



# ITALIAN SCHOOL ON MAGNETIC MATERIALS FOR ENERGY APPLICATIONS

IMEM-CNR Parma, February 11-14, 2014

The School "Magnetic Materials for Energy Applications", promoted by the Italian Association of Magnetism (AIMagn) will be held at IMEM-CNR Institute in Parma, on February 11<sup>th</sup>-14<sup>th</sup>, 2014.

The School is addressed to graduate and PhD students, as well as post-docs and young researchers, both Italians and foreigners, working on the various topics of Magnetism.

The School aims at providing insights into the applications of new magnetic materials for the efficient generation and transformation of energy and into the development of magnetic and magneto-electronic devices with optimized energy efficiency.

The program consists of introductory lectures on the fundamentals of magnetism and properties of magnetic materials, followed by specialised lectures on the applications of magnetic materials for energy.

**Coordinators/representatives of FP7 European projects and international programmes will present their activity in a focused session entitled "Magnetic research for energy: the European answer". The invited speakers for this session will be:**

- ✓ **Alberto Bollero (IMDEA, Madrid)**
- ✓ **Martina de Sole (APRE, Roma)**
- ✓ **Oliver Gutfleisch (TUD, Darmstadt)**
- ✓ **Spomenka Kobe (JSI, Ljubljana)**

## Introductory lectures:

- ✓ Magnetism and magnetic materials: a primer – *Paolo Allia (Politecnico di Torino)*
- ✓ Hard magnetic materials – *Massimo Solzi (Università di Parma)*
- ✓ Soft magnetic materials – *Paola Tiberto (INRIM)*
- ✓ Magnetic nanoparticles: "supermagnetism" regimes – *Davide Peddis (ISM-CNR)*
- ✓ Magnetism in thin films – *Francesca Casoli (IMEM-CNR)*

## Specialised lectures:

- ✓ Permanent magnets for energy applications – *Oliver Gutfleisch (Darmstadt University of Technology)*
- ✓ Soft magnetic materials for electrical applications – *Fausto Fiorillo (INRIM)*
- ✓ Magnetocaloric and magnetic shape memory materials – *Simone Fabbrici (Lab. MIST E-R)*
- ✓ Spin caloritronics – *Marius Costache (Catalan Institute of Nanoscience and Nanotechnology)*
- ✓ Magnetoelectric coupling for low power electrical writing of information in spintronic memories – *Riccardo Bertacco (Politecnico di Milano, L-NESS)*
- ✓ Organic multifunctional spintronic devices – *Valentin Alek Dediu (ISMN-CNR)*
- ✓ Silicon-integrated magnetic devices – *Marco Morelli (STMicroelectronics)*
- ✓ Fundamental limits of energy dissipation in nanomagnetic switches – *Giovanni Carlotti (Università di Perugia)*

## Chairs

Franca Albertini (IMEM-CNR)  
Dino Fiorani (President of AIMagn, ISM-CNR)

## Organizing Committee

Francesca Casoli (IMEM-CNR)  
Marco Coisson (INRIM)  
César de Julián Fernández (IMEM-CNR)  
Simone Fabbrici (Lab. MIST E-R)

## Scientific Committee

Roberto De Renzi (Università di Parma)  
Alessandro Lascialfari (Università di Milano)  
Claudio Sangregorio (ISTM-CNR&INSTM)  
Paola Tiberto (INRIM)

The lectures will be in English. Students will be invited to briefly introduce themselves (2 minutes) in a dedicated session and to prepare a poster on their research activity.

**The NEW deadline for registration is January 9<sup>th</sup>, 2014**

**Venue:** IMEM-CNR Institute - Parco Area delle Scienze 37/A, Parma

For further information about the school and application, please visit <http://www.aimagn.it/school-2014> or contact us at [scuola2014@aimagn.it](mailto:scuola2014@aimagn.it)