Draft Press Material:
CERN–JINR European School of High-Energy Physics

Key points

An advanced school of physics is being held in Parádfürdő in North-Eastern Hungary, about 120 km from Budapest, 5–18 June 2013.

It is organised and supported by CERN and JINR, together with several Hungarian bodies (Academy of Science; Scientific Research Fund; University of Debrecen; Wigner Research Centre for Physics). CERN is the European Organisation for Nuclear Research based in Geneva, Switzerland, and JINR is the Joint Institute for Nuclear Research based in Dubna, Russia.

CERN is a world centre for particle-physics study whose primary mission is fundamental research.

- However, many spin-offs include the World Wide Web and medical applications of particle detectors such as PET scanners
- CERN is also committed to a wide range of educational and outreach activities

The School addresses particle physics for young experimentalists who are preparing their PhD theses.

The students are typically 25 years old, and all already have a university degree.

About 115 students from 27 different countries are attending the School following a highly competitive selection process.

- We foster cultural exchange and networking between young scientists from different countries

Many of the students are working on the Large Hadron Collider (LHC) at CERN.

- By far the most powerful facility of its kind in the world
- Noteworthy for the discovery of the Higgs boson in 2012 in which researchers from Hungary are involved as part of the ATLAS and CMS Collaborations

Fundamental questions addressed at the School include:

- Why do particles have mass?
- Why is the universe made of matter rather than antimatter?

The Directors General of CERN and JINR will lecture at the School on Friday 14 June.

Journalists wanting more information or wishing to visit the School for interviews may contact Physics.School@cern.ch

Why Hungary? Why Parádfürdő?

The CERN Schools started in the 1960's and are now annual events organized jointly by CERN and its sister organisation in the former Soviet Union, JINR.

The Schools are always held in member states of CERN and/or JINR, representing a very large number of countries spanning Western and Eastern Europe, see:
http://home.web.cern.ch/about/member-states
http://www.jinr.ru/

It is a long time since the Physics School was held in Hungary (although other CERN Schools on Accelerators and on Computing have taken place more recently), and it is very appropriate that the 2013 event is being held at the same time as the inauguration of the new "Tier-0" computing centre that is hosted at the Wigner Research Centre for Physics in Budapest.

We looked at many possible places for the School within Hungary before choosing the Erzsébet Park Hotel in Parádfürdő.

Considerations in selecting the venue included the good conference facilities, comfortable sleeping accommodation and nice food. Also relevant were the sports and leisure facilities for the (limited) free time available to the participants, given our objective to promote social as well as professional contacts between students from different countries.

The size of the Erzsébet Park Hotel is well adapted to our needs with about 135 participants in total, including students and staff. The beautiful and somewhat isolated location encourages participants to stay to together and get to know each other.

Last but not least, the Erzsébet Park Hotel offered good value for money. The School works on a tight budget and we are sensitive to the difficult financial situation in the funding agencies and universities throughout Europe. There is important sponsorship from CERN and JINR, as well as from Hungarian funding bodies (Academy of Science, Scientific Research Fund) to whom we are very grateful. However, the students' home institutes have to pay a fee as a contribution to the costs of their participation, including full board and lodgings for two weeks.

Who do we teach? What do we teach?

The School teaches particle physics and related subjects to advanced PhD students, mainly from Europe. They are typically about 1–2 years from the end of their studies and about 25 years old.

We aim to attract the very best students in the field, i.e. people who have the potential to be scientific leaders in the future.

The 2013 School was oversubscribed (209 applications for a target of 100 places), so we had to make a highly competitive selection; finally 115 students were accepted, a few more than the target, reflecting the large number of outstanding candidates.

Students come from places as far afield as Bangladesh, China, Egypt, India, Iran, and North America as well as many countries throughout Europe.

The School provides an excellent opportunity for young scientists to get to know people from other countries – overall, there are students coming from institutes in 27 different countries! The allocation of students to shared twin-bed accommodation deliberately mixes people of different nationalities as a means of promoting cultural exchange and networking between young scientists from different countries.

Several of the courses relate to the science that is being studied at the CERN LHC that is producing a huge number of new results. You may have heard of the discovery of the Higgs boson, but there are many possibilities that have been suggested by theoretical physicists that we need to address – only experiment can tell us what nature does!

It is worth noting that participants of previous schools have gone on to important positions, including the current Director General of CERN (Professor Rolf Heuer) who will visit the School to lecture and discuss with the students on 14 June.

Scientific programme

The intensive scientific programme includes lectures, discussion sessions in small groups, a student poster session, and collaborative student projects.

The lecturers are leading scientists from many different countries (USA and Russia, as well as Western Europe). Several of the teachers are from Hungary.

The poster session provides an opportunity for students to discuss their own work informally with each other and also with senior scientists.

The students are divided into six groups for the discussion sessions that take place most afternoons, and also for the collaborative projects for which they work together during free time in the afternoons and evenings. The projects teach the students to work together in collaboration as well as educating them about the science.

Social programme

Although the scientific programme is very intense, including teaching at the weekends, there is a social and leisure programme through which the students and staff can get to know each other informally, and also learn about the cultural heritage of Hungary.

There will be a full-day excursion to Budapest so that the students can see the Hungarian capital city. There will also be afternoon excursions to the town of Eger and to the Aggtelek caves.

More information

CERN

General CERN home page:
http://home.web.cern.ch/

CERN page for the press:
http://press.web.cern.ch/

The Schools of Physics

General home page for the Schools of Physics:
http://physicschool.web.cern.ch/PhysicSchool/

Page for the 2013 European School:
http://physicschool.web.cern.ch/PhysicSchool/ESHEP/ESHEP2013/