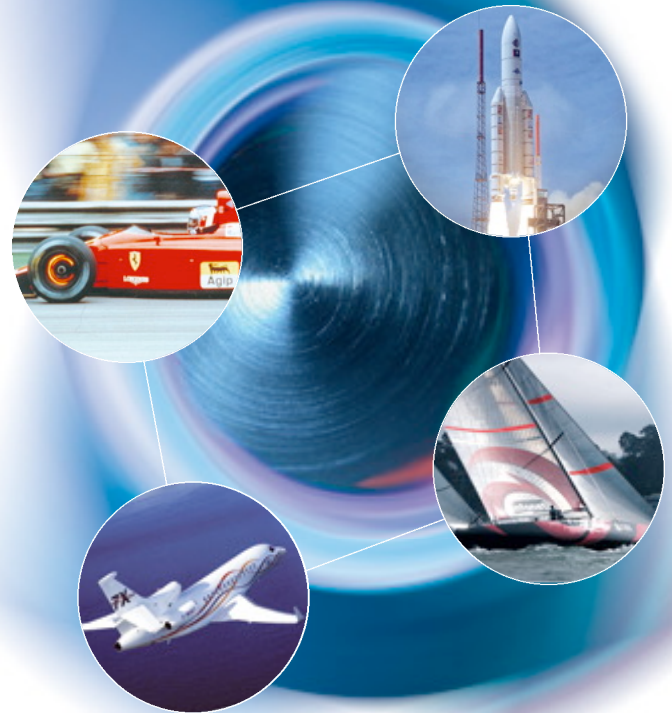


**AQUITAINE** Industrie  
Recherche  
Formation

September 17<sup>th</sup> to 19<sup>th</sup> 2007  
Palais des Congrès - **ARCACHON**  
FRANCE

# 1<sup>st</sup> International Carbon Composites Conference in Aerospace Valley

*Solutions for high  
demanding applications*



Proposed and Organized by



For any matter related to the conference, please contact the Conference Secretariat :

### AVANTAGE-AQUITAINE

42 rue de Tausia - 33800 Bordeaux FRANCE  
Phone : 33 6 81 42 23 95 - Fax : 33 1 45 31 61 34  
Email : [jfb@avantage-aquitaine.com](mailto:jfb@avantage-aquitaine.com)

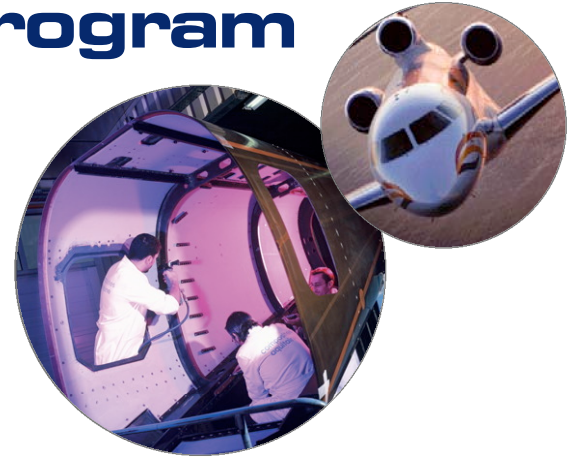
Coordination

**INNOVALIS Aquitaine**  
[www.innovalis-aquitaine.org](http://www.innovalis-aquitaine.org)

Supported by



# Preliminary Program



This international conference, held in the heart of Bordeaux – Toulouse Aerospace Valley, will bring together scientists, designers and end users from the academic, institutional and industrial “Carbon Fibre Composites World”.

It will constitute a unique opportunity to bring together all players in the use of Carbon Fibre Composites.

Emphasis will also be given to the relationship between Schools, Universities and Industry, including education and training of professionals. There will be outstanding presentations and also many formal and informal opportunities for exchanges, networking and cross-fertilization.

The conference will address a wide range of domains such as :

- > Aeronautical, space and defence sectors
- > Transport and automotive applications
- > Industry, off-shore, windmills, construction and buildings
- > Sailing
- > High-end and general public sport goods

The presentations will cover the complete spectrum of related activities :

- > From material properties and conceptual design to verification and qualification
- > Efficient manufacturing techniques
- > Cost assessment and reduction
- > Life cycle, maintenance
- > Repair and overhaul, waste treatment

Topics will encompass the whole range of materials, from carbon fibre and fabric, carbon fibre reinforced plastics to carbon ceramics and the latest nano-technologies based on innovative solutions.

