

Domain Structure and Magnetization Processes in Magnetic Nanoscale Systems		
Organiser	Institution	Contact
Agustina Asenjo	Researcher Instituto de Ciencia de Materiales de Madrid, CSIC Spain.	aasenjo@icmm.csic.es
Volker Neu	Senior Scientist Leibnitz-Institut für Festkörper und Werkstofforschung, IFW, Dresden Germany	V.Neu@ifw-dresden.de
Summary		
A2.I	<p>Magnetic nanostructures are fascinating objects which low dimensionality or nanoscopic length scale determine novel applications in various devices (MRAM, oscillators, sensors, actuators, to name a few). In that regard, the knowledge of their magnetic domain structure and of its static or dynamic evolution under current pulses or applied magnetic field plays a decisive role. Particularly, the controlled existence of different magnetic anisotropy enables both tailoring the magnetic domain configuration and the magnetization process. Therefore, nanoscale magnetic characterization, modeling and visualizing the domain structure are quite important steps in understanding and tailoring the magnetic performance of the material. Advanced high resolution microscopy methods offer the possibility to image the magnetic configuration of systems at the nanoscale. Likewise, novel analysis methods and micromagnetic simulations improve the interpretation of the domain structure and the magnetization processes in increasingly larger computation volumes.</p> <p>Authors are invited to submit contributions in the field of ferromagnetic nanostructures and nanoscale systems with an emphasis on their magnetic domain structure as well as on their static and dynamic magnetization processes. This includes experimental and numerical studies on nanowires/tubes, thin films and patterned structures but also on nanocrystalline bulk magnets.</p>	