

1. Record Nr.	UNINA9910437642603321
Autore	Benner Peter
Titolo	Model Order Reduction . Volume 3 Applications // Peter Benner, Wil Schilders, Stefano Grivet-Talocia, Alfio Quarteroni, Gianluigi Rozza, Luís Miguel Silveira
Pubbl/distr/stampa	Berlin/Boston, : De Gruyter, 2020 Berlin ; ; Boston : , : De Gruyter, , [2020] ©2021
ISBN	3-11-049775-1 3-11-049900-2
Descrizione fisica	1 online resource (VIII, 466 p.)
Collana	Model Order Reduction ; ; Volume 3
Classificazione	SK 955
Disciplina	515.353
Soggetti	MATHEMATICS / Numerical Analysis
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Frontmatter -- Preface to the third volume of Model Order Reduction -- Contents -- 1 Model reduction in chemical process optimization -- 2 Model order reduction in mechanical engineering -- 3 Case studies of model order reduction for acoustics and vibrations -- 4 Model order reduction in microelectronics -- 5 Complexity reduction of electromagnetic systems -- 6 Model reduction in computational aerodynamics -- 7 Model order reduction in neuroscience -- 8 Reduced-order modeling for applications to the cardiovascular system -- 9 From the POD-Galerkin method to sparse manifold models -- 10 Model order reduction in uncertainty quantification -- 11 Reduced-order modeling of large-scale network systems -- 12 Model order reduction and digital twins -- 13 MOR software -- Index
Sommario/riassunto	An increasing complexity of models used to predict real-world systems leads to the need for algorithms to replace complex models with far simpler ones, while preserving the accuracy of the predictions. This three-volume handbook covers methods as well as applications. This third volume focuses on applications in engineering, biomedical engineering, computational physics and computer science.

