

Programme & Speakers



sampe

Summit 22 Paris

Networking
& meeting
new contacts!



Date 2 May 2022

Location Pullman Paris Tour Eiffel

Organization SAMPE Europe

www.sampe-europe.org

Date: Monday 2 May 2022

Location: Hotel Pullman Paris Tour Eiffel*

Conference Room: SALON ORSAY, level -/- 1

Programme

- 08.00 - 09.00** **Registration**
- 09.00** **Opening:** *Prof. Rinze Benedictus, President of SAMPE Europe*
- 09.00 - 10.30** **BLOCK A - Sustainable Materials & Manufacturing**
Session Leader: Prof. Conchúr Ó Brádaigh, University of Edinburgh, UK
- 10.30 - 11.00** **Coffee break**
- 11.00 - 12.30** **BLOCK B - Urban Mobility**
Session Leader: Christian Keun, CompriseTec, Germany
- 12.30 - 14.00** **Lunch**
- 14.00 - 15.30** **BLOCK C - Sustainable Transport & Application**
Session Leader: Guy Larnac, Ariane Group, France
- 15.30 - 16.00** **Tea break**
- 16.00 - 17.30** **BLOCK D - Future Aerospace Technologies**
Session Leader: Arnt R. Offringa M.sc., GKN Fokker, Netherlands
- 17.30 - 18.45** **Closure & Cocktail**
Prof. Rinze Benedictus, President of SAMPE Europe
- 19.30 - 21.30** **Network Dinner in the Roof Top Restaurant at the 10th Floor of the Pullman with excellent view on the Eiffel Tower by night**

Location:

PULLMAN PARIS TOUR EIFFEL
18 AVENUE DE SUFFREN

75015 PARIS – France
T. +33 (1) 44 38 56 10

* How to reach:

RER Train Line C - Station Champ de Mars Tour Eiffel

METRO Line 6 - Station Bir Hakeim.

From Paris airport - Charles de Gaulle, take the RER B in the direction of Robinson/Saint-Rémy-les-Chevreuses. Change at Saint-Michel - Notre-Dame and take the RER C, in the direction of Versailles/Saint- Quentin in Yvelines/Pontoise/Argenteuil. Get off at the Champs de Mars/Tour Eiffel.

SAMPE Europe Summit Paris 2022 in the Pullman Tour Eiffel Hotel: A must for everyone visiting the JEC World 2022!

Free admission to JEC World Paris
A long term partnership between SAMPE Europe and JEC Group has been established in order to bring the highest benefit of composite materials to our members. As part of this, JEC Group offers all Summit delegates free admission to JEC World Paris.

For registration, latest news and the updated program please visit the website of SAMPE Europe www.sampe-europe.org

Monday 2 May 2022 – the day before the JEC World Paris opens its doors – SAMPE Europe will hold its Executive Summit. Location is the Pullman Paris Tour Eiffel Hotel, just aside the Eiffel Tower.

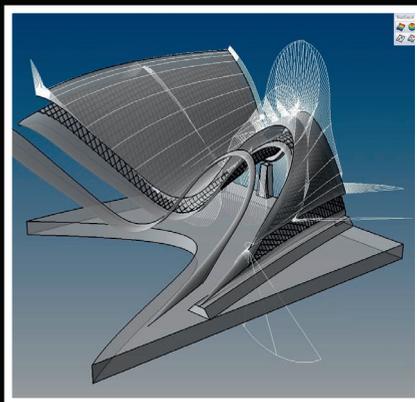


The Program of this Summit consists of a range of 12 high level lectures by invited speakers only. Topics are composite related innovations in Automotive & Transport, Space & Aerospace, Advanced Materials, and Process Engineering, as well as Challenging Applications in other markets like Architecture, Construction, Sports, Energy, Marine & more.

High ranked speakers are from China, Japan, USA and Europe. Attendees are managers of CEO and CTO level in leading companies, engineers, scientists, and professionals from throughout the advanced materials and processes industry and universities.

The conference day starts at 9 AM and ends with a networking dinner in the Rooftop restaurant of the Pullman with a magnificent view on the sparkling lighted Eiffel Tower by night. It is an outstanding occasion for networking with interesting colleagues and meeting new contacts. Both members and non-members of SAMPE, as well as students, are invited to participate.

