

EMF 2009

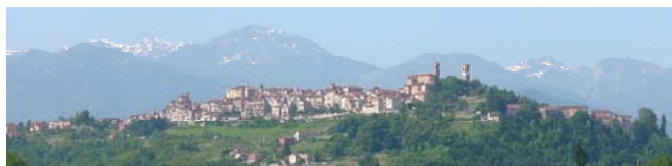
8th International Symposium on

Electric and Magnetic Fields

From Numerical Models to Industrial Applications

Mondovì, Italy, May 26-29, 2009

Organized by the Laboratorio CADEMA of the Dept. of Electrical Engineering and by the CESMO Unit of Politecnico di Torino, Italy, by the Unit of Applied and Computational Electromagnetics (ACE), Dept. of Electrical Engineering and Computer Science, University of Liège, Belgium, and by the Electrical Engineers Association of the Montefiore Institute (AIM), Belgium.



First Announcement and call for papers

Foreword

The 8th International Symposium on Electric and Magnetic Fields, EMF, will be held in Mondovì, Italy, from 27 to 29 May 2009. Previous editions were held in Liège (September 1992), Leuven (May 1994), Liège (May 1996), Marseille (May 1998), Ghent (May 2000), Aachen (October 2003) and Aussois (June 2006).

Mondovì is a small town located about 80 km south of Torino and since 1990 hosts one peripheral site of Politecnico di Torino. Located at the border of the "Langhe" region, home of famous wines like Barolo, it is renowned for its hospitality and for its enogastronomical attitude. The historical part of the town, named Piazza, is at the top of a hill and can be reached by a recently restored cable-car. The town of Mondovì is accessible by car (highway A6 Torino-Savona) and by train (Torino-Savona line).

The purpose of the Symposium is to throw a bridge between the recent advances of research in numerical modelling of electromagnetic fields and the growing number of industrial problems requiring such techniques. Therefore, beside classical sessions on the progress of computational methods, special sessions will be devoted to advanced industrial applications of electromagnetic modelling, including invited lectures.

A one-day tutorial will be organized the day preceding the Symposium.

Local Organizing Committee

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Preferential subjects

- 1. Formulations and associated numerical methods**
Formulations for electrostatics, magnetostatics, magnetodynamics and high frequency problems. Finite element method, boundary element method and integral method, finite difference method, finite volume method. Hybrid methods.
- 2. Coupled problems**
Electromagnetic problems coupled to mechanical problems, thermal problems, electrical and electronic circuits. Movement modelling.
- 3. Material modelling**
Anisotropy, permanent magnets, hysteresis, micromagnetism, superconductivity.
- 4. Numerical techniques**
Error estimation, mesh generation, adaptive meshing. Linear solving (direct and iterative methods), nonlinear system solving, time stepping methods, multigrids, fast multipole method.
- 5. Design and optimisation**
Optimisation, sensitivity analysis, error estimation.
- 6. Software engineering**
Visualisation, data management, postprocessing, software methodology, expert systems, parallel and vector computations.
- 7. Applications**
Electrical machines, induction heating, microelectromechanical systems (MEMS), micro and nano devices, non-destructive testing, micro-wave and high frequency applications. Electromagnetic

compatibility, electromagnetic effects in power electronic devices. EM fields and living systems, bioelectromagnetics, etc.

General information

Dates and Venue

The tutorial will be organized on Tuesday 26 May 2009 and will be followed by the Symposium from 27 to 29 May 2009. Both will be held at the site of Politecnico di Torino in Mondovì.

Language

The working language for written contributions, presentations and discussion will be English.

Deadlines & Submission

- Submission of abstracts 16 January 2009
- Notification of preliminary acceptance 2 March 2009
- Submission of extended papers 29 May 2009

Abstracts relevant to the Symposium topics should be in the form of a 2 pages – 2 columns (text and figures). They should emphasise the main points and novel features of the work, including results. They should be submitted in PDF format directly via the Symposium website.

The authors of accepted abstracts will be invited to submit their extended papers by 29 May 2009. The length of the papers will be limited to 4 pages – 2 columns. A template will be available on the Symposium website.

Both abstracts and extended papers will be peer reviewed.

Symposium Literature

A bound volume with all the abstracts selected for presentation at the Symposium will be made available to all participants at the Symposium. A CD-Rom gathering the extended papers will be sent to the participants after the Symposium.

A selection of the best papers will be made by the Scientific Committee for publication in a special issue of COMPEL Journal (issue 29/6). Papers not presented by one of the authors at the Symposium will not be considered for selection.

Software Demonstrations

The organizers are planning to arrange software demonstrations. Further information will be available from the Secretariat.

Awards

In order to encourage the submission of high-value papers two prizes of 400 € each will be awarded: one for the best paper in plenary session and one for the best paper in poster session. Details will be available in the Symposium Programme.

Symposium Secretariat

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