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UNIVERSALITY OF TRANSIENT DYNAMICS AND AGING FOR SPIN GLASSES

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Abstract

We consider Random Hopping Time (RHT) dynamics of mean field spin glass models. We explain the RHT dynamics in the context of trap models. Next, we study the dynamics of the Random Energy Model (REM) and prove that under a proper normalization the clock process of the dynamics converges to an extremal process and the system exhibits aging like behavior. Finally, we prove that the same is true for Sherrington-Kirkpatrick (SK) model and p -spin models. This confirms Bouchaud's REM-like trap model as a universal aging mechanism for these systems.

Date: Friday, December 25, 2009

Time: 14:00

Place: IMBM Seminar Room, Boğaziçi University