A long term partnership between SAMPE Europe and JEC Group has been established in order to bring the highest benefit of composite materials to our members. As part of this, JEC Group offers all Summit delegates free admission to JEC World Paris.



Session Leaders



Prof. Rinze Benedictus
President of SAMPE Europe
TU Delft / Faculty of Aerospace
Engineering
Opening / Closure



Prof. Conchúr Ó Brádaigh
University of Edinburgh, UK
Block A



Christian Keun
CompriseTec, Germany
Block B



Guy Larnac
Ariane Group, France
Block C



Arnt R. Offringa M.sc.
GKN Fokker, Netherlands
Block D



Block A - Sustainable Materials & Manufacturing



“A holistic sustainability approach for life-cycle-analysis and circular economy for composite technologies in mobility.”

Marc Fette, Chief Executive Officer (CEO) – Composite Technology Center / CTC GmbH (An Airbus Company), Stade, Germany.

Marc Fette is Head of the Department „Additive Manufacturing & Lightweight Technologies“ at the Laboratory for Manufacturing Technology, Helmut Schmidt University Hamburg, Chairman of the Technical Division Aerospace Technologies of the VDI – Association of German Engineers and Member of the Board of Composites United / CU NORD.

The types of mobility and systems differ considerably in terms of requirements, degree of use and service life. Therefore, a holistic view of the entire value chain and the product life cycle is necessary in order to use composite technologies as a decisive key to an ecologically sustainable aviation in the future.

The presentation deals with the need for using and implementing a holistic and parameter-oriented LCA methodology in product and technology development methods for the aviation industry. In addition, the importance of alternative fuels and energy sources such as hydrogen will be described. In this regard, the focus is on the operational phase of an aircraft and on the contribution of composites for future air mobility systems. However, sustainable composite material and technology innovations and their role as key enabler for an eco-friendly aviation will be shown along the entire value chain of the aviation industry from the raw material to the end-of-life. On the one hand, the development in the fields of bio-based and recyclable materials will be discussed. On the other hand, the relevance for reuse, recyclability, design for end-of-life approaches and circular economy will be focused.

CTC GmbH, based in Stade, Germany, is a 100% subsidiary of Airbus. The CTC develops innovative technologies for the industrial and automated processing of composites, especially CFRP. The focus is thus on application-oriented research for aerospace industry. CTC also develops technologies and holistic lightweight solutions in the areas of future mobility and for other industries within the scope of development and consulting projects.



“The challenge of circular economy in aeronautic structure manufacturing.”

Dr. Stefano Corvaglia, R&D and IP manager of Leonardo Aerostructures, Italy.

Leonardo invests for the future, establishes pilot carbon fiber plant in Italy in collaboration with MAE. Part of a government-supported

project to innovate composites, this pilot line will be operational in 2022 and enable testing of new precursors and process variations.

“We started this partnership to develop, for the first time, carbon fiber production in Italy,” says Stefano Corvaglia, materials engineer, head of R&D, and IP manager of Leonardo Aerostructures Division.

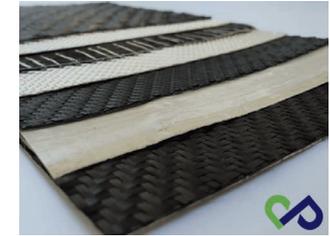
Leonardo SpA (Rome, Italy) provides services to the aerospace, defense, and security sectors including: aerostructures, helicopters, aircraft, airborne and space systems, land and naval defense electronics, and defense systems. As part of its mission to “develop and deploy advanced technology in the pursuit of security, progress and value, today and tomorrow,” Leonardo has invested in a new important project together with MAE (Fiorenzuola, Italy).

Leonardo is already a leader in composite aerostructures, producing one-piece barrel sections and horizontal stabilizers for the Boeing 787 (top and bottom left) as well as nacelles (top right) and other structures. It also is developing new thermoplastic composite technologies and is the project leader for Clean Sky 2's Next Generation Civil TiltRotor aircraft (bottom right). Photo Credit: Leonardo, Clean Sky 2.

Block A - Sustainable Materials & Manufacturing



COMPPAIR



“Self-healing technology to extend the lifetime of composites.”

