Record Nr. UNINA9910298989703321 Autore Deng Yuxin Titolo Semantics of Probabilistic Processes [[electronic resource]]: An Operational Approach / / by Yuxin Deng Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, Pubbl/distr/stampa , 2014 **ISBN** 3-662-45198-0 Edizione [1st ed. 2014.] 1 online resource (258 p.) Descrizione fisica 004 Disciplina 004.0151 005.1015113 005.131 005.55 Soggetti Computer logic Mathematical logic Computer science—Mathematics Mathematical statistics Logics and Meanings of Programs Mathematical Logic and Formal Languages Discrete Mathematics in Computer Science Probability and Statistics in Computer Science Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto 1. Introduction -- 2. Mathematical Preliminaries -- 3. Probabilistic Bisimulation -- 4. Probabilistic Testing Semantics -- 5. Testing Finite Probabilistic Processes -- 6. Testing Finitary Probabilistic Processes --7. Weak probabilistic bisimulation -- Index. Sommario/riassunto This book discusses the semantic foundations of concurrent systems with nondeterministic and probabilistic behaviour. Particular attention is given to clarifying the relationship between testing and simulation semantics and characterising bisimulations from metric, logical, and

algorithmic perspectives. Besides presenting recent research outcomes in probabilistic concurrency theory, the book exemplifies the use of

many mathematical techniques to solve problems in computer science, which is intended to be accessible to postgraduate students in Computer Science and Mathematics. It can also be used by researchers and practitioners either for advanced study or for technical reference.