IGA FOR FLUIDS

Kenji Takizawa[*1] *and Matthias Möller*[2]

[1]*Waseda University*
[2]*Delft University of Technology*

MINISYMPOSIUM

Computational fluid dynamics in IGA has many advantages, such as higher continuity and efficiency. However, to achieve these advantages, some more research is needed. The main difficulty comes from mesh generation. There are many reasons for this. Simply, 3D volumetric mesh generation is more complicated than 2D. The boundary geometry itself is complex. There may be a high aspect ratio of elements for efficient discretization near boundaries, or the mesh may be deformed. Another challenge is the generalization of stabilization techniques that often have their origin in low-order finite elements to basis functions with higher continuity and higher polynomial order.

In this mini-symposium, any aspect of these IGA fluids is welcome, not only the method development but also applications in fluids based on IGA.