

{iaps}



The XXXII International Conference
of Physics Students

Aug 7-14 2017, Torino, Italy



Introduction

The Italian Association of Physics Students (*Associazione Italiana Studenti di Fisica*, AISF) is hosting in Turin the 32nd edition of the International Conference of Physics Students (ICPS). It is the first time that an ICPS is held in Italy, and the organizers are working tirelessly to ensure that the high standards of the last conferences are met if not exceeded. ICPS is a unique event, offering to participants the opportunity to present their own research work and to meet with world-leading scientists as well as fellow young physicists from all over the world. Several parties and excursions will be organized so that the social aspect of the event is not put in second place.

In this document, we summarize the key aspects of the event and present an outline of the program. The backbone structure of ICPS is essentially fourfold: (i) guest lectures by distinguished physicists, (ii) oral or poster presentations by participants on their research (within the parallel sessions and the poster sessions, respectively), (iii) a scientific program including visits to laboratories and research institutions in and outside of Turin and (iv) a social program consisting of several events (Costume Party, Nations Party, Italian Food Night etc.) as well as city rallies and excursions.

During ICPS, the Annual General Meeting of the International Association of Physics Students takes place. This is an essential event in the administrative life of the Association, within which future plans and objectives are discussed and the new Executive Committee is elected. All members are welcome to join the AGM, but only delegates selected by the National and Local Committees can cast their votes in the elections.

IAPS also organizes workshops on a variety of topics at the heart of the life of the association. Past topics included the IAPS student network and ambassadors program, the organization of IAPS events and the IAPS school day. More information on the workshops at ICPS 2017 will be available in the next few months.

About Turin

Turin has been an important center for European science since the 18th century and boasts among its scientists and mathematicians Avogadro and Lagrange (yes, he was Italian and not French). This tradition has been perpetuated through the centuries and Turin (together with its region) hosts today some of most prominent Italian universities and research centers, including our main partner, the University of Turin, and the nearby Politecnico, which has historically thrived thanks to the close collaboration with industry and in particular the FIAT (now FCA) carmaker. We are planning visits to headquarters of heavily R&D-oriented companies, such as Totem Energy, as well as several research centers, among others the Center for Space Human Robotics and the Italian Institute of Technology, two leading centers for automation. Obviously, ICPS 2017 is not going to be all about science and technology! You will definitely enjoy some of the best food and wine in the world (a visit to the famous Cantina is planned) and bask in the glory of absolutely beautiful locations, such as the University of Turin Rector's Palace (Cavallerizza Reale), where participants will enjoy an Italian-style Aperitivo after the opening ceremony.

Program

Participants will be expected to arrive independently in Turin on August 7th and meet the organizers between 13:00 and 18:00 at the Einaudi Campus. The welcome ceremony and reception will start at 20:00.

The next days will unfold as follows. In the morning, guest lectures and parallel sessions (oral presentations by the participants) will take place. Lunch is planned everyday at 13:00 and in the afternoon there will be visits to the city and laboratories (on Tuesday 8 and Wednesday 9) as well as other scientific activities such as parallel sessions, poster sessions, workshops (on Thursday 10, Saturday 12 and Sunday 13). The AGM of IAPS is planned for Saturday 12. Excursions outside of Turin are planned for Friday 11.

A provisional timetable of the conference can be seen below.

	Monday 07/08/2017	Tuesday 08/08/2017	Wednesday 09/08/2017	Thursday 10/08/2017	Friday 11/08/2017	Saturday 12/08/2017	Sunday 13/08/2017	Monday 14/08/2017
8:00	Arrival	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast
8:30								
9:00		Guest lecture	Parallel Session	Parallel Session	Excursions	Parallel Session	Parallel Session	Departure
9:30								
10:00								
10:30								
11:00		Coffee Break	Coffee Break	Coffee Break		Coffee Break	Coffee Break	
11:30		Poster session	Guest lecture	Guest lecture		Guest lecture	Guest lecture	
12:00								
12:30								
13:00	Registration	Lunch	Lunch	Lunch		Lunch	Lunch	
13:30								
14:00								
14:30								
15:00		City Rally A	Lab visit B	City Rally B	Lab visit A	Guest lecture	AGM	Sport
15:30								Poster session
16:00								
16:30								
17:00								
17:30								
18:00								
18:30								
19:00								
19:30								
20:00	Welcome ceremony and reception	Dinner	Dinner	Nations party	Dinner		Dinner	
20:30								
21:00								
21:30								
22:00		Costume Party	That's amore party		Free night	Drink & derive	Farewell party	
22:30								
23:00								
23:30								
0:00								
0:30								
1:00								

Accommodation

Participants will be hosted at the *Einaudi Campus* in the heart of the city. The brand-new and spectacular campus buildings are located on the southern bank of the River Dora and just a few blocks away from the *Mole Antonelliana*, a major landmark of Turin.



