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Titolo	Ninth International Conference on Numerical Methods in Fluid Dynamics [[electronic resource] /] / edited by Soubbaramayer, J. P. Boujot
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Collana	Lecture Notes in Physics, , 0075-8450 ; ; 218
Disciplina	531
Soggetti	Continuum physics Fluids Physics Classical and Continuum Physics Fluid- and Aerodynamics Mathematical Methods in Physics Numerical and Computational Physics, Simulation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	Remarks on approximation schemes -- Topics in the numerical simulation of high temperature flows -- Compact explicit finite-difference approximations to the Navier-Stokes equations -- Time-splitting and the finite element method -- Spectral methods for compressible flow problems -- Global relaxation procedures for a reduced form of the Navier-Stokes equations -- Modelisation numerique d'ecoulements turbulents instationnaires en canalisation cylindrique -- On the use of rational Runge-Kutta methods in Euler steady-state computations -- Probating a finite difference fractional time step, Navier-Stokes code by large eddy simulation -- GRP — An analytic approach to high-resolution upwind schemes for compressible fluid flow -- An adaptive multigrid method for the euler equations -- Direct simulations of spatially evolving compressible turbulence — techniques and results -- Free decay of high reynolds number two dimensional turbulence -- Finite element calculation of potential flow

around wings -- Finite element methods for solving the Navier-Stokes equations for compressible unsteady flows -- Numerical solutions of the Euler equations with separation by a finite element method -- Chebyshev spectral and pseudospectral solutions of the Navier-Stokes equations -- Analysis of strongly interacting viscous-inviscid flows including separation -- An improved Euler method for computing steady transonic flows -- A semi-direct procedure using a local relaxation factor and its application to an internal flow problem -- Viscous computation of a space shuttle flow field -- Numerical calculation of complex shock reflections in gases -- Boundary layer modelling in a numerical weather prediction model -- Modelling of two-dimensional bubbles in vertical tubes -- A time dependent free boundary governed by the Navier-Stokes equations -- A perturbative lambda formulation -- Numerical modeling of vortex merging in axisymmetric mixing layers -- A new modified semi-explicit difference scheme in aerodynamics -- Three-dimensional computations of non-isothermal wall bounded complex flows -- A multigrid technique for steady Euler equations based on flux-difference splitting -- Generation of fully adaptive and/or orthogonal grids -- Computation of compressible two-dimensional turbulence in non rotating and rotating flows -- Comparison of the full-potential and Euler formulations for computing transonic airfoil flows -- Numerical simulations of fuel droplet flows using a Lagrangian triangular mesh -- On boundary conditions for inner incompressible flows -- Fast three-dimensional flux-corrected transport code for highly resolved compressible flow calculations -- A numerical study of the two- and three-dimensional unsteady Navier-Stokes equations in velocity-vorticity variables using compact difference schemes -- Improvements in the accuracy and stability of algorithms for the small-disturbance and full-potential equations applied to transonic flows -- 3D industrial flows calculations by finite element method -- Transonic flows through cascades -- Two-dimensional model for the two-phase flow simulation in a viking rocket engine combustion chamber -- A numerical solution to the motion of a lubricant squeezed between two rotating coaxial disks -- Numerical simulation of gas motion in piston engines -- Modelisation numerique d'E la separation contribuge d'un melange -- Supersonic flow past circular cones at high angles of yaw, downstream of separation -- A two-grid method for fluid dynamic problems with disparate time scales -- Multiple-grid solution of the three-dimensional Edler and Navier-Stokes equations -- New higher-order upwind scheme for incompressible Navier-Stokes equations -- Solution of the parabolized Navier-Stokes equations for three-dimensional internal flows -- Implicit solution of the 3-D compressible Navier-Stokes equations for internal flows -- Computation of three-dimensional vortex flows past wings using the EULER Equations and a multiple-grid scheme -- A spectral element method applied to unsteady flows at moderate Reynolds number -- The computation of three-dimensional transonic viscous flows with separation -- A numerical method of solution for the Kelvin-Neumann problem -- Numerical solution of unsteady transonic flows past thin profiles -- Potential application of artificial intelligence concepts to numerical aerodynamic simulation -- A solution procedure for three-dimensional incompressible Navier-Stokes equation and its application -- A multi-zonal-marching integral method for 3d-boundary layer with viscous-inviscid interaction -- An implicit method for solving fluid dynamics equations -- L.E.A. Un code hydrodynamique multifluide bidimensionnel -- Spectral simulations of 2D compressible flows -- A multigrid factorization technique for the flux-split Euler equations -- Numerical study of the three-dimensional incompressible

