Record Nr. UNINA9910438106603321 Autore Takahashi Yoshinori Titolo Spin Fluctuation Theory of Itinerant Electron Magnetism // by Yoshinori Takahashi Pubbl/distr/stampa Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, , 2013 **ISBN** 3-642-36666-X Edizione [1st ed. 2013.] Descrizione fisica 1 online resource (XI, 181 p.) Collana Springer Tracts in Modern Physics, , 1615-0430 ; ; 253 Disciplina 531 Soggetti Mechanics Astronomy - Observations Quality of life Classical Mechanics Astronomy, Observations and Techniques Quality of Life Research Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Bibliographic Level Mode of Issuance: Monograph Note generali Nota di contenuto Introduction. - Fluctuations and Magnetism -- Effects of Spin Fluctuations on Magnetic Properties -- Magnetic Properties in the Ordered Phase -- Thermal Properties of Itinerant Magnets.- Magneto Volume Effect. Sommario/riassunto This volume shows how collective magnetic excitations determine most of the magnetic properties of itinerant electron magnets. Previous theories were mainly restricted to the Curie-Weiss law temperature dependence of magnetic susceptibilities. Based on the spin amplitude conservation idea including the zero-point fluctuation amplitude, this book shows that the entire temperature and magnetic field dependence of magnetization curves, even in the ground state, is determined by the effect of spin fluctuations. It also shows that the theoretical consequences are largely in agreement with many experimental observations. The readers will therefore gain a new comprehensive perspective of their unified understanding of itinerant electron

magnetism.