Record Nr. UNINA9910453283703321 Autore Riggelsen Carsten **Titolo** Approximation methods for efficient learning of Bayesian networks [[electronic resource] /] / Carsten Riggelsen Amsterdam; ; Washington, DC, : IOS Press, c2008 Pubbl/distr/stampa **ISBN** 6611733337 1-281-73333-4 9786611733339 1-60750-298-4 600-00-0346-3 1-4337-1131-1 Descrizione fisica 1 online resource (148 p.) Collana Frontiers in artificial intelligence and applications;; v. 168 Dissertations in artificial intelligence 519.5 Disciplina 519.5/42 Soggetti Bayesian statistical decision theory Machine learning Neural networks (Computer science) Electronic books. 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 (p. [133]-137). Nota di contenuto Title page; Contents; Foreword; Introduction; Preliminaries; Learning Bayesian Networks from Data; Monte Carlo Methods and MCMC Simulation; Learning from Incomplete Data; Conclusion; References Sommario/riassunto This publication offers and investigates efficient Monte Carlo simulation methods in order to realize a Bayesian approach to approximate learning of Bayesian networks from both complete and incomplete data. For large amounts of incomplete data when Monte Carlo methods are inefficient, approximations are implemented, such that learning remains feasible, albeit non-Bayesian. The topics discussed are: basic concepts about probabilities, graph theory and conditional independence; Bayesian network learning from data; Monte

Carlo simulation techniques; and, the concept of incomplete data. In