1. Record Nr. UNISALENTO991003221639707536

Autore	Paidoussis, Michael P.
Titolo	Fluid-structure interactions [e-book] : slender structures and axial flow / Michael P. Paidoussis
Pubbl/distr/stampa	San Diego, CA : Academic Press, Inc., 1998-
ISBN	9780125443609 0125443609
Descrizione fisica	v. <1- > : ill. ; 25 cm.
Disciplina	624.171
Soggetti	Fluid-structure interaction Electronic books.
Lingua di pubblicazione	Inglese
Formato	Risorsa elettronica
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index
Nota di contenuto	Preface. Introduction. Concepts, Definitions and Methods. Pipes Conveying Fluid: Linear Dynamics I. Pipes Conveying Fluid: Linear Dynamics II. Nonlinear and Chaotic Dynamics. Curved Pipes Conveying Fluid. First-Principles Derivation of Equation of Motion. Analytical Evaluation of h2r, c2, and d3r. Destabilization by Damping. Experimental Methods for Elastomer Pipes. Timoshenko Equations and Associated Analysis. Basics of Nonlinear Dynamics. Newtonian Derivation of Nonlinear Equations. Nonlinear Analysis of a Pipe Conveying Fluid. Fractal Dimension. Derivations for Equations in Chapter 6. Matrices for an Extensible Curved Pipe. Subject Index
Sommario/riassunto	This volume emphasizes the fundamentals and mechanisms giving rise to flow-induced vibration of use to researchers, designers, and operators. Fluid-Structure Interactions provides useful problem-solving tools, and conveys the ideas in a physically comprehensible manner. The book includes a complete bibliography of important work in the field. . The Non-linear behaviour of Fluid-Structure interactions . The possible existence of chaotic oscillations . The use of this area as a model to demonstrate new mathematical techniques This book will prove invaluable to researchers, practitioners, and students in fluid-structure interactions, flow-induced vibrations, and dynamics and vibrations