



LIGHTer

International
Conference

GOTHENBURG 20-21 NOV

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LIGHTer

Hosted by RISE

LIGHTer International Conference, 20-21 November 2019, is a two-day conference, including conference dinner and matchmaking at the end of day two. The purpose of LIGHTer International Conference is to create opportunities for valuable international networking among world leading lightweight actors – from industry, academy and institutes.

The LIGHTer International Conference is LIGHTer's main platform for international collaborations for new lightweight solutions. At the core of the conference are LIGHTer's research innovation themes, which we have identified as our main ways to reach our goals concerning competitiveness and cross-industrial collaborations. Our last conference in 2017 attracted close to 100 participants.

Venue/Location

The conference will take place at Chalmers University of Technology at the heart of Gothenburg. You can easily reach Chalmers via bus or tram.

Accommodation

We recommend conference participants to stay at Hotel Gothia Towers in central Gothenburg. The hotel is located just one tramstop from the conference venue, with easy access to both central Gothenburg and the airport. Conference participants receive a contract price code upon registration.

Register at

<https://lighter2019.b2match.io/>

Conference fee excl VAT

€ 700 (SEK 7 000)

LIGHTer member € 560 (SEK 5 600)

PhD student: € 160 (SEK 1 600)

Free entrance for Speakers.

Further information

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A conference of four innovation themes

50% lighter – Lower costs

New innovative lightweight solutions are too often not commercialised due to cost reasons. This innovation theme focuses on new more effective materials, manufacturing processes and design methodologies that will lower the cost, thus enabling new lightweight solutions to enter the market.

50% lighter – Shorter development times

Another hurdle to overcome is the often longer product design and development time for new and innovative lightweight components. These can be reduced by, for instance, enhanced use of simulation tools and optimization in early stages of product development.

50% lighter – Mixed materials

The ability to use the right material in the right place in a product design is an important possibility for weight reduction. The aim is to achieve improved performance by combining different materials in lightweight components. Some key challenges are joining, prediction of product properties and creating circular material loops.

50% lighter – Using improved properties and innovative solutions

Improved material properties enable lighter components. Some examples are thinner product designs, optimised designs thanks to better abrasion or corrosion resistance, and combined or innovative functions within the mechanical structure (so-called multi-functionality). New technological solutions can open up for radically lighter products.

Keynote Speakers

- Laurent Morel, Manager Operations at Infracore Company. *Cost-effective lightweight FRP solutions based on the InfraCore Inside Technology.*
- Sofia Teixeira de Freitas, Assistant Professor, Aerospace Engineering TU Delft. *On the influence of the laminate properties on the failure of adhesively bonded composite structures.*
- Geoffrey Gibson, Professor, School of Mechanical and Systems Engineering, University of Newcastle UK. *Rapid developments now needed to improve composites fire behavior in the transport and energy industries.*
- Silvan Halter, CEO at Wagner Solutions. *Multi-material based hybrid solutions as cost-effective, light-weight applications for the automotive industry.*

Day 1

- 09.30 Registration for LIGHTer Annual Meeting
 10.00 LIGHTer Annual Meeting. (Only for members)

11.00	Registration for LIGHTer International Conference 2019
11.30	Lunch
12.30	Welcome and inaugural speech Cecilia Ramberg , LIGHTer Pia Sandvik , RISE Kaj Fredin , Volvo Cars
13.00	Sofia Teixeira de Freitas , <i>Assistant Professor, Aerospace Engineering TU Delft</i> On the influence of the laminate properties on the failure of adhesively bonded composite structures.
13.30	Break – moving to the sessions

Parallel sessions – 50% LIGHTer

Time	Mixed materials	Lower costs	Shorter development times
13.45	Claudio di Fratta, Sika Services AG Enhancing lightweight and production efficiency of commercial vehicles with new generation structural adhesives and modular composite components.	Mathilda Karlsson Hagnell, KTH Predictive technical cost modelling of fibre-reinforced composite materials enable cost- and weight-efficient composite design.	Jiayi Yan, QuesTek Europe AB Design of advanced lightweight steel.
14.15	Torsten Sjögren, RISE Compound casting for lightweight components.	Dominik Stapf, IWK Cost-efficient structural composite parts combining unidirectional tape reinforcements and injection molding processes.	Kenneth Karlsson, Saab Aerostructures Shorter time to market

