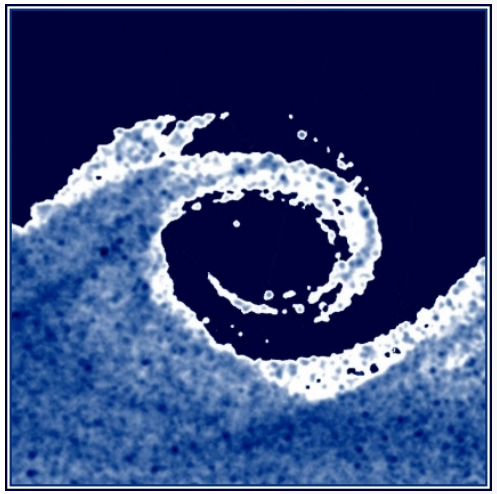


CFD related Research & Development

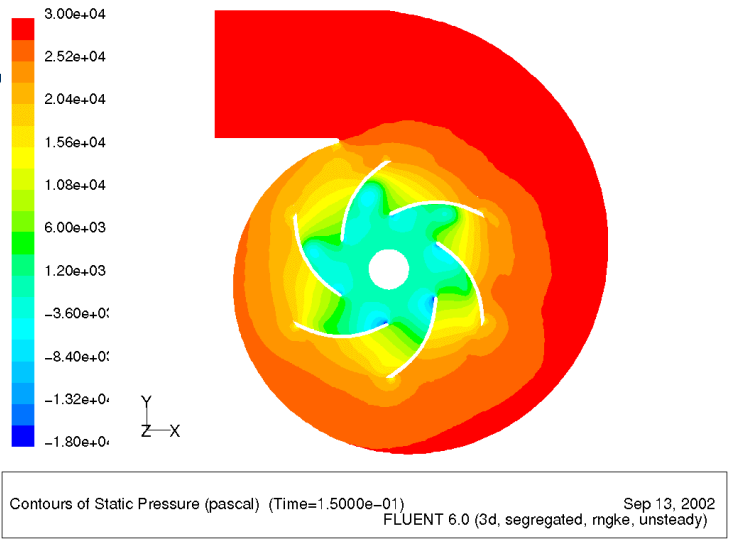
at the

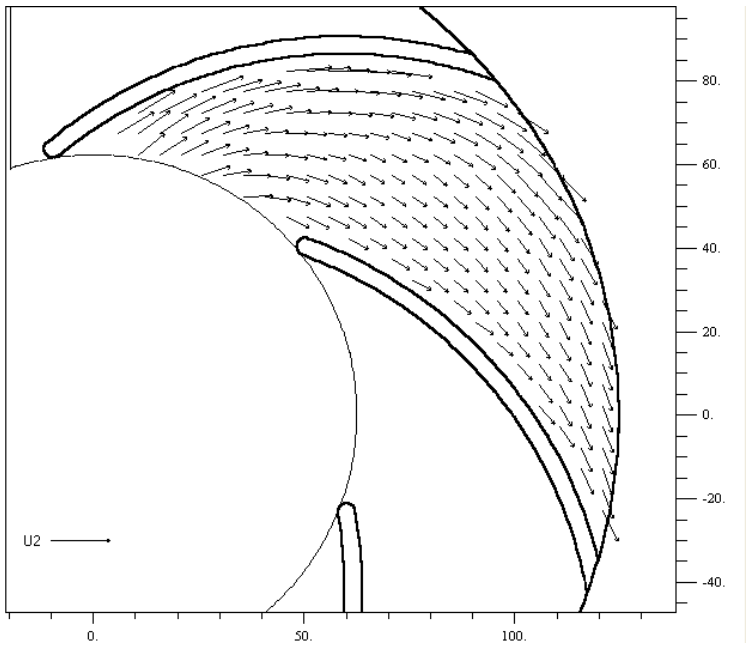
DEPARTMENT of FLUID MECHANICS

Budapest University of Technology and Economics
HUNGARY

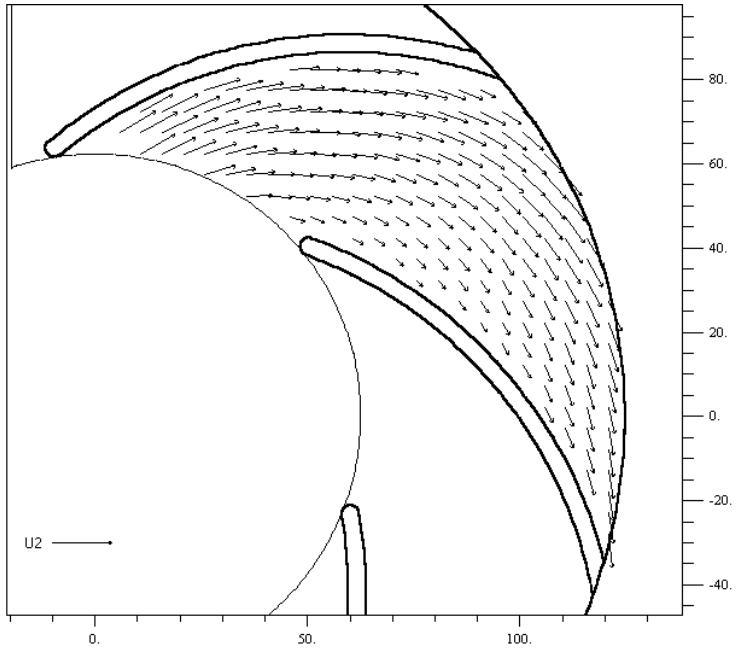
Prof. Tamás LAJOS
Dr. Gergely KRISTÓF
Dr. János VAD

