Record Nr. UNINA9910780921903321 Multi-scale phenomena in complex fluids [[electronic resource]]: Titolo modeling, analysis and numerical simulation / / editors, Thomas Y. Hou, Chun Liu, Jian-Guo Liu Beijing,: Higher Education Press Pubbl/distr/stampa [Hackensack], N.J., : World Scientific, c2009 **ISBN** 7-89423-624-1 1-282-44316-X 9786612443169 981-4273-26-0 Descrizione fisica 1 online resource (379 p.) Collana Series in contemporary applied mathematics;; 12 Altri autori (Persone) HouThomas Y LiuChun LiuJian-Guo Disciplina 532.00151 Fluid dynamics - Mathematics Soggetti Complex fluids - Analysis Complex fluids - Mathematics Differential equations, Partial - Mathematical models Numerical analysis - Simulation methods Lingua di pubblicazione Inglese **Formato** Materiale a stampa Monografia Livello bibliografico Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references. Nota di contenuto Preface: Contents: Zhaojun Bai, Wenbin Chen, Richard Scalettar, Ichitaro Yamazaki: Numerical Methods for Quantum Monte Carlo Simulations of the Hubbard Model; Albert C. Fannjiang: Introduction to Propagation, Time Reversal and Imaging in Random Media; Thomas Y. Hou: Multiscale Computations for Flow and Transport in Porous Media; Chun Liu: An Introduction of Elastic Complex Fluids: An Energetic Variational Approach; Qi Wang: Introduction to Kinetic Theory for Complex Fluids Multi-Scale Phenomena in Complex Fluids is a collection of lecture

> notes delivered during the first two series of mini-courses from "Shanghai Summer School on Analysis and Numerics in Modern Sciences", which was held in 2004 and 2006 at Fudan University,

Sommario/riassunto

Shanghai, China. This review volume of 5 chapters, covering various fields in complex fluids, places emphasis on multi-scale modeling, analyses and simulations. It will be of special interest to researchers and graduate students who want to work in the field of complex fluids.