



**CENTRALE  
LYON**



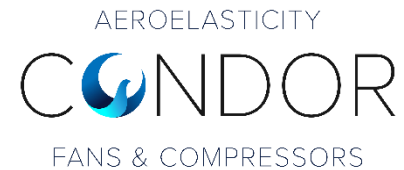
**SAFRAN**  
AIRCRAFT ENGINES



## Workshop ECL5 @LMFA

Location: Centrale Lyon  
Skylab (Building 22)  
36 Avenue Guy de Collongue  
69134 Écully

Date: 17<sup>th</sup> February 2025 – 19<sup>th</sup> February 2025



### Agenda:

#### Monday 17, February 2025

12:00 **Welcome & Lunch**

13:20

**Introduction of Centrale Lyon**

13:30

**Safran Aircraft Engines**

14:00

**Turbomachinery group LMFA**

*Introduction ECL5, Measurements and Simulations, Open Test Case*

15:30

**Coffee**

16:00 **Kevin Billon, ECL**

*Structural characterization under vacuum conditions and modal analysis on tuned open-test-case fan ECL5/CATANA*

16:30 **Elissavet Boufidi, VKI**

*Time-resolved aerodynamic measurements downstream of the ECL5/CATANA fan with hot-wire and fast response pressure probes*

17:00 **Allan Beurville, ECL**

*Transonic flow and noise emission in a fan: large eddy simulations and modeling*

## Tuesday 18, February 2025

09:00	<b>Coffee</b>
09:30	<b>Christian Frey, DLR</b> <i>Flutter Analysis of the ECL5 with the Harmonic Balance Method in TRACE</i>
10:00	<b>Marc Kainz, ANSYS</b> <i>ANSYS software</i>
10:30	<b>Ewan Gunn, Turbostream</b> <i>URANS stability predictions at design and part-speed with Turbostream for ECL5/Catana</i>
11:00	<b>Mario Eck, TU Berlin</b> <i>Overview of recent investigations on Rotating Instability at the Chair of Aero Engines - TU Berlin</i>
12:00	<b>Lunch</b>
13:00	<b>Pierre Tharreau, Imperial College London</b> <i>Disturbance characterisation &amp; Tip Clearance Effects (45min)</i>
13:45	<b>Lorenzo Pinelli, University of Florence</b> <i>Some experiences about aerodynamic and aeroelastic modeling of UHBR fan: the case of ECL5/CATANA</i>
14:15	<b>Marco Casoni, University Of Padova</b> <i>Numeric simulation of the ECL5 rotor with inlet distortion (15min)</i>
14:45	<b>Allessandro Guareschi, University of Florence</b> <i>Flutter stability with artificial mode shape variations (30min)</i>
15:30	<b>Coffee</b>
16:00	<b>Jan Goessling, University of Hannover</b> <i>Non-synchronous vibrations of an UHBR fan at clean and cross-wind conditions</i>
16:30	<b>Shivam Kapila, Whittle Laboratory</b> <i>Experimentally Investigating the Unsteady Aerodynamics of NSV Using Prescribed Blade Vibration Patterns.</i>
17:00	<b>Open discussion</b>
18:45	<b>Bus @ "Accueil" of Centrale Lyon</b>
19:30	<b>Workshop dinner</b> <i>Hermes II, 13 Bis quai Rambaud - Lyon 2ème</i>

Wednesday 19, February 2025

09:00 Coffee

09:30

Ongoing researches

10:30

Visit of test facilities

12:00

End of workshop

Skylab location (Building 22):

