

PISA SCHOOL ON FUTURE COLLIDERS

PISA, ITALY

September 17th - 21st, 2018



List of proposed essay subjects 1/2

1. "Higgs-related measurements: the physics goals".
2. "The measurement of Higgs properties: synergy and complementarity of the various future colliders".
3. "Discuss the technology challenges and the expected performances of proposed future e^+e^- and hadron colliders".
4. "Discuss the respective merits of circular and linear e^+e^- colliders".
5. "Challenges and opportunities in measuring the Higgs self-coupling".
6. "Challenges and opportunities in measuring the top quark Yukawa-coupling".
7. "Relevance of precision measurements at future colliders"

List of proposes essay subjects 2/2

- 8."The measurement of the effective number of neutrino species at future $e^+ e^-$ colliders at the Z pole and higher energies".
9. "Discuss what are the most important changes in the detector requirements for future colliders with respect to the current facilities".
- 10."Discuss the issue of collection and analysis of data at Future Collider and how it might require changes in the current approaches".
11. Discuss the relative merits of a possible new muon collider, in comparison with the better-established ee and pp colliders.
- 12 "Describe some New Physics scenarios that you find of interest, and how they might become experimentally manifest at Future Colliders".
- 13."The most important aspect for any Monte Carlo tool to simulate a HEP detector is the quality of the physics results obtained from the calculations. Discuss which are the most challenging aspects of the simulation relevant for future high energy colliders".

How to get the credits

1. Send a mail to pisa-future-colliders-school@cern.ch with your choice
2. Write a 5-10pg essay on the subject of your choice
3. You can ask all the needed information at the same e-mail given above
4. Send the essay by Sunday October 7th to have it graded
5. We will send you info back by end of October.

Social Dinner



Pizzeria Le scuderie
– Via Simone
Sancasciano 1, Pisa

Meeting:
19.45 @ Le Scuderie

OR

19.30 In front of this building