Radial pump simulation:
comparison of simulated flow field and PIV data



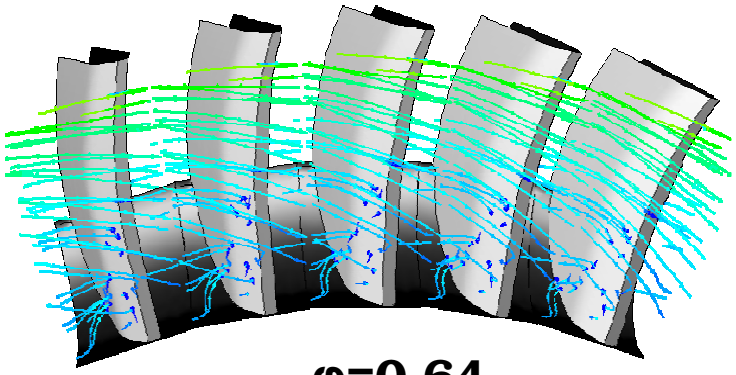


PIV measurement

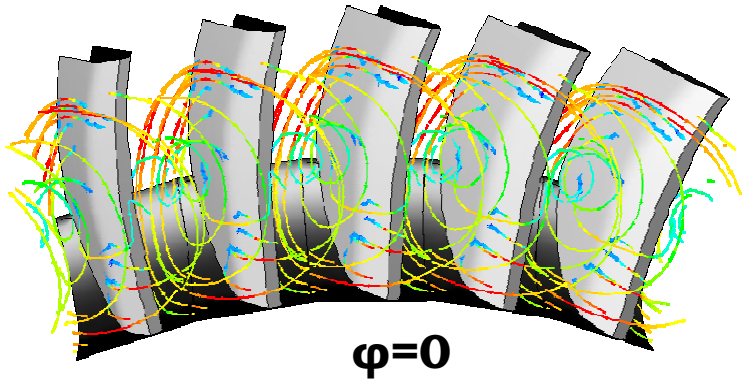


FLUENT simulation

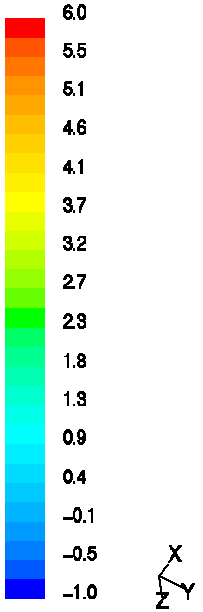
Optimization of side-channel fuel pump of cars



