Global Summer School

Smart Low-Carbon Energy and Aerospace Power

Jul. 20 – Aug.1, 2026

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

Contact Information

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General Information

The Summer School on " smart low-carbon energy and aerospace power", hosted by the School of Energy Science and Technology, serves as a platform for young students in the field of energy and power to exchange ideas. The program focuses on cutting-edge issues and research hotspots in energy and power, aiming to provide participants with an understanding of the current status and development trends of world energy science and technology. By attending the summer school, participants will gain insights into international frontier dynamics and major scientific issues in this field, broaden their academic horizons, enrich their academic experience, enhance their professional qualities, stimulate innovative thinking, and strengthen their innovation capabilities.

The two-week program will feature various forms of teaching, including lectures, project-based learning, and practical sessions. These elements are designed to introduce students with a strong quantitative background (such as those in energy and power, theoretical physics, computer science, and engineering) to emerging fields in smart energy and advanced power. The summer school envisions a collaborative learning environment where teachers and students engage in in-depth discussions on cutting-edge topics in energy and power, exploring advanced mathematical methods, modeling techniques, and practical approaches.

Attendance Requirements

Participants should be currently enrolled at the undergraduate or graduate level, with a background in energy science, power and mechanical engineering, mechanics, aerospace engineering, materials science, applied mathematics, or related disciplines. All participants must have a good command of English. Lectures will be given in English.

Lectures and Talks (Tentative)

The summer school offers four lectures and four seminar talks. Lecturers and speakers are invited from top institutions around the world, including the United States, France, Germany, Australia, Spain, and China. Notable institutions represented include California Institute of Technology, Institut National des Sciences Appliquées de Lyon, University of Western Australia, Universidad de Sevilla, and Harbin Institute of Technology.

Lecturer/ Speaker	Institution	Topic (preliminary)	Units (50 mins/unit)
Prof. Nicolas Riviere	Universidad de Sevilla, Seville	Principles and Applied Technologies of Solar Photovoltaic Power Generation Systems	8 (lecture)
Prof. Iranzo Alfredo	Institut National des Sciences Appliquées de Lyon, France		8 (lecture)
Prof. Yan Kleissl	California Institute of Technology, United States	Fluid Dynamics Computation and Flow Control	8 (lecture)
Prof. Tongming Zhou	University of Western Australia, Australia		8 (lecture)
Prof. Oskar Haidn	Deutsches Zentrum für Luft- und Raumfahrt, Germany	Key Technologies in the Research Field of Liquid Rocket Engines	2 (talk)
Prof. Nicolas Gascoin	Institut National des Sciences Appliquées, France	Challenges of propulsion for a scramjet engine	2 (talk)
Prof. Daren Yu	Harbin Institute of Technology, China	Overview of the Development of Electric Propulsion in Space	2 (talk)
Prof. Jianmin Gao	Harbin Institute of Technology, China	Overview of Advances in Energy Storage Technologies	2 (talk)

Group Research Project

Participants will be divided into 6 or more teams, with 5-7 members in each team, to work on the Rotor UAV Practical Project. Under the guidance of instructors, either online or offline, each group will complete practical exercises focused on the "Supercapacitor/Battery Practical Project".

Program Dates and Times

	Week 1 (7.20—7.25)						Week 2 (7.27—8.1)					
	Mon	Tue	Wed	Thur	Fri	Sat	Mon	Tue	Wed	Thur	Fri	Sat
M	Lecture		Lecture		Lecture	Tour	Lecture		Seminar	Group Research	Defense	Poster
A	Seminar		Seminar		Seminar		Group Research		Group Research	Group Research		

(Registration: July 19th, 2026)

Please note that the program schedule is subject to change based on actual circumstances.