

PROGRAMME

6th International Carbon Composites Conference

June 4-6, 2018

Palais des Congrès

ARCACHON - FRANCE



With partnership of

JEC
GROUP

JECmagazine
COMPOSITES

6th International Carbon Composites Conference

CONFERENCE OBJECTIVES

6TH IC3

JUNE 4-6, 2018

After 5 successful editions in 2007, 2009, 2011, 2014, 2016, Avantage Aquitaine is pleased to confirm you the 6th International Carbon Composites Conference, to be held in Arcachon, France, 2018 June 4-6.

The conference will bring together scientists, designers, manufacturers and end users from the academic, institutional and industrial "Carbon Fiber Composite World".

This is a unique opportunity to meet together all players in the use of Carbon Fiber Composite Materials.

This is a unique place for many formal and informal opportunities for exchanges, networking and cross-fertilization.

You will meet at a time scientists presenting their latest achievements as well as large industrial players and SMEs and start-up companies proposing very brand new applications and services.

You will also have fruitful discussions with educational organizations who are preparing and training future technical managers.

You will meet institutional representatives and identify R&D support and investors for your future development.

Speeches and plenary lectures will be organized in order to bring you the latest overview on high performances composites for cold and hot high demanding applications, latest trends on future of carbon fibers market including environmental issues.

We are looking forward to welcoming you in the very nice city of Arcachon, giving you also the opportunity of discovering the charm of the Bay and the sandy wild beaches of the Atlantic Coast.

You will have the chance to taste the famous oysters and the Bordeaux wines, whilst exchanging on following topics:

Materials

- ☐ Fibres and Fabrics, including Thin Ply solutions
- ☐ Thermoset and Thermoplastic Technologies
- ☐ Ceramics
- ☐ Bio Sourced Solutions

Structure design

- ☐ Static & Dynamic Design & Simulation Tools
- ☐ Damage Analysis and Repair
- ☐ Bonding and Joining

Efficient Manufacturing Technologies

- ☐ Impregnation Process
- ☐ Processing & Process Simulation
- ☐ Assist Lay-up, Fibre Placement, Filament Winding, Thin Ply
- ☐ Innovative/Out of Autoclave Curing

- ☐ Qualification and Certification
- ☐ Material Characterization
- ☐ Structural Testing
- ☐ Non Destructive Testing
- ☐ Virtual Design, Virtual Testing, Virtual Manufacturing
- ☐ Health Monitoring
- ☐ Damage Tolerance
- ☐ Maintenance and Overhaul
- ☐ Life Cycle Cost Analysis
- ☐ Eco-Design
- ☐ Bio-Sourcing
- ☐ Recycling and Environmental Issues
- ☐ Carbon Nanotechnologies
- ☐ Carbon and non-Carbon High Performances
- ☐ Hot Ceramics

Day 1 - June 4th

08h00 - 09h00

REGISTRATION

09h00 - 09h15

WELCOME ADDRESS

Jean-Luc MACRET, Conference Chairman - ArianeGroup - FRANCE
Thierry LEVEUGLE - ThiReX Ingénierie - FRANCE

INTRODUCTION KEYNOTES

09h15-09h45

Chairpersons : Jean-Luc MACRET, Thierry LEVEUGLE
Composites Market Overview
Franck GLOWACZ, JEC MAGAZINE - FRANCE

09h45-10h15

GIFAS French Thermoplastic Initiative
Loïc LE LAY, Stelia Aerospace / IRT Jules Verne - FRANCE

10h15-10h45

Considerations on a New Design Paradigm : Get Rid of Old Legacy Laminates !
Thierry MASSARD, Stanford University - USA

10h45-11h15

Ultimate Lightweight Solutions
Bertrand FLORENTZ, HUTCHINSON PAULSTRA - FRANCE

11h15-11h45

COFFEE BREAK

SESSION 1 : EFFICIENT MANUFACTURING - 1

Chairpersons : Guy LARNAC, Michel TOUSSAINT
Keys for Designing the Most Efficient
and Robust In-situ TP ATP
Anaïs BARASINSKI, Ecole Centrale Nantes - FRANCE

11h45-12h10

Automated Dry Preform Manufacturing
Asier GANDARIAS MINTEGI
Danobat S.Coop. - SPAIN

12h10-12h35

Innovative Heating Solution for Automatic Fiber Place-
ment of Dry Fibers & Thermoplastics Prepreg
Simon DESEUR, COMPOSITADOUR - FRANCE

12h35-13h00

SESSION 2 : STRUCTURAL ASSEMBLY

Chairpersons : Martine DUBE, Thierry LEVEUGLE
Conductive Nanocomposites as Heating
Elements for Resistance Welding
David BRASSARD, École Polytechnique de Montréal -
CANADA

Development of a Sandwich Panel with Carbon Fiber
Reinforced Thermoplastic Skins for Space Applications
Marina HEIM, CNES - FRANCE

Aeronautical Structures by Automatic Lay-up with
Thermoplastic Composites and Material Behavior
Fernando RODRIGUEZ-LENCE,
FIDAMC - SPAIN