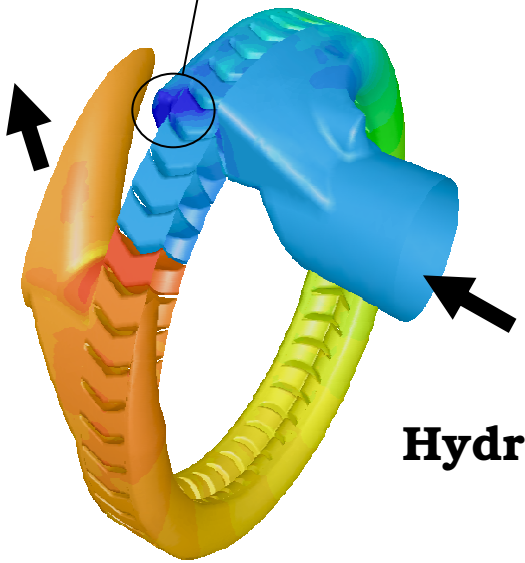
φ=0.64



φ=0

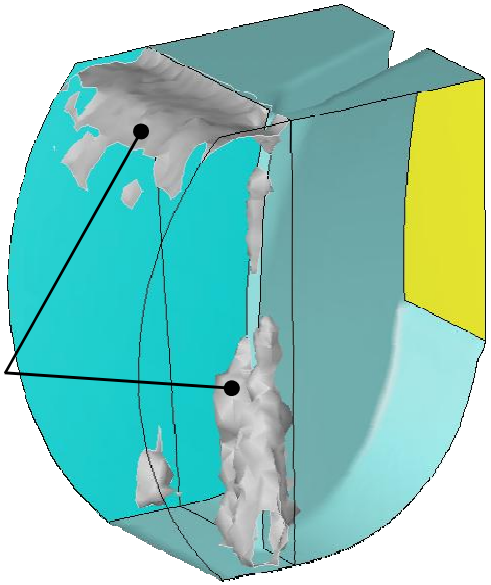


Cavitation zone

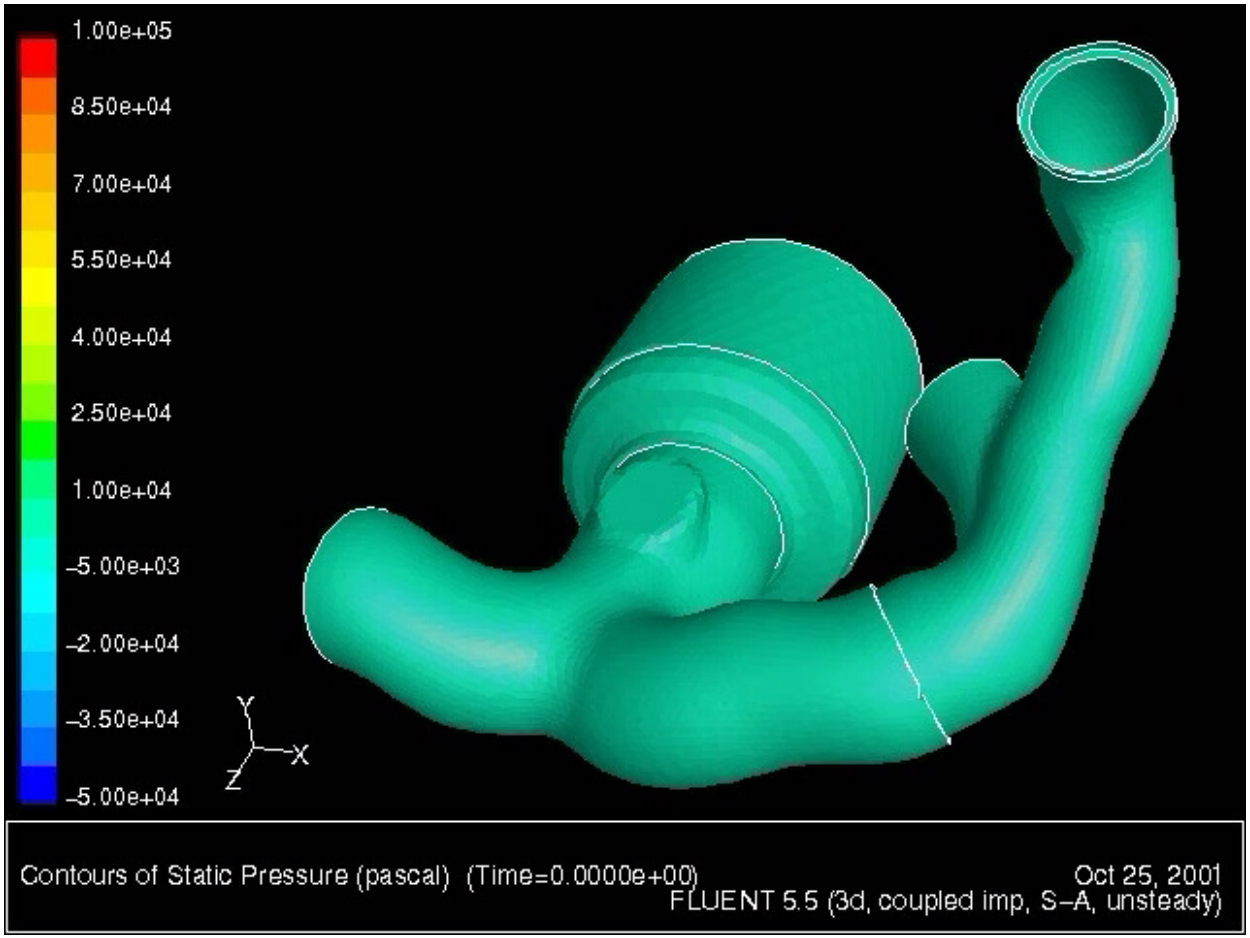


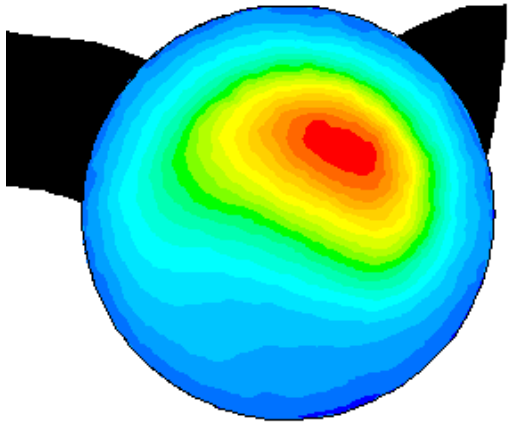
Pressure distribution

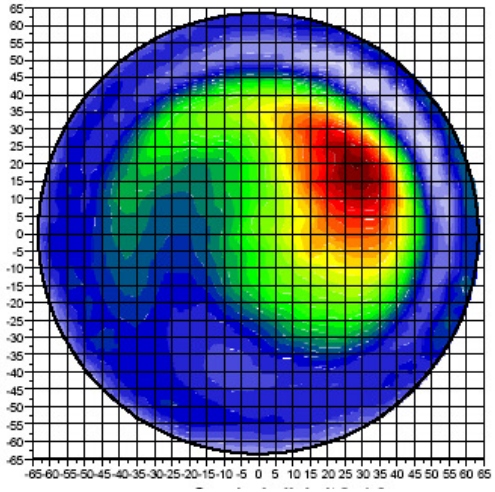
Hydraulic losses



Simulation of exhaust system:
nonuniform load of catalitic converter

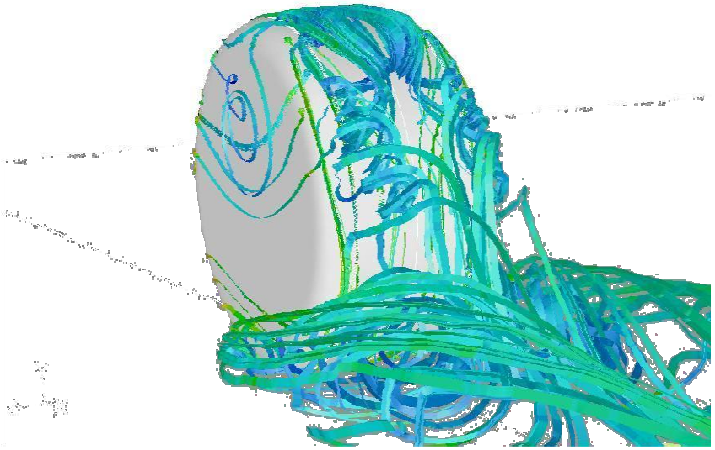


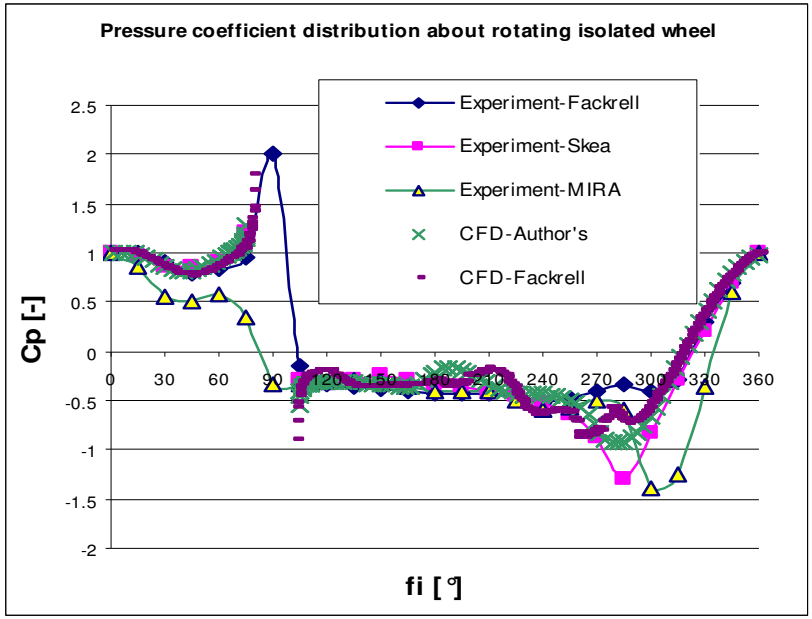




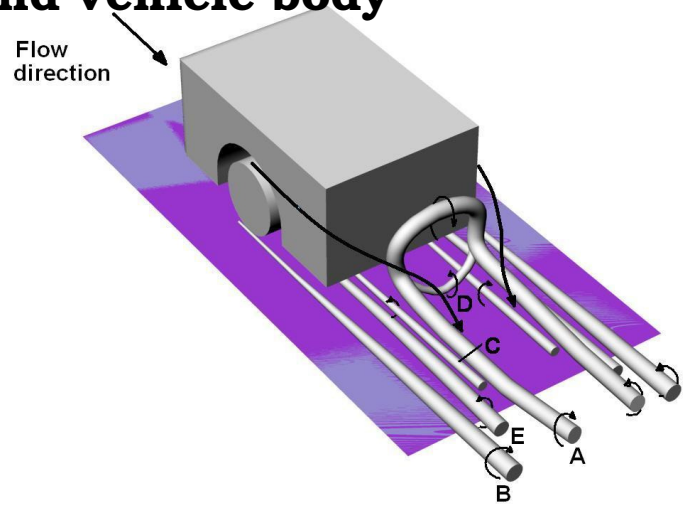
Vehicle Aerodynamics

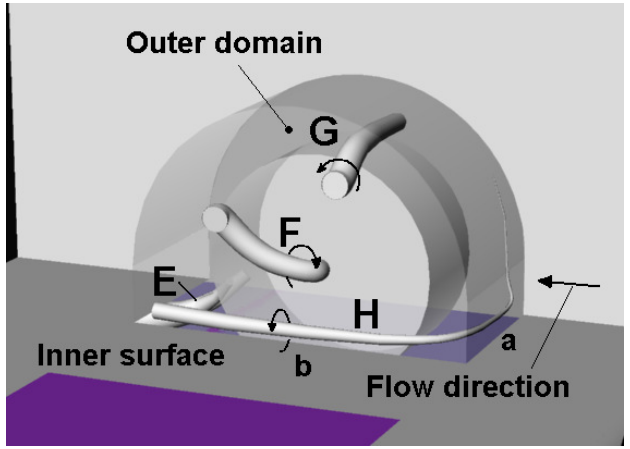
Flow topology and validation on isolated wheel



