


Crash and Impact of Aircraft Structures with Function and Sensor Integration

Wednesday 26th June **Thursday 27th June** **Friday 28th June** **Saturday 29th June**

Morning Session <small>starting at 09:00 am</small>	Introduction, Crash and Impact	Smart Materials	Sensor Integration and Smart Structures	Wrap-Up
	Welcome and Registration	Lecture 2.1 Sensor technologies for spatially resolved strain detection	Lecture 3.1 Data quality: Assessment of completeness and representativeness	Closing Remarks
	Opening Remarks and Overview	Lecture 2.2 Material embeddings for mechanical properties prediction	Industry Insights Impact as a design criterion - Influenced from expected or likely scenarios in operational processes	Certificate Distribution
	Round Table Discussion	Lecture 2.3 Eco-sustainable magnetic field sensors	Industry Insights The way to climate neutral flying	Social Event
	Lecture 1.1 Crashworthiness in aircraft design	coffee break		
Lecture 1.2 Fundamentals of aircraft structures and materials	Lecture 2.4 Reinforced nanocomposites with self-diagnostic capabilities	Panel Discussion Challenges and innovations in sensor integration		
	Lecture 2.5 Integrating recyclability and sustainability into structural component design: A case study from the automotive sector			

lunch break at 12:00 pm

Afternoon Session <small>Starting at 01:30 pm</small>	Lecture 1.3 Crash & impact modelling of fibre-reinforced materials – From material characterization to predictive modelling of components	Interactive Session Workshop and ILK Lab Tour Testing of functional materials	Sensor Integration and Smart Structures	
	Interactive Session Workshop and Discussion Analyzing real-world impact and crash cases	Evening Poster Session Showcasing Trainees Projects	Lecture 4.1 Fibre bragg gratings for aerospace application	
			Lecture 4.2 Functionally integrated aircraft structures for detection of impact events	
		Lecture 4.3 Design of multi-material systems with material-inherent functions		

Welcome Dinner and Networking **Pizza & Beer**

Morning Session

Introduction, Crash and Impact

09:00 am - 09:15 am

Welcome and Registration

09:15 am - 09:30 am

Opening Remarks and Overview

Prof. Maik Gude | ILK, TU Dresden and DCIM Board Member

09:30 am - 10:30 am

Round Table Discussion

Smart Materials

Lecture 2.1

09:00 am - 09:30 am

Sensor technologies for spatially resolved strain detection

Dipl.-Ing. Philip Steinbild | ILK, TU Dresden

Lecture 2.2

09:30 am - 10:00 am

Material embeddings for mechanical properties prediction

Dr. Adrian Ehrenhofer | DCIM and Institute for Solid Mechanics, TU Dresden

Lecture 2.3

10:00 am - 10:30 am

Eco-sustainable magnetic field sensors

Dr. Rui Xu | HZDR

10:30 am - 11:00 am coffee break

Lecture 1.1

11:00 am - 11:30 am

Crashworthiness in aircraft design

Prof. Vassilis Kostopoulos | AML, MEAD, UPAT

Lecture 1.2

11:30 am - 12:00 pm

Fundamentals of aircraft structures and materials

Dr. Thanasis Kotzakolios | AML, MEAD, UPAT

Lecture 2.4

11:00 am - 11:30 am

Reinforced nanocomposites with self-diagnostic capabilities

Dr. Georgios Tzortzinis | DCIM and ILK, TU Dresden

Lecture 2.5

11:30 am - 12:00 pm

Integrating recyclability and sustainability into structural component design: A case study from the automotive sector

Dr. Anastasios Zavas, Dr. Dionysios Markatos | IDEAS, MEAD, UPAT

12:00 pm - 01:30 pm lunch break

Lecture 1.3

01:30 pm - 02:00 pm

Crash & impact modelling of fibre-reinforced materials – From material characterization to predictive modelling of components

Dr. Andreas Hornig | ILK, TU Dresden

Interactive Session Workshop and Discussion

02:00 pm - 02:30 pm

Analyzing real-world impact and crash cases

Interactive Session Workshop and ILK Lab Tour

01:30 pm - 02:30 pm

Testing of functional materials

Evening Poster Session Showcasing Trainees Projects

02:30 pm - 04:30 pm

Sensor Integration and Smart Structures

Lecture 3.1

09:00 am - 09:30 am

Data quality: Assessment of completeness and representativeness

Dr. Thanasis Kotzakolios | MEAD, UPAT

Industry Insights

09:30 am - 10:00 am

Impact as a design criterion - Influenced from expected or likely scenarios in operational processes

Alexander Knorr | Elbe Flugzeugwerke GmbH, Chief Technology Officer

Industry Insights

10:00 am - 10:30 am

The way to climate neutral flying

Dr. Uwe Heßler | Rolls Royce Deutschland Ltd, Head of Research & Technology

11:00 am - 12:00 am

Panel Discussion

Challenges and innovations in sensor integration

Moderation: Prof. Kostopoulos, Prof. Filippatos and Prof. Gude

Sensor Integration and Smart Structures

Lecture 4.1

01:30 pm - 02:00 pm

Fibre bragg gratings for aerospace application

Prof. Rohan Soman | IMP PAN

Lecture 4.2

02:00 pm - 02:30 pm

Functionally integrated aircraft structures for detection of impact events

Dr. Anja Winkler | ILK, TU Dresden

Lecture 4.3

02:30 pm - 03:00 pm

Design of multi-material systems with material-inherent functions

Prof. Angelos Filippatos | IDEAS, MEAD, UPAT

Wrap-Up

09:00 am - 09:15 am

Closing Remarks

09:15 am - 09:45 am

Certificate Distribution

Social Event



Afternoon Session