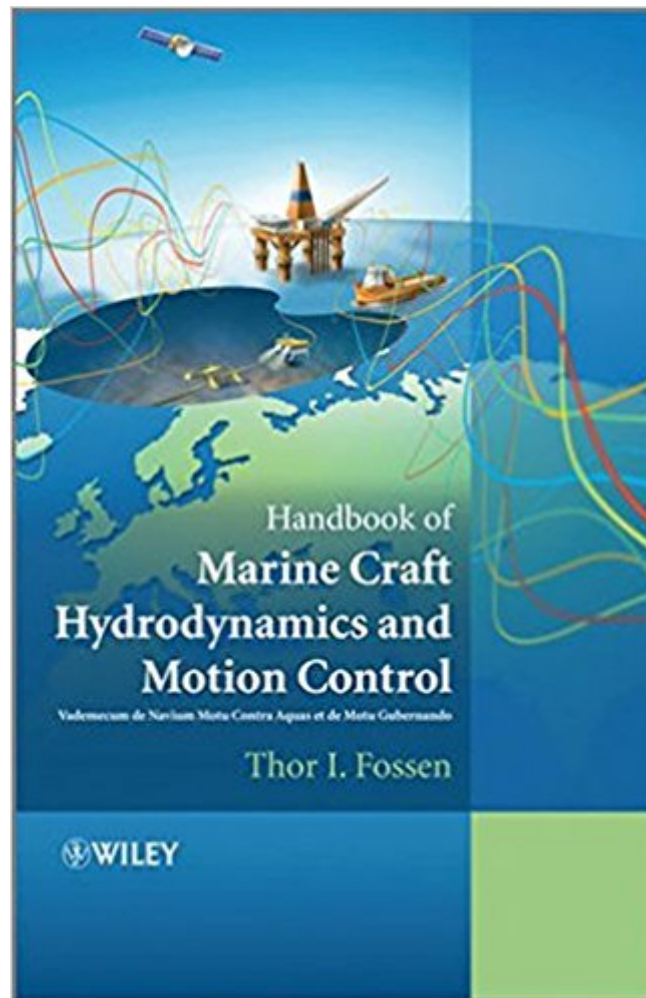




**Ebook Directory**  
the best source of ebook

The book was found

# Handbook Of Marine Craft Hydrodynamics And Motion Control



## Synopsis

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 Appendices, providing all the supporting theory in a single resource kinematics, kinetics, hydrostatics, seakeeping and maneuvering theory, and simulation models for marine craft and environmental forces— guidance systems, sensor fusion and integrated navigation systems, inertial measurement units, Kalman filtering and nonlinear observer design for marine craft state-of-the-art methods for feedback control more advanced methods using nonlinear theory, enabling the user to compare linear design techniques before a final implementation is made. linear and nonlinear stability theory, and numerical methods— a companion website that hosts links to lecture notes and download information for the Marine Systems Simulator (MSS) which is an open source Matlab/Simulink— toolbox for marine systems. The MSS toolbox includes hydrodynamic models and motion control systems for ships, underwater vehicles and floating structures With an appropriate balance between mathematical theory and practical applications, academic and industrial researchers working in marine and control engineering aspects of manned and unmanned maritime vehicles will benefit from this comprehensive handbook. It is also suitable for final year undergraduates and postgraduates, lecturers, development officers, and practitioners in the areas of rigid-body modeling, hydrodynamics, simulation of marine craft, control and estimation theory, decision-support systems and sensor fusion. [www.wiley.com/go/fossen\\_marine](http://www.wiley.com/go/fossen_marine)

## Book Information

Hardcover: 596 pages

Publisher: Wiley; 1 edition (May 23, 2011)

Language: English

ISBN-10: 1119991498

ISBN-13: 978-1119991496

Product Dimensions: 6.9 x 1.5 x 9.7 inches

Shipping Weight: 2.5 pounds (View shipping rates and policies)

Average Customer Review: 4.0 out of 5 stars 2 customer reviews

Best Sellers Rank: #904,034 in Books (See Top 100 in Books) #154 in Books > Engineering & Transportation > Engineering > Marine Engineering #256 in Books > Science & Math > Physics > System Theory #1226 in Books > Engineering & Transportation > Transportation > Ships

