

## CONTENTS

ADÁMEK K., PELANT J.: Air flow at the beginning of the reed channel	p. 1
BARBERON T., HELLUY PH., ROUY S.: Appearance of vacuum - The two-flux method	p. 5
BENEŠ L., JAŇOUR Z., KOZEL K., SLÁDEK I.: Mathematical modelling and numerical solution of 3D atmospheric boundary layer	p. 7
BIAUSSER B., GUIGNARD S., MARCER R., FRAUNIE PH.: Numerical simulations of free surface flows using a new VOF method	p. 11
BODNÁR T., KOZEL K., FRAUNIE Ph., JAŇOUR Z.: Numerical modelling of pollution dispersion in complex terrain	p. 15
BREUß M.: Numerical methods for non-standard conservation laws	p. 19
ČÍŽKOVÁ L., MARYŠKA J., ŠEMBERA J.: Modelling of processes in a combustion engine-model of transport phenomena	p. 21
DEURING P., KRACMAR S.: Artificial boundary conditions for the stationary Navier-Stokes system in 3D exterior domains	p. 25
DOBEŠ, J. FOŘT J.: Numerical solution of internal flow problems by upwind scheme on unstructured grid	p. 27
DOLEJŠÍ V., FEISTAUER M.: Discontinuous Galerkin method for compressible flow	p. 31
FELCMAN J.: Grid adaptation for 3D flow computation	p. 35
GALDI G.P., NEČASOVÁ Š.: Asymptotic properties of self propelled motion	p. 39
HALAMA J., ARTS T.: Numerical simulation of unsteady stator-rotor interaction	p. 41
HELLING CH., OEVERMANN M., KLEIN R., SEDLMAYR E.: Inhomogeneous dust formation due to turbulent motion in brown dwarf atmospheres	p. 45
JANDA M, KOZEL K.: 3D transonic flow computation using finite volume composite scheme	p. 49
JOHN V.: A numerical study of two related types of LES models	p. 53
KLÁŠTERKA H.: Turbulence and wavelets	p. 57
KNOBLOCH P.: On some nonconforming finite elements for incompressible flow problems	p. 61
KOLMAN D.: Numerical and experimental analysis of a fast speed plasma flow	p. 65
KOŘISTA M., JÍCHA M.: Discretisation of general transport equation	p. 69
KOZUBKOVÁ M., DRÁBKOVÁ S.: Numerical modelling of the gaseous pollutant dispersion – influence of release rate and density	p. 73
KRÖNER D.: Absorbing boundary conditions and divergence cleaning for the MHD equations	p. 77

KUČERA P., SKALÁK Z.: Smoothness of the velocity time derivative in the vicinity of regular points of the Navier-Stokes equations	p. 83
KUSZLA P., DARU V.: On some numerical oscillations of Euler multifluid and multidimensional computations	p. 87
LAMPART P., YERSHOW S., RUSANOV A., SHAPOCHKA A.: 3D shape optimisation of stator/rotor axial turbine stages from the interaction of codes optimus and flower	p. 93
MACEK J., POLÁŠEK M.: Simulation of space distributed momentum and heat transfer in porous media used for engine burners	p. 97
MEISTER A.: Numerical simulation of high and low speed flow	p. 101
MOSES P., BURDA P., SZÖLLÖS A., NOVOTNÝ J.: Numerical solution of aeroelasticity problems using finite elements	p. 105
PETER M., VARNHORN W.: The maximum modulus theorem for the Stokes system	p. 109
POZORSKI J.: Stochastic modelling and computation of turbulent flows	p. 113
REHÁK B.: Optimization of a profile in a viscous flow	p. 117
SKALÁK Z.: Removable singularities of weak solutions of the Navier-Stokes equations	p. 121
SOUSEDÍK B., BURDA P., SZÖLLÖS A., NOVOTNÝ J.: Application of a-posteriori error estimates to fluid flow in domain with singularity	p. 125
SVÁČEK P., NAJZAR K.: Numerical error for an implementation of higher order finite element method for problems with nonlinear boundary conditions	p. 129
ŠTASTNÝ M., BABÁK M., KOLÁŘ P., TUČEK A.: Testing of turbulence models for CFD application in turbomachinery	p. 133
TELEAGA D., STRUCKMEIER J.: Stability analysis of a finite-volume particle scheme for conservation laws	p. 137
XING JIUXING, DAVIES A.D.: Modelling non-linear effects of internal tidal waves upon tidal residual flow at the Hebrides shelf edge	p. 141
YERSHOW S., RUSANOV A., LAMPART P., SWIRYDCZUK J., GARDZILEWICZ A.: Simulation of turbomachinery flows using a 3D rans solver with Menter SST turbulence model	p. 145
LIST OF PARTICIPANTS	p. 149

