Record Nr. UNINA9910437642503321 Model Order Reduction . Volume 2 Snapshot-Based Methods and **Titolo** Algorithms / / Peter Benner, Wil Schilders, Stefano Grivet-Talocia, Alfio Quarteroni, Gianluigi Rozza, Luís Miguel Silveira Berlin; Boston:,: De Gruyter,, [2020] Pubbl/distr/stampa ©2021 **ISBN** 3-11-067149-2 Descrizione fisica 1 online resource (VIII, 348 p.) Collana Model Order Reduction; ; Volume 2 Disciplina 515.353 Soggetti MATHEMATICS / Numerical Analysis Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Frontmatter -- Preface to the second volume of Model Order Reduction Nota di contenuto -- Contents -- 1 Basic ideas and tools for projection-based model reduction of parametric partial differential equations -- 2 Model order reduction by proper orthogonal decomposition -- 3 Proper generalized decomposition -- 4 Reduced basis methods -- 5 Computational bottlenecks for PROMs: precomputation and hyperreduction -- 6 Localized model reduction for parameterized problems -- 7 Datadriven methods for reduced-order modeling -- Index An increasing complexity of models used to predict real-world systems Sommario/riassunto leads to the need for algorithms to replace complex models with far simpler ones, while preserving the accuracy of the predictions. This two-volume handbook covers methods as well as applications. This second volume focuses on applications in engineering, biomedical engineering, computational physics and computer science.