

Programme & Speakers



sampe

Summit 23 Paris

“Visions on Future Composites”

Networking
& meeting
new contacts!



Date 24 April 2023

Location Pullman Paris Tour Eiffel

Organization SAMPE Europe

www.sampe-europe.org

Date: 24 April 2023

Location: Hotel Pullman Paris Tour Eiffel*

Conference Room: SALON ORSAY, level -/- 1

Programme

- 09.00 – 10.00** **Registration**
- 10.00** **Opening**
by Arnt Offringa, SAMPE Summit 23 Chair & Guy Larnac, President SAMPE Europe
- 10.00 – 11.00** **BLOCK A – Transport & Mobility**
*Sessionleader Prof. Frank Henning, Fraunhofer ICT & Karlsruher KIT, Germany.
2 presentations – Dan Ziegler, Timo Huber*
- 11.00 – 11.30** **Coffee Break**
- 11.30 – 13.00** **BLOCK B – Materials & Processes**
*Sessionleader Arnt Offringa, GKN Aerospace | Fokker Aerostructures, Netherlands.
3 presentations – Kiyoshi Uzawa, Jean-Paul Moulin & Pierre Gerard, Chad Duty*
- 13.00 – 14.00** **Lunch**
- 14.00 – 15.30** **BLOCK C – Challenging Applications**
*Sessionleader Prof. Conchúr Ó Brádaigh, University of Edinburgh, UK.
3 presentations – Sabrina Malpede, Javier LLorca, Pieter Lantermans*
- 15.30 – 16.00** **Tea Break**
- 16.00 – 18.00** **BLOCK D – Space & Aerospace**
*Sessionleader Guy Larnac, Ariane Group, France
4 presentations – Claire Baker, Dan Ursenbach, André Bertin,
Marc Fette & Isabell Gradert*
- 18.00 – 18.45** **Closure & Cocktail**
by Christian Keun, President SAMPE Global & Arnt Offringa, SAMPE Summit 23 Chair
- 19.00 - 21.30** **Network Dinner - Room SAINT GERMAIN 1, level -/- 1**

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 2023
in the Pullman Tour Eiffel Hotel:
A must for everyone visiting the
JEC World 2023!

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

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Summit 23 Paris

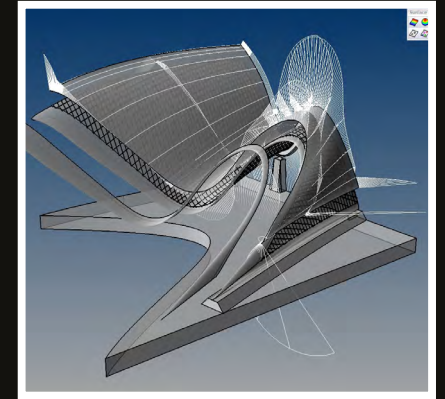
Monday 24 April 2023 – the day before the JEC World Paris opens its doors – SAMPE Europe will hold its Executive Summit. Location is the Pullman Paris Tour Eiffel Hotel, just aside the Eiffel Tower.

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.



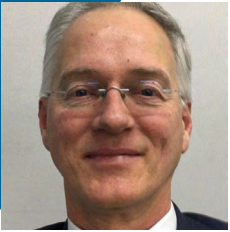
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Session Leaders



Guy Larnac
President SAMPE Europe
ArianeGroup, France
Opening / Block D



Arnt Offringa
SAMPE Summit 23 Chair,
GKN Aerospace / Fokker Aerostructures, Netherlands
Opening / Closure / Block B



Prof. Frank Henning
Fraunhofer ICT & Karlsruher KIT, Germany
Block A



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



Christian Keun
President SAMPE Global
CompriseTec GmbH, Germany
Closure

Block A – Transport & Mobility



“Developing custom composite materials that enhance the safety, savings, and sustainability.”

Dan Ziegler, CCO, MACRO Industries, USA.

MACRO is a small engineering and composites manufacturing business developing impact and fire-resistant structural materials and integrating them into the military, aviation, and automotive platforms.



“Innovative and Sustainable Composite Lightweight Solutions for the Mobility Sector.”

Timo Huber, Vice President Advanced Composite Technology Center ACTC, HRC Group, China

The mobility sector is currently facing many challenges to enable a sustainable mobility in the future. Lightweight construction is one of the top priorities here, in order to make vehicles lighter and thus more efficient in the air and on the ground.

Fiber-reinforced composites have always been an important part of the implementation of structural components and vehicle concepts and will continue to expand their importance in the future. In addition to the material-specific properties, this also involves the issue of the direct and indirect sustainability of the materials used.

The HRC Group is a supplier of innovative and sustainable lightweight components and system solutions based on carbon fiber-reinforced plastics in the fields of mobility (automotive/aerospace/rail), wind energy, construction, and hydrogen energy.

