

ADVANCES IN ACCURATE AND ROBUST NUMERICAL METHODS FOR COMPUTATIONAL FLUID DYNAMICS

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ABSTRACT

High-quality numerical scheme plays a key role in computational fluid dynamics. Efforts have been being constantly devoted in the past several decades to devise new numerical methods of better properties in accuracy, robustness and efficiency for reliable simulations of complex flows in real world applications.

This symposium provides an open forum to communicate the ideas and achievements in designing and implementing high-quality numerical schemes for practical applications. The symposium has twofold purposes: 1) promoting the direct communications among the developers and users of numerical methods; 2) enhancing exchanges among people working with different type of methods or with different real-world problems. We believe that bringing together numerical schemes from different “cultures” and researchers with different backgrounds should be extremely beneficial for stimulating the further development of numerical methods of practical importance.

The topics of this symposium cover all state-of-the-art numerical schemes as well as the applications to fluid dynamics. Developments and applications of the modern numerical formulations, including but not limited to high-order schemes for Euler and Navier-Stokes equations on structured and unstructured grids, gas-kinetic method, particle-based methods and various interface-capturing methods, are well within the scope.