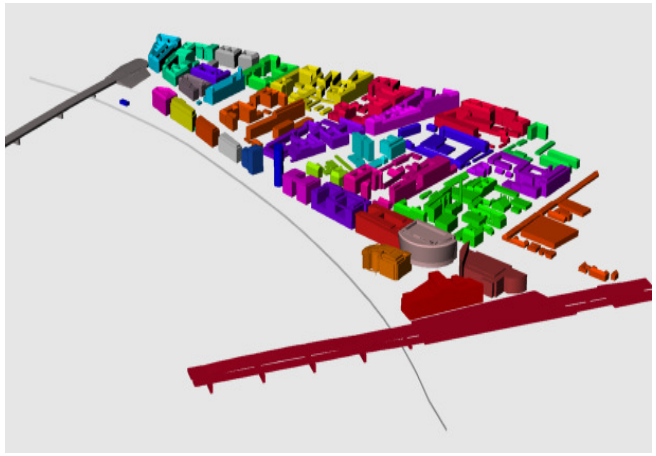


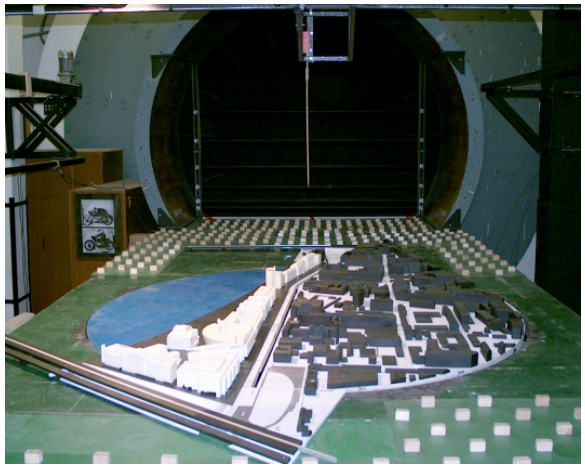
Flow topology in wheelhouse, interaction of flow inside wheelhouse and vehicle body



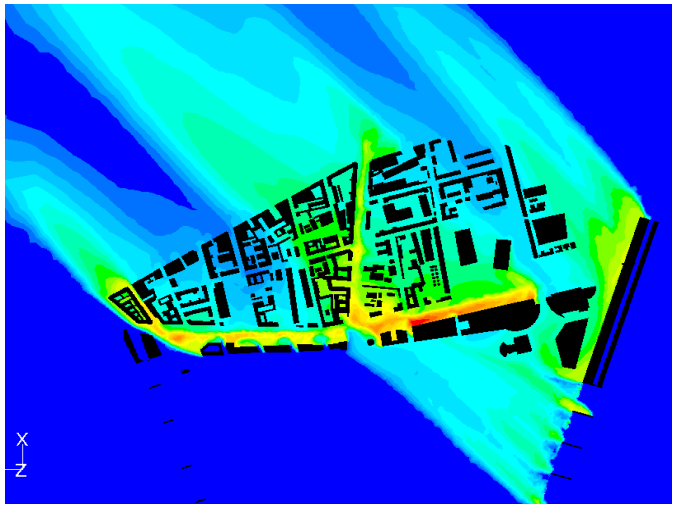


Measurement and numerical simulation of pollutant dispersion in urban atmosphere

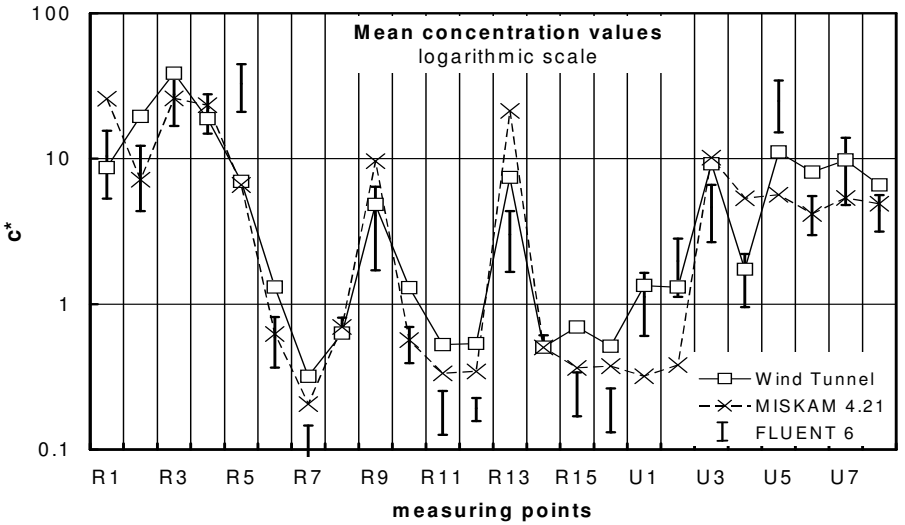




Numerical and wind tunnel model of Millennium City Center



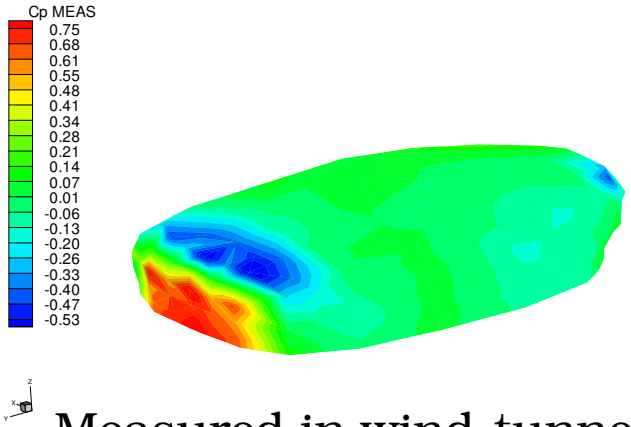
Pollutant concentration



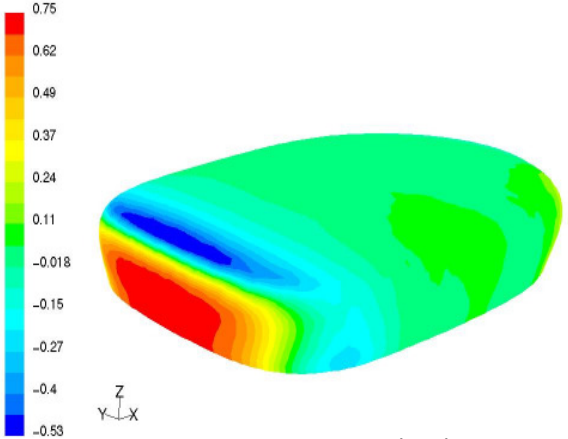
Comparison of simulation and measurement

