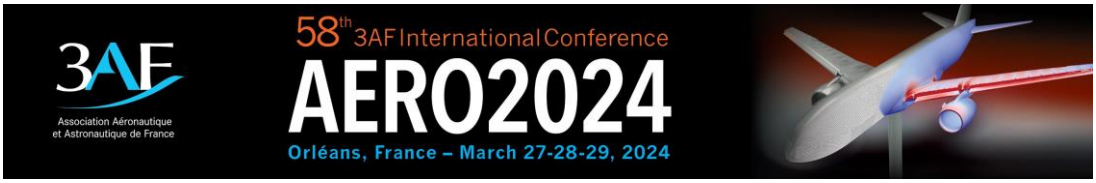


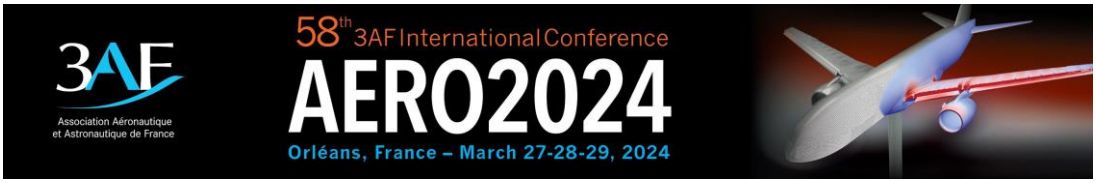
PRELIMINARY PROGRAMME

WEDNESDAY, MARCH 27

08:45	**REGISTRATION**
09:15	**CONFERENCE WELCOME** **Eric BLOND, President - *University of Orléans*** **Régine WEBER, Director- *Polytech Orléans*** **Azeddine KOURTA - *PRISME Laboratory*** **Eric CHAPUT, President - *Scientific Committee AERO2024***
10:00	**KEYNOTE CONFERENCE N°1** **Data-assimilation and stability analysis of turbulent mean-flows** **Dr. Olivier MARQUET** *(ONERA)*

	SESSION 1A **Innovative Experimental techniques** **Chairperson: Ferry SCHRIJER** **(*TU Delft*)**	**SESSION 1B** **Multiphysics coupling** **Chairperson: Eric LAURENDEAU** **(*Polytechnique Montréal*)**
10:45	**40** Towards high resolution and high frequency Real-Time Optical Flow Particle Image Velocimetry. Application to a separated flow **J. PIMIENTA** (*ESPCI Paris*)	**45** A Two-Dimensional Multi-Layer Stochastic Icing Model Utilizing the Immersed Boundary Method **M. BLANCHET** (*Polytechnique Montréal*)
11:10	**26** Wing-to-wall distance effect on the large-scale turbulent structures using volumetric particle tracking velocimetry **T. TAIBI** (*INRAE*)	**54** Data assimilation of transitional flows to predict aerodynamic instabilities of airfoils at low angles of attack **R. PERON** (*ONERA*)
11:35	**52** Unsteady Aerodynamics of Vortex Gust Generation **P. VADHER** (*University of Cambridge*)	***18*** Morphing Aerofoil for Improved Aerodynamic and Aeroacoustic Performance **F. MADI** (*University of the West of England*)
12:00	**28** In-flight optical fibre measurements for aerodynamics **L. MENNEBEUF** (*AIRBUS Operations SAS*)	**64** The Viscous Region at the Leading Edge of a Plate of Zero Thickness **E. PARENTE** (*Safran Tech*)
12:25	**6** Assessment of accuracy of multi-point calibration and single point calibration technique using an accelerometer force balance **S. DEKA** (*IIT Guwahati*)	

12:50	**LUNCH**

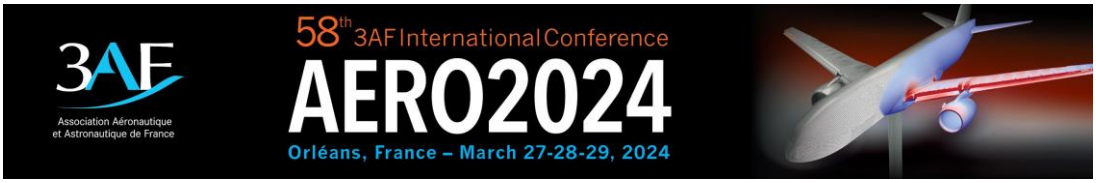


PRELIMINARY PROGRAMME

WEDNESDAY, MARCH 27

14:15	**KEYNOTE CONFERENCE N°2** **Uncertainty Quantification in Data-Driven Aerodynamics Predictions** **Prof. Gianluca IACCARINO** (*Institute of Comp. & Math. Engineering, Stanford University*)

