

New trends in composite materials

Workshop

17/09/2019 · 09:45-14:00 h

Auditori Josep Irla, Passeig Pompeu Fabra 1, 17002 Girona



Introduction

Composite materials have become attractive candidates for demanding applications due to their excellent mechanical performance and weight reduction. Nowadays, many composites are at the leading edge of materials technology and new applications are continuously emerging in different sectors, such as aerospace, aeronautics, automotive, manufacturing and construction. In this highly competitive market, significant innovations in the area of composites in the next years are expected. During this workshop, experts of international relevance will provide their vision on the new perspectives and demands on composite materials, covering topics such as biocomposites, composites with thermoplastic matrices, additive manufacturing and main application sectors (including aeronautics, automotive and construction).

Agenda

09:45 – 10:15 Registration

10:15 – 10:30 Welcome and opening by Dr. Josep Calbó, vice rector of Strategic Projects, and Dr. Josep Costa, Scientific Director of the Composite Campus

NEW MATERIALS & PROCESSES

10:30 – 11:00 “The French ecosystem of biocomposite through 3 examples of collaborative projects”, Alain Bourmaud, University of South Brittany (Lorient, France)

11:00 – 11:30 “Features of designing parts for composite 3D printing with continuous fibers”, Aleksey Khaziev, Anisoprint (Moscow, Russia)

11:30 – 12:00 Networking

APPLICATION SECTORS

12:00 – 12:30 “Thermoplastic composites for primary aircraft structures”, Bas Tijs, GKN Aerospace: Fokker (Rotterdam, The Netherlands)

12:30 – 13:00 “Composite materials applied in infrastructures: recycling strategies” Carlo Paulotto, Acciona (Madrid, Spain)

13:00 – 13:30 “Controlled material fracture as a driver of automotive multi-material body developments”, Pablo Cruz, Applus+ IDIADA (Abrera, Spain)

13:30 – 14:00 Roundtable and closing remarks



Registration

The registration is free.

Registration form: <https://cort.as/-M7Gr>

More information

<https://www.udg.edu/campuscomposits>

campus.composits@udg.edu (+34) 972 41 95 78

Twitter: @campuscomposits

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Speakers brief CV

Alain Bourmaud - University of South Brittany (Lorient, France)

Alain Bourmaud, PhD, Habil, is Researcher at University of South Brittany (IRDL, CNRS lab). He published around 120 papers in international journals on biocomposite processing or plant fibre structure and properties; he supervised 14 PhD students and 3 post-doc. Alain is currently scientific coordinator of the FLOWER project (INTERREG Cross-Channel, 8 partners, 4.6M€) and involved in 2 national projects about biocomposite development for automotive applications and implementation of hemp retting at industrial scale.

Aleksey R Khaziev - Anisoprint (Moscow, Russia)

Aleksey R Khaziev is Chief Researcher of Anisoprint LLC, Assistant professor in Bauman Moscow State Technical University, Department of Rocket and Space Composite Structures. Over 8 years of experience in the aircraft industry: stress analysis; development of engineering methods for stress analysis and design of aircraft composite structures; standard and non-standard testing of composite structural elements. One of developers of Composite Filament Co-extrusion technology and Co-founder of Anisoprint LLC. Field of interest: design and analysis of composite structures.

Bas Tijs - GKN Aerospace: Fokker (Rotterdam, Netherlands)

Bas Tijs is an analysis specialist at GKN Aerospace: Fokker in The Netherlands with over 10 years of industrial experience. He started his career on the fatigue & damage tolerance certification and full-scale testing of the NH90 helicopter tail structure.

During his career, he developed a strong interest in the development of Tools & Methods and joined the Stress Methodology group in 2012 where he has supported the development of several projects such as the Gulfstream G650, Dassault F5x and Airbus A350.

Since 2015, he is leading the development of advanced simulation techniques, such as Virtual Testing & Manufacturing in collaboration with academia and is chair of the GKN Aerospace Community of Practice on Virtual Testing.

He is now combining his research at industry with a PhD program on Virtual Testing of thermoplastic composites at the Technical University of Delft where he will contribute to the development of a thermoplastic fuselage for the next generation aircraft.

Carlo Paulotto - Acciona (Madrid, Spain)

Carlo Paulotto is responsible of the Maritime Works Group of the Technological Center of the ACCIONA construction business line. He obtained his PhD in Mechanics of Structures from the University "La Sapienza" in Rome. He has worked as a researcher for the European Laboratory for Structural Assessment of the European Commission in Ispra, Italy. Over the last 10 years at ACCIONA, he has participated in the design, manufacture and installation of important civil structures in composite materials, among others: a pedestrian walkway over the Manzanares river in Madrid, a lighthouse in the new port of Valencia and a highway bridge in Gabon. Carlo Paulotto is a member of the executive committee of the International Institute for FRP in Construction (IIFC) and of the working group (WG4) of the CEN TC-250 that is currently preparing the Eurocode for the design of structures made of composite materials.

Pablo Cruz - Applus+ IDIADA (Abrera, Spain)

Expert in vehicle development from concept phase to SOP. Mainly focused on Passive Safety and multi-material lightweight body development. Leading multidisciplinary projects managing both virtual (CAE) and physical testing tools and teams at international level. Active participation in the international expansion of the company with three expatriation processes in India, Czech Republic and Germany during the last 10 years. Currently based in Idiada Headquarters. Specialties: International Company Expansion; Passive Safety development (Testing & CAE); Non-linear CAE analysis; Advanced Material Engineering for multi-material lightweight body development