

Vortex & turbulence – Tribute to Laurent Jacquin – Program (1)

Wednesday 10 September

8h30 **Welcome – Pôle de mécanique (Building 104) – See map, page 3**

9h00-9h30 **Introduction**

Christophe Josserand École polytechnique, **Denis Sipp** ONERA, **Stéphane Andrieux** Académie des technologies, co-organisers of the conference

Bérengère Dubrulle, Académie des sciences, **Stéphane Andrieux** Académie des technologies, **Xavier Bouis** Académie de l'air et de l'espace

Chair Vincent Brion – Pôle de mécanique

9h30-10h15 **Jeffrey Crouch** The Boeing Company **Modeling trailing vortices to determine airplane separation requirements: Sensitivities to near-field characteristics**

10h15-10h30 **Marie Couliou** DAAA, ONERA **The effect of freestream turbulence on wing tip dynamics**

10h30-11h00 **Coffee break**

11h00-11h30 **Carlos Pantano** AME, University of Southern California **Inner-outer interactions in turbulent channel flow over rough surfaces**

11h30-12h00 **Nicolas Bonne** DMPE, ONERA **Jet Vortex interaction and vortex dynamic applied to contrail formation and evolution (how Laurent's work help to understand the climatic impact of aviation)**

12h00-12h30 **Thomas Leweke** IRPHE, CNRS **Two-phase wing tip vortex breakdown**

12h30-14h00 **Lunch break – Pôle de mécanique**

Chair Christophe Josserand – Pôle de mécanique

14h00-14h45 **Bérengère Dubrulle** SPEC, CNRS **Exploring the small scales of turbulence**

14h45-15h00 **Sébastien Candel** EM2C, **Exploring azimuthal instabilities in annular combustors using swirling injector staging**

15h00-15h30 **François Gallaire** EPFL **A weakly nonlinear amplitude equation approach to the bypass transition in the two-dimensional Lamb–Oseen vortex**

15h30-16h00 **Vincent Brion** DAAA, ONERA **Unsteadiness and instabilities of wing tip vortices, influence and potential of near wake effects**

16h00-16h30 **Antoine Llor** CEA **Some comments on turbulence modelling: shared views with Laurent Jacquin on large scale properties of structures, intermittency, and dissipation**

10h30-11h00 **Coffee break**

Chair Stéphane Andrieux – Pôle de mécanique

17h00-18h00 **Testimonies**

17h05-17h25 **Denis Sipp**, ONERA, **Emblematic experiments of Laurent Jacquin: turbulence, vortices and metrology**

17h25-17h40 **Sébastien Michelin**, LadHyX, CNRS & Ecole Polytechnique **Vortices, turbulence, fluids and beyond: almost 30 years of teaching at Polytechnique**

17h40-17h50 **Manuel Dorion-Soulié**, Ecole Polytechnique **Flying Across Disciplinary Frontiers with Laurent Jacquin**

18h30-21h00 **Cocktail – Salon d'honneur de l'École polytechnique – See map, page 3**
Cocktail and speeches

Vortex & turbulence – Tribute to Laurent Jacquin – Program (2)

Thursday 11 September

Chair Denis Sipp – Pôle de mécanique

- 9h00-9h45 **Jean-Marc Chomaz** LadHyX, CNRS & École polytechnique **Performing fluids, in the art of turbulences**
- 9h45-10h00 **Eunok Yim** EPFL, **Local stability of turbine wake Batchelor vortices**
- 10h00-10h30 **Sébastien Deck** DAAA, ONERA **Transonic buffet over the OAT15A supercritical airfoil: from experimental investigation to advanced turbulence modelling**
- 10h30-11h00 **Coffee break**
- 11h00-11h30 **Ivan Delbende** Institut Jean le Rond d'Alembert, Sorbonne University **Transition in helical vortex systems**
- 11h30-12h00 **Jean-Pierre Rosenblum** Dassault Aviation **Le montage MARCO au service de la modélisation d'arrière-corps**
- 12h00-12h30 **Olivier Marquet** DAAA, ONERA **Assimilation de données pour la turbulence**
- 12h30-14h00 **Lunch break – Pôle de mécanique**

Chair Patrick Le Quéré – Pôle de mécanique

- 14h00-14h45 **Benjamin Leclaire** DAAA, ONERA **Turbulent structures in round jets: from physical analysis to advanced metrology and flow reconstruction**
- 14h45-15h00 **Younes Bouhafid** DAAA, ONERA **Simulation of a contrail formation and early life cycle for a realistic airliner geometry**
- 15h00-15h30 **David Fabre** IMFT **Is the transition to unsteadiness in the wake of profiled bodies an artefact of boundary conditions ?**
- 15h30-16h00 **Coffee break**
- 16h00-16h30 **Thomas Gerz** DLR **Wake Vortices in Aviation and Wind-Energy Supply - two examples of coherent structures in incoherent environments**
- 16h30-17h00 **Riwal Plougonven** LMD, IPSL & École polytechnique **Rare observations of turbulence in the lower stratosphere**
- 17h00-17h15 **Clément Morhain** CMAP, École polytechnique **How to synthesize turbulence from wavelet decomposition and random cascades?**

Friday 12 September

Chair Bérengère Dubrulle – Pôle de mécanique

- 9h00-9h45 **Basile Gallet** SPEC, Université Paris-Saclay-CNRS-CEA **Transport by 2D turbulence: Vortex-gas theory vs. self-similar inverse cascade**
- 9h45-10h00 **Flavio Tuteri** Institut D'Alembert, **Fluctuations around Turbulence Models**
- 10h00-10h30 **Jean-Paul Bonnet** Pprime Institute, CNRS-Université de Poitiers-ISAE/ENSMA **Flow control and turbulent scales interactions**
- 10h30-11h00 **Coffee break**
- 11h00-11h30 **Claude Cambon** LMFA, CNRS & École centrale de Lyon **Rotating turbulence and beyond (with Laurent since the early eighties)**
- 11h30-11h45 **Yves Pomeau** LadHyX, École polytechnique **Singularities and intermittency**
- 11h45-12h00 **Conclusions**