	SESSION 2A **Mesh Adaptation** **Chairperson: Frédéric ALAUZET** **(*INRIA*)**	**SESSION 2B** **High Speed Flows** **Chairperson: Jean COLLINET** **(*ArianeGroup*)**	**SESSION 2C** **Optimisation with ROM** **Chairperson: Laurent CORDIER** **(*Institut P', ISAE-ENSMA*)**
15:00	**29** Adaptive Mesh Refinement and Turbulence Modeling for Vortex Interactions **M. VISONNEAU** (*Ecole Centrale de Nantes*)	**4** Design of a hypersonic gun-launched projectile based on von Karman-derived waverider **S. BAGY** (*ISL - Institut Saint-Louis*)	**9** Multi fidelity optimisation of transonic wing profile via reduced order model **T. SANCHEZ** (*MBDA*)
15:25	**33** Dynamic mesh adaptation for High-Order Finite Volume Simulations of Aeroacoustic Sources in Unsteady Turbulent Flows **A. LIAPI** (*Institut Jean le Rond d'Alembert*)	**46** Code-to-Code Comparison of CHAMPS and NSMB Solvers Using a Zero-Equation Transition Model for Hypersonic Flows **M. BLANCHET** (*Polytechnique Montréal*)	**12** Automatic MDO of TBW configuration based on aerodynamic shape optimization with controllability considerations **M. MADANI** (*Amirkabir University of Technology*)
15:50	**32** Successive-correction h-p adaptation for k-exact FV schemes in compressible flow simulations **M. SALIHOGLU** (*Institut Jean le Rond d'Alembert*)	**58** Large Eddy Simulations and Experiments of Shock Oscillations from Separation-Shear Layer Entrainment in Highly Separated Transitional Shock-Boundary Layer Interactions **P. L. NEL** (*Rolls-Royce Deutschland Ltd.*)	**65** Multi-Objective Industrial Optimization of High-speed Helicopter Main Rotor Blades **D. DESVIGNE** (*Airbus Helicopters*)
16:15	**COFFEE BREAK**		
16:45	**66** High-Fidelity Film-Cooled Rotor High Pressure Turbine Simulation using Metric-Based Anisotropic Mesh Adaptation **F. ALAUZET** (*INRIA Saclay Île-de-France*)	***8*** *Experimental analysis of force locations in Multi-point Calibration approach for Asymmetric loading over hypersonic configurations* ***A. KAMAL*** *(IIT Guwahati)*	**56** Multi-Point Surrogate-based Optimization for Automated Nozzle Design **N. RAZAALY** (*ISAE-ENSMA*)
17:10	**60** A New Rotation Correction for the Spalart-Allmaras Model to Improve Off-Body Vortex Prediction and Vortex-Vortex Interaction Effects **F. ALAUZET** (*INRIA Saclay Île-de-France*)	**23** Measurement of streaks generated by non-uniform surface temperature distributions for delaying high-speed boundary layer transition **K. OZAWA** (*Imperial College London*)	**63** Experimental closed-loop control of an airfoil using linear genetic programming at high Reynolds numbers **P-Y. PASSAGGIA** (*University of Orleans*)
17:35	**61** Evaluation of tandem transonic compressor performances with mixing plane and metric-based mesh adaptation **E. GUILBERT** (*INRIA)*	**10** Transition Prediction for 3D Supersonic Swept Wing Based on γ-Reθt model **C. LIU** (*AVIC Aerodynamics Research Institute*)	***14*** *A Novel Methodology for Propellers Rotor Blades Optimization* ***H. FELLOUAH*** *(Université de Sherbrooke)*
18:00	**END OF SESSIONS**		
18:30	**WELCOME RECEPTION | Hosted by Orléans City Hall (Hôtel Groslot)**		

