

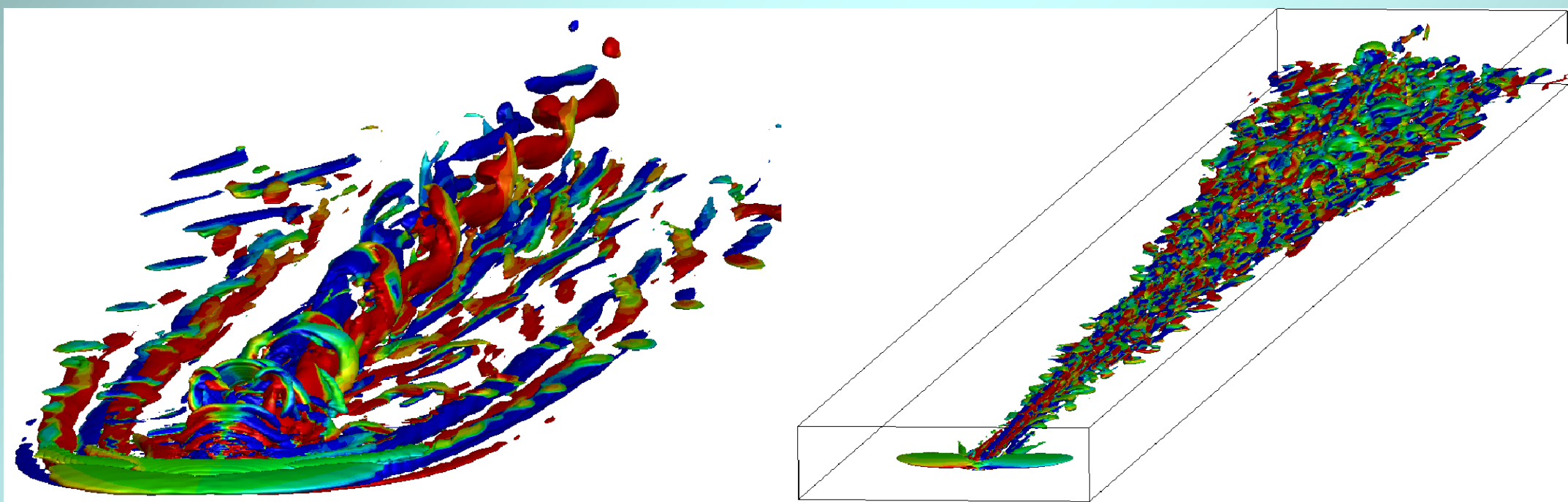
**Numerical simulation of supersonic
 boundary layer tripped by transverse injection**

par

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le jeudi 20 juin 2013 à 11h
salle de réunion ICARE



The laminar-turbulent transition of a Mach 4.6 flat-plate boundary layer forced by a wall under-expanded jet is investigated using Implicit Large Eddy Simulation based on a 5th order WENO scheme. Two free-stream unit length Reynolds numbers, 6 and 16 million, are considered. The effects of injection pressure and temperature on the structure and the stability of the near-injection flow are investigated. Downstream breakdown to turbulence is analyzed through Q-criterion visualization, mean velocity profiles and wall parameters. Results show that a low-pressure injection is sufficient for effective tripping, and that a cold injection is more efficient to promote transition.

Prochain séminaire prévu 27/06/2012, 11h

Viciation effects in air/H₂ supersonic combustion, par Mehmet Karaca, post-doctorant à ICARE

Pour tout renseignement complémentaire, ou proposition de séminaire par un thésard ou un chercheur invité, contacter Ivan Fedioun, fedioun@cnrs-orleans.fr, poste 5520, 06.62.81.23.08