

The Summer Students Lecture Programme is ending today.

We hope that you have enjoyed it.

**Note that the slides of all lectures are available in Indico, together with the video recording of the lectures !!**

( as advertised during the induction sessions, on the first day, and occasionally in the MA )

<http://summer-timetable.web.cern.ch/summer-timetable/>

## Summer Student Lectures 2016

Other year



09:00		<b>09:00</b> <b>Introduction Presentation</b> Neufeld, Niko (CERN), Perez, Emmanuel Francois (CERN), Lueders, Stefan (CERN), Basaglia, Tullio (CERN)	<b>09:00</b> <b>DG's Presentation</b> Gianotti, Fabiola (CERN)		<b>09:15</b> <b>Theoretical concepts in Particle Physics (1/5)</b> Cohen, Andrew (Boston University)	<b>09:15</b> <b>Theoretical concepts in Particle Physics (3/5)</b> Cohen, Andrew (Boston University)
10:00			<b>09:45</b> <b>Particle World (3/3)</b> Shears, Tara (University of Liverpool (GB))			
		<b>10:20</b> <b>Particle World (1/3)</b> Shears, Tara (University of Liverpool (GB))			<b>10:20</b> <b>Theoretical concepts in Particle Physics (2/5)</b> Cohen, Andrew (Boston University)	<b>10:20</b> <b>Theoretical concepts in Particle Physics (4/5)</b> Cohen, Andrew (Boston University)
11:00			<b>10:50</b>			

click



Summer Student Lecture Programme Course

### Particle World (3/3)

by Dr. Tara Shears (University of Liverpool (GB))

1 Jul 2015, 10:15 → 11:00 Europe/Zurich

500-1-001 - Main Auditorium (CERN)

