1. Record Nr. UNINA9910254067103321

Titolo	Numerical Simulation in Physics and Engineering : Lecture Notes of the XVI 'Jacques-Louis Lions' Spanish-French School / / edited by Inmaculada Higueras, Teo Roldán, Juan José Torrens
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2016
ISBN	3-319-32146-3
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (IX, 251 p. 72 illus., 59 illus. in color.)
Collana	SEMA SIMAI Springer Series, , 2199-305X ; ; 9
Disciplina	530.15
Soggetti	Mathematical models Numerical analysis Differential equations Computer vision Computer programming Mathematical Modeling and Industrial Mathematics Numerical Analysis Differential Equations Computer Vision Programming Techniques
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	1 L. Beirão da Veiga, A. Buffa, G. Sangalli, and R. Vázquez: An introduction to the numerical analysis of isogeometric methods -- 2 M. Hassell and F.–J. Sayas: Convolution Quadrature for Wave Simulations -- 3 A. Baeza: Mathematical Methods in Image Processing and Computer Vision -- 4 E. Balsa-Canto, A. A. Alonso, A. Arias-Méndez, M.R. García, A. López-Núñez, M. Mosquera-Fernández, C. Vázquez, and C. Vilas: Modeling and optimization techniques with applications in food processes, bio-processes and bio-systems -- 5 J. M. Mantas, M. De la Asunción, and M. J. Castro: An introduction to GPU computing for numerical simulation.
Sommario/riassunto	This book presents lecture notes from the XVI ‘Jacques-Louis Lions’ Spanish-French School on Numerical Simulation in Physics and

Engineering, held in Pamplona (Navarra, Spain) in September 2014. The subjects covered include: numerical analysis of isogeometric methods, convolution quadrature for wave simulations, mathematical methods in image processing and computer vision, modeling and optimization techniques in food processes, bio-processes and bio-systems, and GPU computing for numerical simulation. The book is highly recommended to graduate students in Engineering or Science who want to focus on numerical simulation, either as a research topic or in the field of industrial applications. It can also benefit senior researchers and technicians working in industry who are interested in the use of state-of-the-art numerical techniques in the fields addressed here. Moreover, the book can be used as a textbook for master courses in Mathematics, Physics, or Engineering.