

## Computational Methods in Fundamental and Applied Aerodynamics

Reducing fuel consumption in cars and airplanes, improving competition times in speed sports such as athletics or motorsports, optimizing the shapes of buildings and bridges for their structural stability, and improving energy harvesting with wind turbines, are some of the examples where understanding the aerodynamics of bodies is essential. This mini-symposium aims to bring together the state of the art in both compressible and incompressible computational aerodynamics, in subsonic or supersonic regimes, with its applications in complex problems. Topics covered are boundary layer control, wake prediction, aeroacoustic problems, turbulence models (DNS, LES, RANS, etc.) for flows with boundary layer separation, panel methods for potential flow, high-performance computing, and machine learning for applied problems in aerodynamics.