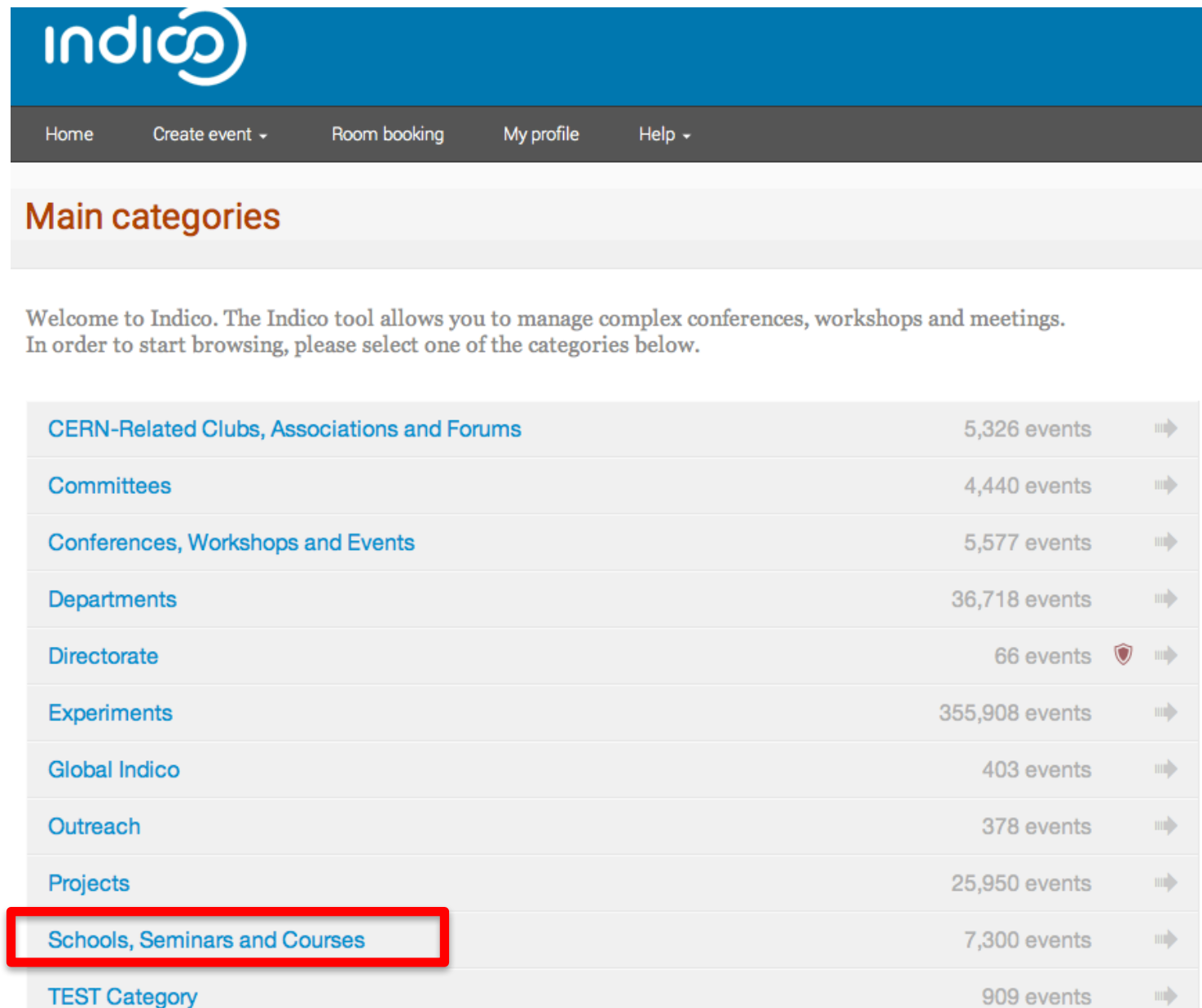
slides

Recording of the lecture (video)

Available shortly after the lecture



In case you have lost the web page, go to <https://indico.cern.ch/>



**indico**

Home Create event ▾ Room booking My profile Help ▾

## Main categories

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.

<a href="#">CERN-Related Clubs, Associations and Forums</a>	5,326 events	➔
<a href="#">Committees</a>	4,440 events	➔
<a href="#">Conferences, Workshops and Events</a>	5,577 events	➔
<a href="#">Departments</a>	36,718 events	➔
<a href="#">Directorate</a>	66 events	🛡️ ➔
<a href="#">Experiments</a>	355,908 events	➔
<a href="#">Global Indico</a>	403 events	➔
<a href="#">Outreach</a>	378 events	➔
<a href="#">Projects</a>	25,950 events	➔
<a href="#">Schools, Seminars and Courses</a>	7,300 events	➔
<a href="#">TEST Category</a>	909 events	➔

## Schools, Seminars and Courses

↑ Parent category

Schools	260 events	⇒
Training and Development	3,256 events	⇒
Seminars	2,967 events	⇒
Other CERN events	626 events	⇒
External events	191 events	⇒










## Training and Development

Academic Training Lecture For Postgraduate Students	124 events	⇒
.....		
Summer Student Programme	2,099 events	⇒
e-learning	20 events	⇒




And then choose: [Summer Student Lecture Programme Course](#).

## Summer Student Lecture Programme Course

### August 2017

-  03 Aug [Mogens Dam, "Physics at Future Colliders \(3/3\)"](#)
-  03 Aug [Mogens Dam, "Physics at Future Colliders \(2/3\)"](#)
-  03 Aug [Chloe Malbrunot, "Antimatter in the lab \(3/3\)"](#)
-  02 Aug [Gustaaf Brooijmans, "Search for BSM Physics at Hadron Colliders \(3/3\)"](#)
-  02 Aug [Mogens Dam, "Physics at Future Colliders \(1/3\)"](#)
-  02 Aug [Chloe Malbrunot, "Antimatter in the lab \(2/3\)"](#)
-  01 Aug [Bryan Webber, "Introduction to Monte-Carlo Techniques \(2/2\)"](#)
-  01 Aug [Gustaaf Brooijmans, "Search for BSM Physics at Hadron Colliders \(2/3\)"](#)
-  01 Aug [Mihaly Novak, "Simulation of Particle Interaction in a Detector"](#)


