

# i-MATH Short course on Numerical Simulation in Electromagnetism and Industrial Applications

January 17 - 21, 2011  
Universidade de Santiago de Compostela, Spain  
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## Presentation

### Numerical

simulation plays an important role in electrical engineering to optimize the design and operation conditions of electromagnetic devices such as electrical machines, induction heating systems, transformers, etc. The behavior of these devices is governed by Maxwell equations, which cannot be solved, in general, by using analytical methods. Therefore, to deal with a specific electromagnetic problem, is essential to know the mathematical and numerical tools suitable for its resolution.

## The

main aim of this course is to introduce researchers, students and professionals having a prior mathematical training (mathematicians, physicists, engineers) in the modeling and numerical simulation of different electromagnetic problems and their industrial applications. Intended for

Young researchers who want to initiate into the applications of mathematics in electromagnetism and, more specifically, into numerical methods and industrial problems.