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Nota di contenuto	Introduction -- The Severe Acute Respiratory Syndrome Corona Virus Type 2 -- The SIR Model in Epidemic Modelling -- The SARS-CoV-2-fitted SEIR Model -- Model Specifications -- Parameter Estimation in MAT LAB -- Markov Chain Epidemic Models -- R´esum´.
Sommario/riassunto	This book deals with the prediction of possible future scenarios concerning the COVID-19 pandemic. Based on the well-known SIR model by Kermack and McKendrick a compartment model is established. This model comprises its own assumptions, transition rates and transmission dynamics, as well as a corresponding system of ordinary differential equations. Making use of numerical methods and a nonstandard-finite-difference scheme, two submodels are implemented in Matlab in order to make parameter estimations and compare different scenarios with each other. About the author Sarah Marie Treibert is a research assistant at the Chair of Applied Mathematics / Numerical Analysis of the University of Wuppertal (Bergische Universität Wuppertal). Her focus is on Epidemic Modelling.

