

## Optimal design of flexible structures

### Activity to develop:

The aim of this project is to develop a C/C++ code to optimize and optimally design flexible structures with industrial applications in view. The flexible structures under consideration, mainly in two space dimensions, will be modeled in several levels of complexity, from planar graphs to finite-element models in elasticity. The computer code to be developed will combine numerical solvers for the target model with previously developed optimization packages.

### Key words:

Optimization, discrete structural analysis, partial differential equations, finite element method, C/C++.

### Prerequisites:

Undergraduate (4th year) or graduate student in mathematics, physics, engineering or computer science. More consolidated and experienced profiles will be considered too.

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