Record Nr. UNINA9910383827803321 Autore Robertazzi Thomas G **Titolo** Networking and Computation: Technology, Modeling and Performance // by Thomas G. Robertazzi, Li Shi Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2020 **ISBN** 3-030-36704-5 Edizione [2nd ed. 2020.] 1 online resource (XIII, 212 p. 152 illus., 37 illus. in color.) Descrizione fisica 004.6 Disciplina Electrical engineering Soggetti Computer networks Applied mathematics **Engineering mathematics** Computer system failures Communications Engineering, Networks Computer Communication Networks Applications of Mathematics System Performance and Evaluation Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Introduction -- A Tour through Networking and Computing --Nota di contenuto Fundamental Stochastic Models -- Queueing Models -- Fundamental Deterministic Algorithms -- Divisible Load Modeling for Grids --Amdahl's and Related Laws -- Machine Learning for Networking --Conclusion. Sommario/riassunto This revised textbook, intended for use in undergraduate/graduate courses on computer networking, computer systems/architecture and performance evaluation, presents a host of new and revised content and ancillaries. This text presents a balanced approach between technology and mathematical modeling. It covers networking algorithms (routing, error codes, protocol verification, line codes, network coding and quantum encryption) and analysis (probability for networking with technological examples, queueing models, divisible

load scheduling theory and Amdahl's Law). There is also a tutorial

chapter providing insights into machine learning for networking, the cutting edge of networking technology. This self-contained text progresses systematically and gives students numerous examples at the end of each chapter. Students in electrical engineering, computer engineering and computer science departments will benefit from this book as will engineers and computer scientists working in relevant fields. Maintains a balanced approach between technology and mathematical modeling Features new and revised content covering the latest advances in the field since the original publication Includes a host of classroom material for students and instructors.