WakeNet3-Europe

3rd Major Workshop - First Announcement

Wake Turbulence Achievements and Future Research Needs

Southampton – 10th & 11th May 2011
De Vere Grand Harbour Hotel
West Quay Road,
Southampton, SO15 1AG, UK
Overview

Who should attend

The workshop is directed at everyone professionally involved in wake vortex related aerospace activities, including scientists, researchers, members from aviation authorities, air navigation service providers, airport operators, airlines, pilots, aircraft and system manufacturers etc. The workshop shall provide the opportunity to strengthen the relations between all interested stakeholders in order to facilitate future activities towards achieving the ACARE “Vision 2020” while taking into account wake turbulence safety.

Topics

Wake Turbulence Separations and Recategorisation

Substantial effort has been directed towards wake vortex research across the world in recent years. This has resulted in a number of new concepts being developed and implemented into the operational environment today. Research on wake turbulence continues; however measures to distinguish an acceptable definition of aircraft disturbance from wake turbulence remain undefined and wake turbulence separation requirements continue to constrain operations at many of the world’s busiest airports.

Re-categorisation of aircraft types and their wake turbulence separations is being evaluated by ICAO, Eurocontrol and FAA within the RECAT project. Additional concepts range from simple changes of existing weight categories to planned dynamic, pair-wise separations within SESAR WP6.8.1.

Wake Vortex Concepts - Benefit Assessments

Various operational concepts are proposed to increase airport capacity without loss of safety. Initial high level studies have generally indicated substantial capacity gains (of the order of 10%), final figures can only be obtained through a more detailed analysis taking into account specific site dependent details, with all issues such as meteorological uncertainty and wake prediction included.

The goal of many of the concepts currently being researched today is the implementation of procedures which can be harmonised across Europe and the rest of the world. More detailed research must be conducted to identify the actual benefit in terms of tactical and strategic capacity gain before these concepts are implemented operationally.

Continued Wake Vortex Research

Technological advances are imperative with regards to the implementation of future wake turbulence concepts ensuring that a high level of safety is maintained and capacity is increased.

WakeNet3 aims to share information on a number of different technological advances relating to wake turbulence research. The exchange of knowledge on the status of aspects such as operational wake vortex behaviour modelling, wake vortex encounter simulations and wake vortex alleviation is paramount. The developments and validation exercises within these subjects can enhance the quality of any operational wake vortex concepts implemented in the future.

Wake Advisory Systems and Weather Prediction

Wake sensors and model-based predictions allow for dedicated wake advisory and warning systems on the ground (especially at capacity-constrained airports) as well as in the air. Onboard and ground-based systems may operate independently or in collaboration and may use sensors and/or models to assure safety. They may replace existing separation rules or act as additional safety nets.

Wake vortex behaviour strongly depends on prevailing meteorological conditions and most wake vortex concepts need to understand and predict these conditions for large operational areas, (for example along the glide path) for the near future. Developments within this area need to be made available to those in the wake vortex research community.

Call for Presentations

If you wish to contribute to the workshop with a dedicated presentation targeted towards one of the workshop’s main topics contact the organising committee at wakenet3@nats.co.uk.
Workshop Location

The **De Vere Grand Harbour Hotel** was built in the mid 1990s, alongside Southampton city’s medieval town wall. However, its real connection is with the maritime history of this bustling port as the hotel is located right on the Southampton waterfront.

**Directions**

**By Car**
Take the M3 South and leave at Junction 13 (Bournemouth) to the M27. Exit at Junction 3 to the M271, and follow signs to Southampton Waterfront.

Sat Nav Coordinates: **Latitude:50.8998**  **Longitude:-1.4077**

**By Rail**
The hotel is 5 minutes from Southampton Central Train Station

**By Air**
The hotel is approximately 20 minutes drive away from Southampton airport. Opposite the airport is Southampton Airport Parkway Train Station where you can catch a train into the centre of Southampton which will take 5 minutes.
A direct train can be taken from London Gatwick airport to Southampton.
For London Heathrow take the underground to London Waterloo and change here for trains to Southampton.

**Hotels**
There have been a number of hotel rooms reserved for delegates of the workshop at the De Vere; however these will be allocated on a first come first serve basis. Below are a list of other hotels which are in walking distance from the workshop venue:

- **Novotel Southampton**, West Quay Road, Southampton, SO15 1RA
- **Hotel Ibis Southampton**, West Quay Road, Southampton, SO15 1RA
- **Holiday Inn Southampton**, Herbert Walker Avenue, Southampton, SO15 1HJ
- **Jurys Inn Southampton**, Charlotte Place, Southampton, SO14 0TB

Registration for the Workshop

All participants are **required to register** their attendance by April 20th, 2011, by email to the following address: **WakeNet3@nats.co.uk**. The registration form has to be downloaded from the WakeNet3-Europe website (**www.WakeNet.eu**). Participants are only successfully registered after having received a positive reply. Please register as soon as possible but only if you are certain to attend.

Social Event

A dinner at the De Vere Grand Harbour will take place on the evening of the first workshop day (Tuesday, May 10th, 19:00).

The dinner is optional and without additional fee; however it is mandatory to register for the dinner using the workshop registration form.

Fees

The workshop is **free of charge** for registered participants which includes catering during both days. Participants are responsible for their accommodation as well as for their transport to and from the venue.

Contact Information

To contact the organisation committee, please send an email to **WakeNet3@nats.co.uk**.

During the days of the workshop (if you are late or lost) you can reach the Workshop Coordinator using the following mobile phone number: **+44 7507 599 979**