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Soggetti	Mathematical physics
	Elementary particles (Physics)
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	Mathematical Physics
	Elementary Particles, Quantum Field Theory
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Sommario/riassunto	This is a primer on a mathematically rigorous renormalisation group theory, presenting mathematical techniques fundamental to renormalisation group analysis such as Gaussian integration, perturbative renormalisation and the stable manifold theorem. It also provides an overview of fundamental models in statistical mechanics with critical behaviour, including the Ising and 4 models and the self-avoiding walk. The book begins with critical behaviour and its basic discussion in statistical mechanics models, and subsequently explores perturbative and non-perturbative analysis in the renormalisation group. Lastly it discusses the relation of these topics to the self-avoiding walk and supersymmetry. Including exercises in each chapter to help readers deepen their understanding, it is a valuable resource for mathematicians and mathematical physicists wanting to learn