13h00-14h30

LUNCH

PLENARY SESSION 1

14h30-14h55

Chairpersons: Marie JACQUESSON, Thierry LEVEUGLE
Review of Additive Manufacturing Polymer for Next Launchers Generation
Franck LAFFARGUE, ArianeGROUP - France

SESSION 3 : DYNAMICS AND DAMAGE CONTROL

Chairpersons : Slahedinne FRIKHA, Jean-Luc MACRET
Machine Learning Techniques Applied to Health
Monitoring of Composites Structures
Yann DUPLESSIS KERGOMARD, ESI Group - FRANCE

14h55-15h20

CFRP Repair Doubler Manufactured
on 3D Printed Tooling
Asunción BUTRAGHEÑO, Airbus - SPAIN

15h20-15h45

Short Beam Strength Tests on Woven
Composite Specimens
Augustin GAKWAYA, Laval University - CANADA

15h45-16h10

Low Velocity Impact Modelling on Laminate Compo-
site : Industrial Application to Impact at Hole Edge
Patrick PERES, ArianeGroup - FRANCE

16h10-16h35

SESSION 4 : ADDITIVE MANUFACTURING

Chairpersons : Guy LARNAC, Thierry MASSARD
Advanced Simulation to Leverage the True Additive
Manufacturing Potential
Guillaume BOISOT, e-Xstream - LUXEMBOURG

Solutions for additive Manufacturing
of Polymers Parts
Frédéric VERLON, EOS - FRANCE

Composite Additive Manufacturing
Eric MONTERO, Stratasys - FRANCE

Additive Manufacturing in High Performances Plastics
Marialuisa GERAMO, ROBOZE - USA

16h35-17h05

COFFEE BREAK

Day 1 - June 4th

17h05-18h00

ROUND TABLE 1

Moderator : Philippe BRIANT, Ariane Group

Design & Manufacturing : How to Transition from Expensive Handcrafting to Affordable Perspectives for Composites Applications ?

Participants : Francis SEDEILHAN, COMPOSITADOUR – Christophe CHAMPENOIS, CETIM – Laurent PÉRINET, ArianeGroup

20h00-23h00

CONFERENCE GALA DINNER

Day 2 - June 5th

PLENARY SESSION 2

Chairpersons : Ludger FROEBEL, Thierry LEVEUGLE

09h00-09h30

Composite Structures for Launchers : Challenges in Design, Dimensioning and Qualification for Gain of Costs and Adaptation to Market
Florian LAVELLE, CNES - FRANCE

09h30-10h00

Shaping The Future of Access to Space
Jean-Luc MACRET, ArianeGroup - FRANCE

10h00-10h30

COFFEE BREAK

SESSION 5 : LOW COST DESIGN / RECYCLING / BIOSOURCING

SESSION 6 : ADVANCED DESIGN & SIMULATION

10h30-10h55	Chairpersons : Martine DUBE, Xavier COQUERET The FORCE Project : Biobased Low-cost Carbon Fiber for a More Intensive Use of Composites Celia MERCADER, CANOE - FRANCE	Chairpersons : Thierry MASSARD, Frédéric DAU Virtual Prototyping of Hybrid Composite-metal Parts Using ESI VPS Patrick DE LUCA, ESI Group - FRANCE
10h55-11h20	3R-COMPO: Reprocessable, Repairable and Recyclable Thermoset Composites for Aeronautics and Automotive Nerea MARKAIDE, Cidetec - SPAIN	Water Vapor Transmission Through Bagging Materials for Composite Processes Anja HÄBERLE, Faserinstitut Bremen e.V. - GERMANY
11h20-11h45	FORTAPE Project: From Lab-scale Impregnation Line to Pre-industrial Manufacturing of GF and CF-based UD Tapes for Transportation Industries Thibaut SAVART, ARKEMA - FRANCE	Experimental Characterization of the Viscoelastic Behavior of a Curing Epoxy Matrix Composite from Pre-gelation to Full Cure. Application to Simulate Residual Deformation Alain VINET, Airbus CRT - FRANCE
11h45-12h10	Carbiso M and Carbiso TM: ELG Carbon Fibre Turns Recycled Carbon Fibres into Reinforcements for Thermoset and Thermoplastic Composites Marion FLAHAUT, ELG - UNITED KINGDOM	Fiber/Matrix Interfacial Analysis of Thermostable Thermoplastic Composites Aurélien MALHO RODRIGUES, IRT Saint-Exupéry - FRANCE
12h10-12h35	Development of a Bio-based Ablative Resin for Thermal Protection Systems Robin POUYET, ArianeGroup / ICMR-URCA - FRANCE	Large Amplitude Non-linear Free Vibrations of Sandwich Plates Using a Semi-analytical Method Hanane BHAR, Mohammed V University - MOROCCO

