

## First International Spring School on McPhase

The first International School on McPhase (a software suite for complex magnetism) was held from May 10–13, 2011, at Gijón in the principality of Asturias, Spain. This School brought together about 40 participants, most of them PhD students or young researchers interested in magnetism, but working in different fields of science: physics, chemistry, materials sciences, engineering, and others.

In the four days, the School covered a wide field of basic topics dealing with fundamental and applied aspects of d and f-elements in two main streams: the mornings provided introductory talks on different subjects, e.g. exchange interactions, crystal field anisotropy, high-order interactions, etc., while the afternoons were concentrated on practical session using the McPhase software suite.

The introductory lectures were delivered by Andrew Boothroyd (crystal fields), Ernest Bauer (crystalline electric field effects on magnetic properties), Mark Johnson (neutrons and simulations dealing with some inorganic materials

and magnetism), Albert Furrer (pressure effects on crystal-field interactions applied to barocaloric cooling), Michael Loewenhaupt (crystal fields, neutrons and McPhase), Jesus A. Blanco (magnetic interactions and phase diagrams), Luigi Paolasini (investigation of magnetic and electronic-order parameters by polarized x-ray diffraction), Helen Walker (multipolar order), Duc Manh Le (magnetic and orbital order-phase diagrams in McPhase), Lucas Fernández-Seivane (magnetism & magnetic anisotropies of small nanostructures containing 5d atoms), Jens Jensen (linear response & RPA-dispersive magnetic excitations), Bela Lake (spin-wave theory), Toby Perring (dispersive excitations and fitting to neutrons), Duc Manh Le & Martin Rotter (dispersive excitations in McPhase), Devashibhai Adroja (vibron quasi-bound state in the tetragonal heavy fermion compound:  $\text{CeCuAl}_3$ ), Martin Rotter (flipping ratios and spin densities), and concluded with a lecture by Stephen W. Lovesey on exotic multipoles.

The informal setting of a typical Asturian “Sidrería” (cider drinking hall) helped to break the ice at the School banquet (see photo) stimulating many lively discussions. Due to its success, another School is planned in 2012 to be held at ILL-ESRF in Grenoble, France.

The meeting was organized by the Department of Physics of the Oviedo University, Jesus A. Blanco and Pedro Gorria, and Martin Rotter from Max Planck Institute for Chemical Physics of Solids, Dresden, Germany. We would like to take this opportunity to thank the sponsors (NMI3, University of Oviedo, Cajastur, Ayuntamiento de Gijón, FICYT, MICINN, Air Liquid) for their financial support and thus making this an exciting meeting.

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