We will show what such lightweight solutions can look like using the example of a “flying car” from the fast-growing urban air mobility market sector and a concept for a lightweight EV traction battery system. We will also provide an outlook on what future hydrogen storage systems will look like, offering high storage density with low weight and a concept adapted to different vehicle and application purposes.

Block B – Materials & Processes



“Innovative Manufacturing Technology by Backcasting from Application to Materials.”

Prof. Kiyoshi Uzawa, Director Innovative Composite Center (ICC) at Kanazawa Institute of Technology, Japan

Prof. Kiyoshi Uzawa will focus on synthesis with coupling and optimization of curing/polymerization and molding process.

By developing resins with new curing/polymerization properties and adapting the resin's reaction characteristics to the composite's molding process, innovative manufacturing can achieve both quality, productivity, and cost. This synthesis with coupling and optimization of curing/polymerization and molding process is application dependent.

In this presentation, we show the various molding methods with in-situ polymerization thermoplastic epoxy resins and innovative manufacturing methods for composite tanks with novel monomer-blended thermoplastics and Redox curable resins. In addition, T_g-less resins and semi-organic resins that can be easily molded into high heat-resistant composites with low-temperature curing will be introduced.



“Sustainability and recyclability in thermoplastic composites: latest progress and insights in Elium® applications.”

Jean-Paul Moulin, Material Science Director, Arkema, France and Pierre Gerard, Elium® Global Head R&D, Arkema, France

Elium® is the first liquid thermoplastic resin that processes like thermoset for continuous fiber reinforced composites and revolutionizes composite materials applications thanks to its recyclability at the end of the product life.



The current status is that the mechanical properties of such new system are similar or better than standard continuous fiber reinforced thermoset resins and yet thermoplastic matrix

composites could offer important advantages in cycle time reduction, assembly by welding, repair and recyclability. Today the thermoplastic resin has been tested for two main recycling technologies: mechanical and chemical processes. Composite parts made from this new resin can be easily ground and then compounded with other thermoplastic resins whose properties can be enhanced by the recycled material. >>

The thermoplastic resin can also be depolymerized into recycled monomer that can then be reused in recycled resin production for the manufacturing of new composite parts with exactly the same properties and thus meets the criteria for circular economy.



“Decarbonizing with Composites.”

Dr. Chad Duty, Chief Executive Officer-Elect, IACMI – The Composites Institute, USA

Since its formation in 2015, IACMI has created an unparalleled network of innovation partners and shared infrastructure to “convene, connect, and catalyze” the U.S. composites industry.

With a focus on clean energy applications, IACMI's supply chain project approach has resulted in significant reductions in cost and embodied energy of composites, and significant advancements in composites recycling technologies. As the world moves toward electric vehicles, larger wind turbines and hydrogen, new challenges have arisen that composites can uniquely address in the quest for decarbonization. This presentation will highlight a few significant examples of our progress to date and describe IACMI's approach to meet the challenges before us.

Block C – Challenging Applications



“The next generation of wind turbine blades for a NET-Zero Future: advancing composite technologies.”

Dr Sabrina Malpede, Co-founder and Managing Director of ACT Blade Ltd., UK

Dr Sabrina Malpede has nearly two decades of experience in the design, development, and commercialization of innovative solutions first in the yachting and now in the wind energy industry.

She has an Honours degree in Aeronautical Engineering from the University of Federico II (Naples-Italy) and a PhD in Aerospace Engineering from the University of Glasgow (UK). In 2020 she was awarded with the European Tech Woman Award (International Clean Energy) and in 2022 she won the European Institute of Innovation and Technology Public Award.

The award she got is from European Institute of Innovation and Technology is described at the [link](#).



“3D printed composite bioabsorbable scaffolds for bone tissue engineering: mechanical, corrosion and biological performance.”

Javier LLorca, Scientific Director, IMDEA Materials Institute & Technical University of Madrid, Spain

Temporary implants and scaffolds, that are progressively degraded and absorbed in the human body and can be manufactured by 3D printing, have tremendous potential for tissue engineering applications. However, optimum performance from the mechanical, degradation and biological standpoint can only be achieved through composites that combine different bioabsorbable metals and polymers. This talk presents an overview of the current state-of-the-art on bioabsorbable composite scaffolds and implants from for bone tissue engineering that can be manufactured using standard composite processing techniques or 3D printing.



“HyFly H510 – World’s first hydrogen powered tandem tilt wing VTOL drone.”