With the support of the following partners :

AIRBUS, AMAC, ARKEMA, ASTRIUM, ENSAM,  
ENSCP, ESCM, GFEC, INNOVALIS Aquitaine,  
Snecma Propulsion Solide, SOFICAR,  
SONACA, Universities of Bordeaux and Toulouse.

**SEPTEMBER 17 TH**

**08.00 - 09.00** Registration

**09.00 - 09.15** Welcome Address  
*AVANTAGE AQUITAINE*

**09.15 - 10.15** Opening Session  
*CONSEIL REGIONAL D'AQUITAINE  
AEROSPACE VALLEY - INNOVALIS Aquitaine*

**10.15 - 10.45** *COFFEE BREAK*

## **Session 1** Carbon Composite Family

**10.45 - 11.15** Invited Lecture  
Carbon-based Polymer Composites and Nanocomposites  
*A. SOUM - CNRS*

**11.15 - 11.45** Invited Lecture  
CMC, a Class of Versatile and Smart Composite Materials  
*J. LAMON - LCTS*

**11.45 - 12.15** World Carbon Fiber Market  
*M. BRISSON - SOFICAR*

**12.15 - 13.45** *LUNCH*

**13.45 - 14.30** Invited Lecture  
Multiscale and Multilevel Analysis of Composite Structures :  
an Overview of the Americo Project  
*N. CARRERE - ONERA*

>>>

**Session 2**  
Design Research  
and Tools 1

**Session 3**  
Efficient Manufacturing  
Techniques 1

**14.30 - 15.00** Application of Evolutionary Algorithms to the Optimal Design of Composite Aircraft Structures Regarding Laminate Staking Sequence Rules  
*P. KALETTA - AIRBUS*

**15.00 - 15.30** Ablation of C/C Composites : Roughness and Reactivity  
*G.J. VIGNOLES - LCTS*

Infusion process for fabrication of peculiar part of composite fuselage  
*V. DE VITA - ALENIA*

**15.30 - 16.00** Aeronautic Carbon Brake : Braking Under Severe Conditions  
*G.B. MAZET  
MESSIER BUGATTI*

Development of Very High Tensile Flux Metal/Composite Junctions  
*N.M. PETERMAN  
ASTRIUM ST*

**16.00 - 16.30** New Tools for the Design of Composites Accelerated Testing Methodology is Access to Durability Prediction  
*T. MASSARD  
Think COMPOSITE*

Carbon Fibers Formation from PAN Precursors Modified with Carbon and Ceramic Nanoconstituents  
*S. BLAZEWICZ  
Cracow Science and Technology University*

**16.30 - 17.00** COFFEE BREAK

**Session 4**  
Design Research  
and Tools 2

**Session 5**  
Efficient Manufacturing  
Techniques 2

**17.00 - 17.30** Influence of Intralaminar Damage on Composite Laminates Delamination Onset  
*J.C. WAHL - Bordeaux I Univ.*

The RTM Process Evolutions at AIRBUS Nantes  
*M. DUBLINEAU  
AIRBUS*

**17.30 - 18.00** Some Topics on the Strength Prediction of the Structural Bondings : Space Applications Examples  
*R. VIALLE - THALES ALENIA*

Advanced Composite Technologies for Solid Rocket Motor Nozzle  
*M. DAUCHIER  
Sneema Propulsion Solide*

**18.00 - 18.30** Characterization and Life Duration of CMC Based on Carbon Fibers  
*M. CATALDI  
Sneema Propulsion Solide*

Fibre-reinforced Carbon Materials for Flow Stabilization over the Multilayered Surface  
*N. KISILOVA  
Kharkov National University*

**20.00** CONFERENCE DINNER

**Session 6**  
Design Research  
and Tools 3

**Session 7**  
Efficient Manufacturing  
Techniques 3

**08.15 - 09.00** Invited Lecture  
Carbon-based Polymer Composites and Nanocomposites  
*P. LADEVEZE - LMT Cachan*

**09.00 - 09.30** Mechanical Behaviour of 2D C/SiC Composites, Relations Between Microstructures/Properties  
*M.A. DOURGES - CNRS*

Thermostructural Composites Nozzles : Off the Shelves Breakthrough Technology to Improve Upper Stage Rocket Engine Performance  
*M. LACOSTE  
Sneema Propulsion Solide*

**09.30 - 10.00** Damage Tolerance of Launchers Composite Structures  
*A. BERGEROT  
ASTRIUM ST*

Numerical Modeling and Simulation of Liquid Composite Molding Processes  
*C.H. PARK - Le Havre Univ.*

**10.00 - 10.30** Friction and Wear of Carbon/Carbon Composites : the Role of Mechanic and Physicochemistry  
*S. BONNAMY - CNRS*

