

Joint Global Summer School

A

Frontiers of Mechanics in Advanced Manufacturing and Intelligent Equipment

July 20–31, 2026

Harbin Institute of Technology, Harbin, P.R. China



Contact Information

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General Information

Mechanics serves as a bridge between basic science and future technology. This summer school is co-organized by **Harbin Institute of Technology**, **Zhejiang University** and **Peking University**, and focuses on the latest advancements in mechanics, particularly in the research, design, and applications related to advanced manufacturing and intelligent equipment. Participants will gain in-depth knowledge in the fields of integrated design of mechanical structures, dynamics and control, high performance materials for engineering applications, and structural health monitoring, through both theoretical instruction and group research projects. During the first week, participants will study at Zhejiang University; during the second week, they will study at Harbin Institute of Technology. This program offers an excellent opportunity for participants to access the frontiers of mechanics research, collaborate on challenging problems, and build a global academic network.

Attendance Requirements

Participants should be at the undergraduate level, with a background in mechanics, aerospace engineering, mechanical engineering, materials science, applied mathematics, or related fields. Proficiency in English is required, though some lectures will be given in Russian or Chinese with translation provided.

Lectures and Talks (Tentative)

(for reference only; specific details may be subject to change)

Date	Time	Activities	Information	Instructor(s)
Zhejiang University (Yuquan Campus)				
Jul. 19	All day	Registration	Check-in location: Yuquan Campus, ZJU	

Jul. 20	08:00–08:30	Opening Ceremony		
	08:30–11:30	Course	Fuzzy Control and Artificial Neural Networks	Assoc. Prof. Zhipeng Ma, ZJU
	14:00–17:00	Course	Structure and Mechanics of Soft Matter	Assoc. Prof. Zongrong Wang, ZJU
Jul. 21	08:30–11:30	Course	Mechanics of Flexible Electronics	Prof. Jizhou Song, ZJU
	14:00–17:00	Course	Mechanical Design of Soft Machines	Prof. Guoyong Mao, ZJU
Jul. 22	08:30–11:30	Course	When Mechanics Meets Biology	Prof. Bin Chen, ZJU
	14:00–17:00	Course	Principles of Turbomachinery and Applications of Artificial Intelligence	Prof. Kai Zhou, ZJU
Jul. 23	8:30–11:30	Course	Multi-field Coupling Modelling of Soft Active Materials	Prof. Rui Xiao, ZJU
	14:00–17:00	Course	Wave and Vibration Analysis of Smart Structures	Prof. Bin Wu, ZJU
Jul. 24	08:30–11:30	Course	Dimensional Analysis and Its Engineering Applications	Prof. Guoxing Lu, ZJU
	14:00–17:00	Course	Friction Laws in Compressible Turbulent Boundary Layers	Prof. Zhenhua Xia, ZJU
Jul. 25	Departure			
Harbin Institute of Technology				
Jul. 26	All day	Registration	Check-in location: HIT	
Jul. 27	08:30–11:30	Course	AI-Empowered Mechanics Simulation	Prof. from PKU
	14:00–17:00	Practice	Introduction to Relevant Skills	
Jul. 28	14:00–17:00	Practice	Teamwork-based Practice on Reusable Rockets, Unmanned Aerial Vehicles, or Intelligent Vehicle Robots	Prof. from HIT
	08:30–11:30	Practice		
Jul. 29	14:00–17:00	Practice		
	08:30–11:30	Practice		
Jul. 30	14:00–17:00	Practice		
	08:30–16:00	Practice		
Jul. 31	16:00–17:00	Competition		
	Departure		Closing Ceremony	

Accommodation And Travel Expense

There are no tuition and instructors will be provided with free accommodation in Hangzhou and Harbin from July 19–31, 2026. Participants shall bear their own international and domestic travel expenses (including travel expenses between Zhejiang and Harbin), insurance premiums and living expenses during the program.