CERN ACADEMIC TRAINING COMMITTEE REPORT FOR ACCU

Dr Evangelia Dimovasili, ACCU delegate to the ATC
19 September 2017
Facts and objectives

✓ CERN’s situation is almost unique in terms of accumulated cross-discipline knowledge, via visiting collaborators and on-site experts.

✓ ATC aims to organise regular lectures mainly for students (PhD students and postdocs), but of interest to the community of CERN scientists

✓ Three main areas: theoretical physics, experimental physics, applications

✓ Efforts are made to balance lectures between these areas
CERN Academic Training lectures are open to all members of CERN personnel (in particular staff members and fellows, associates, students, users, project associates and apprentices) free of charge. Pre-course registration is not required, individual attendance is not recorded and certificates can be given to the attendees on demand. Conditions required:

• Participant to declare that needs a certificate BEFORE the lecture series and
• has to ‘sign in’ at the start of the lecture.

Each lecture recorded and published on the web along with the visual support material. Complete catalogue of Academic Training and Summer Student Programme lectures has been archived since 1999.
Academic Training Committee

Maria DIMOU, IT Chair
Maureen PROLA-TESSAUR, IR Administrative Assistant

Members, Representatives

Departments
• Albert DE ROECK, EP (Chair High Energy Physics Working Group)
• Alessandra LOMBARDI (Chair Applied Physics Working Group)
• Maria ARSUAGA RIOS, IT
• Alfredo FERRARI, EN
• Stephan RUSSENSCHUCK, TE
• Alessandra LOMBARDI, BE
• Sergey SIBIRYAKOV, TH

Users
• Evangelia DIMOVASILI, EP

Summer Student Lectures
• Andreas HOECKER, EP
• Jennifer DEMBSKI, HR

Staff Association
• Juan GARCIA PEREZ, TE

Observers, liaison with HR Department
• Maria FIASCARIS, HR

CERN School of Physics
• Nick ELLIS, EP

CERN School of Computing
• Sebastian LOPIENSKI, IT

CERN Accelerator School
• Roger BAILEY, ATS

Student Committee
• Alex BROWN, IR
The decision is always taken across Working Groups (WGs) for the top-10 most voted subjects.

Until recently (before 2-3 ago) a fixed number for both groups (High-Energy Physics, Applied Physics) independently, e.g. 5 from each group.

Also, in those days not necessarily took all the ones with the highest votes but tried to get a balance of the program covering different aspects, i.e. could pick up some with lower scores if that made sense.

Always had a pre-discussion on that in the two groups, to come with a proposal for THE MEETING.
How the Academic Training Programme is decided

• The WGs meet internally early April. They decide on subjects to propose to the community for voting.
• The WG chairpersons edit the questionnaires of their communities and discuss them by email to avoid duplicates.
• The ATC administrator makes the questionnaire and sends it to the 2 WG chairs for pilot testing.
• When questionnaire quality is confirmed the administrator (or chairperson) emails the community (everyone in the CERN HR database with >=50% presence on the CERN site) and gives 2 weeks to vote. This period is typically the 2nd half of May.
• The ATC meets mid-June to decide on the next Academic Year programme based on the voting results.
• A fixed number of lecture series is planned for both WGs independently, e.g. 5 from each group.
• High votes is an important criterion but an effort is made to get a balanced cross-discipline programme. This may include lectures which got less votes.
This page shows analysis of submitted data, such as the number of submissions per component value, calculations, and averages. Additional components may be added under the "Add analysis components" fieldset.

Exoplanets
- Exoplanets: 234

Gravitational Waves: A New Tool to Explore Nature
- Gravitational Waves: A New Tool to Explore Nature: 292

Axion and Axion–like Particles in Astrophysics and Cosmology
- Axion and Axion–like Particles in Astrophysics and Cosmology: 138

New Developments in Amplitudes
- New Developments in Amplitudes: 56

Quantum Information and Gravity
- Quantum Information and Gravity: 212

Supersymmetry
- Supersymmetry: 169

Machine Learning
- Machine Learning: 334

Perturbative QCD
- Perturbative QCD: 96

Forward Physics at the LHC
- Forward Physics at the LHC: 148

Searches for New Physics with Long–Lived Particles
- Searches for New Physics with Long–Lived Particles: 158

LHCb Anomalies in $B\rightarrow K^{*0}$ and Related to Lepton Flavour Violation
- LHCb Anomalies in $B\rightarrow K^{*0}$ and Related to Lepton Flavour Violation: 68

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The ‘winners’ for the 2017-18 ATC (High Energy Physics) programme

1. Gravitational waves
2. Physics beyond colliders
3. Searches for long-lived particles
4. Statistics
5. New infrastructures
This page shows analysis of submitted data, such as the number of submissions per component value, calculations, and averages. Additional components may be added under the "Add analysis components" fieldset.