Numerical simulation and wind tunnel measurement of wind forces

Budapest Arena



Measured in wind-tunnel



FLUENT 5.5

Ice-stadium Essen

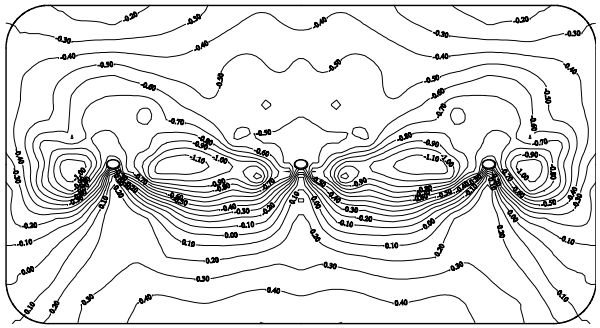
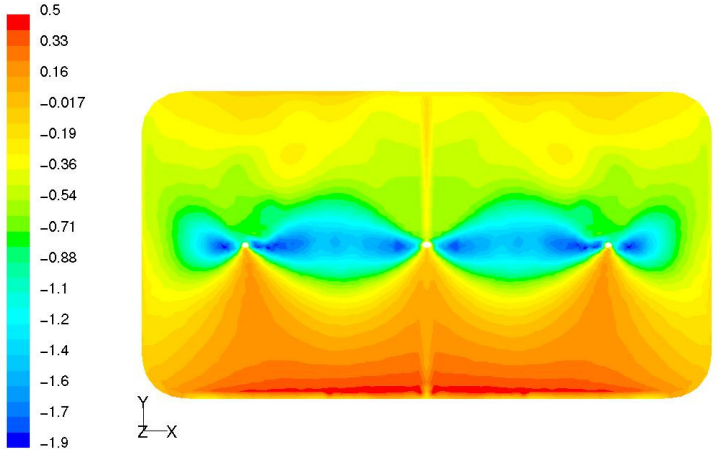


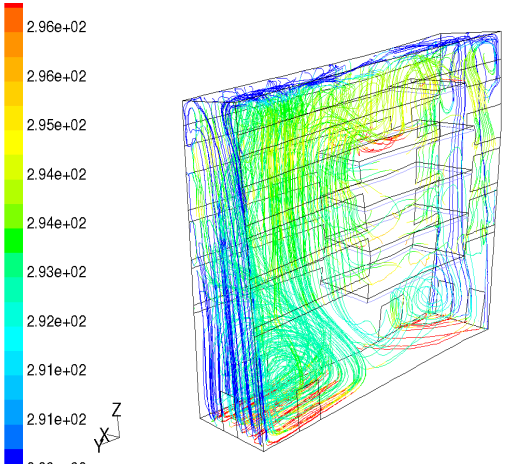
Bild 6. Druckbeiwerte an äusserer Oberfläche (Cpa [-])
Windrichtung 0° 1:300

0°

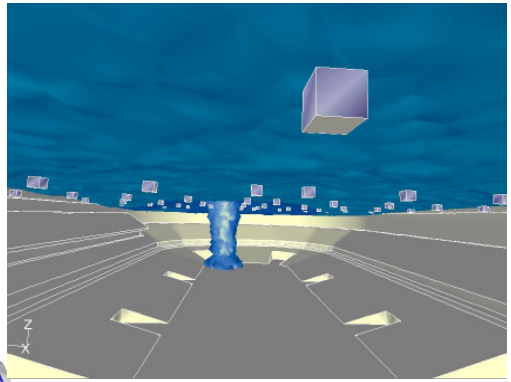


Air-conditioning & ventilation of large halls

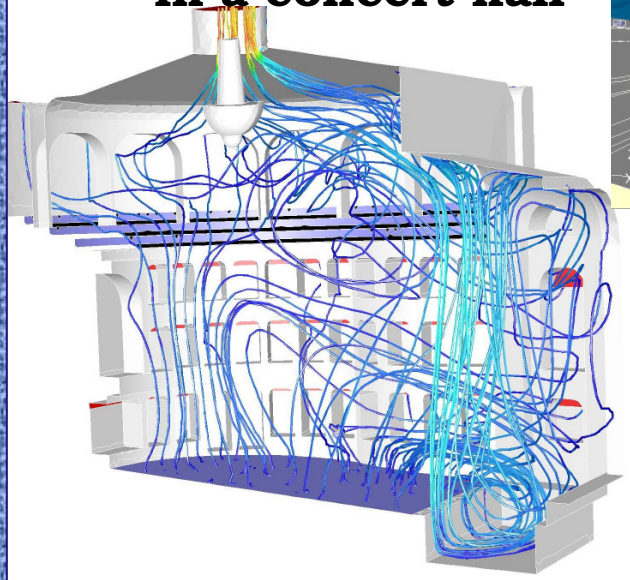
Streamlines and temperature in a concert hall



