



## **"On the importance of magnetism at the 'universe-scale' and on the Earth"**

by Prof. Jordi Sort

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Talk about some general aspects of magnetism in the universe and general phenomenology related to magnetic materials, with emphasis put on the applications of ferromagnetic dots in magnetic recording.

Also it will revised the evolution of computation over the years, since the very first "mechanical" computers (manufactured prior to the Second World War) until the first prototypes of "quantum" computers developed recently. It will be emphasis on "magnetic" hard disks and the drastic increase of areal bit density/year that has led to the advent of "big data" and "artificial intelligence"; also on the energy-efficiency problem in magnetic actuation and spintronic devices. It will overview some recent strategies to decrease the power consumption of personal computers and cell phones.

**9 Mar 2018**

**12:00 hrs**

**Maxwell Auditorium,  
ALBA Synchrotron**