Preparation of C/C Composites by Chemical Vapour Infiltration : Benefits from Process Modelling  
*G. VIGNOLES - LCTS*

**10.30 - 11.00** A Numerical Simulation Method for the Failure Behaviour of Carbon Fibre Reinforced Plastics  
*P. LINDE - AIRBUS*

Multi-Cells CFRP Insert Conception : From the Idea to Applications  
*P. TAQUET - SONACA*

**11.00 - 11.30** COFFEE BREAK

**Session 8**  
Design Research  
and Tools 4

**Session 9**  
Waste Treatment

**11.30 - 12.00** A Micromechanical Discrete Damage Based Model for Woven Composite Materials  
*G. COUEGNAT - LCTS*

What Solution for Carbon Composites Waste Treatment and what Mass Available  
*A. PARISSÉ - COMPOSITEC*

**12.00 - 12.30** Optimal Reinforcement of the Carbon Composites in a Known State of Load Distribution  
*N. KISILOVA  
Kharkov National Univ.*

Recycling Used Composites  
*P. JEULIN - GEMAB*

**12.30 - 14.00** LUNCH

**14.00 - 15.00** ROUND TABLE  
Moderator : F. CANSELL - Ecole Nationale Supérieure de Chimie et de Physique de Bordeaux  
What Are the Needs for Education and Training in Composite Materials Science for the Next 15th Years  
>>>

**Session 10**  
Design Research  
and Tools 5

**15.30 - 16.00** Advanced Composite Materials for Current and Future Space Propulsion and Non-Aerospace Applications  
*S. BEYER - ASTRIUM ST*

**Session 11**  
High Performance  
Applications 3

Helium High Pressure Tanks at ASTRIUM Space Transportation  
*F. BENEDIC  
ASTRIUM ST*

**16.00 - 16.30** To the Structuration of the Research Activities in the Field of Composites : State-of-Art and New Challenges  
*E. PAPON - MIB*

Inverse Methods : New Way of Thinking for the Design of Laminated Panels  
*R. GUEROULT  
Peter Heppel Associates*

**16.30 - 17.00** **COFFEE BREAK**

**Session 12**  
Technology Exchanges and Transfer

**17.00 - 17.30** A Lot Of Composites  
*J.T. GEERTS - Lot Développement Aménagement*

**17.30 - 18.00** A New Way to Switch From Metal to Composite : CARBOSTAMP  
*M. GELI - SOFICAR*

**18.00 - 18.30** From Metallic Materials to Composite Materials : COMUT Initiative in Aquitaine Region  
*J. PASSEMARD - 2ADI*

**SEPTEMBER 19 TH**

**Session 13**  
Characterization and  
Qualification Tests 1

**09.00 - 09.30** Improving Performance in Composites Drilling  
*L.M. DURAO  
Lab. de Ensaïos Mecânicos*

**Session 14**  
High Performance  
Applications 4

Democratization Bet of Carbon Fiber AND Traditional Solutions Alternate  
*S. LULL - Epsilon Composite*

**09.30 - 10.00** Fabrication and Mechanical Property Testing of Sisal and Glass Fiber Composite Materials  
*P. SIVASUBRAMANIAN  
A. K. College of Engineering*

Carbone Fibre Stone (CFS) Applications and Technical Information  
*K. KUSE - TechnoCarbon  
Technologies Gbr*

**10.00 - 10.30** A Study of the Effects on Fire Behaviour of Epoxy Resin  
*C. PEREIRA - Institute INEGI*

Airbus Structure Technology Next steps and vision  
*B. BERAL - AIRBUS*

**10.30 - 11.00** **COFFEE BREAK**

>>>

**Session 15**  
Characterization and  
Qualification Tests 2

**11.00 - 11.30** Experimental Study of Forces and Moment during Carbon Epoxy Drilling Process  
*M. CHERIF  
Bordeaux 1 Univ.*

**Session 16**  
High Performance  
Applications 5

C2 : a Sustainable Carbonized Rayon for Solid Rocket Motor Nozzles  
*B. BROQUERE  
Sneema Propulsion Solide*

**11.30 - 12.00** The Determination of Carbon Fiber Reinforced Plastics Porosity in Aircraft Constructions by Laser-Acoustic Method  
*V. MURASHOV - VIAM*

Pitch Based High Modulus Carbon Fibres for Thermal Solution  
*H. OHNO - Nippon Graphite Fiber Corporation*

