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MATHMODS

Mathematical Modelling in Engineering: Theory, Numerics, Applications

Companies are keen to hire people with skills in mathematical modelling, as this can be a much less costly option than real experiments; it is this interface between theory and application that is at the heart of the MATHMODS course. Students spend the first year together in Italy and Germany, before specialising in one of the branches of modelling in their second year at one of the five consortium members.

We also have agreements with around 20 companies who, while not formal partners, agree to host students during the fourth semester. All our students therefore have both an academic and a work-based adviser – particularly helpful when researching their thesis.

Over a period of nine years, we have seen around 200 students graduate from 60 different countries. Some two-thirds of graduates go on to do a PhD, which is often an industrial doctorate. Those who choose to enter the workforce after graduating usually take key roles in company R&D teams, where they are able to speak the languages of both mathematics and engineering. Our consortium, in fact, is based on the successful networking that took place under an EU-funded R&D network.

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FACTBOX

“Mathematical modelling” refers to the use of mathematics and related computational tools to bring real-world, challenging and important socio-economic and industrial problems into a form simple enough so that a good solution can be found in a reasonable time, while keeping the relevant features of the problem.

Partners:

- University of L'Aquila, Italy.
- University of Nice - Sophia Antipolis, France.
- University of Hamburg, Germany.
- Gdansk University of Technology, Poland.
- Autonomous University of Barcelona, Spain.

Website:

www.mathmods.eu

