

Save the Date – CVUT Summer School

Programme on page 2

Dear MechaTwing Partners, dear Aerospace Community, dear Sir or Madam,

we kindly invite you to our **2nd Summer School** on **September 14—18, 2026**, as part of the project *MechaTwing*, funded by the European Union. We will bring together scientists and experts for lectures, workshops, and technical discussions with a focus on the combined control of morphing and aeroelasticity of aircraft wings.

This Summer School will focus on **the advanced and challenging topic of employing aircraft wing actuation mechanisms to achieve combined control of wing profile morphing and aeroelastic behaviour**. While effective morphing requires low structural stiffness and minimal deformation forces, aeroelastic stability depends on high stiffness. Our approach introduces the concept of mechatronic stiffness, enabling both requirements to be fulfilled within a single system. The Summer School will showcase the latest outcomes of the *MechaTwing* project.

Lectures to introduce both fundamental and advanced topics of key aerodynamic aspects of morphing technologies and aeroelasticity, followed by a comprehensive overview of mechatronic design methodology—covering concept development, system modelling, simulation, control design, and optimisation. The programme will also address mechatronic wing design from the perspectives of structural mechanics, composite materials, additive manufacturing, and integrated health monitoring systems.

Hands-on workshops & experiments in the laboratory: The final part will focus on experiment design and wind tunnel testing. Attendees will have the opportunity to engage directly with selected development steps of the project, observe wind tunnel experiments, and tour unique testing facilities dedicated to turboprop engine development.

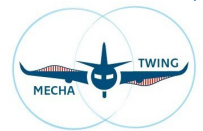
The Summer School will be given in English.

When: 14-18 September 2026

Where: Czech Technical University in Prague, Jugoslavskych Partyzanu 1580/3, Prague, Czech Republic + online

Registration: via email to casr@fs.cvut.cz

REGISTRATION—email to: casr@fs.cvut.cz



REGISTRATION:	ON-SITE PARTICIPATION:	LIVE-STREAM PARTICIPATION:
	FREE OF CHARGE	FREE OF CHARGE
REGISTRATION	30.8.2026	
Participants will cover their travel, accommodation and main meals during the Summer School.		
ACCOMMODATION: SOME EXAMPLES:	There are possibilities within the Prague 6—Dejvice and surrounding areas, please ensure to make your reservation <u>well in advance</u> .	
Hotel MEDA	Grand Hotel International	Hotel DAP
City Castle Aparthotel	Urban Hideaway	Panorama Prague Castle with Terrace

CVUT Summer School—PROGRAMME

	Monday, 14/9/2026	Tuesday, 15/9/2026	Wednesday, 16/9/2026	Thursday, 17/9/2026	Friday, 18/9/2026
8:30 - 9:00	Introduction & welcome (M. Valášek, M. Španiel, CVUT)				
9:00 - 9:45	SYSTEM SPECIFICATION – Aerodynamic challenges, Morphing wing preliminary aerodynamic design: main requirements, method and initial results (G. Frulla, PoliTO)	DETAILS OF SOLUTION – Mechatronic design (M. Valasek, CVUT)	Control design & optimization (A. Schirrer, TU Wien)	Hands on MODELING, SIMULATION, CONTROL (M. Valasek, CVUT)	Hands on MANUFACTURING (J. Zavřel, CVUT)
9:45 - 10:30	SYSTEM SPECIFICATION – Aeroelastic challenges (M. Ritter, DLR)	Mechanical structure, actuator SYSTEM MODELING (T. Vampola, CVUT)	Control design & optimization (A. Schirrer, TU Wien)	Experimental validation – DoE (G. Di Cicca, PoliTO)	Hands on MANUFACTURING (J. Zavřel, CVUT)
10:30 - 10:45	COFFEE BREAK	COFFEE BREAK	COFFEE BREAK	COFFEE BREAK	COFFEE BREAK
10:45 - 11:30	SYSTEM SPECIFICATION – Aeroelastic challenges (H. Hwang, DLR)	Mechanical structure, actuator SYSTEM MODELING (T. Vampola, CVUT)	Hands on MODELING, SIMULATION, CONTROL (M. Ritter, DLR)	Experimental validation – DoE (G. Di Cicca, PoliTO)	DEPLOYMENT – Application (J. Klesa, CVUT)
11:30 - 12:15	From Deterministic to Probabilistic Design: Uncertainty in Aeroelastic and Structural Analysis (E. Cestino, PoliTO)	Mechanical structure, actuator SIMULATION (M. Valasek, CVUT)	Hands on MODELING, SIMULATION, CONTROL (M. Ritter, DLR)	REALIZATION-Design, Construction, Manufacturing (J. Zavřel, CVUT)	VALIDATION – Experiments (J. Klesa, CVUT)
12:15 - 13:30	LUNCH BREAK	LUNCH BREAK	LUNCH BREAK	LUNCH BREAK	LUNCH BREAK
13:30 - 14:15	SYSTEM SOLUTION - Morphing & aeroelastic control (M. Valasek, CVUT)	Mechanical structure, actuator SIMULATION (M. Valasek, CVUT)	Shape measuring (M. Gherlone, PoliTO)	REALIZATION-Design, Construction, Manufacturing (J. Zavřel, CVUT)	Wrap up & final discussion (M. Valasek, CVUT)
14:15 - 15:00	DETAILS OF SOLUTION – Mechatronic design methodology (M. Valasek, CVUT)	Mechanical structure, actuator CONTROL DESIGN (A. Schirrer, TU Wien)	Shape measuring (M. Gherlone, PoliTO)	COFFEE BREAK	Close & thank you (M. Valášek, M. Španiel, CVUT)
15:00 - 15:15	COFFEE BREAK	COFFEE BREAK	COFFEE BREAK	Visit to Wind Tunnel with demonstrator	
15:15 - 16:00	DETAILS OF SOLUTION – Mechatronic design (M. Valasek, CVUT)	Mechanical structure, actuator CONTROL DESIGN (A. Schirrer, TU Wien)	Hands on MODELING, SIMULATION, CONTROL (P. Kovar, CVUT)		
16:00 - 16:45		Visit to TurboProp Engine TestCell			
18:00 -	Social programme		Social programme	Social programme	

We are looking forward to welcoming you in Prague. The MechaTwing Summer School is coordinated by the MechaTwing Organising Committee.

Enquiries: casr@fs.cvut.cz (Radka Preclikova, Center of Aviation & Space Research)

