



# Adaptive Lightweight Structures and Technologies Symposium

15 May 2024  
Alumni Pavillon, ETH Zürich



Dear Ladies and Gentlemen,  
Dear friends!

It is my great pleasure to invite you to this one-day symposium on adaptive lightweight structures and technologies. This meeting provides a unique opportunity to exchange with leading scientists and long-time friends and partners of CMASLab on actual topics embracing modeling, design, technology aspects. Applications focus on adaptive structures in ultra-lightweight space structures, morphing and mobility solutions.

You are all very welcome to join this event!  
Sincerely yours  
Paolo Ermanni



**Prof. Dr. Paolo Ermanni**  
Director of Composite Materials and Adaptive Structures Lab (CMASLab)  
[www.structures.ethz.ch](http://www.structures.ethz.ch)

# Symposium Program

<i>Time</i>	<i>Speaker</i>	<i>Title</i>
08.00-08.30		Coffee & Registration
08.30-08.40	<b>Paolo Ermanni</b> ETH Zurich, Switzerland	Welcome and Opening
08.40-09.20	<b>Sergio Pellegrino</b> Caltech, USA	Ultralight Deployable Space Structures
09.20-10.00	<b>Paul Weaver</b> University of Limerick, Ireland	Varicomposites: Spatially & Temporally Variable Properties for Highly Efficient and Sustainable Performance
10.00-10.30		Coffee Break
10.30-11.10	<b>Joanna Wong</b> University of Calgary, Canada	Additive Manufacturing of Lightweight Composite Shells for Deployable Space Structures
11.10-11.50	<b>Véronique Michaud</b> EPFL, Lausanne	Towards tough, healable and recyclable composite materials
11.50-12.30	<b>Sandro Wartzack</b> University of Erlangen-Nürnberg, Germany	Development of lightweight user-centered mobility solutions
12.30-13.30		Lunch
13.30-14.10	<b>Alexander Hasse</b> Chemnitz University of Technology, Germany	A pseudo-kinematic approach for the design of shape-adaptive compliant mechanisms
14.10-14.50	<b>Dirk Mohr</b> ETH Zurich, Switzerland	Recurrent Neural Network-based Design of Plate-Lattice Materials
14.50-15.20		Coffee Break
15.20-16.00	<b>Urban Fasel</b> Imperial College, London	Morphing wings – from sparse model discovery to control co-design
16.00-16.40	<b>Andres Arrieta</b> Purdue University, USA	A short journey into the programming of shape shifting structures
16.40-17.00	<b>Kristina Shea</b> ETH Zurich, Switzerland	Closure - "Movement"