

Student Presentations

Communicating Science to the general public

July 1, 2018

Martijn Mulders (CERN)

The 2018 European School of High-Energy Physics

Maratea, Italy, 20 June - 3 July 2018



What is the *European School of High-Energy Physics* ?

- A two-week advanced Summer School for PhD students
- At this school we have 96 students of 37 nationalities



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Standing Committee

T. Danzova (JINR)
 N. Ellis (CERN)
 M. Mulders (CERN)
 A. Olchevsky (JINR)
 K. Ross (CERN)
 G. Zanderighi (U. Oxford/CERN)

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 N. Pastore (INFN Turin)
 A. Skrinsky (BINP)
 N. Tyurin (HEP)

Scientific Programme

Physics Beyond the Standard Model
 B. Allanach (U. Cambridge)
 Field Theory and the E-W Standard Model
 A. Bednyakov (JINR)
 Cosmology and Dark Matter
 A. De Simone (SISSA)
 QCD Under Extreme Conditions
 E. Fraga (UFRJ)
 Higgs Physics
 F. Maltoni (UCL)
 Neutrino Physics
 S. Pascoli (U. Durham)
 LHC Run-2 and Future Prospects
 N. Pastore (INFN Turin)
 Flavour Physics and CP Violation
 G. Perez (Weizmann)
 Practical Statistics for Particle Physicists
 H. Prosper (Florida State U.)
 QCD
 F. Tramontano (U. Federico II/INFN Naples)

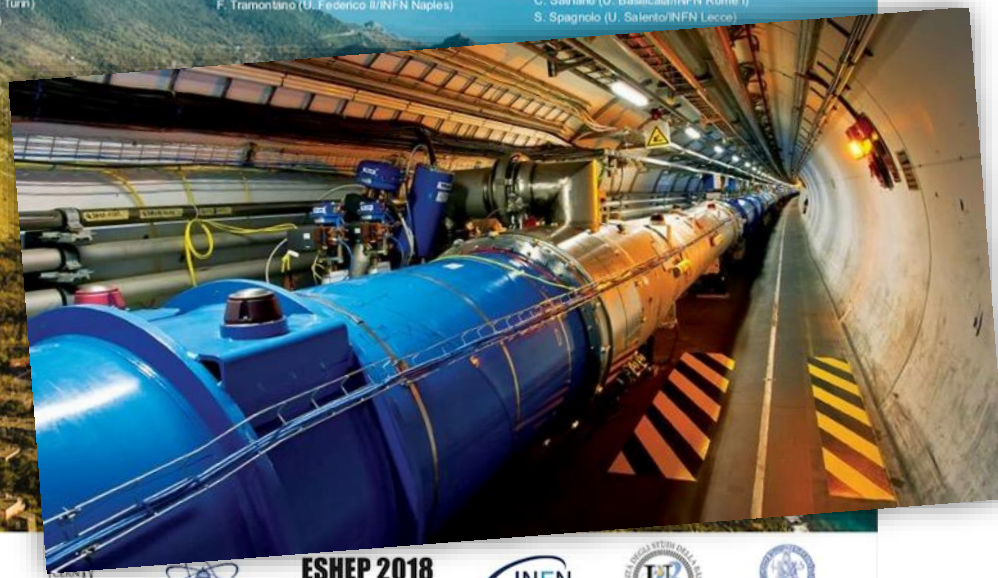
Discussion Leaders

S. Borowka (CERN)
 A. Gladyshev (JINR)
 A. Pikelner (Hamburg U.)
 N. Vignaroli (INFN Padua)
 E. Vryonidou (CERN)

Local Committee

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 G. Carino (INFN Naples)
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 F. Cirotto (INFN Naples)
 A. Di Crescenzo (U. Federico II/INFN Naples)
 F. Fabozzi (U. Basilicata/INFN Naples)
 A.O.M. Iorio (U. Federico II/INFN Naples)
 L. Lista (INFN Naples)
 M. Merola (U. Federico II/INFN Naples)
 C. Sabiano (U. Basilicata/INFN Rome I)
 S. Spagnolo (U. Salerno/INFN Lecce)

- Organized by CERN and JINR every year in a different country
 - Here: with universities of Naples and Basilicata
- International physics laboratories focused on Scientific Research Technology Education



ESHEP 2018
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S. Spagnolo (U. Salento/INFN Lecce)

<http://cern.ch/PhysicsSchool/ESHEP>

- Two weeks with intense programme of physics lectures and discussions
- 2 out of 32 lecture slots dedicated to training in Science communications

Tonight the students will practice Science communication for a general audience

- 6 groups of students have prepared short presentations on “hot” physics topics
- Prepared in “free time”



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The topics

- A : MiniBooNE sterile neutrinos
- B : Observation of $t\bar{t}H$
- C : Ultra-high energy neutrinos in Icecube
- D : Multi-messenger observation of a binary neutron star merger
- E : Recent flavor anomalies
- F : Measurement of the W boson mass at the LHC

A special welcome:

- **Guests** from the hotel
- **The Jury** who will provide feedback and determine a winning presentation
 - Chair: **Leonardo Alfondi** (Director of PsiQuadro)
 - **Fabio Maltoni** (University of Louvain)
 - **Andrea de Simone** (International School for Advanced Studies, Trieste)

Note:

- The order of the presentations will be **random**
- Maximum time per talk is **7 minutes**
- General public + jury can ask questions (max 3 minutes)
- There will also be a **student vote** : each student group will be asked to rank the other groups
- As announced previously, we will **record the presentations** and put the video files on our public INDICO web pages
 - material from previous years has been used in real science communication events eg for showing to high-school students

Criteria

1. **Content:** the content must be scientifically correct, and well chosen to suit the audience
2. **Clarity:** critical for effective science communication... the structure of the talk is important, and judges and audience should be able to understand the scientific concept chosen
3. **Connection / inspiration and enthusiasm:** the audience and judges should be left inspired and enthused about science

Use what you have learned from the Outreach & Media training !
(Audience, Impact, Language)

Programme

- Introduction (15 minutes)
- Talk 1 – 6, in random order. For each talk:
 - Presentation (**7 minutes**)
 - Questions (maximum 3 minutes)
- Deliberations of the jury (15 minutes)
 - In parallel on 'coffee' terrace: student vote ; ranking per group
- Feedback from the jury and decision (10 minutes)
+ result of public vote



Informal discussions can continue afterwards in the bar !!