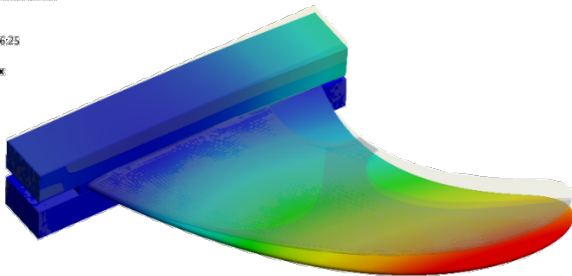


# Virtualising Composites

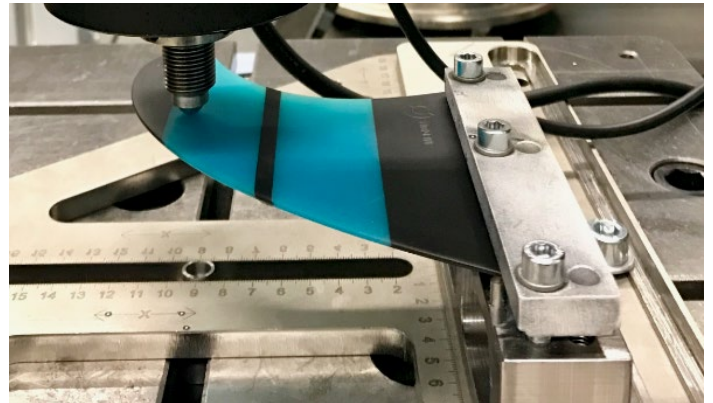
## Technologies and Trends in Composite Simulation

F: Klemmung Punkt 4  
Total Deformation  
Type: Total Deformation  
Unit: mm  
Time: 2  
15.08.2018 16:25

0.9 Max  
0.8  
0.7  
0.6  
0.5  
0.4  
0.3  
0.2  
0.1  
0 Min



0,00 22,50 45,00 67,50 90,00 (mm)



Simulation and test of continuously reinforced surf fin (IWK/KWB svismold)

In cooperation with ETH Zurich and Composites United Switzerland.

# Conference Goals

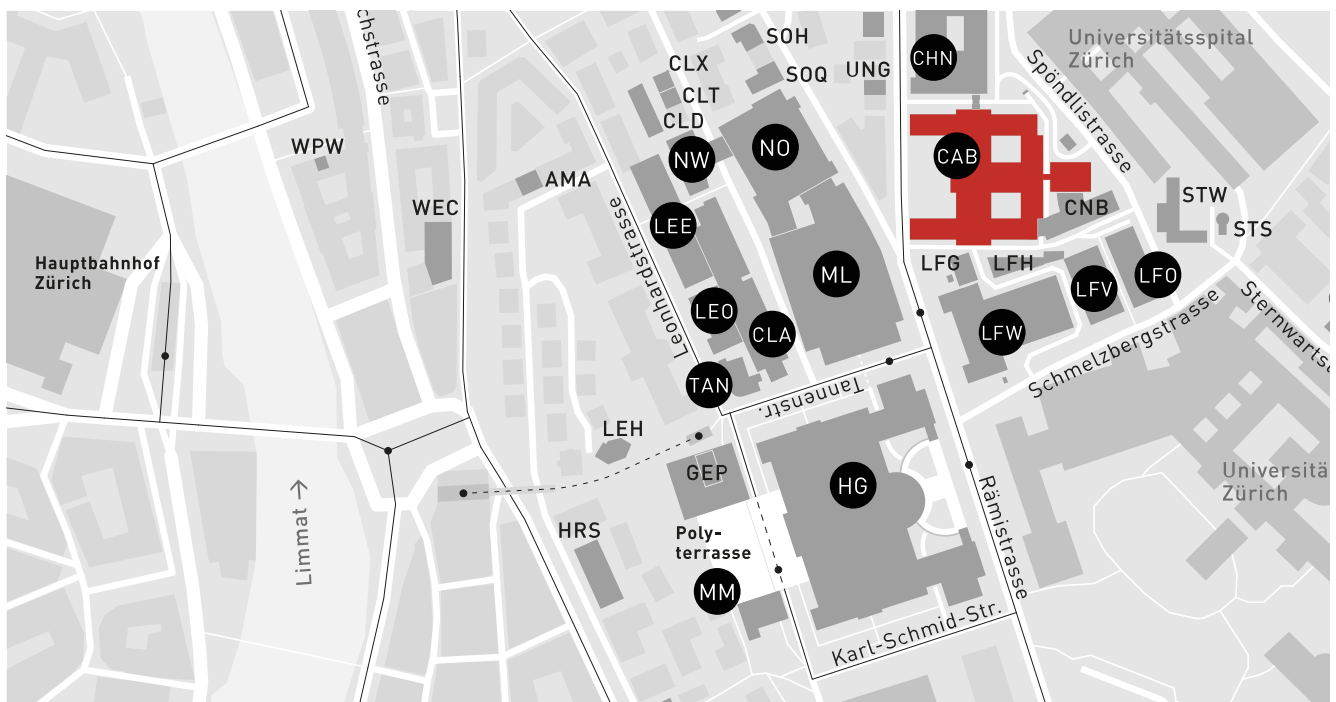
The Swiss SAMPE chapter, ETH Zürich and Composites United Switzerland are very pleased to invite you to the biannual Swiss SAMPE Technical Conference. The conference concentrates on the latest developments and trends concerning simulation and optimization of lightweight composite parts.

