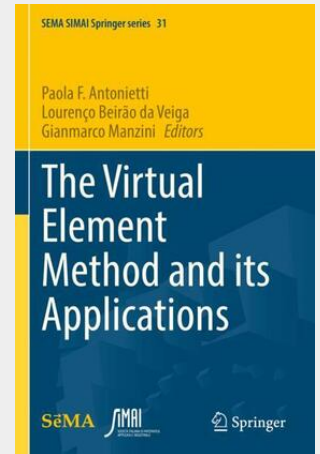


The Virtual Element Method and its Applications

The purpose of this book is to present the current state of the art of the Virtual Element Method (VEM) by collecting contributions from many of the most active researchers in this field and covering a broad range of topics: from the mathematical foundation to real life computational applications. The book is naturally divided into three parts. The first part of the book presents recent advances in theoretical and computational aspects of VEMs, discussing the generality of the meshes suitable to the VEM, the implementation of the VEM for linear and nonlinear PDEs, and the construction of discrete hessian complexes. The second part of the volume discusses Virtual Element discretization of paradigmatic linear and non-linear partial differential problems from computational mechanics, fluid dynamics, and wave propagation phenomena. Finally, the third part contains challenging applications such as the modeling of materials with fractures, magneto-hydrodynamics phenomena and contact solid mechanics. The book is intended for graduate students and researchers in mathematics and engineering fields, interested in learning novel numerical techniques for the solution of partial differential equations. It may as well serve as useful reference material for numerical analysts practitioners of the field.



106,99 €

99,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9783030953218

Medium: Buch

ISBN: 978-3-030-95321-8

Verlag: Springer International Publishing

Erscheinungstermin: 10.10.2023

Sprache(n): Englisch

Auflage: 1. Auflage 2022

Serie: SEMA SIMAI Springer Series

Produktform: Kartoniert

Gewicht: 943 g

Seiten: 605

Format (B x H): 155 x 235 mm

