



Institut de Mécanique des Fluides

Amphithéâtre Nougaro (Entrée A) - 2 Allée du Pr Camille Soula, Toulouse

Mercredi 7 Février - 10h30

Horia Hangan

Professor and Director, WindEEE Research Institute, Western University, Canada

New Physical Simulations of 3D, non-stationary and non-gaussian wind flows.

Traditional wind tunnels have served well the fluid mechanics and its applications by simulating overall unidimensional, stationary flow fields. However, these flow fields are an idealization of real flows occurring in nature such as wind flow fields.

Traditional Boundary Layer Wind Tunnels can simulate large scale “synoptic” wind flows over various surface roughness with applications to wind engineering, wind energy and wind environment problems. However, they cannot simulate localized 3D, time dependent wind events such as tornadoes, downbursts and microbursts, gusts or separated flows.

New facilities have emerged that combine the action of multiple fans to simulate these type of non-stationary and three-dimensional wind events. In view of all this, we present the research that was triggered for the last 5 years in one of these novel facilities, the novel Wind Engineering Energy and Environment WindEEE Dome at the University of Western Ontario (Western), in Canada, see www.windeee.ca.



contact : sig_communication@imft.fr