Simulation is key in the development process of composite components. The use of virtual design enables cost-efficient production and tooling and avoids trial-and-error procedures.

This one-day conference will provide an overview around this topic. It will provide fundamental insights to the state of the art but also offer detailed views on on-going research and applications in the relevant fields.

## Location

The event will take place at ETH Zurich, Zentrum Campus, CH-8092 Zurich, in room CAB G 51.



How to reach the venue:

- From the Zurich Main Station: tram no. 6 (Direction: Zoo) or tram no. 10 (Direction: Zürich Flughafen), Stop: ETH/Universitätsspital
- From Central: Polybahn

# Programme

09:00	<b>Registration &amp; coffee</b>
09:30	<b>Opening address</b> <i>Dr. Oliver Döbrich, President Swiss SAMPE Chapter</i>
09:40	<b>Keynote: Investigation of safety kinematics for high-pressure CFRP hydrogen vessels under side Pole crash</b> <i>Marlies Springmann, Institute of Aircraft Design, University of Stuttgart, Stuttgart</i>
10:10	<b>Microscale modelling of technical textiles for prediction of macroscopic drape behaviour</b> <i>Dr. Oliver Döbrich, IMPE Institute of Materials and Process Engineering, ZHAW Zurich University of Applied Sciences, Winterthur</i>
10:30	<b>Coffee Break</b>
11:00	<b>Open source FEA simulation for composites with Salome_MECA</b> <i>Dr. Markus Zogg, Inspire AG, Zürich &amp; Prof. Dr. Gion A. Barandun, IWK Institut für Werkstofftechnik und Kunststoffverarbeitung, OST Ostschweizer Fachhochschule, Rapperswil</i>
11:20	<b>"Low-Tech" Composite Processing Simulation for Efficient Training of Engineers</b> <i>Dr. Fabien Cara, TFX SA, Boncourt &amp; Composites Academy</i>
11:40	<b>FEA of Tailored Fiber Placement Parts – freedom and challenges</b> <i>Jascha Schmied, Bionic Composite Technologies AG, St. Gallen</i>
12:00	<b>Lunch &amp; Networking</b>
13:30	<b>Reinforcing Elements - A new approach to model complex layered composite structures</b> <i>Dr. René Roos, ANSYS Switzerland, Zürich</i>
13:50	<b>Fatigue with Composites – State-of-the-art in Simulation</b> <i>Prof. Dr. Davide Valtorta, Department of Innovative Technologies, SUPSI University of Applied Sciences and Arts of Southern Switzerland</i>
14:10	<b>Physics-augmented digital twins for guided wave ultrasonic inspections of composite materials</b> <i>Christian Boehm, Mondaic AG, Zurich</i>
14:30	<b>Coffee Break</b>

15:00	<b>Artificial Intelligence in Composites Engineering and Manufacturing</b> Maximilian Holland, Fraunhofer Fraunhofer-Institut für Gießerei-, Composite- und Verarbeitungstechnik IGCV, Augsburg
15:30	<b>Multiscale Computational Analysis of Fiber Ondulation Effects on the Shear Properties of Carbon Fiber-Reinforced Plastics</b> Armin Farzin, Institute of Lightweight Structures, Professorship of Textile Technologies, TU Chemnitz
16:00	<b>Closing remarks</b> <i>Dr. Oliver Döbrich, President Swiss SAMPE Chapter</i>
16:10	<b>Networking Apéro</b>
17:30	<b>End of Event</b>

To participate to this event, please register until **9 January 2026** on the conference website:

[www.ost.ch/ssctc](http://www.ost.ch/ssctc)

#### Registration is free of charge for

- SAMPE Members
- ETHZ/EPFL/EMPA Members
- Participants from Composites United Switzerland its Member Companies and Institutes
- Students (Bachelor, Master and PhD Students from Swiss Universities and Swiss Universities of Applied Sciences)

Non-members should sign up to SAMPE Europe before registering in the conference at

[www.sampe-europe.org/membership](http://www.sampe-europe.org/membership)

#### Further information

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