INTERNATIONAL SUMMER SCHOOL

INTELLIGENT ROBOT

Jul 2nd – Jul 14th, 2023

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

GENERAL INFORMATION

The theme of this summer school is “Intelligent Robot”, with the course of a variety of teaching contents and activities with this theme. Technical links include “Frontiers of Robotics”, “Robotics and Artificial Intelligence”, “Micro and Nano fluid Mechanical systems”, etc. Through the International Summer School, we provide distinctive international summer courses for our students and students from other universities, and promote the improvement of students’ cross-cultural communication ability. Making full use of the resources provided by the National Key Laboratory of Robotics Technology and System in HIT, and fully cooperating with overseas scholars in an all-round way, this summer school gives full play to its characteristics and advantages as much as possible. In addition, as the feature of this summer school, we will provide students with practical activities of robot design and competition in the form of competition under the leadership of domestic and foreign tutors, so that students can truly understand the core of robot technology during this period, and through the combination of theoretical learning and design practice, students will appreciate the application prospect of robot in the field of mechanical engineering and related interdisciplinary disciplines.

ATTENDANCE REQUIREMENTS

Undergraduate or graduate attendees with background in mechanics, aerospace engineering, mechanical engineering, materials science, applied mathematics, etc. are welcomed. All participants must have a good command of English. Some lectures will be given in Chinese with translation in English.

LECTURES AND TALKS

The summer school offers three lectures and twelve seminars. Lecturers and speakers are invited from top institutions in Europe and China, including Commercial Aircraft Corporation of China, Cardiff University, Heriot-Watt University, Harbin Institute of Technology, University of Nottingham, University of Jefler.

Lecturer	Title	Institution	Topic	Class Hour
Kenneth T V Grattan	Professor, Fellow of the Royal Academy of Engineering	London Metropolitan University	Optical fiber sensing system	16
Hegao Cai	Academician of Chinese Academy of Engineering, Professor	School of Mechanical and Electrical Engineering	The development of intelligent robots	4
Zongquan Deng	Academician of Chinese Academy of Engineering, Professor	School of Mechanical and Electrical Engineering	The lunar rover and its intelligent components	4
Hong Liu	Academician of Chinese Academy of Engineering, Professor	School of Mechanical and Electrical Engineering	Intelligent space robot	4
Cyrille Breard	Doctor	Commercial Aircraft Corporation of China (COMAC)	Smart equipment on big planes	4
Zhirong Liao	Associate Professor	University of Nottingham	Advanced manufacturing technology	4
Emmanuel Brousseau	Professor	Cardiff University	Ultra-precision and micro-nano manufacturing	4
Xianwen Kong	Professor	Watt University	Parallel robot	4
Gurvinder S. Virk	Professor	The University of Jefler, Sweden	Intelligent sensing system	4

GROUP RESEARCH PROJECT

Participants will be grouped into 6 teams or more, each with 7-10 members, to work on a project on structural design and safety assessment of space vehicles in

omposite materials. Each group may select one from four areas: general design of space vehicles, structural dynamics and control, computation of strength and service life, structural health monitoring of space vehicles.

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<tr><td colspan="6">Week 1 (7.3-7.9)</td><td colspan="5">Week 2 (7.10-7.15)</td></tr>
<tr><td></td><td>Mon</td><td>Tue</td><td>Wed</td><td>Thur</td><td>Fri</td><td>Mon</td><td>Tue</td><td>Wed</td><td>Thur</td><td>Fri</td></tr>
<tr><td>M</td><td colspan="4">Lecture</td><td>Seminar</td><td rowspan="2" colspan="2">Training</td><td rowspan="2" colspan="2">Competition</td><td>Competition</td></tr>
<tr><td>A</td><td colspan="4">Seminar</td><td>Tour</td><td>Award Ceremony</td></tr>
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CONTACT INFORMATION

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