12h35-14h00

LUNCH

SESSION 7 : EFFICIENT MANUFACTURING - 2

SESSION 8 : COMPOSITES FUNCTIONALIZATION - 1

14h00-14h25	Chairpersons : Marie JACQUESSON, Philippe BRIANT Thermoplastic Composites For Laser Filament Winding Benoît COURTEMANCHE, CETIM - FRANCE	Chairpersons : Jason TAVARES, Eric DANTRAS Effect of Electro-less Pure Nickel Plating on Carbon Micro Fibers in Light Weight Metal Matrix Composites Material Produced by Induction Melting and Centrifugal Casting Method Danilo MARINI, Sapienza University of Rome - ITALY
14h25-14h50	Automated Collaborative Process for Aerospace Omega Stiffeners Manufacturing Guillaume FOURAGE, COMPOSITADOUR - FRANCE	Composites Functionalization and Deformation Monitoring Guillaume TIBERGHEN, TIBTECH - FRANCE
14h50-15h15	Demonstrator of an Aileron Fabricated from out of Autoclave CF/Epoxy Prepregs – Piotr CZARNOCKI, Warsaw Univ of Technology - POLAND	Solutions for Production and Properties of Thermoplastic Composites Dragan VELJANOSKI, Mikrosam AD - MACEDONIA

Day 2 - June 5th

15h15-15h45

COFFEE BREAK

SESSION 9: EFFICIENT MANUFACTURING - 3		SESSION 10: COMPOSITES FUNCTIONALIZATION - 2	
	Chairpersons : Guy LARNAC, Michel TOUSSAINT		Chairpersons : Xavier COQUERET, Jason TAVARES
15h45-16h10	Developments of Carbon / Thermoplastic Composites Amélie BRIENTIN, AVIACOMP - FRANCE		Carbon Nanotubes-modified Carbon Fibre Reinforced Polymer (CFRP) Composites with Tailored Interfaces Raquel SANTOS, INEGI - PORTUGAL
16h10-16h35	Thermoplastic Composites Manufacturing Luis RUBIO GARCIA, AIRBUS - FRANCE		Thermal Conduction Analyses in PEKK / CARBON Fiber Composites – Mike COULSON, CIRIMAT - FRANCE
16h35-17h00	Development of Competitive Prepreg and Welding Thermoplastic Technologies at IRT Saint-Exupéry Mathieu CHEVALIER, IRT Saint-Exupéry - FRANCE		Using Zinc Oxide Nanoparticles to Improve the Thermal Stability of a High-performance Benzoxazine Resin Jérémy HORION, Université Catholique de Louvain - BELGIUM
17h00-17h25	Thermoplastics for AIRBUS Structures : Status, Challenges and Perspectives Christophe PARIS, AIRBUS - FRANCE		Electrical Characterization of High Conductive Coating for CFRP Lightning Strike Protection Vincent BEDEL, IRT Saint Exupéry - FRANCE

17h25-18h10

ROUND TABLE 2

Moderator : Guy LARNAC, ArianeGroup
What Credible Perspectives for Composites Functionalization ?
Participants : Guillaume TIBERGHEN, TIBTECH – Luis QUIROGA CORTES, IRT Saint-Exupéry

Day 3 - June 6th

PLENARY SESSION 3

Chairpersons : Marie JACQUESSON, Slahedinne FRIKHA

09h00-09h30

Modeling of Liquid Composite Molding (LCM) Process for Ceramic Matrix Composites (CMC) Manufacturing – Marta PEREZ, ESI Group - FRANCE

09h30-10h00

VINCI Engine Thermo-Structural Composite Nozzle Extension for Ariane 6
Hervé COPÉRET, ArianeGroup - FRANCE

10h00-10h30

Materials and Processes Used to Manufacture Efficient SRM Components and Parts
Didier BOURY, ArianeGroup - FRANCE

10h30-11h00

COFFEE BREAK

PLENARY SESSION 4

Chairpersons : Jean-Luc MACRET, Thierry LEVEUGLE

11h00-11h30

Thin Ply Material for Space and Aero Applications
Fredrik OHLSSON, TeXtreme - SWEDEN

11h30-12h00

Development of CFRP Technologies for Application in the Vinci Engine Frame of Ariane 6 Evolution
Javad FATEMI, AIRBUS DS NETHERLANDS - THE NETHERLANDS

12h00-12h30

ARIANE 6 Structures Composites
Thomas KHALFI, ArianeGroup - FRANCE

12h30-12h45

CONCLUSION

6th IC3 Conclusion
Jean-Luc MACRET, Conference Chairman - ArianeGroup - FRANCE
Thierry LEVEUGLE - ThiReX Ingénierie - FRANCE

12h45-14h00

FAREWELL LUNCH

General Information

GENERAL LOCATION

Palais des Congrès d'Arcachon Boulevard Veyrier Montagnères
33120 Arcachon – France
(3/4 hour drive from Bordeaux International Airport)

LANGUAGE

Papers will be presented in English. Simultaneous translation facilities will not be available.

SECRETARIAT

All correspondence and inquiries should be sent to the conference secretariat.

AVANTAGE AQUITAINE - 6, Place de la République, 24 360 PIEGUT-PLUVIERS – FRANCE

Tel/voice box: + 33 (0)6 81 42 23 95

Fax: +33 (0)1 45 31 61 34 – E-mail: jfb@avantage-aquitaine.com

www.avantage-aquitaine.com

OUR PARTNERS