14.45	Coffee break
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Parallel sessions – 50% LIGHTer

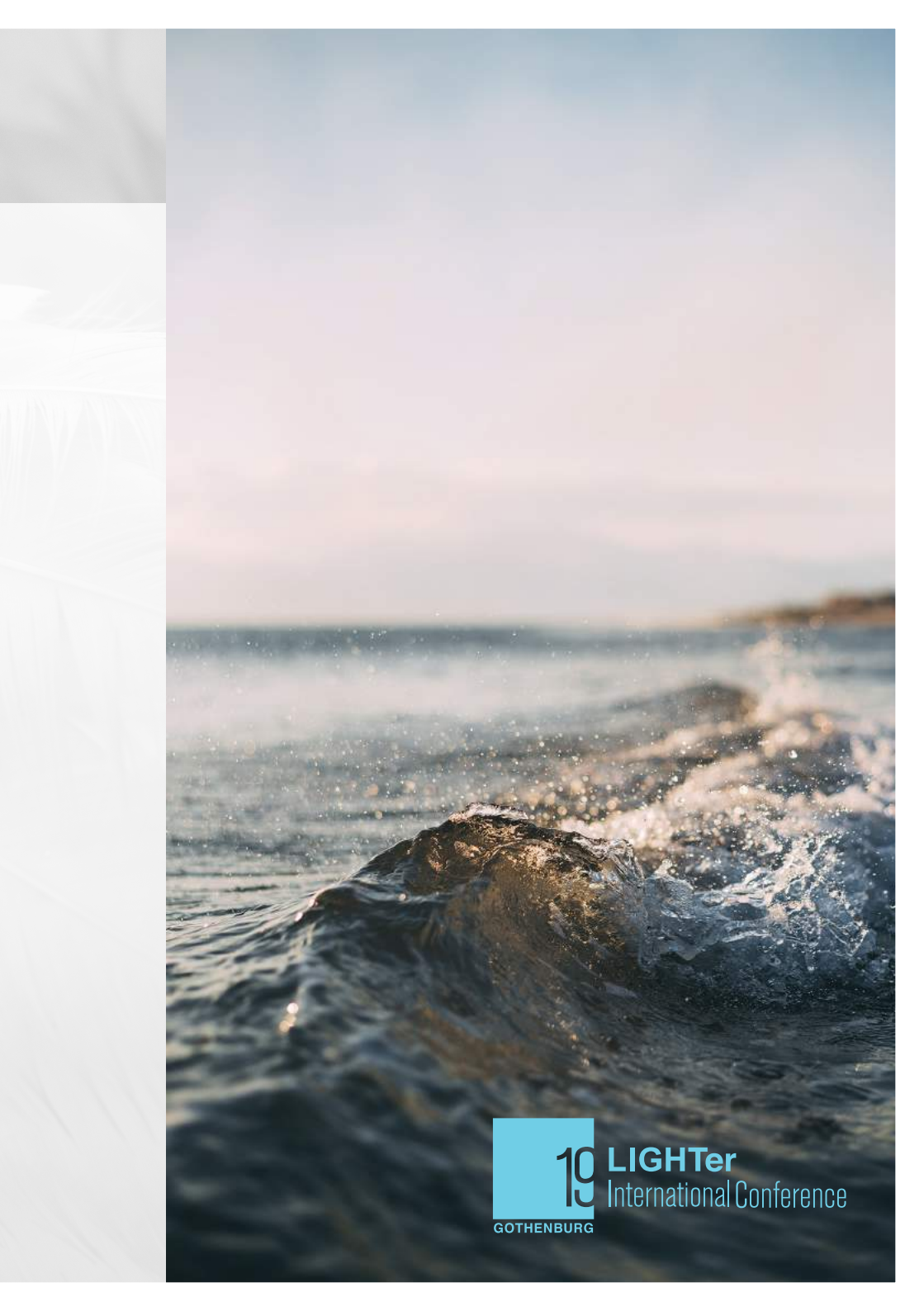
Time	Mixed materials	Lower costs	Using improved properties and innovative solutions
15.15	Simon Bauer, Institute of Structures and Design Resistance welding of high-performance reinforced thermoplastics in fuselage applications.	Benedikt Borchert, BIONTEC Complex Composite Components become feasible in Large volume.	Joseph Ceena, GKN Aerospace Sweden AB Understanding the mechanical properties of castable alloys A205 by modelling and experiments.
15.45	Reza Haghani, Chalmers Falcon – A multi-disciplinary effort towards future infrastructure using lightweight fiber reinforced polymer composites.	Sébastien Guérout, IRT Jules Verne A way to produce lightweight structures: from raw materials to final composite part.	Andreas Thore, RISE Weight reduction of cast metal components through sensor integration.
16.15-16.30	Break – Moving to the plenary session		
16.30	Silvan Halter, CEO at Wagner Solutions Multi-material based hybrid solutions as cost-effective, lightweight applications for the automotive industry.		
17.00-17.15	Diploma Ceremony LIGHTer PhD Network Summary of the day		
19.00	Dinner		

