

0. General information

Prof. Roberto Amadini

Department of Computer Science and Engineering, University of Bologna, Italy

Combinatorial Decision Making and Optimization

2nd cycle degree programme in Artificial Intelligence

University of Bologna, Academic Year 2024/25



Short Bio

- Roberto Amadini
- Associate Professor @ Dept. of Computer Science and Engineering, University of Bologna
- Associate Investigator @ OPTIMA: <https://optima.org.au/>
 - Opportunity for outgoing students
- E-mail: roberto.amadini@unibo.it
- Webpage: <https://www.unibo.it/sitoweb/roberto.amadini/en>
- Office: Mura Anteo Zamboni 7, room 206 (2nd floor)
- Office hours: By appointment

- This module will introduce the fundamentals of:
 - Satisfiability modulo theory
 - 1st part of the module
 - Mixed-Integer Linear Programming
 - 2nd part of the module
- Teaching material: all available on the Virtuale platform
 - <https://virtuale.unibo.it/course/view.php?id=60687>
- Lectures are not recorded
 - <https://www.theguardian.com/australia-news/2025/feb/19/teaching-to-an-empty-hall-is-the-changing-face-of-universities-eroding-standards-of-learning>

Prerequisites

Basic knowledge of:

- Constraint Programming (from Module 1)
- Boolean Satisfiability (from Module 1)
- Coding
- Logic and Math

Schedule

- Tuesday h. 13–16
 - Room 0.5
- Thursday h. 14.30–17.30
 - Room 0.5
- ~ 6 weeks, no lectures between 16th and 28th April
- Exercises session with the tutor is possible
 - To be confirmed
- Invited talk by Leslie De Koninck
 - To be confirmed

- Common project for the 2 modules
 - Unveiled towards the end of the course
- Group project (2–4 people)
- Project proposals are welcome!
 - Subject to approval
 - Can be merged with master thesis
- All details already on virtuale platform
- Questions?