1.	Record Nr.	UNINA9910130864103321
	Autore	Fossen Thor I.
	Titolo	Handbook of marine craft hydrodynamics and motion control / / Thor I. Fossen
	Pubbl/distr/stampa	Chichester, England : , : Wiley, , 2011 ©2011
	ISBN	1-283-40556-3 9786613405562 1-119-99868-9 1-119-99412-8 1-119-99413-6
	Descrizione fisica	1 online resource (597 p.)
	Classificazione	SCI064000
	Disciplina	623.8/1 623.81
	Soggetti	Ships - Hydrodynamics Stability of ships Motion control devices Automatic pilot (Ships) Steering-gear Ships - Electronic equipment Electronic books.
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Description based upon print version of record.
	Nota di bibliografia	Includes bibliographical references and index.
	Nota di contenuto	HANDBOOK OF MARINE CRAFT HYDRODYNAMICS AND MOTION CONTROL; Contents; About the Author; Preface; List of Tables; Part One: Marine Craft Hydrodynamics; 1 Introduction; 1.1 Classification of Models; 1.2 The Classical Models in Naval Architecture; 1.2.1 Maneuvering Theory; 1.2.2 Seakeeping Theory; 1.2.3 Unified Theory; 1.3 Fossen's Robot-Like Vectorial Model for Marine Craft; 2 Kinematics; 2.1 Reference Frames; 2.2 Transformations between BODY and NED; 2.2.1 Euler Angle Transformation; 2.2.2 Unit Quaternions; 2.2.3 Quaternions from Euler Angles; 2.2.4 Euler Angles from Quaternions 2.3 Transformations between ECEF and NED2.3.1 Longitude and

Sommario/riassunto	The technology of hydrodynamic modeling and marine craft motion control systems has progressed greatly in recent years. This timely survey includes the latest tools for analysis and design of advanced guidance, navigation and control systems and presents new material on underwater vehicles and surface vessels. Each section presents numerous case studies and applications, providing a practical understanding of how model-based motion control systems are designed. Key features include:a three-part structure covering Modeling of Marine Craft; Guidance, Navigation and Control Systems; and