Miniclass projects

To be realized preferably by **pairs** of students (or alone, if not too many).

Objective: prepare a **mini-class** to be given during the course (last two weeks).

Timing: **10 to 15 minutes** + 5 minutes of questions.

Typical plan:

- Broader context and overview of known results on this topic (2 to 5 min)
- Presentation of a particular algorithm or theorem (4 to 7 min)
- If applicable, a demo coded in `networkX` or `JBotSim` (2 to 4 min)
- If applicable, main open questions (∼2 min)

Suggested list of topics (you can suggest another):

1. The graph isomorphism problem
2. Auction algorithms for bipartite matchings
3. Distributed algorithms in the LOCAL model
4. Community detection
5. Kuratowski's theorem and Wagner's theorem
6. Max-flow min-cut theorem and applications
7. Proof of Euler's formula and that $\exists$ vertex of degree at most 5
8. Graph spanners (geometric or not, your choice)

Selection: Send us an email with the names of participants and a ranking of the 4 preferred projects (or another suggestion) by **April 1**.