flow between closed rotating cylinders -- An adaptive finite element method for high speed compressible flow -- Analysis of separated flow in a pipe orifice using unsteady Navier-Stokes equations -- The convective dynamo : A numerical experiment -- A second-order accurate flux splitting scheme in two-dimensional gasdynamics -- A comparison of finite difference and characteristic Galerkin methods for shock modelling -- Multigrid relaxation for the Euler equations -- A practical adaptive-grid method for complex fluid-flow problems -- Orthogonal grid generation by boundary grid relaxation algorithms -- A new LU factored method for the compressible Navier-Stokes equations -- Time-dependent non-uniform grids for parabolic equations -- Numerical simulation of dynamics of an autorotating airfoil -- Transient multiple wave number convective instability in a 2-dimensional enclosed rotating fluid -- Numerical computation of 3-D fire-induced flows and smoke coagulation -- Cyber 205 dense-mesh solutions to the Euler equations for flows around the M6 and Dillner wings -- Nonconforming 3D analogues of conforming triangular finite element methods in viscous flow -- On the non-uniqueness of the solution of the problem on flow field about a cone at incidence -- Higher-order method of lines for the numerical simulation of turbulence -- A numerical study of the fluid dynamics in extractions columns -- Multigrid solution of the Navier-Stokes equations for the flow in a rapidly rotating cylinder -- Algorithms for direct numerical simulation of shear-periodic turbulence -- Steady and unsteady nonlinear flow treatment using the full potential equation -- Vortex method in three-dimensional flow -- Calculation of transonic potential flow past wing-tail-fuselage combinations using the multigrid technique -- Pulsed column : Transient flow of a polydispersed phase -- A flame approach to unsteady combustion phenomena with application to a flame interacting with a cold wall -- Numerical solution for entry flow in curved pipes of arbitrary curvature ratio -- Numerical simulation of boundary-layer transition -- Spectral methods for aerodynamic problems -- Time-dependent inverse solution of three-dimensional, compressible, turbulent, integral boundary-layer equations in nonorthogonal curvilinear coordinates -- A three-dimensional incompressible primitive variable Navier-Stokes procedure with no poisson solver -- Formation of taylor vortices in spherical Couette flow -- Numerical simulation of unsteady flowfields near bodies in nonuniform oncoming stream -- Flux vector splitting and Runge-Kutta methods for the Euler equations -- Fast solutions to the steady state compressible and incompressible fluid dynamic equations -- Influence matrix technique for the Navier-Stokes pressure boundary condition -- Simulation of transonic separated airfoil flow by finite-difference viscous-inviscid interaction -- Universal single level implicit algorithm for gasdynamics -- Renormalization group-based subgrid scale turbulence closures -- An iterative-method of integral relations scheme for wake flows -- Fourier-legendre spectral methods for incompressible channel flow -- Accurate solution of several complicated problems.

2. Record Nr.	UNISALENT0991002569829707536
Titolo	Deutsche Literaturzeitung für Kritik der internationalen Wissenschaft / Akademie der Wissenschaften der DDR. - 1880-1993
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3. Record Nr.	UNINA9910830356303321
Titolo	HVDC grids : for offshore and supergrid of the future / / edited by Dirk van Hertem, Oriol Gomis-Bellmunt, Jun Liang
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Descrizione fisica	1 online resource (529 pages) : illustrations
Collana	IEEE press series on power engineering
Disciplina	621.31
Soggetti	Convertidors de corrent elèctric Parcs eòlics marins Electric power systems Electrical engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	HVDC GRIDS; Contents; List of Figures; List of Tables; Contributors; Foreword; Preface; Acknowledgments; Acronyms; PART 1 HVDC Grids in the Energy Vision of the Future; 1 Drivers for the development of HVDC