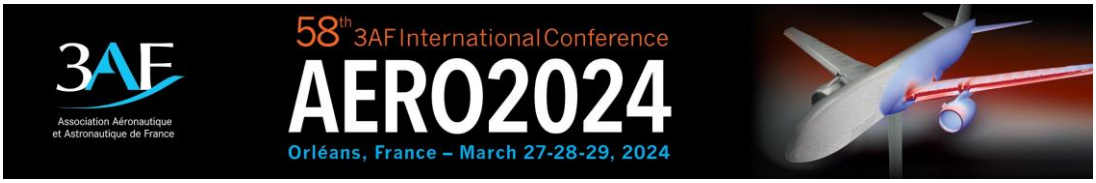


PRELIMINARY PROGRAMME

THURSDAY, MARCH 28

09:15	**KEYNOTE CONFERENCE N°3** **Flow control in Aerodynamics: From model-based to data-driven** **Dr. Laurent CORDIER** *(Institut P', ISAE-ENSMA)*

	SESSION 3A **Flow control** **Chairperson: Nicolas MAZELLIER** **(*Université d'Orléans*)**	**SESSION 3B** **Exergy and drag decomposition** **Chairperson: Patrick GONIDEC** **(*Safran Nacelles*)**
10:00	**39** Modelling Porosity using Python and CFX for the COMPACT Project **A. PREECE** (*Aircraft Research Association Ltd.*)	**15** Overview of the IDEFFIX project towards the development of the far-field exergy balance method at an industrial level of complexity **I. PETROPOULOS** (*ONERA*)
10:25	**34** Experimental characterisation of controlled separated flows using high-frequencies sweeping jets **M. TOCQUER** (*University of Orleans*)	**17** Exergy analysis of surface heat exchangers for aircraft engine applications **E. PALADINI** (*Safran Aircraft Engines*)
10:50	**38** Separation control of a NACA 4412 with 25° sweep at high Reynolds numbers using pulsed-jet actuators **P-Y. PASSAGGIA** (*University of Orleans*)	**37** Assessment of the Far-Field Exergy Balance Method for Industrial Aerodynamic and Aerothermal Applications **M. MORELLI** (*Airbus Operations SAS*)
11:15	**COFFEE BREAK**	
11:45	**35** Examination of mass flux equilibrium in the 3D turbulent wake of the flat-back Ahmed body using stacked stereoscopic PIV **V. PAREZANOVIC** (*Khalifa University of Science and Technology*)	**16** Development of a far-field drag extraction method for supersonic flows **I. PETROPOULOS** (*ONERA*)
12:10	**49** On the Control of a Leading-Edge Vortex & its Liftoff on a Cranked, Swept Back Wing **W. WIGNANSKI** (*University of Arizona*)	***1*** Drag reduction over the rectangular aircraft wing through varying spanwise waviness characteristics **A. INTIZAR - H. TANWEER** (*Mehran UET Jamshoro*)
12:35	**LUNCH**	

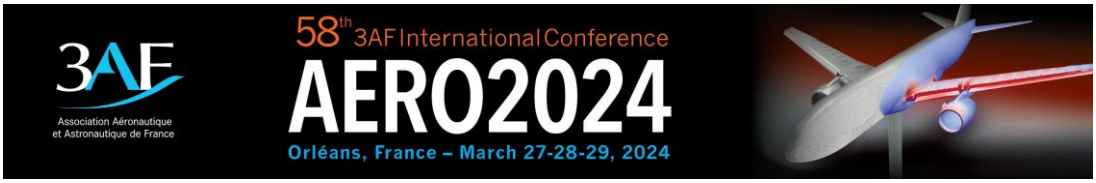


PRELIMINARY PROGRAMME

THURSDAY, MARCH 28

14:00	**KEYNOTE CONFERENCE N°4** **Applications of Generative Deep Learning for Aerodynamic Modelling** **Dr. Xavier BERTRAND** (*Airbus Commercial Aircraft*)