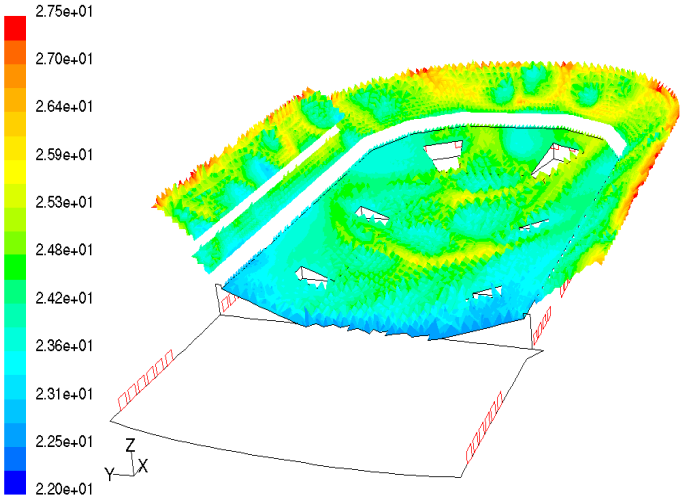
Flow in aula of a bank



Smoke dispersion in Sport Arena

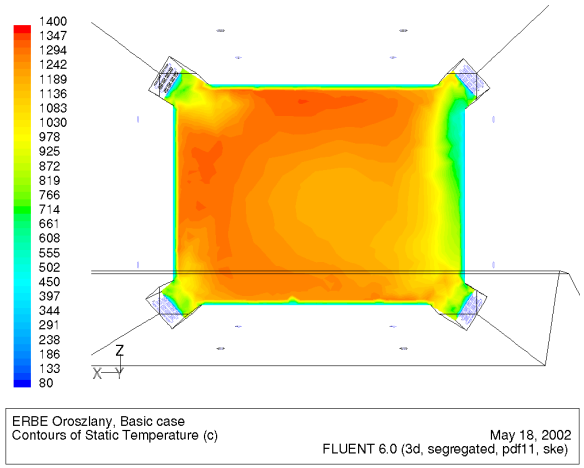


Streamlines in Opera-house

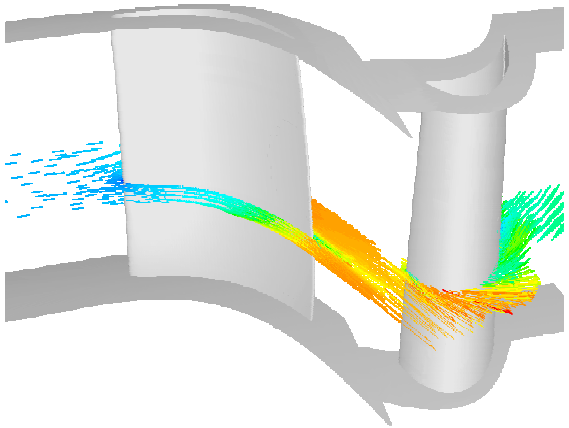


Temperature in Sport Arena

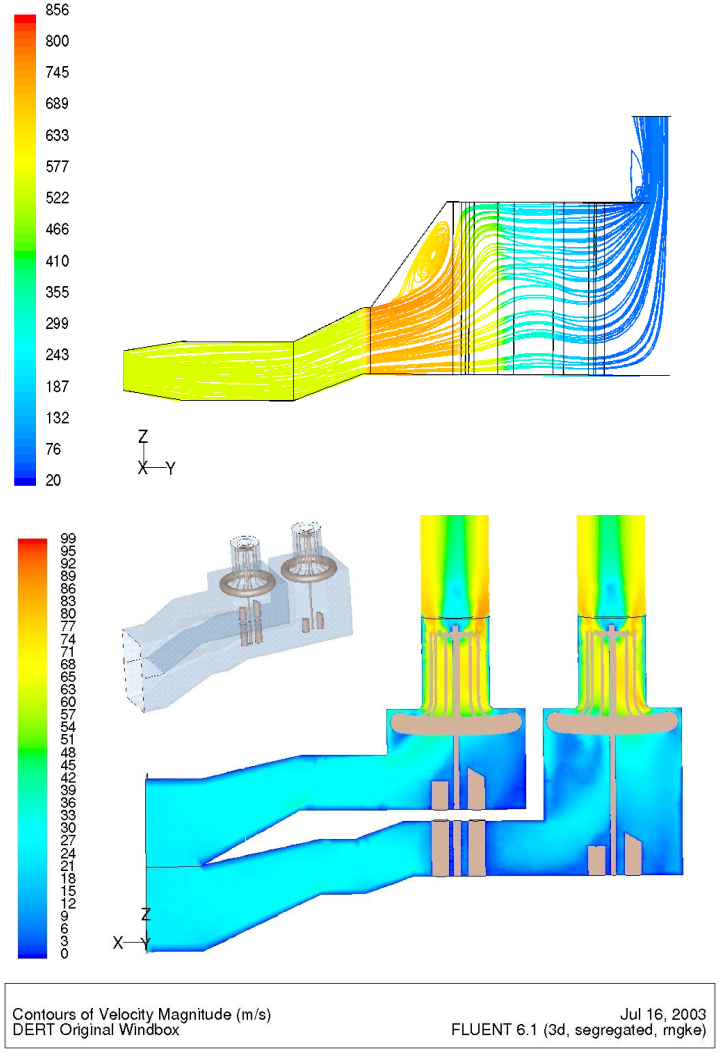
Application of CFD in energetics



NO_x reduction in boiler



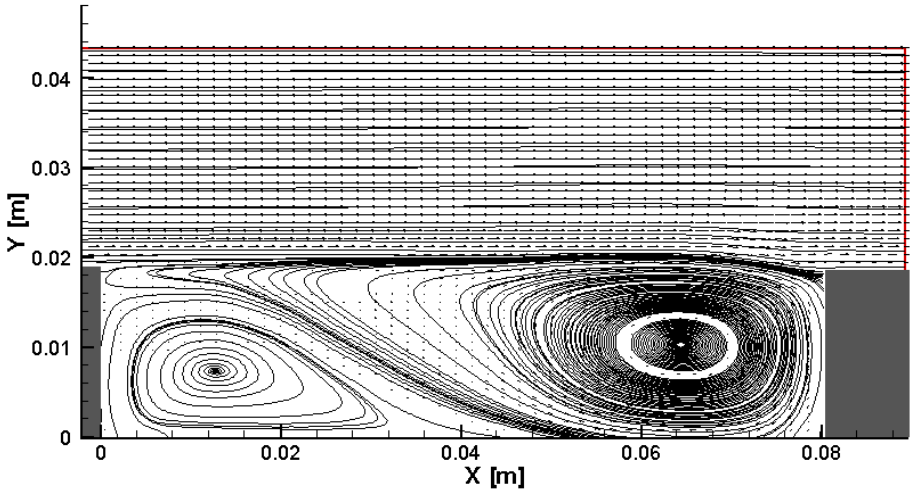
Simulation of flow in steam turbine stage



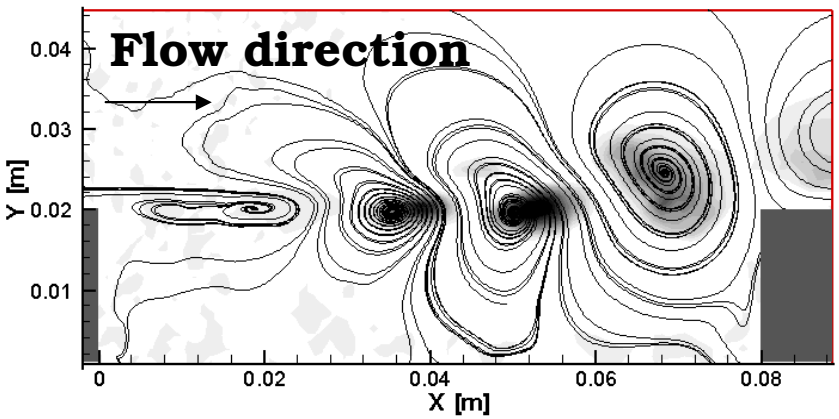
Optimization of flow in boilers

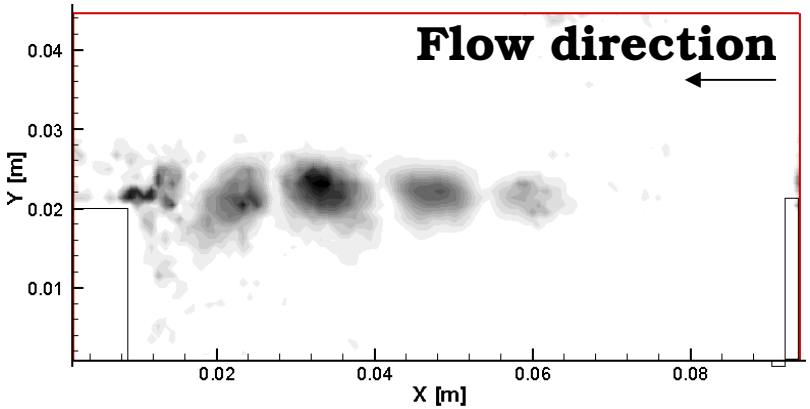
Coherent structure extraction

PIV measurements on a flow over a rectangular, open cavity



Extraction of coherent structures from turbulent flows by Proper Orthogonal Decomposition (POD)

