1. Record Nr. UNINA9910787770903321

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Titolo	Cavitation and bubble dynamics / / Christopher E. Brennen, California Institute of Technology [[electronic resource]]
Pubbl/distr/stampa	Cambridge : , : Cambridge University Press, , 2014
ISBN	1-107-50324-8 1-139-89546-X 1-107-50418-X 1-107-49768-X 1-107-51725-7 1-107-50145-8 1-107-50683-2 1-107-33876-X
Descrizione fisica	1 online resource (xvii, 249 pages) : digital, PDF file(s)
Classificazione	TEC009070
Disciplina	532/.597
Soggetti	Bubbles - Dynamics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from publisher's bibliographic system (viewed on 05 Oct 2015).
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Phase change, nucleation, and cavitation -- Spherical bubble dynamics -- Cavitation bubble collapse -- Dynamics of oscillating bubbles -- Translation of bubbles -- Homogeneous bubbly flows -- Cavitating flows -- Free streamline flows.
Sommario/riassunto	Cavitation and Bubble Dynamics deals with the fundamental physical processes of bubble dynamics and the phenomenon of cavitation. It is ideal for graduate students and research engineers and scientists, and a basic knowledge of fluid flow and heat transfer is assumed. The analytical methods presented are developed from basic principles. The book begins with a chapter on nucleation and describes both the theory and observations in flowing and non-flowing systems. Three chapters provide a systematic treatment of the dynamics and growth, collapse, or oscillation of individual bubbles in otherwise quiescent fluids. The following chapters summarise the motion of bubbles in liquids, describe some of the phenomena that occur in homogeneous bubbly flows, with emphasis on cloud cavitation, and summarise some of the

experimental observations of cavitating flows. The last chapter provides a review of free streamline methods used to treat separated cavity flows with large attached cavities.