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## Rigorous and numerical results for the Edwards–Anderson model

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The Edwards–Anderson model of spin glasses is the simplest realistic model of disordered systems. In this talk I will discuss two of its properties. The first property is given by a set of non-trivial overlap identities which hold when the average of the coupling is different from zero. They generalize the Ghirlanda–Guerra identities and, remarkably, can be shown to hold pointwise along the so-called Nishimori line and with the expected finite-volume corrections. The second property concerns the standard EA model with symmetric coupling distribution. The vanishing of overlap connected correlation function is investigated using numerical simulations. The results on finite volume systems suggest that the quenched state—conditioned to a fixed value of the overlap—is clustering.