



POLITECNICO  
MILANO 1863

MILANO  
LEONARDO  
CAMPUS

# MATHEMATICAL MODELS AND METHODS IN ENGINEERING

## PHD PROGRAMS

### Programme

Hosted by the Mathematics Department, this programme aims at training high level researchers in advanced areas of applied mathematics. Since a successful approach to practical applications depends on a deep understanding of real-world phenomena as well as on the knowledge of mathematical tools for their description, Ph.D. candidates are expected to go thoroughly both into modelling and methodological aspects.

### Mission and goals

Ph.D. candidates carry out their research both in the development of new mathematical methods and in the implementation and improvement of advanced techniques in connection with specific contexts and applications. Candidates working in appropriate research areas may develop their activities within the MOX (Modeling and Scientific Computing) Laboratory. Candidates are expected to acquire scientific expertise and improve professional skills in several ways. They are encouraged to attend seminars, conferences, workshops and summer schools. A limited teaching activity to undergraduate students, approved by the Faculty, is also encouraged. Periods spent in other Institutions, especially abroad, are welcome. Candidates may complete their preparation, establish scientific contacts and collaborations, and work on their Ph.D. thesis while visiting hosting Institutions. The most important activity carried out by the candidates is the preparation of the Ph.D. thesis. On a yearly basis, the Faculty Board examines the work progress of each thesis. Ph.D. theses must contain original results of appropriate level, and are expected to lead to one or more publications on high-level international journals. The Faculty defines appropriate refereeing methods for the Ph.D. theses. Candidates defend their theses against a Board composed by a majority of external experts.

## **Career Opportunities**

Companies, research Agencies, and research Institutions which are leaders in their respective fields.

## **Eligible students**

In order to enter the Ph.D. programme, candidates must possess an Italian Master of Science degree, or an equivalent academic qualification obtained abroad, comparable in duration and content to the above Italian qualification, and approved in advance by the competent academic authorities.

## **Scholarships**

Ph.D. positions fall into the following categories:

- a) positions with Ph.D. scholarships awarded by the Politecnico di Milano. Scholarships may be either generic or restricted to a specific research topic
- b) positions without Ph.D. scholarships awarded by the Politecnico di Milano, subject to payment of admission and tuition fees.

## **Contacts**

For further information, please visit the following web site: [www.polimi.it/phd](http://www.polimi.it/phd) or contact the School of Doctoral Programmes - Politecnico di Milano at [phdschool@polimi.it](mailto:phdschool@polimi.it). For further information on specific aspects of the course and curricula, visit the following web site:

<https://www.dottorato.polimi.it/en/phd-programmes/engineering/mathematical-models-and-methods-in-engineering> or contact the Secretary [esperia.ferrara@polimi.it](mailto:esperia.ferrara@polimi.it)