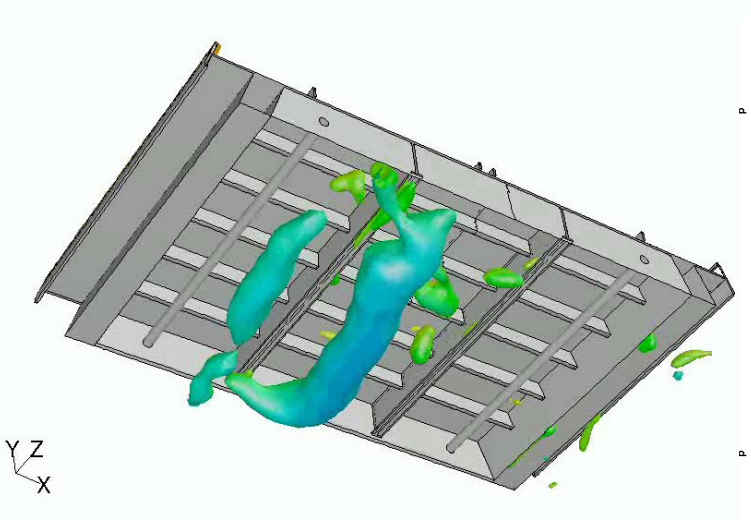


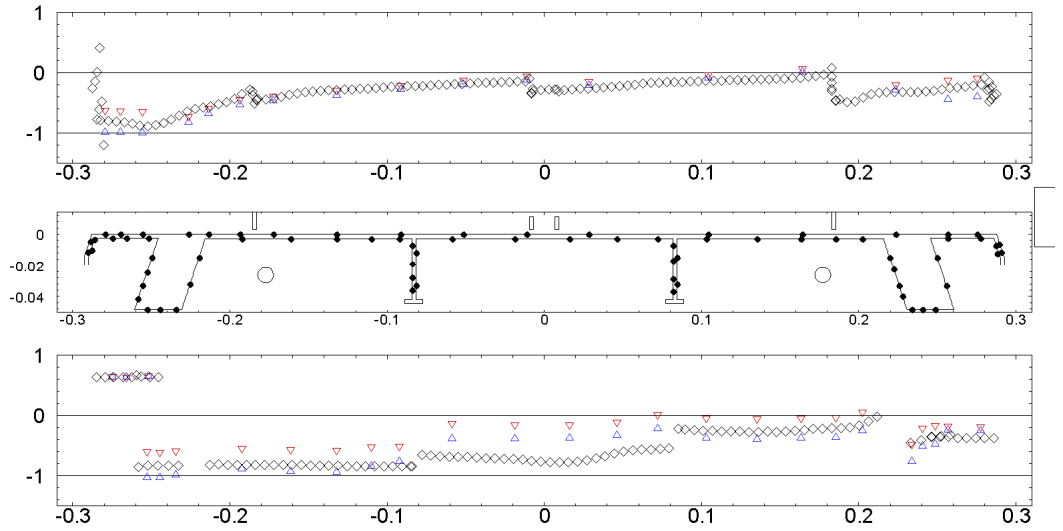


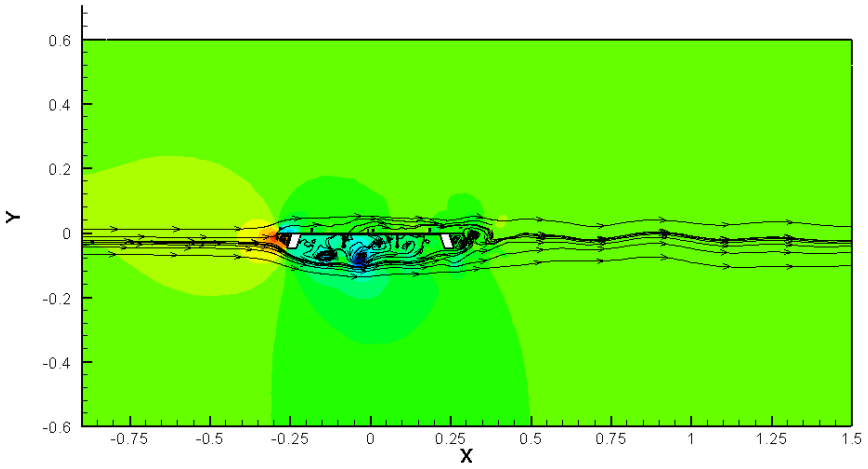
Coherent structures, which characterize temporal features (energetic vortex shedding process found by POD)

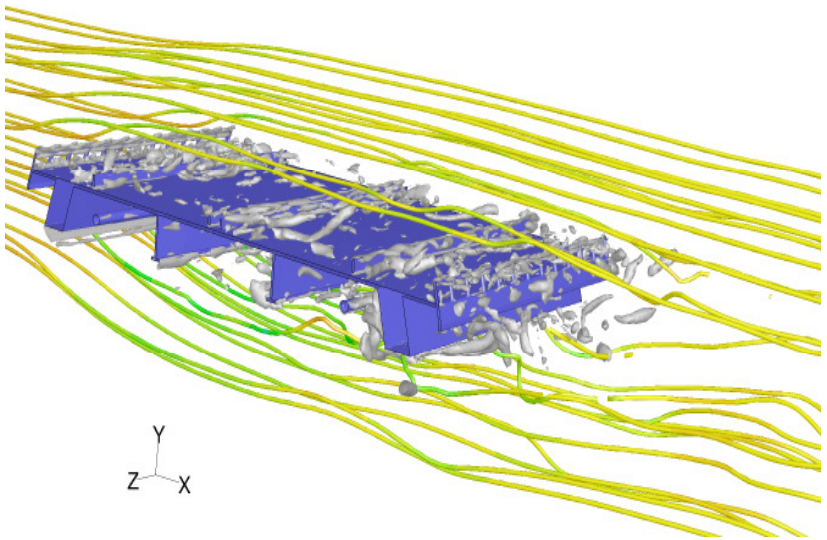
LES of flow past a Danube bridge:

comparison of simulation and wind tunnel results, fluctuation of lift force



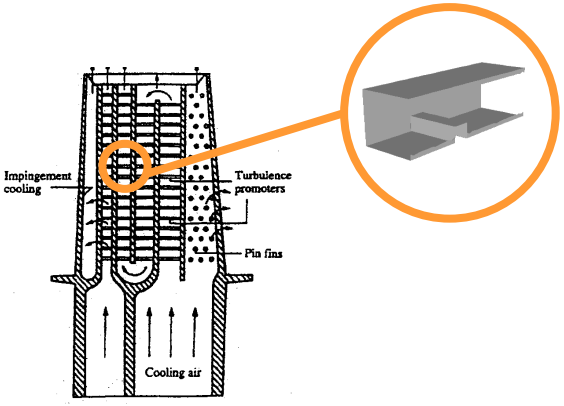




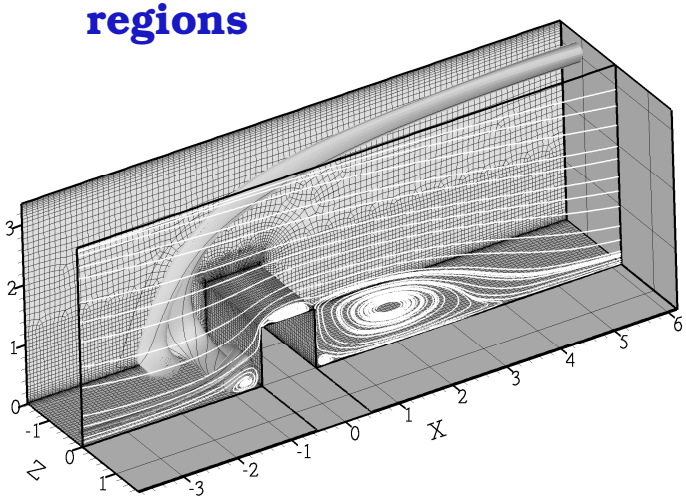


Description of turbulent ribbed duct flow, using results of Large Eddy Simulation

