

## On the nature of memory in spin glasses

**Ilaria Paga**

*Cnr-nanotec, Italy*

Rejuvenation and memory are common to glassy systems. We are able to extract the origin of these phenomena through an examination of rejuvenation and memory in the out of equilibrium dynamics of spin glasses, using a temperature-cycling protocol carried out in a simulation using the Janus-II supercomputer. Analogously to experiments on single crystal of CuMn, we define a memory measurement and draw out a scaling law which describes both the numerical and experimental data. Moreover, we show that the dynamics is governed by more than a single correlation lengths, and we show how to connect them to the one accessible in the lab.