

(Preliminary) Programme of the winterschool EICFD2004

Monday – February 23, 2004

7:30-9:00

Registration

9:00-10:30

Bodnar & Kozel - Classical methods for CFD

Finite-difference schemes, modified equation, artificial viscosity. Application to ABL flows.

11:00-12:30

Furst - High resolution finite-volume methods for transonic flows

14:15-15:45

Neustupa & Novotny - Navier-Stokes equations

Formulation of basic problems, qualitative properties of solution, open questions.

Tuesday – February 24, 2004

9:00-10:30

Redondo - Stratified and rotating flows

Internal and inertial waves; Richardson, Rosby, Burgers and Eckman numbers; Diffusion in non-homogeneous flows; Entrainment and mixing efficiency; Barriers to transport

11:00-12:30

Burda - Stabilized finite-element finite-element methods for incompressible flows

14:15-15:45

Feistauer - High resolution finite-element methods for compressible flows

Thursday – February 26, 2004

9:00-10:30

Seguin & Helluy - Source terms and well balanced schemes for conservation laws

Application to shallow water simulations.

11:00-12:30

Helluy - Entropy optimization scheme

Application to real gas flows and phase transition.

14:15-15:45

Fort - Numerical solution of some industrial flow problems

Turbomachinery flows and external aerodynamics applications

Friday – February 27, 2004

9:00-10:30

Prihoda - Turbulence models for industrial problems

Janour - Turbulence models for environmental flows

11:00-12:30

Fraunie - Small scale modelling in stratified environmental flows

14:15-15:45

Concluding remarks – End of the winterschool