1. Record Nr. UNINA9910300109503321

Autore	Kovchegov Yevgeniy
Titolo	Path Coupling and Aggregate Path Coupling / / by Yevgeniy Kovchegov, Peter T. Otto
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	3-319-77019-5
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (xi, 96 pages) : illustrations
Collana	SpringerBriefs in Probability and Mathematical Statistics, , 2365-4333
Disciplina	519.53
Soggetti	Probabilities Probability Theory and Stochastic Processes
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Preface -- Coupling, Path Coupling, and Mixing Times -- Statistical Mechanical Models and Glauber Dynamics -- Large Deviations and Equilibrium Macrostate Phase Transitions -- Path Coupling for Curie-Weiss Model -- Aggregate Path Coupling: One Dimensional Theory -- Aggregate Path Coupling: Higher Dimensional Theory -- Aggregate Path Coupling: Beyond Kn.
Sommario/riassunto	This book describes and characterizes an extension to the classical path coupling method applied to statistical mechanical models, referred to as aggregate path coupling. In conjunction with large deviations estimates, the aggregate path coupling method is used to prove rapid mixing of Glauber dynamics for a large class of statistical mechanical models, including models that exhibit discontinuous phase transitions which have traditionally been more difficult to analyze rigorously. The book shows how the parameter regions for rapid mixing for several classes of statistical mechanical models are derived using the aggregate path coupling method.