1. Record Nr. UNINA9910257441603321

Titolo	Sixth International Conference on Numerical Methods in Fluid Dynamics [[electronic resource]] : Proceedings of the Conference, Held in Tbilisi (U.S.S.R.) June 21-24, 1978 / / edited by H. Cabannes, M. Holt, V. V. Rusanov
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 1979
ISBN	3-540-35521-9
Edizione	[1st ed. 1979.]
Collana	Lecture Notes in Physics, , 0075-8450 ; ; 90
Disciplina	532 533.62
Soggetti	Fluids Physics Fluid- and Aerodynamics Mathematical Methods in Physics Numerical and Computational Physics, Simulation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Numerical calculation of hydrodynamic stability problems with time-dependent boundary conditions -- On numerical simulation in fluid dynamics -- Some finite element methods in fluid flow -- Numerical study of nonlinear axisymmetric flow of fluid between two concentric rotating spheres -- Investigation of hydrodynamic stability by means of computers -- Implicit finite-difference simulations of steady and unsteady transonic flows -- Numerical investigation of some gas dynamics problems by net-characteristic method -- The method of discrete vortices in aerohydrodynamic problems and the theory of multidimensional singular integral equations -- Analysis of higher order methods for the numerical simulation of confined flows -- Numerical simulations of two-dimensional plasma flows -- Numerical simulation of turbulent flows with a three-dimensional vortex-in-cell method -- Mathematical and numerical aspects of discrete kinetic theory -- Resolution Numerique d'une Equation de Conservation par

une Approche Variationnelle -- Errors in finite difference solutions of Navier-Stokes equations -- A free boundary problem in hydrodynamic lubrication including surface tension -- Approximation viscosity and stability of difference schemes -- A study on curvilinear coordinates and macro -elements for multiply connected flow fields -- Separating, incompressible, laminar boundary-layer flow over a smooth step of small height -- On certain solutions of the non- stationary equations for rotating flow -- A unification of unidirectional flow approximation -- A finite element formulation suitable for subsonic and transonic flow -- Tests of computational algorithms for inviscid hyperbolic flows -- Initialization of the navier-stokes equations for use in numerical simulations and predictions of severe (convective) weather events -- The algorithm of approximate calculation of potential-type singular integrals and their applications -- Aerodynamics and dynamics of bodies with mass loss and shape change under the influence of radiative heating -- Ergodic behavior of two-dimensional inviscid turbulence -- Calculation of the three-dimensional supersonic blunt body flow of viscous perfect gas and nonequilibrium gas mixture -- Numerical simulation of MHD-problems on the basis of variational approach -- Numerical solution for unsteady separated inviscid incompressible flow past an arbitrary body -- Direct numerical method for the velocity profile and the form of a laminar jet in a liquid-liquid system -- Model calculations of self-excited oscillations in transonic flow in a duct with an abrupt enlargement -- An orthogonal finite element method for transonic flow calculations -- Solution of turbulent transport equations by an accurate numerical method -- A new numerical method for solving exterior linear elliptic problems -- The transformation of external disturbances into the boundary layer waves -- The effect of strong magnetic field on the shift flow of viscous incompressible electroconducting fluid -- A Lagrangian method for the numerical solution of the Euler equations for transonic flows -- On computational modelling of the Tunguska catastrophe -- Numerical solution of transonic flow through a cascade with slender profiles -- Czochralski bulk flow in the growth of garnet crystals -- Numerical shock structure and nonlinear corrections for difference schemes in conservation form -- Numerical simulation of explosion phenomena taking into account non-equilibrium physical-chemical processes -- Calculation of three-dimensional turbulent subsonic flows in transition ducts -- Pulmonary haemodynamics -- A vortex-grid method for blood flow through heart valves -- Supersonic viscous flow over cones at incidence -- Calculation of supersonic gas flows about wings -- Large Eddy Simulation of turbulent shear flows -- Numerical solution of the nonlinear stability of an imcompressible ekman boundary layer -- Non-forward-marching method for three dimensional flow around spinning bodies -- Applications of the energy estimates analogous to Saint-Venant's principle to problems of elasticity and hydrodynamics -- Finite element analysis of viscous incompressible flow around an oscillating airfoil -- Some permeable boundaries in multidimensional unsteady flows -- Supersonic flow of viscous gas around bodies and the flaw in the wake (methods of a numerical solution and computing results) -- Numerical models of turbulent convection based on the unsteady Navier-Stokes equations -- Solution by Newton's method to the steady transonic Euler equations -- A simplified spline solution procedure -- A test case for checking computational methods for gas flows with discontinuities -- To the numerical simulation and propagation of tsunami according to the shallow water equations -- A hybrid random choice method with application to internal combustion engines -- The solution of the Navier-Stokes equation via successive approximations

-- On the condensing of grid points in the process of solving and high order schemes in viscous gas flow computations -- Investigation of unsteady supersonic flows about blunt bodies -- Calculation of the flow field in supersonic inlets using a bicharacteristics method with shock wave fitting -- Bispectral measurements in turbulence computations -- On the application of orthogonal polynomials in the theory of elasticity -- Numerical modeling of atmospheric pollution -- Integral-representation approach for time-dependent viscous flows -- On some methods for the numerical simulation of flows with complex structure -- Design criteria and generation of optimum finite element meshes -- Self-adapted algorithms in problems of gas dynamics -- Application of Lagrangian invariants to the calculation of three-dimensional rotational flows of a perfect fluid -- Sixth International Conference on Numerical Methods in Fluid Dynamics Tbilisi, U.S.S.R., 20–25 June, 1978.