

1. Record Nr.	UNINA9910437943803321
Titolo	GPU solutions to multi-scale problems in science and engineering // edited by David A. Yuen ...[et al.]
Pubbl/distr/stampa	Berlin ; ; New York, : Springer, c2013
ISBN	1-299-19746-9 3-642-16405-6
Edizione	[1st ed. 2013.]
Descrizione fisica	1 online resource (676 p.)
Collana	Lecture notes in earth system sciences, , 2193-8571
Altri autori (Persone)	YuenDavid A
Disciplina	006.6
Soggetti	Graphics processing units High performance computing Multivariate analysis - Data processing
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Initial-value problems associated with viscoelasticity in the geosciences -- The geophysical phenomenon of Glacial Isostatic Adjustment -- Initial Value Approach with the MOL -- Elastic and Viscoelastic Responses -- Current Numerical Methods for integrating VIP -- GPU Hardware aspects -- GPU Software aspects -- Philosophy of GPU Implementation of the MOL in VIP problems -- Code conversion versus Code implementation using CUDA or Open CL -- Examples of Postglacial Rebound -- Future Perspectives of VIP on GPU.
Sommario/riassunto	This book covers the new topic of GPU computing with many applications involved, taken from diverse fields such as networking, seismology, fluid mechanics, nano-materials, data-mining , earthquakes ,mantle convection, visualization. It will show the public why GPU computing is important and easy to use. It will offer a reason why GPU computing is useful and how to implement codes in an everyday situation.