Amaël Cohades, Co-founder and CEO of CompPair Technologies Ltd, Switzerland. Since 2019, Amaël's five years of hard work and research, including his PHD thesis achieved in 2018, were the root of CompPair's technology. Amaël undertook his Bachelor and Master's degree at EPFL-Lausanne-Switzerland, studying Materials Science, passing by the University of Auckland, and including a minor in technology management and entrepreneurship.

Answering problems of durability and sustainability, CompPair drastically reduces maintenance costs, improves recycling of composite parts while keeping standard specifications. CompPair products are pre-impregnated textiles integrating novel chemistry to produce healable and sustainable composites, extending their lifetime, and improving circularity.

CompPair is an EPFL spin-off and in line with the United Nations Sustainable Development Goals.

Block B - Urban Mobility



“Composites Bringing Urban Air Mobility to Life.”

Bernd Thoma, Senior Industrial Engineer, Volocopter, Germany.

Volocopter is the electric air taxi pioneer leading the way in building up the ecosystem for urban air mobility. As Industrial Engineer Bernd Thoma is responsible for Manufacturing Engineering of Composite Structures and the related process chain at Volocopter GmbH. The presentation will focus on the requirements for the urban air taxi mission, discuss the design of the electric vertical takeoff and landing (eVTOL) aircraft “VoloCity” and will address the challenges of materials and process technologies as key enablers for aerospace innovation, with this mission in mind.



“The Electric Composite Bus, for a sustainable and affordable public transport.”

Tjaard Sijpkens, CTO Ebusco, Netherlands

Tjaard has been Chief Technology Officer at Ebusco since 2017. A graduate of Delft Technical University in mechanical engineering, he has been involved in the development of military vehicles and aircraft landing gear (including the use of composite materials) in large international programs. Tjaard has held positions as Technology & Engineering director, CTO, and Head of Technology at leading companies in the aviation sector. Tjaard is Chairman of the Advisory Board for the Engineering faculty of the Fontys University of Applied Science and associate professor and innovation advisor at the faculty of Aerospace Engineering of the Technical University of Delft.

He will tell all about the development of the Ebusco 3.0 electric bus. Winner of the Automotive Innovation Award 2021. The Ebusco 3.0 is a revolutionary model. Its lightweight carbon fibre composite body is based on aerospace technology, which contributes to its distinctive features; the Ebusco 3.0 stands out, next to its lightweight, in its kilometer range on a single charge and lifespan.

Ebusco's work is all about people. It is our goal to contribute to a better living environment by enabling reliable, sustainable, emission-free, and affordable public transport. We love the transition to sustainable transport!



Block B - Urban Mobility



“Innovative composite lightweight solution for EV traction battery systems.”

Dr.-Ing. Timo Huber, Vice President
Advanced Composite Technology
Center ACTC, HRC Group, China.
Fuel defines the sustainability of future mobility by providing eco-friendlier solutions that leave as less environment footprint.

HRC Group is an innovative high-tech enterprise specialized in composite product developing and manufacturing. We provide highly intellectual service from initial idea consulting to serial production as a lightweight expert with our comprehensive understanding and acquaintance of composite value chain. With the rising of a low-carbon economy and lightweight trend, HRC is utilizing its core resources to consolidate competitiveness of the company as a pioneer in the global market.

He will give an overview of current trends and today's challenges in the EV sector and how composites can contribute to a more sustainable mobility using the example of an innovative battery housing based on (CF-)SMC/Prepreg technology. In the context of electromobility, weight-specific battery capacity has an increasing importance as an evaluation criterion for BEV. To achieve high values of >180Wh/kg, innovative lightweight solutions of the entire battery system are necessary. HRC Group/ACTC and its project partners are addressing this challenge and will show the potential of composite materials with one of the latest developments in this area.

Block C - Sustainable Transport & Application



“Scaling up Composites Technology and its acceptance in shipping.”

Cedric Verhaeghe, Senior Engineer
Composite Structures Damen Schelde
Naval Shipbuilding, The Netherlands.
Cedric Verhaeghe is Specialist Composite Structures Damen Schelde Naval Shipbuilding since 2015.

RAMSSES is a collaborative research project within the European Union's Horizon 2020 Research and Innovation Programme called: 'Realisation and Demonstration of Advanced Material Solutions for Sustainable and Efficient ships'.