## Customer Reviews

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 Appendices, providing all the supporting theory in a single resource
- kinematics, kinetics, hydrostatics, seakeeping and maneuvering theory, and simulation models for marine craft and environmental forces
- guidance systems, sensor fusion and integrated navigation systems, inertial measurement units, Kalman filtering and nonlinear observer design for marine craft
- state-of-the-art methods for feedback control
- more advanced methods using nonlinear theory, enabling the user to compare linear design techniques before a final implementation is made.
- linear and nonlinear stability theory, and numerical methods
- companion website that hosts links to lecture notes and download information for the Marine Systems Simulator (MSS) which is an open source Matlab/Simulink® toolbox for marine systems. The MSS toolbox includes hydrodynamic models and motion control systems for ships, underwater vehicles and floating structures

With an appropriate balance between mathematical theory and practical applications, academic and industrial researchers working in marine and control engineering aspects of manned and unmanned maritime vehicles will benefit from this comprehensive handbook. It is also suitable for final year undergraduates and postgraduates, lecturers, development officers, and practitioners in the areas of rigid-body modeling, hydrodynamics, simulation of marine craft, control and estimation theory, decision-support systems and sensor fusion. [www.wiley.com/go/fossen\\_marine](http://www.wiley.com/go/fossen_marine)

I found the matrix math in this book very interesting; it really builds to a comprehensive solution. All-in-all, one of the more interesting texts I've read since college.

This is an excellent book on its topic, but the implementation of the e-book is not particularly good. Equations have poor resolution, equation numbering is not in line with the equations and some links seem to be missing. All in all I really recommend the book itself, but order the paper version, not the e-book.

[Download to continue reading...](#)

Handbook of Marine Craft Hydrodynamics and Motion Control Marine Hydrodynamics (MIT Press)  
Applied Hydrodynamics in Petroleum Exploration Practical Ship Hydrodynamics, Second Edition  
Topological Methods in Hydrodynamics (Applied Mathematical Sciences) Physical Hydrodynamics  
Handbook of Marine Mineral Deposits (CRC Marine Science) NLP: Neuro Linguistic Programming:  
Re-program your control over emotions and behavior, Mind Control - 3rd Edition (Hypnosis,  
Meditation, Zen, Self-Hypnosis, Mind Control, CBT) NLP: Persuasive Language Hacks: Instant  
Social Influence With Subliminal Thought Control and Neuro Linguistic Programming (NLP, Mind  
Control, Social Influence, ... Thought Control, Hypnosis, Communication) Sight, Sound, Motion (Sight,  
Sound, Motion: Applied Media Aesthetics) (Wadsworth Series in Broadcast and Production)  
[Hardcover](2010) by Herbert Zettl Step-by-Step Free-Motion Quilting: Turn 9 Simple Shapes into  
80+ Distinctive Designs – Best-selling author of First Steps to Free-Motion Quilting Stop  
Motion: Craft Skills for Model Animation (Focal Press Visual Effects and Animation) Stop Motion:  
Craft Skills for Model Animation Marine Diesel Engines: Maintenance, Troubleshooting, and Repair  
(International Marine-RMP) Reeds Vol 12 Motor Engineering Knowledge for Marine Engineers  
(Reeds Marine Engineering and Technology Series) Reeds Vol 1: Mathematics for Marine  
Engineers (Reeds Marine Engineering and Technology Series) Reeds Vol 2: Applied Mechanics for  
Marine Engineers (Reeds Marine Engineering and Technology Series) Reeds Vol 6: Basic  
Electrotechnology for Marine Engineers (Reeds Marine Engineering and Technology Series)  
Deliverance from Marine Spirits: Powerful Prayers to Overcome Marine Spirits – Spirit  
Husbands and Spirit Wives - Permanently. (Deliverance Series Book 1) Casualty investigation code:  
code of international standards and recommended practices for a safety investigation into a marine  
casualty or marine incident

[Contact Us](#)

[DMCA](#)

[Privacy](#)

