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Titolo	Gems in experimental mathematics : AMS Special Session, Experimental Mathematics, January 5, 2009, Washington, DC // Tewodros Amdeberhan, Luis A. Medina, Victor H. Moll, editors
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ISBN	0-8218-8196-5 0-8218-4869-0
Descrizione fisica	1 online resource (426 p.)
Collana	Contemporary mathematics ; ; 517
Disciplina	511/.6
Soggetti	Combinatorial analysis Number theory Experimental mathematics Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"This collection [of papers] is a continuation of Tapas in experimental mathematics, volume 457 [Contemporary Mathematics series]"-- Preface.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	""A new algorithm for the recursion of hypergeometric multisums with improved universal denominator""""1. Introduction""; ""2. Two algorithms""; ""3. Use of the program and examples""; ""4. Proof of the multisum algorithm""; ""5. Proof of the universal denominator algorithm""; ""References""; ""The method of brackets. Part 2: Examples and applications""; ""History of the formulas and algorithms for $1/\zeta$ ""; ""A matrix form of Ramanujan-type series for $1/\zeta$ ""; ""An algorithmic approach to the Mellin transform method"" ""Which partial sums of the Taylor series for e are convergents to e ? (and a link to the primes 2, 5, 13, 37, 463). Part II""""Experimentation at the frontiers of reality in Schubert calculus""; ""On Sp_4 modularity of Picard-Fuchs differential equations for Calabi-Yau threefolds""

2. Record Nr.	UNINA9910130864103321
Autore	Fossen Thor I.
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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

Latitude Transformations; 2.3.2 Longitude and Latitude from ECEF
 Coordinates; 2.3.3 ECEF Coordinates from Longitude and Latitude; 2.4
 Transformations between BODY and FLOW; 2.4.1 Definitions of Course,
 Heading and Sideslip Angles; 2.4.2 Sideslip and Angle of Attack; 3
 Rigid-Body Kinetics; 3.1 Newton-Euler Equations of Motion about CG;
 3.1.1 Translational Motion about CG; 3.1.2 Rotational Motion about CG;
 3.2 Newton-Euler Equations of Motion about CO; 3.2.1 Translational
 Motion about CO; 3.2.2 Rotational Motion about CO
 3.3 Rigid-Body Equations of Motion3.3.1 Nonlinear 6 DOF Rigid-Body
 Equations of Motion; 3.3.2 Linearized 6 DOF Rigid-Body Equations of
 Motion; 4 Hydrostatics; 4.1 Restoring Forces for Underwater Vehicles;
 4.1.1 Hydrostatics of Submerged Vehicles; 4.2 Restoring Forces for
 Surface Vessels; 4.2.1 Hydrostatics of Floating Vessels; 4.2.2 Linear
 (Small Angle) Theory for Boxed-Shaped Vessels; 4.2.3 Computation of
 Metacenter Height for Surface Vessels; 4.3 Load Conditions and Natural
 Periods; 4.3.1 Decoupled Computation of Natural Periods
 4.3.2 Computation of Natural Periods in a 6 DOF Coupled System4.3.3
 Natural Period as a Function of Load Condition; 4.4 Ballast Systems;
 4.4.1 Conditions for Manual Pretrimming; 4.4.2 Automatic Pretrimming
 using Feedback from z , $\dot{z}$, and $\ddot{z}$; 5 Seakeeping Theory; 5.1
 Hydrodynamic Concepts and Potential Theory; 5.1.1 Numerical
 Approaches and Hydrodynamic Codes; 5.2 Seakeeping and
 Maneuvering Kinematics; 5.2.1 Seakeeping Reference Frame; 5.2.2
 Transformation between BODY and SEAKEEPING; 5.3 The Classical
 Frequency-Domain Model; 5.3.1 Potential Coefficients and the Concept
 of Forced Oscillations
 5.3.2 Frequency-Domain Seakeeping Models5.4 Time-Domain Models
 including Fluid Memory Effects; 5.4.1 Cummins Equation in SEAKEEPING
 Coordinates; 5.4.2 Linear Time-Domain Seakeeping Equations in BODY
 Coordinates; 5.4.3 Nonlinear Unified Seakeeping and Maneuvering
 Model with Fluid Memory Effects; 5.5 Case Study: Identification of Fluid
 Memory Effects; 5.5.1 Frequency-Domain Identification using the MSS
 FDI Toolbox; 6 Maneuvering Theory; 6.1 Rigid-Body Kinetics; 6.2
 Potential Coefficients; 6.2.1 3 DOF Maneuvering Model; 6.2.2 6 DOF
 Coupled Motions
 6.3 Nonlinear Coriolis Forces due to Added Mass in a Rotating
 Coordinate System

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;
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