

Workshop title: Turbulence Modeling



The objective is to familiarize the students with the fundamental physics of turbulent flows. Students will become familiar with transport of moment, energy and vorticity in turbulent flows. Students will be able to use the phenomenological models of turbulence. The main goal of the course is familiarize the students with recent and advanced higher order modeling of turbulent shear flows. As a result the students will be able to analyze turbulent flows in complex regions with the use of commercial codes. Example of applications of turbulent flow in industry and environment will be described. The direct and large-eddy simulations of turbulent flows will be also introduced.