

# Combinatorial Optimization

## A4M35KO

# Grading System

To get an **assessment**, the following requirements have to be met:

- obtain at least **25 from 44 points**.
  - 8 points for each test I,II (written at lectures).
  - 8 points for practical test (written at the lab).
  - 10 points for semester project.
  - 10 points for homework assignments No. 1-5 (2 points for each assignment if successfully submitted till the deadline, -1 point each week after the deadline). Beware, the penalty points can approach negative infinity!
- for more information, please check the course website <https://cw.fel.cvut.cz/wiki/courses/a4m35ko/start>

# Homework

- homeworks can be coded in **C++, Java or Python**.
- each homework (the source code) must be handed in to the **UploadSystem** (<https://cw.felk.cvut.cz/brute>) with a hard deadline, specified in the UploadSystem.
- it is **graded automatically** by the UploadSystem.
- there is **1 penalty point for each commenced week** unless the homework is uploaded.
- check [https://cw.fel.cvut.cz/wiki/courses/a4m35ko/upload\\_system](https://cw.fel.cvut.cz/wiki/courses/a4m35ko/upload_system) for technical requirements on the submitted source code

# Semester Project

- each student chooses from the following two options:
  1. **Cocontest.** Students participating in the contest implement a solver for one specific combinatorial optimization problem.
  2. **Research on chosen topic:** a student chooses a **non-trivial problem** from the combinatorial optimization area on which he/she will work during the semester. The topic must be approved by the lab teacher!
- the students express their choice of semester project by submitting a text file into UploadSystem with the **strict deadline of 10.03.2017, 23:59** (4 penalty points for the late delivery for each commenced week).
- a student **gets points only if he/she presents the project on the Lab #13.**

# Combinatorial Optimization Contest — Cocontest 2017

- **Optimization competition**

- single real-life optimization problem.
- the assignment is to implement the solver, no report needed.
- solutions are evaluated by the UploadSystem.
- grading comprises both the ability to solve given instances well enough and the rating among the other students.
- computation time of the solver on server is bounded.



- **Changes from the last year:**

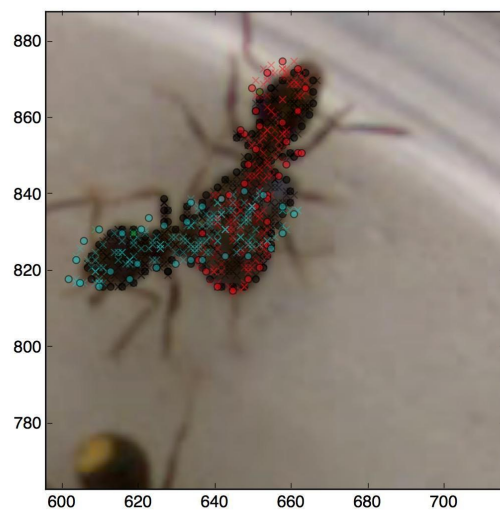
- now the cocontest is a semester project (last year it was optional)
- only solutions were required, while this year your source codes run on a server
- more information about last year at <https://cocontest-1225.appspot.com/>

# Research on Chosen Topic

- students can solve a problem for some company, project, diploma thesis etc.
- the assignment has two parts: written report and implementation.
- submission is divided into 3 parts constrained by deadline.
- 4 penalty points for the late delivery for each commenced week.
- written document is between 4 and 8 pages.
- the evaluation is performed by the student's lab teacher, it considers fulfillment of formal requirements and the work quality.

# Past successful topics

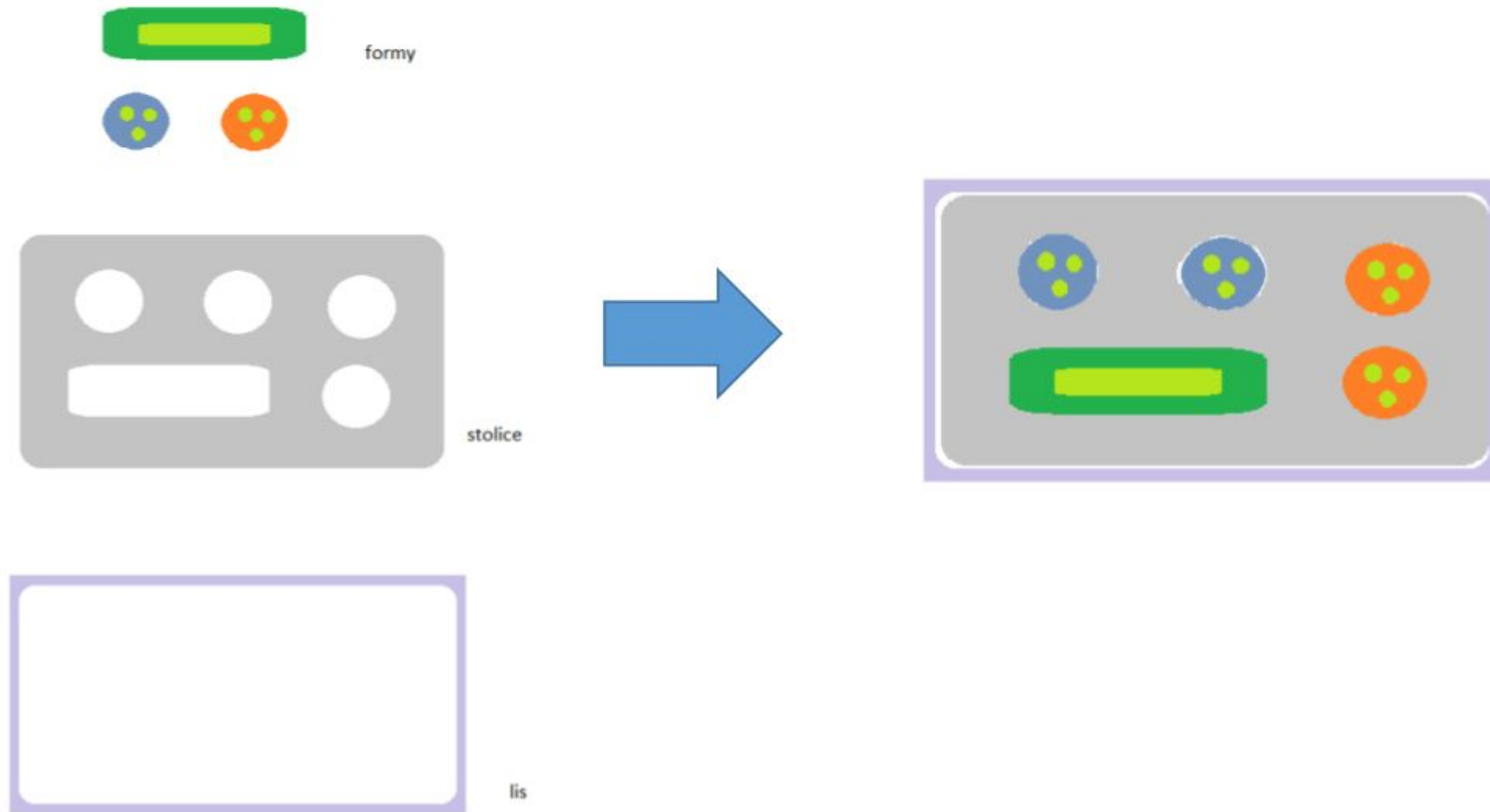
- Animal position estimation



- Stackelberg equilibrium in a selection game

# Past successful topics

- Scheduling of wax pressers





For more information about what we are doing, our projects, thesis topics etc., please visit:

<http://industrialinformatics.cz/>



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