



## FOREWORD

The compilation of the presented papers has been prepared for the 19<sup>th</sup> Polish National Fluid Dynamics Conference taking place at the Poznan University of Technology on 5–9 September 2010. The papers present the current status of the Polish Computational Fluid Dynamics (CFD). There is no doubt that the level of the presented papers is high, referring in some cases to results of international projects. There are several groups in Poland strongly involved in the development of CFD methods, nevertheless, many more groups are involved in numerical simulations of flows in order to better understand the underlying physics.

The Polish National Conference of Fluid Mechanics has been organized since 1974. The main topics of interest are:

1. Aerodynamics
2. Physics of Linear and Nonlinear Fluids
3. Hydromechanics of Ships
4. Fluid-Flow Machinery
5. Multiphase Fluid Mechanics
6. Mechanics of Atmospheric Motions
7. Experimental Methods in Fluid Mechanics
8. Computational Methods in Fluid Mechanics
9. General Fluid Mechanics
10. Turbulence

The thematic scope of the conference topics is the reason why the papers deal with very basic mathematical approaches to flow physics and modeling on one hand, and on the other hand, engineering problems in modern numerical methods are tackled. Both types of tasks are challenging and important.

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