CERN SUMMER STUDENT PROGRAMME 2017
Summer Students Lecture Programme Committee

- Jennifer Dembski (HR)
- Eszter Badinova (HR)
- Roger Bailey (Accelerators)
- Markus Schulz (IT)
- Emmanuel Perez (Experiment, Chair)
- Richard Hawkings (Experiment)
- Thierry Gys (Experiment)
- Diego Blas Temino (Theory)
- Andrea Wulzer (Theory)
- Francesco Cerutti (Engineering)
Goals: Expose students to forefront research, aid in their development as scientists, teach them knowledge and skills for future work

These goals are achieved through a series of lectures on experimental and theoretical physics, and through individual work within a group at CERN

Your engagement is crucial! Get involved, ask questions, go to group meetings, discuss with fellow students, work hard, ....
Lectures have been planned on the most important topics you need to learn to better your career now

Many categories of research represented

- **Experimental Physics** (Accelerators, Detectors, Hadron collider physics, Flavour physics, Neutrino physics, Astrophysics, Antimatter, Nuclear physics, Heavy ions, etc.)

- **Theoretical Physics** (Quantum field theory, Standard Model, Beyond the Standard Model, Cosmology, Astroparticle physics, etc.)

- **Other** (Statistics and Data mining, Electronics, DAQ systems, Medical physics, ROOT, etc.)
Lectures : level

Lecturers have been selected because they are one of the top individuals in their fields, and have experience presenting material pedagogically.

Nevertheless, you don’t all have the same background / experience, so all lectures cannot be at the right level for all of you.
- in some cases “pre-requisites” are indicated, check in the Indico agenda.
- try to attend the first lecture of each serie...

Don’t feel frustrated if the level of some lectures is too high.

Also note the Openlab lectures (afternoons), that can interest (among others) students with an IT oriented profile.
https://indico.cern.ch/category/8040/
Lectures

Every morning, at 9:15, 10:25, 11:35, in the Main Auditorium
- each lecture is 45 minutes
- followed by 10 min of questions (don’t leave the room !)
- and a 15 min break

Use the backward doors if you are late ( but you should not ! )

Make an effort to follow the lectures actively
- avoid being distracted with your laptop !!
- do the homework/exercises that the lecturers may propose
- go through the material after the lectures
http://summer-timetable.web.cern.ch/summer-timetable/

Summer Student Lectures 2016

**Click**

Recording of the lecture (video)
Available shortly after the lecture

**Slides**

Particle World (3/3)
by Dr. Tara Shears (University of Liverpool (GB))

1 Jul 2015, 10:15 

Europe/Zurich
500-1-001 - Main Auditorium (CERN)
Welcome to Indico. The Indico tool allows you to manage complex conferences, workshops and meetings. In order to start browsing, please select one of the categories below.

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<tr>
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<th>Events</th>
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<tr>
<td>CERN-Related Clubs, Associations and Forums</td>
<td>5,326 events</td>
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<td>Committees</td>
<td>4,440 events</td>
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<tr>
<td>Conferences, Workshops and Events</td>
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<td>Departments</td>
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<td>Experiments</td>
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<tr>
<td>Schools, Seminars and Courses</td>
<td>7,300 events</td>
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<tr>
<td>TEST Category</td>
<td>909 events</td>
</tr>
</tbody>
</table>
And then choose: Summer Student Lecture Programme Course.
August 2016

05 Aug  Michele Maggiore, "Closing Lecture: The first direct detections of gravitational waves"
04 Aug  Ruth Durrer, "Introduction to Cosmology (3/3)"
04 Aug  Stefano Redaelli, "Collimation Systems (2/2)"
04 Aug  Laura Covi, Laura Covi, "Astroparticle Physics (3/3)"
03 Aug  Ruth Durrer, "Introduction to Cosmology (2/3)"
03 Aug  Stefano Redaelli, "Collimation Systems (1/2)"
03 Aug  Laura Covi, "Astroparticle Physics (2/3)"
02 Aug  Wolfgang Lerche, "What is String Theory?"
02 Aug  Laura Covi, Laura Covi, "Astroparticle Physics (1/3)"
02 Aug  Bryan Webber, "Monte-Carlo Techniques (2/2)"
01 Aug  Manjit Dosanjh, "Physics and Medical Applications (3/3)"
01 Aug  Ruth Durrer, "Introduction to Cosmology (1/3)"
Beyond the Standard Model (4/4)
by Christophe Grojean (DESY (Hamburg) and ICREA/IFAE (Barcelona))

27 Jul 2016, 09:15 → 10:10 Europe/Zurich

500-1-001 - Main Auditorium (CERN)
Beyond the Standard Model

CERN summer student lectures 2014

Lecture 4/4

Christophe Grojean

DESY (Hamburg)
ICREA@IIAE (Barcelona)
christophe.grojean@cern.ch

126 GeV
For each lecture series: you have the opportunity to give us feedback. Please fill and send the questionnaire !!!

The lecturers will see these comments: the comments can help them improve the lectures for the next year(s).

We (the lecture programme committee) also make use of them to improve the programme. Questionnaire is a priori anonymous – but you can indicate your email to us (the committee) if you wish.
And Finally ...

“Introduction to CERN” lecture by Eckhard Elsen, Director of Research and Computing, on Friday noon

Several workshops – see next presentation by Niko Neufeld

Poster session and Student Presentations in August.

For administrative and scheduling questions, please contact Jennifer / Eszter: summer.student.info@cern.ch

Feel free to contact the committee chair with questions or comments you might have: emmanuel.perez@cern.ch

Enjoy CERN, Geneva, your research group, and the lecture series!