grids; 1.1 Introduction; 1.2 From the vertically integrated industry to fast moving liberalized market; 1.2.1 Brief History of the Transmission System Before Liberalization; 1.3 Drivers for change; 1.3.1 Liberalized Energy Market; 1.3.2 More Renewables in the Energy Mix; 1.4 Investments in the grid; 1.4.1 Why Investments Are Needed in the Transmission System
1.4.2 Difficulties with New Transmission Lines 1.4.3 Available Investments Technologies; 1.4.4 HVDC Technology; 1.5 Towards HVDC grids; 1.5.1 Transmission Technology; 1.5.2 Why Not AC?; 1.5.3 HVDC Grids as a Supergrid; 1.6 Conclusions; References; 2 Energy Scenarios: Projections on Europe's future generation and load; 2.1 Introduction; 2.2 System setting; 2.2.1 Supply; 2.2.2 Demand; 2.2.3 Matching Supply and Demand; 2.2.4 European Energy Policy; 2.3 Scenarios for Europe's energy provision; 2.3.1 The Role of Defining Scenarios; 2.3.2 Supply Side; 2.3.3 Demand Side
2.3.4 Implications Towards the Grid 2.3.5 International Cooperation and Market Perspective; 2.4 Conclusions; References; PART 2 HVDC Technology and Technology for Offshore Grids; 3 HVDC technology overview; 3.1 Introduction; 3.2 LCC-HVDC systems; 3.2.1 Configurations; 3.2.2 Reactive Power Properties of LCC HVDC; 3.3 LCC-HVDC converter station technology; 3.3.1 Converter Station; 3.3.2 Transformers; 3.3.3 Filters and Reactive Compensation; 3.3.4 Other Required Components; 3.4 VSC-HVDC systems; 3.5 VSC-HVDC converter station technology; 3.5.1 Converter Configurations; 3.5.2 Switching Components
3.5.3 AC Filters 3.5.4 Transformers; 3.5.5 AC Phase Reactor and Arm Inductor in a Multilevel Converter; 3.5.6 DC Capacitors; 3.5.7 DC Chopper; 3.5.8 HVDC Switchgear; 3.6 Transmission lines; 3.6.1 HVDC Overhead Lines; 3.6.2 HVDC Cables; 3.7 Conclusions; References; 4 Comparison of HVAC and HVDC technologies; 4.1 INTRODUCTION; 4.2 CURRENT TECHNOLOGY LIMITS; 4.2.1 Onshore Equipment; 4.2.2 Offshore Equipment; 4.2.3 Current Ratings for HVDC Technology; 4.3 TECHNICAL COMPARISON; 4.3.1 Charging Currents-Transmission Distance; 4.3.2 Asynchronous Networks; 4.3.3 Power Flow Control Capability
4.3.4 Voltage Support 4.3.5 Dynamic System Performance; 4.3.6 Stability Limits; 4.3.7 Right-of-Way; 4.3.8 Black Start Capability; 4.3.9 Electromagnetic Fields; 4.3.10 Insulation Requirements; 4.3.11 Reliability; 4.4 ECONOMIC COMPARISON; 4.4.1 Onshore Transmission; 4.4.2 Offshore Transmission; 4.4.3 AC Transmission Losses; 4.4.4 DC Transmission Losses; 4.4.5 Comparison of AC and DC Equipment Losses; 4.5 CONCLUSIONS; References; 5 Wind turbine technologies; 5.1 Introduction; 5.2 Parts of the wind turbine; 5.3 Wind turbine types; 5.3.1 Fixed-Speed Wind Turbines

Sommario/riassunto

Presents the advantages, challenges, and technologies of High Voltage Direct Current (HVDC) Grids This book discusses HVDC grids based on multi-terminal voltage-source converters (VSC), which is suitable for the connection of offshore wind farms and a possible solution for a continent wide overlay grid. HVDC Grids: For Offshore and Supergrid of the Future begins by introducing and analyzing the motivations and energy policy drives for developing offshore grids and the European Supergrid. HVDC transmission technology and offshore equipment are described in the second part of the book. The third part of the book discusses how HVDC grids can be developed and integrated in the existing power system. The fourth part of the book focuses on HVDC grid integration, in studies, for different time domains of electric power systems. The book concludes by discussing developments of advanced control methods and control devices for enabling DC grids. . Presents

the technology of the future offshore and HVDC grid. Explains how offshore and HVDC grids can be integrated in the existing power system. Provides the required models to analyse the different time domains of power system studies: from steady-state to electromagnetic transients. This book is intended for power system engineers and academics with an interest in HVDC or power systems, and policy makers. The book also provides a solid background for researchers working with VSC-HVDC technologies, power electronic devices, offshore wind farm integration, and DC grid protection. Dirk Van Hertem is an Assistant Professor within ESAT-ELECTA at KU Leuven, Belgium. Dr. Van Hertem has written over 100 scientific papers in international journals and conferences. Oriol Gomis-Bellmunt is an Associate Professor in the Technical University of Catalonia (UPC). He is involved in the CITCEA-UPC research group and the Catalonia Institute for Energy Research (IREC). Jun Liang is a Reader within the School of Engineering at Cardiff University, UK. He's also an Adjunct Professor at Changsha University of Science and Technology and North China Electric Power University.