	SESSION 4A **Real time data / Design** **Chairperson: Pascal LARRIEU** **(*Airbus*)**	**SESSION 4B** **Unsteady flows** **Chairperson: Marianna BRAZA** **(*IMFT, CNRS*)**
14:45	**11** Combination of flight test measurement and the aerodynamic model to determine in real time the Horizontal Tailplane angle of attack in dynamic longitudinal maneuvers **L. AMBIT MARIN** (*Airbus Operations SAS*)	**19** Transient effects from a laminar separation bubble on an airfoil in an oscillating freestream **V. FERRAND** (*ISAE-SUPAERO*)
15:10	**42** Aerodynamic Investigation of a Flare-Stabilized Projectile Using Acceleration-Based Measurements and Numerical Simulations **F. LEOPOLD** (ISL - *Institut Saint-Louis*)	**51** Numerical simulation and physical analysis of the electroactive morphing effects through travelling waves on an A320 wing prototype **R. EL AKOURY** (*Institut de Mécanique des Fluides de Toulouse*)
15:35	**59** Model order reduction, application of the DPSM method to real time flight simulation **J-P. BARBOT** (*ENS, Université Paris-Saclay*)	**27** A novel shock control bump approach for oblique shock wave boundary layer Interactions **T. MISSING** (*University of Cambridge*)
16:00	**COFFEE BREAK**	
16:30	**57** Towards using Medium-Fidelity Nonlinear Potential Methods for Full Aircraft Configurations **C. LE PAILLEUR** (*Polytechnique Montréal*)	**48** Dynamic Stall Study of a S809 Airfoil with Retrofitted Vortex Generators **M. BODEN** (*Northumbria University*)
16:55	**25** Initial Optimisation and Mach Number Comparison of a Joint Wing Design at High Subsonic Speeds **P. HANMAN** (*University of the West of England*)	**24** On the Optimal Size of Square-Lobed Trailing Edges in Transonic Flow Over a Backward-Facing Step **M. BODEN** (*Northumbria University*)
17:20	***47*** Airfoil design using machine learning **H. FELLOUAH** (Université de Sherbrooke)	**5** A Novel Approach to 3D Thrust Vectoring CFD via Mesh Morphing **U. YILDIZ** (*Turkish Aerospace Industries*)
18:00	**DEPARTURE FROM POLYTECH**	
18:30	**VISIT - BANQUET & AWARD CEREMONY**	



PRELIMINARY PROGRAMME

FRIDAY, MARCH 29

09:15	**KEYNOTE CONFERENCE N°5** **Machine-learning-assisted turbulence modeling** **Prof. Paola CINNELLA** *(Institut Jean Le Rond D'Alembert, Sorbonne Université)*

	SESSION 5A **Machine Learning for simulation and turbulent flows** **Chairperson: Paola CINNELLA** ***(Sorbonne Université)***	**SESSION 5B** **Aerodynamic Design** **Chairperson: Marc BOUCHEZ** **(*MBDA*)**
10:00	**30** Reduced Order Modelling with Machine Learning for turbulent aerodynamic flows around wings at high Reynolds number **A. MAROUF** (*University of Strasbourg*)	**50** Acoustic Analysis and Geometrical Parametric Study of Propeller Trailing-Edge Serrations for Advanced Air Mobility Applications **M. DE ROSA JACINTO** (*Technische Universität Wien*)
10:25	**41** Machine learning applied to turbulence modelling for industrial aeronautical applications **G. LARUELLE** (*Dassault Aviation*)	**53** A comparative study of wind turbine rotor aerodynamic loads obtained from an experimental approach and predicted by a high fidelity CFD simulation **M. DUMANOIR** (*Ecole de l'Air*)
10:50	**43** Towards real-time CFD: Novel deep learning architecture for transonic wall-bounded flows **F. TEJERO** (*Cranfield University*)	**2** Effect of a fan on the unsteady distortion of S-duct intakes **M. MIGLIORINI** (*Cranfield University*)
11:15	**COFFEE BREAK**	
11:45	**7** Investigations on Physics-Informed Neural Networks for Aerodynamics **R. DUVIGNEAU** (*INRIA Centre*)	**22** Experimental Investigation of Mixed-Compression Supersonic Intakes using a Highly Re-configurable Model **J. LEWIS** (*Imperial College London*)
12:10		**62** A novel wind turbine simplified model capable of generating a swirling wake **E. FUENTES-NORIEGA** (*University of Orleans*)
12:35	**LUNCH**	
14:00	**TECHNICAL VISIT**	
16:00	**END OF AERO2024 CONFERENCE**	