Within the RAMSSES project Damen Naval led the work package on the development, validation, and acceptance of large composite hull structures. Together with the work package partners Infracore, Airborne, Evonik, TNO, Damen Gorinchem, and Bureau Veritas, we were able to meet the objectives realizing the capability to design, produce and validate the process of developing composite vessels up to approx. 85 meters in length. Validation of the risk-based design and development process was done by producing a hull section, 6 meters high, with full-scale validation testing, mechanically as well as for its fire performance. As such we were able to demonstrate how to comply with SOLAS and class regulations.

Damen is a family-owned business that stands for fellowship, craftsmanship, entrepreneurship, and stewardship. We believe that our oceans, seas, lakes, and rivers offer humanity a growing range of possibilities in terms of trade, food, energy, and recreation. We provide maritime solutions to meet these opportunities, through design, shipbuilding, ship repair, and related services. In the previous century, we revolutionized shipbuilding with standardization and serial production. More than ninety years and 6,000 ships later, those pillars are unchanged. Their importance is only growing with the need for increased sustainability and digitalization. It is our aim to combine our proven standardization with the innovations of digitalization to become the world's most sustainable shipbuilder.

Block C - Sustainable Transport & Application



“New Airbus Space and Moon projects.”

Eugenio Ferreira, Head of Space
Exploration R&D, Airbus Defence and
Space, France.
Eugénio FERREIRA, Head of Space Exploration R&D since 2020, at AIRBUS Defence & Space, Space Systems. He started his career in 1991 as Systems Engineer with the Space Transportation Flight Control Department and continued in several functions. form Performance & Mission Analysis Architect, Ariane program, Head of section, Guidance of Launchers, System Design Manager, Spaceplane program, R&D Project Manager, Digital Engineering, Space Tug Spacecraft to his today function. In his presentation Eugenio will give an Overview of developments concerning the future lunar ecosystem.

For decades, Airbus Defence and Space has been at the very heart of space exploration, developing the technology that allows mankind to send spacecraft to planets, moons and comets both close to the sun and millions of kilometres away – allowing us to learn more about the universe we live in and helping to make it truly our home.

In a context of increased momentum around space exploration, Airbus Defence and Space, Air Liquide and ispace Europe recently launched the joint creation of EURO2MOON. This non-profit organisation will be dedicated to promoting a better use of lunar natural resources, while accelerating the cis-lunar economy and federating industrial efforts across Europe.



“The EcoPulse™ project, Defining the future of Hybrid - Electric Aviation”

Christophe ROBIN, Head of Design,
DAHER, France.
EcoPulse™ is a distributed propulsion hybrid aircraft demonstrator developed by Daher, Safran, and Airbus with the support of France's CORAC civil aviation research council. It is one of the French aeronautics industry's major collaborative projects and contributes to the decarbonization objectives that the air transportation sector has targeted to achieve by 2050.

With the EcoPulse™ demonstrator, Daher intends to develop the key architectural principles for future hybrid aircraft. The main points of attention to be considered in this presentation are:

- Integration of functions: impossible to consider the structure independently of the systems – systemic design of the structures (sensor on the wing);
- Methods of new justifications of structures > structure as a system (since function integration) link with the design of structures by key characteristics;
- Weight reduction is mandatory for this kind of aircraft.

Block D - Future Aerospace Technologies



“The European vision on Sustainability in Aerospace.”

Dr. Sonell Shroff, Project officer, Clean Aviation Joint Undertaking (CAJU), Belgium.

Sonell Shroff is a Project Officer at Clean Aviation and formerly at Clean Sky 2 Joint Undertaking of the European Commission. After her Masters and PhD in the field of Aerospace Structures and Computational Mechanics at the Delft University of Technology in the Netherlands, she continued her research as an Assistant Professor at the faculty of Aerospace Engineering in the Aerospace Structures and Materials department. She is presently responsible for the Eco Design Transversal Activities platform at Clean Aviation and is also involved in their Technology Office.

In her presentation, Sonell will be focussing on the development and integration of technologies into future aircraft like: Advanced Manufacturing, Automation, New Materials, and End to End Life cycle Assessment.



“The Airbus vision on future aerospace.”

