

1. Record Nr.	UNINA9910299695603321
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Titolo	Submarine Hydrodynamics / / by Martin Renilson
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2015
ISBN	3-319-16184-9
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (163 p.)
Collana	SpringerBriefs in Applied Sciences and Technology, , 2191-530X
Disciplina	623.8257
Soggetti	Fluid mechanics Fluids Automatic control Engineering Fluid Dynamics Fluid- and Aerodynamics Control and Systems Theory
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 at the end of each chapters.
Nota di contenuto	1 Introduction -- 2 Hydrostatics and Control -- 3 Manoeuvring and Control -- 4 Resistance and Flow -- 5 Propulsion -- 6 Appendage Design -- 7 Hydro-Acoustic Performance.
Sommario/riassunto	This book adopts a practical approach and presents recent research together with applications in real submarine design and operation. Topics covered include hydrostatics, manoeuvring, resistance and propulsion of submarines. The author briefly reviews basic concepts in ship hydrodynamics and goes on to show how they are applied to submarines, including a look at the use of physical model experiments. The issues associated with manoeuvring in both the horizontal and vertical planes are explained, and readers will discover suggested criteria for stability, along with rudder and hydroplane effectiveness. The book includes a section on appendage design which includes information on sail design, different arrangements of bow planes and alternative stern configurations. Other themes explored in this book include hydro-acoustic performance, the components of resistance and the effect of hull shape. Readers will value the author's applied experience as well as the empirical expressions that are presented for

use at the preliminary design stage. A wide range of state-of-the-art material is included, and there are over fifty references to recent publications in the field. Intended for advanced students and professionals working in the specialised field of submarine hydrodynamics, this book brings theoretical and practical knowledge together in one comprehensive work that is particularly valuable to the submarine hydrodynamicist.