**12.00 - 13.30** **LUNCH**

**13.30 - 14.15** **Invited Lecture** : Is there a Future for Carbon Nanotubes in Composites ?  
*M. MONTHIOUX - CNRS*

**Session 17**  
Carbon Nanotubes 1

**14.15 - 14.45** Efficient Use of Carbon Nanotubes in Thermoplastics and Elastomer Composites  
*P. PICCIONE - ARKEMA*

**Session 18**  
High Performance  
Applications 6

Design and Analysis of a Full Composite Rigid Wing for Ultra light "Trike"  
*L.L. CANNONE  
Politecnico di Torino*

**14.45 - 15.15** Tiny Tubes Provide Real Material Improvement/Better Thermoset Composites for High-Performance Applications  
*K. SCHIERHOLZ  
Nanoledge Technical Center*

Composite Materials on Falcon Planes Family  
*C. SOURDET  
DASSAULT AVIATION*

**15.15 - 15.45** Nanosafe  
*F. SCHUSTER - CEA*

From P80 Nozzle Demonstration to A5 SRM Nozzle Evolution  
*D. BOURY  
Sneema Propulsion Solide*

**15.45 - 16.15** Process and Performance Enhancement in Thermoset Composites using Acrylic Block Copolymers and Carbon Nanotubes  
*P. GERARD - ARKEMA*

Bordering Concrete Columns with Carbon Fibers Reinforced Polymers  
*R. BENZAID - Jijel Univ.*

**16.15 - 16.45** **COFFEE BREAK**

**Session 19**  
Carbon Nanotubes 2

**16.45 - 17.15** Nacomat project Overview  
*M. BOURGEON - Sneema Propulsion Solide*

**17.15 - 17.45** Carbon Nanotube Composite Fibers  
*Ph. POULIN - CNRS*



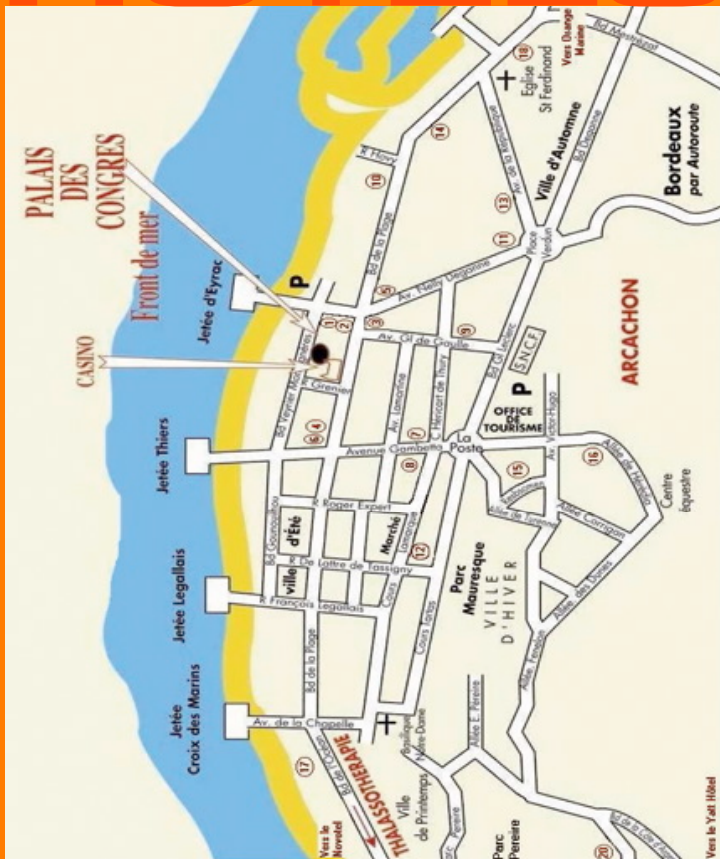
# 1<sup>st</sup> International Carbon Composites Conference

September 17-19,  
2007

Palais des Congrès  
Arcachon - France



## HOTELS



### Walking Distance to the conference center

(Numbers in front of the name of the hotel are references to determine the position of the hotel on the map)

#### 19 - HOTEL DU PARC \*\*\*

5/7 av du parc  
33120 Arcachon  
Phone : 05 56 83 10 58  
Fax : 05 56 54 05 30  
Single Room breakfast included :  
90 € TTC

#### 13 - HOTEL LES MIMOSAS \*\*

77 bis avenue de la République  
33120 ARCACHON  
Phone : 05 56 83 45 86  
Fax : 05 56 22 53 40  
Single Room breakfast included :  
69 € TTC  
Double Room breakfast included :  
76.5 € TTC

#### 17 - LES VAGUES \*\*\*

9 bd de l'Océan  
33120 ARCACHON  
Phone : 05 56 83 03 75  
Fax : 05 56 83 77 16  
Single Room breakfast included :  
88 € TTC  
Single Room breakfast included  
(view on the beach): 127 € TTC

