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Titolo	Introduction to a Renormalisation Group Method / / by Roland Bauerschmidt, David C. Brydges, Gordon Slade
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Descrizione fisica	1 online resource (xii, 283 pages) : illustrations
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Disciplina	530.1430151
Soggetti	Mathematical physics Quantum field theory String models Statistical physics Physics Dynamics Mathematical Physics Quantum Field Theories, String Theory Statistical Physics and Dynamical Systems Mathematical Methods in Physics Complex Systems
Lingua di pubblicazione	Inglese
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Nota di bibliografia	Includes bibliographical references and index.
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 renormalisation group theory.