Tools Gurobi OPL | y | y | | OSP | |
| A. Hill, J. Ticktin. T. Vossen | A Computational Study of Constraint Programming Approaches for Resource-Constrained Project Scheduling with Autonomous Learning Effects | [12] | 2021 | CPAIOR | | | | | | | |
| C. Klanke, D. Bleidorn, V. Yfantis, S.Engell | Combining Constraint Programming and Temporal Decomposition Approaches - Scheduling of an Industrial Formulation Plant | [17] | 2021 | CPAIOR | | | | | | | |
| C. Hanen, A. Kordon, T. Pedersen | Two Deadline Reduction Algorithms for Scheduling Dependent Tasks on Parallel Processors | [11] | 2021 | CPAIOR | | | | | | | |
| M. Åstrand, M. Johansson, H.Feyzmahdavian | Short-Term Scheduling of Production Fleets in Underground Mines Using CP-Based LNS | [5] | 2021 | CPAIOR | | | | | | | |
| T. Geibinger, L. Kletzander, M. Krainz, F. Mischek, N. Musliu, F. Winter | Physician Scheduling During a Pandemic | [8] | 2021 | CPAIOR | | | | | | | |
| D. Grimes, G. Ifrim, B. O'Sullivan, H. Simonis | Analyzing the impact of electricity price forecasting on energy cost-aware scheduling | [10] | 2014 | J.SUSCOM | | | - | - | - | | |

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[2] Valentin Antuori, Emmanuel Hebrard, Marie-José Huguet, Siham Essodaigui, and Alain Nguyen. Combining monte carlo tree search and depth first search methods for a car manufacturing workshop scheduling problem. In Laurent D. Michel, editor, *27th International Conference on Principles and Practice of Constraint Programming, CP 2021, Montpellier, France (Virtual Conference), October 25-29, 2021*, volume 210 of *LIPIcs*, pages 14:1–14:16. Schloss Dagstuhl - Leibniz-Zentrum für Informatik, 2021.

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