Books

- Building Decision Support Systems using MiniZinc
 Mark Wallace, Springer, 2020
 - Available printed and online copies from the UniBo library.
- Handbook of Constraint Programming
 - F. Rossi, P. van Beek, T. Walsh (eds), Elsevier Science, 2006.
 - Available printed copies from the UniBo library.
 - Some chapters are available online in Virtuale:
 - Chapter 1 Introduction
 - Chapter 3 Constraint Propagation
 - Chapter 4 Backtracking Search Algorithms
 - Chapter 7 Global Constraints
 - Chapter 10 Symmetry in CP
 - Chapter 11 Modelling

Conferences

- Principles and Practice of Constraint Programming (CP)
- Integration of AI and OR Techniques in CP (CP-AI-OR)
- Conference of the Association for the Advancement of Al (AAAI)
- <u>International Joint Conference on Artificial Intelligence</u> (IJCAI)
- <u>European Conference on Artificial Intelligence</u> (ECAI)

All conference proceedings are available via <u>DBLP</u>.

Online Material

- Coursera and Edx online courses
 - Basic Modelling for Discrete Optimization
 - Advanced Modeling for Discrete Optimization
 - Solving Algorithms for Discrete Optimization
 - Discrete Optimization
 - Constraint Programming
- ACP summer schools
- ACP YouTube Channel
 - Research, educational, applications and solvers/systems talks
 - Solvers and systems talks
 - Links to other YouTube channels (CP Conference, CPAIOR conference)

- High level modelling (&search) languages with backend to CP solvers.
- Solvers
 - Often embedded in a programming language via a library:
 - imperative and OO programming (C, C++, Java, Python)
 - functional programming (Objective Caml)
 - logic programming (Prolog-based)

AIMMS

 Modeling language with interfaces to CP and MIP solvers (http://www.aimms.com/cp)

MiniZinc

- Modeling language with interfaces to CP, ILP, SAT, heuristic search solvers (https://www.minizinc.org/)
- IBM ILOG CPLEX Optimization Studio
 - Modelling language (OPL) with interfaces to CP and ILP solvers (https://www.ibm.com/products/ilog-cplex-optimization-studio)

PyCSP3

Modeling language with interfaces to CP solvers (https://www.pycsp.org)

- Choco
 - Java library (http://choco-solver.org/)
- Eclipse
 - Prolog library (http://eclipseclp.org/)
- SCIP
 - C library for CP and ILP solvers (http://scip.zib.de/)

- Gecode
 - C++ library (<u>https://gecode.github.io</u>)
- Google OR-tools
 - Collection of libraries for C++, Java, Python, .NET (https://developers.google.com/optimization/)
- IBM ILOG CP Optimizer
 - C++ library (https://www.ibm.com/analytics/cplex-cp-optimizer)