1.

Record Nr.	UNISOBVAN0038988
Autore	Shatz, Sol M.
Titolo	Tutorial : distributed-software engineering / Sol M. Shatz and Jia-Ping Wang
Pubbl/distr/stampa	Washington, : IEEE Computer Society, 1989
Titolo uniforme	Tutorial : distributed-software engineering
ISBN	08-18-68856-4
Descrizione fisica	IX, 279 p. : ill. ; 29 cm
Altri autori (Persone)	Wang, Jia-Ping
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia

2.

Record Nr.	UNINA9910337461403321
Autore	Zhang Jie
Titolo	The Developments and the Applications of the Numerical Algorithms in Simulating the Incompressible Magnetohydrodynamics with Complex Boundaries and Free Surfaces / / by Jie Zhang
Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2019
ISBN	981-10-6340-0
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (XV, 145 p. 95 illus., 81 illus. in color.)
Collana	Springer Theses, Recognizing Outstanding Ph.D. Research, , 2190-5053
Disciplina	620.1064
Soggetti	Fluid mechanics
	Mechanics
	Algorithms
	Engineering Fluid Dynamics
	Classical Mechanics
	Mathematics of Algorithmic Complexity
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia

Nota di contenuto	Introduction -- Governing Equations -- Numerical schemes -- The validations of the numerical methodology -- The argon bubble rising in the liquid GaInSn under the inuence of a vertical magnetic eld -- The argon bubble rising in the liquid GaInSn under the inuence of a horizontal magnetic eld. .
Sommario/riassunto	This thesis presents an accurate and advanced numerical methodology to remedy difficulties such as direct numerical simulation of magnetohydrodynamic (MHD) flow in computational fluid dynamics (CFD), grid generation processes in tokamak fusion facilities, and the coupling between the surface tension force and Lorentz force in the metallurgical industry. In addition, on the basis of the numerical platform it establishes, it also investigates selected interesting topics, e.g. single bubble motion under the influence of either vertical or horizontal magnetic fields. Furthermore, it confirms the relation between the bubble's path instability and wake instability, and observes the anisotropic (isotropic) effect of the vertical (horizontal) magnetic field on the vortex structures, which determines the dynamic behavior of the rising bubble. The direct numerical simulation of magnetohydrodynamic (MHD) flows has proven difficult in the field of computational fluid dynamic (CFD) research, because it not only concerns the coupling of the equations governing the electromagnetic field and the fluid motion, but also calls for suitable numerical methods for computing the electromagnetic field. In tokamak fusion facilities, where the MHD effect is significant and the flow domain is complex, the process of grid generation requires considerable time and effort. Moreover, in the metallurgical industry, where multiphase MHD flows are usually encountered, the coupling between the surface tension force and Lorentz force adds to the difficulty of deriving direct numerical simulations.