1. Record Nr. UNISA996418164603316

Titolo	Cryocoolers [[electronic resource]] : Theory and Applications / / edited by Milind D. Atrey
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
ISBN	3-030-11307-8
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (X, 236 p. 178 illus., 149 illus. in color.)
Collana	International Cryogenics Monograph Series, , 0538-7051
Disciplina	536.56
Soggetti	Low temperature physics Low temperatures Thermodynamics Heat engineering Heat transfer Mass transfer Medical physics Radiation Aerospace engineering Astronautics Low Temperature Physics Engineering Thermodynamics, Heat and Mass Transfer Medical and Radiation Physics Aerospace Technology and Astronautics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Preface -- Atrey -- Pfotenhauer -- Jeong -- Kirichek -- Shirron -- Stautner -- Bain -- Caughley -- Stautner -- Spagna.
Sommario/riassunto	This book serves as an introduction to cryocooler technology and describes the principle applications of cryocoolers across a broad range of fields. It covers the specific requirements of these applications, and describes how the advantages and disadvantages of different cryocooler systems are taken into consideration. For example, Stirling coolers tend to be used only in space applications because of their high

coefficient of performance, low weight and proven reliability, whilst Gifford-McMahon coolers are used for ground applications, such as in cryopumps and MRI shield cooling applications. Joule-Thomson cryocoolers are used in missile technology because of the fast cool down requirements. The cryocooler field is fast developing and the number of applications are growing because of the increasing costs of the cryogens such as Helium and Neon. The first chapter of the book introduces the different types of cryocoolers, their classification, working principles, and their design aspects, and briefly mentions some of the applications of these systems. This introductory chapter is followed by a number of contributions from prominent international researchers, each describing a specific field of application, the cooling requirements and the cryocooler systems employed. These areas of application include gas liquefaction, space technology, medical science, dilution refrigerators, missile systems, and physics research including particle accelerators. Each chapter describes the cooling requirements based on the end use, the approximate cooling load calculations, the criteria for cryocooler selection, the arrangement for cryocooler placement, the connection of the cooler to the object to be cooled, and includes genuine case studies. Intended primarily for researchers working on cryocoolers, the book will also serve as an introduction to cryocooler technology for students, and a useful reference for those using cryocooler systems in any area of application.

2. Record Nr. UNINA9910563192803321

Autore	Beiwinkel Konrad
Titolo	Wehrgerechtigkeit als finanzpolitisches Verteilungsproblem : Möglichkeiten einer Kompensation von Wehrungerechtigkeit durch monetäre Transfers / Christa Littmann, Konrad Beiwinkel
Pubbl/distr/stampa	Frankfurt a.M, : PH02, 2018 2018, c1987
Edizione	[1st, New ed.]
Descrizione fisica	1 online resource (205 p.) : , EPDF
Collana	Finanzwissenschaftliche Schriften ; 29
Soggetti	Military administration Political economy
Lingua di pubblicazione	Tedesco
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Peter Lang GmbH, Internationaler Verlag der Wissenschaften
Nota di contenuto	Aus dem Inhalt: Identifikation des Wehrgerechtigkeitsproblems - Ansatze zur Begrundung einer monetaren Kompensation - Die wirtschaftliche Belastung der Dienstleistenden - Der wirtschaftliche Lastenausgleich aus konzeptioneller und praktischer Sicht.
Sommario/riassunto	Die allgemeine Wehrpflicht in der Bundesrepublik Deutschland ist keineswegs «allgemein», sondern vielmehr speziell bzw. selektiv. Insbesondere diese Tatsache ist in der politischen Diskussion Anlass, einen Mangel an Wehrgerechtigkeit zu konstatieren. Gegenstand dieser Untersuchung ist die Frage nach einer konsensfahigen, widerspruchsfreien und operationalen Definition von Wehrgerechtigkeit und die Analyse alternativer finanzpolitischer Konzepte zur Durchsetzung von (mehr) Wehrgerechtigkeit in konzeptioneller und praktischer Hinsicht.

3. 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.