

From the Guest Editors

This Supplement contains papers presented at the Turbulence Workshop - International Symposium held at the University of Belgrade, Faculty of Mechanical Engineering from August 31-September 2, 2015. The participants were researchers from fourteen universities and four institutes from Germany, Japan, Montenegro, Serbia, Spain, Sweden and USA.

Two Serbian schools of turbulence at the University of Belgrade played an important role in leading this event: The School of the Turbulent Swirling Flow at the Faculty of Mechanical Engineering and The Laboratory for Thermal Engineering and Energy at the Vinča Institute of Nuclear Sciences.

Turbulence, one of the most difficult and unsolved problems that remains in classical physics, still attracts the attention of numerous engineers and researchers around the world because of its relevance in practical applications. These include, for instance, energy facilities, aerodynamics, propulsion, weather and climate change and bioengineering sciences. Among the many objectives of this event was to promote interactions between early career scientists and established experts in the field of turbulence research.

This Supplement contains 28 papers treating a number of different problems in turbulent flows. The first group embraces papers related to experiments and the associated accuracies in the velocity-gradient statistics with hot-wire probes, also including optical techniques for measurement (laser Doppler anemometry, particle image velocimetry) and visualization. These are concerned with fundamental experiments in wind tunnels, as well as turbulent-swirling flow phenomena downstream of axial fan in pipes, diffusers, jets and the resulting turbulence anisotropy. The second group comprises papers related to computational modeling of electrokinetic flows, fiber suspensions, combustion, magnetohydrodynamics, aerodynamics, turbulent flows in rectangular ducts, and compressible flows in vortex tubes. In general, the papers address a wide range of flow configurations, including internal and external flows in laminar, turbulent, subsonic and hypersonic regimes. Two papers, at the end of this Supplement, are reviews of the scientific activities in the Laboratory for Thermal Engineering and Energy at the Vinča Institute of Nuclear Sciences and the School of the Turbulent Swirling Flow at the Faculty of Mechanical Engineering.

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