

Joint European Summer School on Fuel Cell, Electrolyser, and Battery Technologies

JESS 2025

15 – 19 September 2025

Vravrona, Athens, Greece



Basic Information

Participation fees:

2.100,- € per person,
Early Bird rate **until 31.03.2025** 2.000,- € per person.
Double room occupancy is 1.850,- € per person standard
rate, and Early Bird rate € 1.750,-

This fee includes all tuition, as well as:

- full board for six nights,
- coffee breaks,
- a banquet on the Friday, and
- an excursion on the Wednesday.

Accompanying persons (in same double room, not
attending lectures) pay 890 € including all of the above.

The local tourist tax of €15 / day will be payable at the
hotel separately, due to Greek tax laws.

Arrival is expected on Sunday 14 Sept. and departure on
Saturday 20 Sept., as we will have a Friday evening
farewell dinner.

Please register by 31 July 2025 to secure your place on
the School (cut-off date).

For regular updates and information, please go to our
web site: <https://www.jess-summerschool.eu>

For registration, mail manuela@panhellas.gr

Contact for all other enquiries:

Robert Steinberger-Wilckens
School of Chemical Engineering
University of Birmingham
Edgbaston
Birmingham, B15 2TT, UK
r.steinbergerwilckens@bham.ac.uk

JESS is organised by:



Organising committee:

Prof. Robert Steinberger-Wilckens, U Birmingham
Prof. Jens Oluf Jensen, DTU Energy
Prof. Rüdiger-A. Eichel, FZ Jülich GmbH

Scope and target:

The Joint European Summer School (JESS in short) dates
back to 2004 when the first Summer School took place in
Greece. By now, 21 events have been successfully
organised with over 1.000 students attending.

The participants make their course choice from four
parallel modules:

The week offers three comprehensive introductions
aimed at graduate and PhD students and young
professionals within the fields of low and high
temperature fuel cells & electrolysis, and in battery
technology.

In addition, an advanced module is offered for students
and professionals with a few years of experience. It
covers the essential field of Hydrogen Safety.

All lectures will be presented by highly acclaimed experts
from universities, research centres, and industry with
long-standing experience in teaching. All details of the
courses and information on lecturers can be found on
the JESS website.

The Introductory Modules are accredited at DTU, RWTH
Aachen, and University of Birmingham. The Advanced
modules at University of Birmingham only. Upon
successfully taking the optional final exams, students will
receive 3 ECTS credit points for their course.

Lecture language: English.

Slides and information will be available to participants
via a dropbox folder during and after the Summer
School.

If you want to sponsor this event, please contact
Prof Steinberger-Wilckens.



The 22nd edition of the Joint European Summer School – JESS2025 - will again take place close to the beautiful city of Athens on the coast of the Aegean Sea.

It will provide four high level modules on selected topics in fuel cell, electrolyser, battery and related technologies.

JESS addresses newcomers to the field, graduate students, and young professionals working at the forefront of electrical energy and hydrogen technologies.

Summer School will include four parallel modules:

Introduction to Fuel Cell, Electrolyser, and Battery

Technologies: starting from the fundamental principles of electrochemistry and thermodynamics the entire spectrum of materials, design and balance of plant will be covered both from a scientific and an engineering point of view. The courses will be augmented by more general lectures on various aspects of the technology.

The Advanced Module addresses students with one or two years of experience and participants from industry and covers **H₂ Safety**, introducing issues encountered in hydrogen handling, accident prevention, and hydrogen releases and fires.

All lecturers are highly experienced and include senior researchers from the fields of fuel cell, electrolyser, battery, and hydrogen research.

In addition to the lectures, the participants will be asked to join in student projects, applying the course content to case studies to be presented at the end of the week.

Programme Schedule

JESS offers four independent course modules, as shown below.
During registration, students choose the specific module they want to attend.

Introductory Modules:

<i>Introduction to Electrochemistry and Thermodynamics</i> <i>Introduction to Solid State Chemistry and Ionics</i>		
<i>Introduction to SOFC / SOE</i>	<i>Introduction to LT Fuel Cells & Electrolysers</i>	<i>Introduction to Batteries</i>
• <i>materials: electrolytes & electrodes</i> • <i>cell and stack design</i> • <i>stack materials</i> • <i>manufacturing</i> • <i>characterisation</i> • <i>degradation</i> • <i>system technology</i>	• <i>materials: electrolytes & electrodes</i> • <i>cell and stack design</i> • <i>manufacturing</i> • <i>characterisation</i> • <i>degradation</i> • <i>system technology</i>	• <i>materials: electrolytes & electrodes</i> • <i>cell and stack designs</i> • <i>manufacturing</i> • <i>characterisation</i> • <i>modelling</i> • <i>degradation</i> • <i>system technology</i> • <i>beyond Lithium</i> • <i>metal-air & solid state batteries</i>
• <i>power to gas, power to fuel</i>		

Advanced Module:

<i>Hydrogen Safety</i>
• <i>introduction to hydrogen safety</i> • <i>hydrogen storage</i> • <i>materials and hydrogen</i> • <i>incident handling</i> • <i>incident prevention</i> • <i>standards</i>