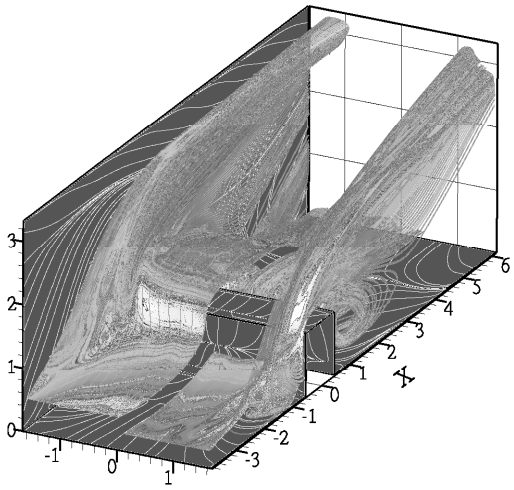
Application: internal cooling of turbine blades



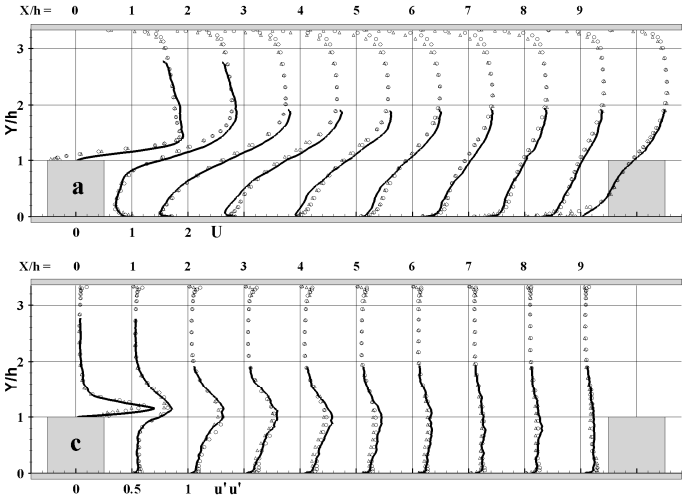
Mesh, recirculation regions



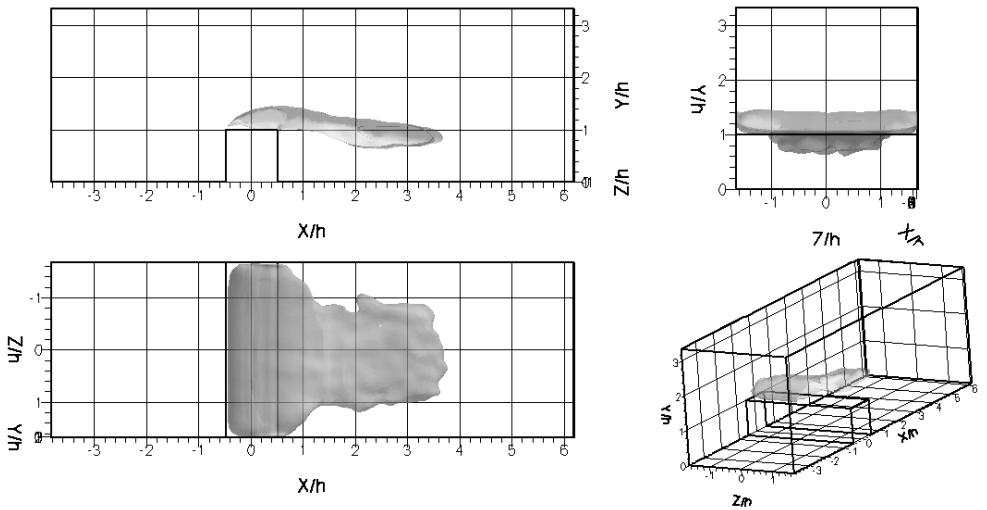
Mixing by the mean flow



Validation to PIV measurement



High TKE region



Conference on Modelling Fluid Flow

BUDAPEST / HUNGARY

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Organized by
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170 papers from 30 countries

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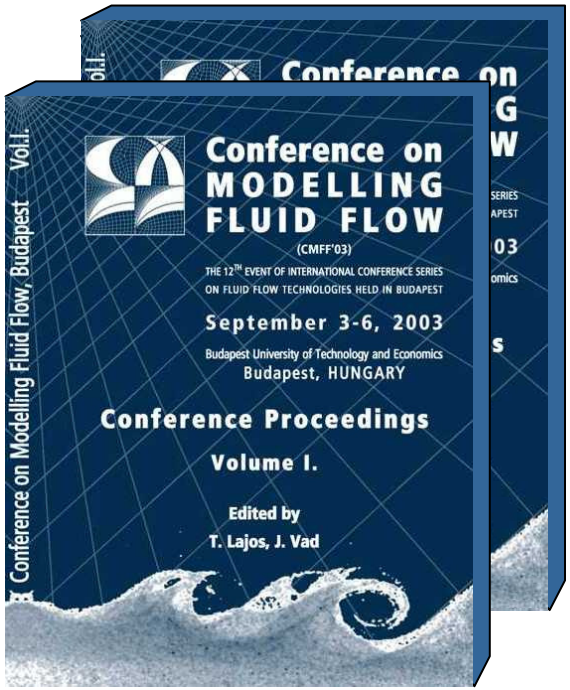
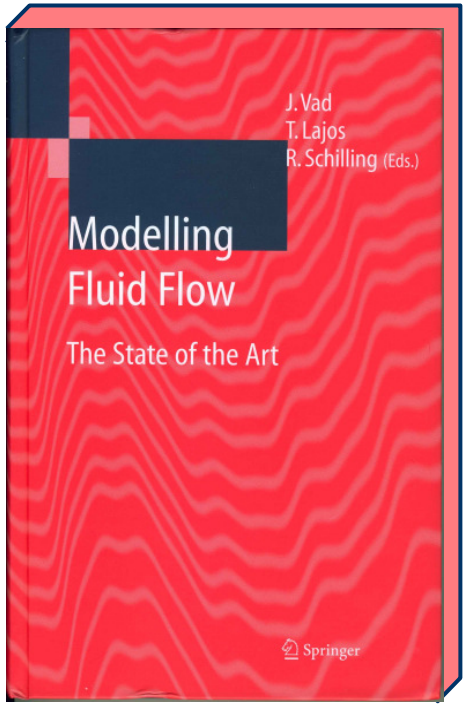


NEXT CMFF EVENT in 2006



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