#### 16 - HOTEL MARINETTE \*\*

15 allée J.M. de Hérédia  
33120 ARCACHON  
Phone : 05 56 83 06 67  
Fax : 05 56 83 09 59  
Single Room breakfast included :  
69 € TTC  
Double Room breakfast included :  
88 € TTC

#### 14 - AQUAMARINA \*\*\*

82 bd de la plage  
33120 ARCACHON  
PHONE : 05 56 83 67 70  
Fax : 05 57 52 08 26  
Single Room breakfast included :  
73 € TTC

### Hotel out of the map below

#### HOTEL IBIS \*\*

Avenue de Saint Exupery  
33260 La Teste de Buch  
Phone : 05 57 15 20 00  
Fax : 05 57 15 20 09  
Single Room breakfast included :  
82 € TTC

#### YATT HOTEL\*\*

253 bd côte d'argent  
33120 ARCACHON  
Phone : 05 57 72 03 72  
Fax : 05 56 22 51 34  
Single Room breakfast included :  
69 € TTC

#### ORANGE MARINE \*\*

35 bd Chanzy  
33120 Arcachon  
Phone : 05 57 52 00 80  
Fax : 05 57 52 00 78  
Single Room breakfast included :  
56 € TTC  
Double Room breakfast included :  
73 € TTC

#### NOVOTEL \*\*\*

Avenue du Parc  
33120 ARCACHON  
Phone : 05 57 72 06 72  
Fax : 05 57 72 06 82  
Single Room breakfast included :  
160 € TTC

ACCOMODATION FORM >>>

# ACCOMODATION FORM

To be sent directly to the hotel selected before August 10, 2007

Name of the Hotel Selected : \_\_\_\_\_

(subject to availability at the date of your reservation)

Name of the Conference Delegate : \_\_\_\_\_

Address : \_\_\_\_\_

Zip Code : \_\_\_\_\_

City : \_\_\_\_\_

Country : \_\_\_\_\_

Phone : \_\_\_\_\_ Fax : \_\_\_\_\_

Email : \_\_\_\_\_

## NUMBER OF PERSON

1 pers

2 pers

Single

Double

Twin (2 beds)

Arrival on :

Departure on :

Number of nights :

I enclose to this form a one night deposit cheque of \_\_\_\_\_ euros

Date and place : \_\_\_\_\_

Signature : \_\_\_\_\_

# REGISTRATION FORM

To be sent to :

**AVANTAGE AQUITAINE**

42, rue de Tauzia

33800 Bordeaux - FRANCE

Phone : + 33 (0)6 81 42 23 95 - Fax : 33 (0)1 45 31 61 34

E-mail : [jfb@avantage-aquitaine.com](mailto:jfb@avantage-aquitaine.com)

Family name : \_\_\_\_\_

First name : \_\_\_\_\_

Firm/Organisation : \_\_\_\_\_

Address : \_\_\_\_\_

Zip Code : \_\_\_\_\_

City : \_\_\_\_\_

Country : \_\_\_\_\_

Phone : \_\_\_\_\_ Fax : \_\_\_\_\_

E-Mail : \_\_\_\_\_

- Regular Rate : 800 € (including 19,6% VAT)
- Speakers and chairmen : 650 € (including 19,6% VAT)
- University members and students : 400 € (including 19,6% VAT)  
(Intracommunity VAT number : FR2248513674100017)

## PAYMENT

- By cheque in Euros to the order Avantage Aquitaine
- By Credit Transfer to the account N° 30003-00360-00021257336-41  
(Société Générale -10, av. de Bordeaux - 33510 Andernos - France)  
IBAN : FR76 30003 00360 00021257336 41 – BIC/SWIFT : SOGEFRPP
- By Credit Card :
  - Visa Card  Mastercard  American Express
  - Credit Card Number \_\_\_\_\_
  - Expiration date CID\* \_\_\_\_\_
- By order to Avantage Aquitaine

Date/signature \_\_\_\_\_

Please don't forget to mention participant's name on payment. Cancellations will only be accepted until 7 days prior to the Conference. After 7 days a 750 Euros cancellation fee will be applied. Registrants who do not cancel before the conference date will be liable for full registration fees.

\*CID : The CID (card identification) number is a 3- or 4-digit code on your credit card (three last digit on the number on the back of your visa or master credit card or the fourth digits on the front of your AMEX Credit card). We are requesting it as an added security precaution. It's another measure we take to ensure that your credit card is present when you place your order. If your CID number is illegible, call your credit card company.