

# Quantum Spin Glasses

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## Abstract

Transversal magnetic fields in mean-field glasses of Sherrington-Kirkpatrick type introduce quantum effects. A natural question is that of the fate of the low-temperature glass phase, which according to Parisi, goes along with the breaking of replica symmetry in the classical counterpart of such models. In this talk, I will give an introduction into a quantum version of Parisi's famous variational characterisation of the specific free energy. In particular, I will discuss the form of the order parameter as well as the persistence of replica symmetry breaking at small transversal fields.