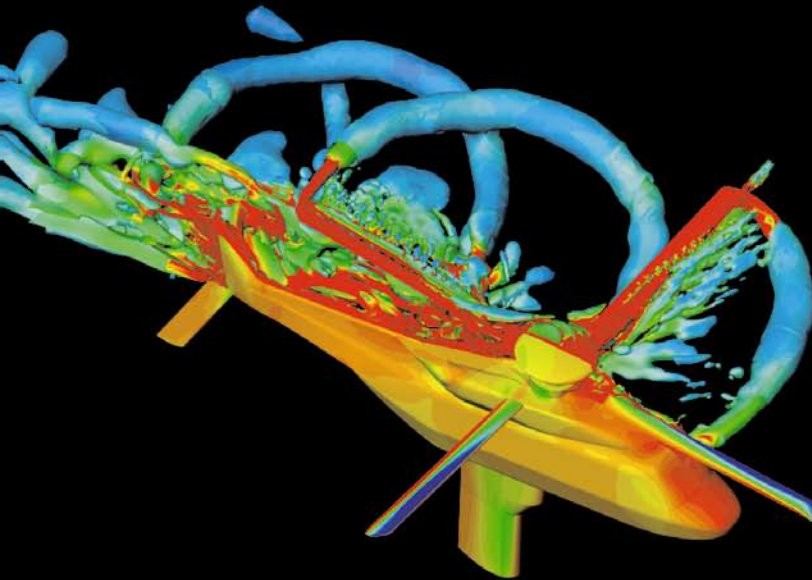


CALL FOR PAPERS



46th Symposium of Applied Aerodynamics Aerodynamics of Rotating Bodies Orléans, March 28-29-30, 2011



Scientific Committee

3AF

- Aerodynamic Commission
- Propulsion Commission
- Helicopter Commission

University of Cambridge
Polish Academy of Sciences
Polytech' Orléans
University Paris Ouest – LTIE-GTE

ONERA

THE FRENCH AEROSPACE LAB



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46th 3AF Symposium of Applied Aerodynamics Scientific Committee

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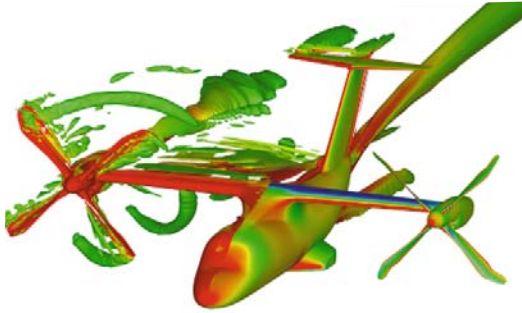
3AF, Association Aéronautique et Astronautique de France, organises each year the Applied Aerodynamics Symposium in a different venue known for its activity in the domain of aeronautics and/or space.

This symposium is an excellent opportunity for scientific exchanges among the aerospace community where aerodynamicists from industry, research institutions and academics meet. Scientists and engineers from other domains involving fluid mechanics are also welcome. Applied Aerodynamics Symposium concentrates each year on a different topic representative of the present concerns in the field of aerodynamics. It is organized on the basis of five sessions, each introduced by a keynote speaker. The symposium ends with a technical visit usually in connection with the symposium's subject.

Although foreign colleagues have contributed to the symposium in the past, the Applied Aerodynamics Symposium has decided to open more largely its audience by extending the participation to the international community and adopting English as the working language.

46th 3AF Symposium of Applied Aerodynamics

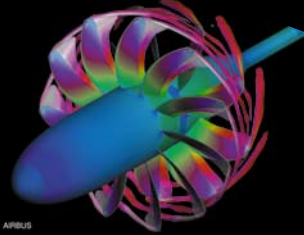
Aerodynamics of Rotating Bodies



This year, the symposium focuses on the aerodynamics of rotating bodies which is present in numerous applications where relative and absolute frames can be considered. The experimental, theoretical, and numerical aspects, from fundamental research to industrial applications will be considered. Due to the large variation of Mach number, many fields of the aerodynamics are concerned such as compressible flows, transonic flows, transition, 3D effects, turbulence, unsteady phenomena, thermal effects.

Main Topics

Aerodynamics of the rotating bodies covers a wide range of applications both for aerospace or ground applications. The following items can be addressed during the Symposium:



•**Propellers** present low subsonic to transonic flows along the blade, generating noise and drops of efficiency.

•**Counter Rotating Open Rotors (CROR)** are candidates for the future generation of short/medium range aircraft.

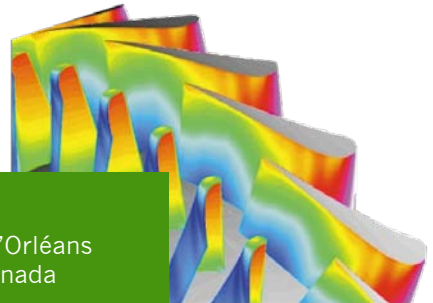
•**Helicopter rotors** are still challenging to model due to the strong fluid/structure and wake interactions and the large variation of Mach number from root to tip.

•**Tilt-Rotor aircraft** presents specific blades which must answer to both hover and cruise capabilities.

•**Turbomachinery** have complex flow structures due to the high pressure gradients within small confined volumes.

•**Turbopumps** must deal with high loads and non Newtonian fluids when used for aerospace.

•**Wind turbines** are facing to an important development and various aerodynamic configurations must be assessed.



Keynote speakers

Sandrine **Aubrun**

Hany **Moustapha**

Laurent **Scannapieco**

Guy **de Spiegeleer**

Zoubir **Zouaoui**

PRISME – Polytech’Orléans

Pratt & Whitney Canada

Eurocopter

Snecma

Glyndwr University

46th 3AF Symposium of Applied Aerodynamics

Call for papers

Communication abstracts (300 to 500 words with selected figures) have to be emailed to the 3AF Executive Secretary secr.exec@aaaf.asso.fr **before November 15th, 2010.**

The Scientific Committee will inform the author of acceptance on December 13th, 2010.

Full papers must be sent to the 3AF Executive Secretary before February 21st, 2011 to allow their insertion in the symposium proceedings.

Official language: English
(abstract, paper and conference)

A selection of papers will be published in a special issue of the *International Journal of Engineering Systems Modelling* dedicated to the Applied Aerodynamics Symposium. Authors are however free to publish their paper in another journal with a reference to the Symposium being then appreciated.



Deadlines

Abstract submission:	November 15th, 2010
Paper acceptance:	December 13th, 2010
Paper submission:	February 21st, 2011
Symposium in Orléans:	March 28th-30th, 2011

Executive Secretary

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