1. Record Nr. UNINA9910970050403321 Autore Liggett Thomas M (Thomas Milton), <1944-2020, > Titolo Stochastic Interacting Systems: Contact, Voter and Exclusion Processes // by Thomas M. Liggett Pubbl/distr/stampa Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, 1999 **ISBN** 3-662-03990-7 Edizione [1st ed. 1999.] Descrizione fisica 1 online resource (XII, 335 p.) Collana Grundlehren der mathematischen Wissenschaften, A Series of Comprehensive Studies in Mathematics, , 2196-9701; ; 324 Disciplina 519.2 Soggetti **Probabilities** Mathematical physics **Engineering mathematics** Engineering - Data processing **Probability Theory** Theoretical, Mathematical and Computational Physics Mathematical and Computational Engineering Applications Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Bibliographic Level Mode of Issuance: Monograph Note generali Includes bibliographical references and index. Nota di bibliografia Nota di contenuto Background and Tools -- Contact Processes: Preliminaries; The Process on the Integer Lattice Zd; The Process on (1,...,N)d; The Process on the Homogeneous Tree Td; Notes and References -- Voter Models: Preliminaries: Models with General Threshold and Range: Models with Threshold = 1; Notes and References -- Exclusion Processes: Preliminaries; Asymmetric Processes on the Integers; Invariant Measures for Processes on (1,..,N); The Tagged Particle Process --Notes and References Bibliography -- Index. Sommario/riassunto Interactive Particle Systems is a branch of Probability Theory with close connections to Mathematical Physics and Mathematical Biology. In 1985, the author wrote a book (T. Liggett, Interacting Particle System. ISBN 3-540-96069) that treated the subject as it was at that time. The present book takes three of the most important models in the area, and traces advances in our understanding of them since 1985. In so doing, many of the most useful techniques in the field are explained and

developed, so that they can be applied to other models and in other contexts. Extensive Notes and References sections discuss other work on these and related models. Readers are expected to be familiar with analysis and probability at the graduate level, but it is not assumed that they have mastered the material in the 1985 book. This book is intended for graduate students and researchers in Probability Theory, and in related areas of Mathematics, Biology and Physics.