



## LILLE TURBULENCE PROGRAMME 2023

### OPENING WORKSHOP ON TURBULENT FLOWS

Villeneuve d'Ascq, Cité Scientifique , M6 Building  
20-22 June 2023

#### TUESDAY 20 JUNE 2023

- 12:30-14:00 WELCOME AND BUFFET LUNCH
- 14:00-14:40: YVES POMEAU -- Applications of a new model of turbulence: mixing layer, plane Poiseuille, turbulent wake...
- 14:40-15:20: MARTIN OBLIGADO -- Energy cascades in the turbulent wake of a wind turbine.
- 15:20-16:00: TEA/COFFEE BREAK AND DISCUSSIONS
- 16:00-16:40: KOSTAS STEIROS -- Experimental investigation of the primary and secondary vortex streets in the wake of bluff bodies.
- 16:40-17:20: ELISABETTA DE ANGELIS -- Scale-by-scale budgets and cascades near turbulent/non-turbulent interfaces.
- 17:20-18:00: NICOLAS MAZELLIER -- A near wake analysis of a swirling porous disk : application to wind turbine.

#### WEDNESDAY 21 JUNE 2023

- 9:00-9:40: JOACHIM PEINKE -- A general joint multipoint approach to turbulence and its thermodynamical interpretation - Reflection on a new definition of turbulent structures
- 9:40-10:20: ALBERTO VELA-MARTIN -- Non-equilibrium and irreversibility in the turbulence energy cascade: implications for subgrid-scale modelling
- 10:20-11:00: TEA/COFFEE BREAK AND DISCUSSIONS

- 11:00-11:40: MATTHIAS WACHTER -- The turbulent-nonturbulent interface (TNTI) in the atmosphere between Prandtl and Ekman layer
- 11:40-12:20: WOUTER BOS -- Scaling in inhomogeneous and unsteady turbulence
- 12:20-14:20: LUNCH AND DISCUSSIONS
- 14:20-15:00: ALEXANDRE ALEXAKIS -- How far does turbulence spread?
- 15:00-15:40: CHRISTOS VASSILICOS --Beyond scale-by-scale equilibrium
- 15:40-16:20: TEA/COFFEE BREAK AND DISCUSSIONS
- 16:20-17:00: FABIEN THIESSET -- Turbulent iso-sets.
- 17:00-17:30: TOM FRIDLENDER – On plasmas dielectric barrier discharge integration for grid generated turbulence
- 20:00: WORKSHOP DINNER IN CENTRAL LILLE

#### **THURSDAY 22 JUNE 2023**

- 9:00-9:40: SZYMON MALINOWSKI -- Turbulence in clouds: nonstationary, nonuniform anisotropic and intermittent. How to analyze airborne data?
- 9:40-10:20: LUMINITA DANAILA -- Multi-scale interactions in the atmosphere. Application to the prediction of heat waves and urban heat islands
- 10:20-11:00: TEA/COFFEE BREAK AND DISCUSSIONS
- 11:00-11:40: MARTA WACLAWCZYK -- Non-equilibrium turbulence in the atmospheric boundary layer.
- 11:40-12:20: DISCUSSION
- 12:20-14:00: CLOSING BUFFET LUNCH