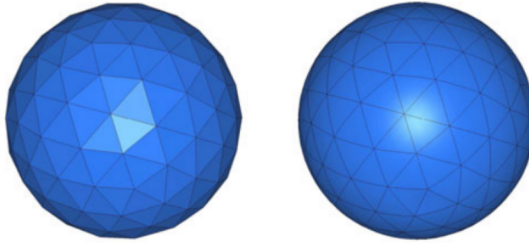


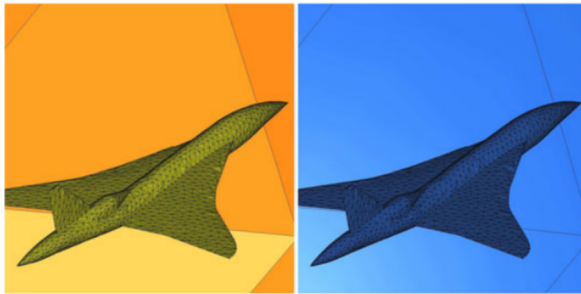
(such as turbulent boundary layers), we may use this variety of choice during the simulation to facilitate the convergence.

Remark 4.3 (About mapping uniqueness)

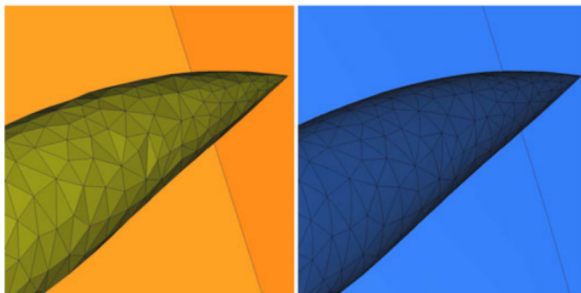
To ensure that the mapping is unique, one can add to the previous algorithm a step 2, which consists to find the smallest θ_{jac} such as the Jacobian becomes negative and to update the mesh of $\min(\theta_0, \theta_{jac})$.



(a) P1 mesh ; external curved surface.



(b) Airplane.



(c) Zoom on the airplane.

Figure 10. Meshes for airplane test case. (a) P1 mesh; external curved surface; (b) airplane, and (c) zoom on the airplane.