1. Record Nr. UNINA9910731466603321 Autore Hinze Michael **Titolo** Model Order Reduction and Applications: Cetraro, Italy 2021 / / by Michael Hinze, J. Nathan Kutz, Olga Mula, Karsten Urban; edited by Maurizio Falcone, Gianluigi Rozza Cham:,: Springer Nature Switzerland:,: Imprint: Springer,, 2023 Pubbl/distr/stampa 3-031-29563-3 **ISBN** Edizione [1st ed. 2023.] Descrizione fisica 1 online resource (241 pages) Collana C.I.M.E. Foundation Subseries;; 2328 Altri autori (Persone) KutzJ. Nathan MulaOlga UrbanKarsten FalconeMaurizio RozzaGianluigi Disciplina 518 Numerical analysis Soggetti Mathematical models Mathematics—Data processing Differential equations **Numerical Analysis** Mathematical Modeling and Industrial Mathematics Computational Mathematics and Numerical Analysis Differential Equations Equacions diferencials Models matemàtics Llibres electrònics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia This book addresses the state of the art of reduced order methods for Sommario/riassunto modelling and computational reduction of complex parametrised

systems, governed by ordinary and/or partial differential equations, with a special emphasis on real time computing techniques and applications in various fields. Consisting of four contributions

presented at the CIME summer school, the book presents several points of view and techniques to solve demanding problems of increasing complexity. The focus is on theoretical investigation and applicative algorithm development for reduction in the complexity – the dimension, the degrees of freedom, the data – arising in these models. The book is addressed to graduate students, young researchers and people interested in the field. It is a good companion for graduate/doctoral classes.