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Nota di contenuto	1 AI and Pooling Tests for COVID-19 -- 2 AI for Drug Repurposing in the Pandemic Response -- 3 AI and Point Of Care Image Analysis For COVID-19 -- 4 Machine Learning and Laboratory Values in the Diagnosis, Prognosis and Vaccination Strategy of COVID-19 -- 5 AI and the Infectious Medicine of COVID-19 -- 6 AI and ICU Monitoring in COVID-19 -- 7 Symptom Based Detection Models of COVID-19 Infection Using AI -- 8 AI Techniques for Forecasting Epidemic Dynamics: Theory and Practice -- 9 Regulatory Aspects on AI and Pharmacovigilance for COVID-19 -- 10 AI and the Clinical Immunology

Sommario/riassunto

This book deals with the advantages of using artificial intelligence (AI) in the fight against the COVID-19 and against future pandemics that could threaten humanity and our environment. This book is a practical, scientific and clinically relevant example of how medicine and mathematics will fuse in the 2020s, out of external pandemic pressure and out of scientific evolutionary necessity. This book contains a unique blend of the world's leading researchers, both in medicine, mathematics, computer science, clinical and preclinical medicine, and presents the research front of the usage of AI against pandemics. Equipped with this book the reader will learn about the latest AI advances against COVID-19, and how mathematics and algorithms can aid in preventing its spreading course, treatments, diagnostics, vaccines, clinical management and future evolution.