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Autore	Rastelli Enrico
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Sommario/riassunto

The aim of this advanced textbook is to provide the reader with a comprehensive explanation of the ground state configurations, the spin wave excitations and the equilibrium properties of spin lattices described by the Ising-Heisenberg Hamiltonians in the presence of short (exchange) and long range (dipole) interactions.The arguments are presented in such detail so as to enable advanced undergraduate and graduate students to cross the threshold of active research in magnetism by using both analytic calculations and Monte Carlo simulations.Recent results about unorthodox spin configurations suc