### July 2017


-  31 Jul [Chloe Malbrunot, "Antimatter in the lab \(1/3\)"](#)
-  31 Jul [Gustaaf Brooijmans, "Search for BSM Physics at Hadron Colliders \(1/3\)"](#)
-  31 Jul [Bryan Webber, "Introduction to Monte-Carlo Techniques \(1/2\)"](#)

Summer Student Lecture Programme Course

# 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)



slides

video



# Beyond the Standard Model (4/4)

27th July 2016 at 08:35 Christophe Grojean



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# Beyond the Standard Model

*CERN summer student lectures 2016*

Lecture 4/4

*Christophe Grojean*

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

1 | 17s Beyond the Standard Model

*CERN summer student lectures 2016*

Lecture 4/4

2 | 21s Outline

- 1. Motivation
- 2. The Higgs boson: experimental discovery
- 3. The Higgs boson: theoretical discovery
- 4. The Higgs boson: production and decay
- 5. The Higgs boson: discovery
- 6. The Higgs boson: discovery
- 7. The Higgs boson: discovery

3 | 47s 5 dimensions

4 | 50s 5 dimensions

5 | 1m 48s 5 dimensions

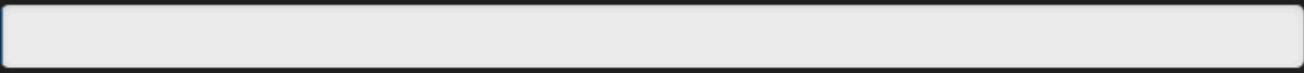
6 | 31s 5 dimensions

7 | 21s 5 dimensions

8 | 1m 5s 5 dimensions



00:00:00



00:50:27



You can help us make the lecture programme  
(even) better for next year :  
please provide feedback !

Feedback on the individual lectures :

<http://hr-dep.web.cern.ch/content/lectures-questionnaires-2017>

Questionnaires are anonymous.



Please select your main field of study: \*

Comp. / Phys. / Eng.

Please indicate how many years you have attended university: \*

Please assess the content of the lecture: \*

From “very interesting” to “uninteresting”

Please assess the presentation of the lecturer: \*

From “excellent” to “poor”

How would you assess the level of the lecture? \*

From “too high” to “too low”

How many of this lecturer's lectures have you attended? \*

If you did not attend all the lecturer's lectures, please tell us why:

Is there anything you want to mention?

Please note that this questionnaire is anonymous. If you still would like to provide us your

The feedback is used by us and by the lecturers, and helps them improve the lectures for the next year(s).

The “comments” field, in particular, is extremely useful. Positive comments are always good and nice to read. But negative (and constructive) comments are very welcome.

You will also receive a [general questionnaire asking for global feedback](#) about the programme.

Speakers receive a compilation of the general comments, the feedback about their lecture, together with global statistics showing how their lecture compares to the others.

## Examples of useful feedback received last year

[ *make it in +1 lecture* ] ✓ We changed the prog. accordingly

Nice presentation, but with so many figures and numbers, it is easy to get lost. ✓ The speaker took this into account for this year's lecture.

Please don't go over time limit. Always good to remind that !

I would strongly recommend to give guidelines about requirements needed to understand :

✓ We ask the speakers to specify explicitly pre-requisites

Would be better to ask questions directly after lectures

✓ Things were organized differently last year...

# THANKS !!

to the HR team: Jennifer Dembski, Eszter Badinova, Celine Delieutraz,  
Natalia Trajdos, Ana Djordjevic  
for a lot of work done behind the scene and fixing problems before you  
could notice them !

to the technicians who run the MA: Gilles, Pascal & their team

to the speakers for their excellent lectures

to you – for being an interested, interesting and respectful audience

Enjoy the rest of your stay at CERN, and best wishes  
for your future !