**PIXE (Proton Induced X-ray Emission) and Accelerators for the Cultural Heritage**

**Radiation Effects, Calculation Methods and Radiation Test Challenges in Accelerator Mixed Beam Environments**

**CLIC Update**

**Mathematical Physics**
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<th>Scientific Writing</th>
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<th>The Antikythera Mechanism: The first computer</th>
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<td>Big Data &amp; Social Media</td>
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The ‘winners’ for the 2017-18 ATC (Applications- Science and Technology) programme

1. Big Data and Social Media
2. Thinking about the Future: Whether, When, Why, How, Who, What ... and So What?
3. Medical Applications
4. Scientific Writing
5. The Antikyther Mechanism
6. The Journey of a Source Line” – How your code is translated into a controlled flow of electrons
7. Radiation Effects
There are 2 events in the future. Hide

November 2017

29 Nov  Anastasia Ailamaki, "Fast, Just-in-Time Queries on Heterogeneous Raw Data"

02 Nov  Rakesh Agrawal, "Data-Driven Education: Technologies and Directions"

October 2017

13 Oct  Michelangelo Mangano, "Physics perspectives for a Future Circular Collider: FCC-hh/eh - Physics-Perspectives" (3/3) NEW

12 Oct  Werner Riegler, "Physics Perspectives for a Future Circular Collider: FCC-hh - Accelerator & Detectors" (2/3) NEW

11 Oct  Patrick Janot, "Physics Perspectives for a Future Circular Collider: FCC-ee" (1/3) NEW

May 2017

12 May  Christopher G. Tully, "Fast Timing for Collider Detectors" (3/3)

11 May  Christopher G. Tully, "Fast Timing for Collider Detectors" (2/3)

10 May  Christopher Tully, "Fast Timing for Collider Detectors" (1/3)

There are 846 events in the past. Show
Info on some novelties…
Summary table of payments that may be made to invited contributors to outreach activities who are not members of the CERN personnel:

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<th>Activity</th>
<th>CERN Schools</th>
<th>Teachers Programme</th>
<th>Academic Training Programme</th>
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<tr>
<td></td>
<td>CERN School of High-Energy Physics</td>
<td></td>
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<td></td>
<td>European School</td>
<td>Latin American School</td>
<td>CAS</td>
</tr>
<tr>
<td>Beneficiary</td>
<td>&quot;Lecturers&quot;</td>
<td>&quot;Discussion Leader&quot;</td>
<td>Contributor</td>
</tr>
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Possible payments:

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<th>Travel</th>
<th>Reimbursement of travel costs:</th>
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<td></td>
<td>- according to the applicable rules for CERN official travel, and</td>
</tr>
<tr>
<td></td>
<td>- if the travel costs are not borne by the home institute.</td>
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<tr>
<th>Accommodation</th>
<th>n/a</th>
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<td>(except in the event of participation in preparatory committees at CERN:</td>
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<td></td>
<td>- either reimbursement of overnight stays at the CERN Hostel,</td>
</tr>
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<td></td>
<td>- or payment of a subsistence allowance according to the rates for Switzerland).</td>
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</tbody>
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<tr>
<th>Meals</th>
<th>n/a</th>
<th>Subsistence allowance according to the rates for Switzerland</th>
</tr>
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| Minor expenses | 50 CHF per day | 15% of the UN subsistence rate | Amount indicated in the "minor expenses" column of the subsistence allowance rates for the city where the course is taking place. | 50 CHF per day (max. 3 days) | n/a |

| Indemnity | 150 CHF per class | 50 CHF per session | n/a | n/a | 150 CHF per theory class + 50 CHF per practical exercise | lumpsum of 200 CHF covering all courses | 200 CHF per class |
The **contributors** covered by this procedure are people invited by CERN to give a lecture or a class, or more generally to contribute to the programme of a course. In most cases these are professors, lecturers or experts in a certain field.

As a general rule, when contributors are **members of the personnel paid by CERN**, they **cannot receive any payments other than those related to expenses incurred during official travel**. As a result, when accommodation and meals are paid for by the CERN schools, contributors who are members of the personnel paid by CERN only receive reimbursement of travel expenses (if applicable) and, in some cases, payments for minor expenses (amount indicated in the "minor expenses" column, which is equivalent to 15% of the **subsistence allowance rate** for the city where the course or class is held).
Academic Training CDS videos in YouTube

The plan is to make the corpus of recorded Academic Training (AT) lectures more widely known via a dedicated CERN Academic Training YouTube channel.

So far, an evaluation has been done of other such sites and a first selection of 'pilot entries' from past lectures.

All about this project is now in: https://twiki.cern.ch/Edutech/CernAcademicTrainingInYouTube

For more info please contact: Maria.Dimou@cern.ch
THANK YOU!