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Titolo	Ship hydrostatics and stability [e-book] / Adrian Biran
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Nota di contenuto	Preface; Acknowledgements; Definitions, principal dimensions; Basic ship hydrostatics; Numerical integration in naval architecture; Hydrostatic curves; Statical stability at large angles of heel; Simple models of stability; Weight and trim calculations; Intact stability regulations I; Parametric resonance; Intact stability regulations II; Flooding and damage condition; Linear ship response in waves; Computer methods; Bibliography; Index
Sommario/riassunto	The hydrostatic approach to ship stability aims to balance idealized ship weight against buoyancy forces. This textbook is a complete guide to understanding ship hydrostatics in ship design and ship performance. Adrian Biran guides readers from first principles through basic and applied hydrostatic and ship stability theory, and introduces contemporary mathematical techniques for hydrostatic modelling and analysis. Real life examples of the practical application of hydrostatics are used to explain the theory and calculations; and to illustrate the effect shifting weights and central gravity displacements have on overall ship stability. Ship Hydrostatics and Stability covers recent developments in the field of naval architecture such as parametric resonance (also known as the Mathieu effect), the effects of non-linear motions on stability, the influence of ship lines, and new international stability regulations for small vessels. Extensive use of computer techniques is made throughout and downloadable MATLAB files

accompany the book to support readers' own hydrostatic and stability calculations. A revised reprint was published in 2005 that includes tables of terms and indexes in French, German, Italian and Spanish. \* Adheres to international standards and terminology \* Includes real life practical examples and calculations to illustrate the hydrostatic approach to ship stability \* Accompanied by free downloadable MATLAB files to support readers' own hydrostatic and stability calculations

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