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Behavior of the overlap distribution of various spin glasses at low temperature JULIO F. FERNÁNDEZ, Universidad de Zaragoza, JUAN J. ALONSO, Universidad de Malaga — Numerical results for the probability distribution, $P(q,T)$, of the spin-overlap q as a function of temperature T, is reported for several randomly frustrated systems. These include (i) random bond Ising systems, such as the Edwards-Andreson spin-glass model, (ii) site diluted systems which are geometrically frustrated, such as FCC lattices with 40% of their sites occupied with up-down spins, and (iii) random-field systems. $P(q,T)$ stands for an average of $P_{\mathcal{J}}(q,T)$ over many system samples with different realizations of quenched randomness $\mathcal{J}$. We also report statistical fluctuations of $P_{\mathcal{J}}(q,T)$ which are relevant to the issue of self-averaging.

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