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Nota di contenuto	Chapter 1. Research and Technology Development Achievements During the COVID-19 Pandemic – An Overview -- Chapter 2. Analysis of the COVID-19 Pandemic Behavior based on the Compartmental SEAIRD and Adaptive SVEAIRD Epidemiologic Models -- Chapter 3. The Comparison of Different Linear and Nonlinear Models Using Preliminary Data to Efficiently Analyze the COVID-19 Outbreak -- Chapter 4. Probabilistic Forecasting Model for the COVID-19 Pandemic based on the Composite Monte Carlo Model Integrated with Deep Learning and Fuzzy System -- Chapter 5. The Application of Supervised and Unsupervised Computational Predictive Models to Simulate the COVID-19 Pandemic -- Chapter 6. A Quantum Field formulation for a pandemic propagation.
Sommario/riassunto	Covid-19 has hit the world unprepared, as the deadliest pandemic of the century. Governments and authorities, as leaders and decision

makers fighting against the virus, enormously tap on the power of AI and its data analytics models for urgent decision supports at the greatest efforts, ever seen from human history. This book showcases a collection of important data analytics models that were used during the epidemic, and discusses and compares their efficacy and limitations. Readers who from both healthcare industries and academia can gain unique insights on how data analytics models were designed and applied on epidemic data. Taking Covid-19 as a case study, readers especially those who are working in similar fields, would be better prepared in case a new wave of virus epidemic may arise again in the near future.