Pieter Lantermans, CEO HyFly, The Netherlands

In this presentation we show the development of our hydrogen powered VTOL drone and the role of composites in particular. This drone is especially developed for transportation of urgent goods in challenging environments, like cities and offshore conditions. In order to transport high payload mass over long distances, the HyFly H510 is equipped with a hydrogen fuel cell propulsion system. The unique tandem tilt wing concept enables wind resistant operation in compact areas like rooftops in cities. All these characteristics make the platform the right choice for transportation of medical goods in urban environment.

With the capability of transporting a payload of 10 kg over a distance of 120 km in a little more than one hour, the HyFly H510 stands for emission free air transportation of goods, without the need for a large take-off and landing area or runway.

Block D – Space & Aerospace



“Composite Structures for the New Space Age.”

Claire Baker, Segment Manager Space & Communications, Toray Advanced Composites, UK

The space segment is in a whirlwind of disruptive and rapid evolutionary change. Conventional communication satellites are getting smaller, and constellations of smallsats are populating low earth orbits in vast numbers. Numerous launch vehicles are under development around the world and racing towards the launch pad. What are the implications for composite structures in this New Space Age?

composite structures in this New Space Age?

Graduating from Queen Mary, University of London with a B.Eng in Materials Engineering and a MSc. in Composite Research Techniques, Claire has over 25 years of experience in composite materials across a wide variety of sectors, 10 years of hands on R&D roles, followed by 15 years of commercial. Claire is responsible for leading Toray Advanced Composites' activities in Space and Communications in Europe, tracking markets to find future trends with which to align and build the TAC product range of prepregs and complementary products. Claire supports the European sales team in strategy and new business development in this segment across EMEA. She also manages key and early stage accounts, liaises at programme level with ESA, and supports customer projects.

Toray Advanced Composites has been supplying specialist prepregs into the space industry for over 30 years. Our materials are flying on almost every space programme in the western world. Toray has heritage across many space agency, commercial and Governmental satellite programmes. We see a strong future in this sector of the composites industry.



“Thermoplastic Composites at Collins Aerospace and Industry Certification Challenges”

Dan Ursenbach, Associate Director Research & Development, Collins Aerospace | Advanced Structures, USA

“Collins Aerospace has been developing thermoplastic composite processes to fabricate large assemblies in Europe and North America to take advantage of the short cycle times and improved performance of the materials. Key differences between thermoset and thermoplastic composites require development of new design and certification approaches. For example, the ability to re-melt local areas requires new methods of material characterization that can account for all possible process histories on certified structures. These and other considerations, along with a description of some of Collins' current activities will be discussed.”



“The Art of Entrepreneurship inside Aerospace Groups, a 30 Year's Journey to Deliver Cost Killer Technologies: RTM and SQRTM.”

André Bertin, CEO Coexpair and Coexpair Dynamics, Belgium

“The Art of Internal Entrepreneurship” title comes from a book written by Guy Kawasaki, “The Art to Start”. Within this book, the author explains how Apple

killed a cash cow, the Appel II, to create a new product, the Macintosh. It is a source of inspiration for any engineer who wants to innovate inside a large aerospace organization.

The lessons learned by André Bertin, working for 30 years in aerospace industry are highlighted in regard of Guy Kawasaki recommendations, focusing on innovation to kill cost of composite parts production. The basic physical principles behind RTM and SQRTM processes are reminded as the strong inherent limitations of Autoclave. The author presents successes and difficulties to introduce RTM and SQRTM processes in production, working half of his career within a large Tier One before creating Coexpair companies.

As a conclusion it is presented how Coexpair, partner of Radius Engineering USA, achieved a key position within the future of aerospace composites industry and why its products are unique to OEMs and Tiers Ones.



“The Future of Aerospace Technologies – Contributions of Composite Technologies.”

Marc Fette, CEO at Composite Technology Center / CTC GmbH – An Airbus Company -, Germany and Isabell Gradert, VP- HO Central Research & Technology at Airbus, 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 material, electrification and communication technologies can be harnessed to improve the current and next-generation portfolio of services, commercial aircraft, helicopters and spacecraft – enabled by the use of artificial intelligence, virtual product engineering and the introduction of quantum technologies.



With the introduction of composite technologies a more efficient flight was enabled by the combination of lightweight and high mechanical properties. In the future, composite materials, lightweight design and appropriate production technologies are key technologies for higher performance combined with functional integration, low energy consumption and low emissions along the entire value chain, especially for future mobility systems.

This speech will give insights into future technology challenges, current composite technology developments and their potentials in the framework of a big picture for future air mobility.

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Registration fees SAMPE Europe Summit Paris 2023

[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. € 700,-
- Non SAMPE Europe Members of Industry, Universities, High Schools, Research Institutes and others. € 800,-*
- Student member badge** € 350,-
- Non-member student badge** € 400,-*
- Press (showing presscard) FREE

Amounts are including VAT

* Free membership until 1st of April 2024.

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