

THEMATIC SESSION:

Sharp nonuniqueness of admissible solutions for the 2D Euler equation

Fran Mengual (Max Planck Institute, Leipzig)

A weak solution to the Euler equation is called admissible if it does not increase the energy. These weak solutions coincide with a strong solution as long as the latter exists. In this talk we address the question of what is the threshold regularity at $t = 0$ for which uniqueness of admissible solutions fails in 2D. We will show, by means of the convex integration method, sharpness of the weak-strong uniqueness principle, as well as sharpness of the Yudovich proof of uniqueness in the class of bounded admissible solutions.