MECCANICA

A CONFERENCE IN HONOR OF SANDRO GRAFFI ON HIS 65TH BIRTHDAY

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Structure and properties of the Generalized Random Energy Model

We recall the general structure and properties of the Generalized Random Energy Model, introduced by Bernard Derrida in order to provide a simple model with properties similar to a spin glass. This will be an occasion to review comparison methods and interpolation techniques, that have been exploited in the last years in the study of spin glass models. Moreover, the new variational principles, extending those of Parisi type for the spin glass, find a completely well defined and simple formulation in the quite simple case of the Generalized Random Energy Model.