Day 2

09.00	Geoffrey Gibson , <i>Professor, School of Mechanical and Systems Engineering, University of Newcastle UK</i> Rapid development now needed to improve composites fire behaviour in the transport and energy industries.
09.30	Break – moving to the sessions

Parallel sessions – 50% LIGHTer

Time	Using improved properties and innovative solutions	Lower costs	Shorter development times
09.40	Sotirios Grammatikos, NTNU Lighter, safer and more sustainable through lifetime prediction.	Luis Felipe Sánchez-Heres RISE Cost reduction approaches for lightweight marine composite structures.	Marcel Schubiger, Swiss CMT AG Powder resin system - a new way of composites manufacturing
10.10	Rico Schmerler, Fraunhofer Novel Lightweight material, design and cooperation solutions for electric mobility.	Måns Håkansson, Saab Kockums AB Design Process for Composite Ships.	Harald Hasselblad, Volvo Cars CAE Driven Development as a strategic tool.
10.40	Coffee break – Moving to the plenary session		
11.10	Laurent Morel , <i>Manager Operations at Infracore Company</i> Cost-effective lightweight FRP solutions based on the InfraCore Inside Technology.		
11.40	George Kotsikos , <i>European Commission</i> Horizon Europe – The next research and innovation framework programme: A lightweight perspective.		
12.10	Summary – welcome to matchmaking.		
12.20	Lunch		
13.20-16.00	Matchmaking and LIGHTer After Conference 2019		



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International Conference

GOTHENBURG

LIGHTer is the national multi-sectorial lightweight arena in Sweden. With partners from industry, academy, research institutes and trade organisations, we effectively create competitiveness on behalf of the Swedish industry. We have the honour of inviting you to LIGHTer's International Conference 2019 in Gothenburg, Sweden.

Tomorrow's challenges

Environmental challenges and technological development make way for groundbreaking trends such as electrification, multifunctional materials and biobased materials - all essential to green lightweight innovations. At the LIGHTer International Conference 2019, we offer a state-of-the-art of the current lightweight landscape, and glimpse at the megatrends affecting long-term lightweight innovations.

The way forward

Chains of collaboration need to be strengthened at all levels – between industrial sectors, between OEMs and their suppliers, between institutes and universities, and between authorities and stakeholders within the field.

Gothenburg

Gothenburg is the heart of western Sweden where leading lightweight products such as cars, trucks, aircraft engines, marine vessels, and offshore- and shipping equipment are produced. The conference venue will be Chalmers University of Technology in Gothenburg. We are looking forward to seeing you there!

Kaj Fredin, Manager, Strategy, Concepts & Advanced Engineering
Painted Body & Closures at VolvoCar Group
Chairman of the Board of LIGHTer