Isabell Gradert, HO Central Research & Technology and General Manager for Material Technology, Airbus, Germany.

Isabell Gradert is the Head of Airbus' Central Research and Technology which leads upstream research on emerging technologies. She also leads the Airbus Fast Track for Materials and acts as the General Advisor for Materials Technology to the

Chief Technical Officer of Airbus. In this capacity, she leads the company's cross-divisional materials roadmap for associated technologies including metal, composite, surface & bonding technologies as well as additive manufacturing. She is an aerospace engineer based in Airbus' Bremen, Germany.

At Airbus, we are pioneering sustainable aerospace for a safe and united world. We explore technology pathways that will bring us closer to a smarter and zero-emission future of flight. How do we do this? By looking into how advanced materials, the industrial system, artificial intelligence, autonomy, connectivity as well as electrification, and alternative propulsion means can be harnessed to improve the current and next-generation portfolio of services, commercial aircraft, helicopters, and spacecraft. Evidently, climate change has become the most apparent and urgent challenge of our industry, which is why the aviation industry (Airbus included) has committed to industry-wide CO2 emissions targets set out by ATAG. However, these ambitious targets cannot be achieved using existing aircraft technologies. This is why we have been accelerating our commitment to developing, building, and testing alternative propulsion systems produced by renewable energy sources such as electricity or hydrogen. In parallel, as a global company operating in a fast-changing market, we see it as our duty to transform the way we conduct business and to make the entire lifecycle of our products and our operations more sustainable. Materials will be a key enabler to achieve this ambition.



“Air Mobility, Economy of Scale.”

Nobuya Kawamura, Senior Executive Engineer, Toyota Motor North America & John Geriguais, Advanced Development Lead, Joby Aviation, USA.

Nobuya Kawamura is responsible for advanced development of light weight Carbon Fiber Reinforced Plastic (CFRP) material and processes for the primary structures of Advanced Air Mobility (AAM) on the joint project with Joby Aviation. The experiences gained in CFRP material and process

development for Formula one racing and Lexus LFA supercar projects, combined with the knowledge of Toyota Production System (TPS) from various mass production applications, such as the interior & exterior trims and engine plastic components, are the key asset to this project where solutions for higher level of efficient manufacturing volume at closer to automotive costs are required in comparison to what conventional aerospace industries are accustomed to.

John Geriguais is Advanced Development Lead of Joby Aviation. Joby is a California-headquartered transportation company developing and manufacturing an all-electric, vertical take-off and landing aircraft which we intend to operate as a commercial passenger aircraft beginning in 2024. They have spent more than a decade developing and testing our zero-emissions aircraft that will travel 150+ miles on a single charge, enabling a pilot and four passengers to leapfrog over the congestion below at speeds of up to 200 mph.

JOIN US!

5 main reasons to become a member of SAMPE Europe:

1. Network Opportunities
2. Meetings, Seminars, and Literature
3. Membership Discounts for Conferences & Exhibitions
4. Free Technical Papers
5. SAMPE Journal Subscriptions

SAMPE Europe is a non-profit making association and any funds generated are to be used for the purposes of pursuing the benefits as above.

Meet our benefits for € 80 / year only (students € 20) and book at members discount rate

Registration fees SAMPE Europe Summit Paris 2022

Full Summit ticket

Fee includes lunch, drinks, Happy Hour & SUMMIT Dinner as indicated in the programme. All delegates receive a USB with the proceedings of the lectures given. Main sponsor JEC Group offers all Summit delegates free admission to JEC Paris.

- Professional & associate members of SAMPE Europe and all other SAMPE regions and chapters from SAMPE Global like Australia, Brazil, China, North America, Japan, and similar. € 775,-
- Non SAMPE Europe Members of Industry, Universities, High Schools, Research Institutes and others. € 875,-*
- Student member badge** € 275,-
- Non-member student badge** € 375,-*
- Press (showing presscard) FREE

Amounts are including VAT

* Free membership until 31 December 2022

** Student registration applies to full time students and must be accompanied by a student ID card. A copy of your ID card must be mailed or faxed to the secretariat. For Booking Terms and Conditions see www.sampe-europe.org.

MAIN SPONSOR



ANNUAL PARTNERS 2022

