

## Preface

This volume of *Tech. Mech.* contains selected papers presented at the 18<sup>th</sup> event of the international conference series on fluid flow technologies, referred to today as Conference on Modelling Fluid Flow (CMFF'22). This conference took place in Budapest (Hungary) between Aug. 30<sup>th</sup> and Sept. 2<sup>nd</sup>, 2022, with more than 100 participants from 14 countries. The next event is scheduled for September 2025. Please bookmark <https://www.cmff.hu> if you would like to be kept informed.

As reflected in its title, this conference covers all fields of fluid mechanics. Key results from theoretical, numerical, as well as experimental studies have been presented in Budapest, with the most significant papers being invited for journal publication. The present special issue reveals the complex nature of fluid flows, particularly those that are intrinsically *multi-scale* and involve *multi-physics*. The 16 papers contained in this issue span fluid dynamics at micro-scale (microchannels, wetting, wall roughness) to cm-scale applications (reactors, burners, relief valves) up to extremely large scales (aircrafts and atmospheric flows). Single-phase as well as two-phase flows (drop impact, bubbles, polymers, separation), some involving heat transfer processes and/or electrostatics will be considered. Of course, for this purpose, suitable models must be developed and validated, particularly those regarding turbulence.

We hope that you will enjoy reading the content!

Dominique Thévenin, János Vad, Csaba Horváth, and Gábor Janiga

