

# 0. General information

Prof. Roberto Amadini

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

## **Combinatorial Decision Making and Optimization**

2<sup>nd</sup> cycle degree programme in Artificial Intelligence

University of Bologna, Academic Year 2023/24



# 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](mailto:roberto.amadini@unibo.it)
- Webpage: <https://www.unibo.it/sitoweb/roberto.amadini/en>
- Office: Mura Anteo Zamboni 7, room 206 (2<sup>nd</sup> floor)
- Office hours: By appointment

- This module will introduce the fundamentals of:
  - Satisfiability modulo theory
    - 1<sup>st</sup> part of the module
  - Mixed-Integer Linear Programming
    - 2<sup>nd</sup> part of the module
- Teaching material: all available on the Virtuale platform
  - <https://virtuale.unibo.it/course/view.php?id=39366>

# Prerequisites

Basic knowledge of:

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

# Schedule

- Thursday h. 14.30–17
  - Room 0.5
- Friday h. 9–12
  - Room 0.6
- ~ 6 weeks, no lecture on Thu. 25<sup>th</sup> and Fri. 26<sup>th</sup> April
- An online exercises session on SMT with Dr. Francesco Antici is planned — To be confirmed
- Invited talk by Mark Wallace canceled :(
  - Maybe another will be arranged

- 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?