Presentations by students

During ICPS, students can display their research in oral or poster presentations. Talks given by the students last 12 minutes (+ 3 minutes for questions). Participants who wish to present at ICPS will have to submit an abstract of their work beforehand, which will be reviewed before approval. The procedure for the abstracts submission is described in detail at the event website, www.icps2017.it. Students who submit an abstract will be given priority in the selection of participants, both in the early and in the late phase of registration. A set of templates for abstracts (both in Microsoft Word and in LaTeX) has been made available online for guideline purposes; note that it is not compulsory to use such templates, as they only provide an indicative format that the selection committee expects.

Guest lectures & confirmed speakers

Guest speakers will deliver 1-hour lectures on their lifelong research work. Given the very broad audience of participants in ICPS, these talks will not be highly technical but rather they will be designed to arouse interest in the fields while still being enjoyable for students with some background in that particular area. We are working hard to make sure that guest speakers at ICPS 2017 are enthusiastic leaders in their fields and that a wide range of physics topics is covered in their presentations. Here is a short list of speakers who have already confirmed their participation. We are currently awaiting confirmation from another 3 speakers - be ready for surprises!



Steven Cowley, FRS FREng

plasma physics

became Director of the Culham Centre for Fusion Energy in September 2008 and was appointed as Chief Executive Officer of the United Kingdom Atomic Energy Authority in November 2009. He received his BA from Oxford University and his PhD from Princeton University. He is currently President of the Corpus Christi College, Oxford and a member of the Prime Minister's Council of Science and Technology. His wikipedia page does a fair job in presenting his numerous achievements.



Francesco Prino

particle physics

is presently a researcher of the INFN Torino. He got his PhD in 2001 with a thesis on the analysis of the data collected in 1998 by the NA50 experiment. From 2004 he worked mainly on the preparation, the commissioning and the data analysis of the ALICE experiment at the LHC. Within the ALICE experiment he worked on the construction, test and performance studies of the silicon drift detectors (SDD) of the inner tracking system (ITS). He is, since October 2008, the project leader of the SDD detector.



Francesco Tombesi

astrophysics

is an astrophysicist at NASA/GSFC and assistant research scientist at the Department of Astronomy of the University of Maryland, College Park. His main research topic is the study of supermassive black holes in active galactic nuclei (AGN) through X-ray observations. In particular, he investigates the origin of black-hole-driven winds, such as the powerful ultra-fast outflows and their feedback on the AGN host galaxies. He has been awarded several prizes, among which the 2014 "Early Career Research Scientist Prize for Excellence" of the University of Maryland, College Park and the "2014 NASA Astrophysics Science Division Peer Award".

Excursions

On Friday 11, students will be able to join one of the 8 planned excursions. Here is the complete list:

- **National Institute of Metrological Research (INRIM), Turin.** A research center specialized in metrology (creation of samples of measurement units and measurements of fundamental constants), quantum information and nanotechnology.
- **Underground laboratory of Modane (LSM), Modane,** located at the border between France and Italy. The laboratory hosts neutrino, double-beta decay and dark matter experiments.
- **National Center of Oncology Hadrontherapy (CNAO) in Pavia.** This is a center for oncological hadrontherapy where patients are treated with ion and proton beams, which are more accurate and effective than standard radiotherapy.
- **Restoration and Conservation Center La Venaria Reale.** Visiting this center will give you the unique opportunity to see how advanced physics and technologies are applied to the restoration of art masterpieces.
- **Italian Institute of Technology (Genoa).** This branch of the IIT focuses on advanced robotics, human-machine interaction, artificial intelligence and neuroscience. It is a world-leading center for robotics.
- **Research on Energy Systems.** This is a company focused on developing innovative technologies for the management of the national electric grid.
- **Totem Energy.** A company carrying out cutting-edge research in the areas of energy production and distribution. In particular, they are pioneering the 'distributed small-scale generation' approach which is based on the generation of power where it is needed.

City rallies, lab visits, and of course.. socials!

You'll have a chance to explore the city center of Turin with some exceptional guides: the young 'Torinesi' themselves! The city rallies will include some games (including a scavenger hunt) and key sights of the city. You'll also be able to visit the outstanding laboratories of the Politecnico, one of the most renowned academic institutions in Italy. Every evening will boast a party, with a different topic/theme every night. Here is some more information as a teaser...

- **Costume party.** A theme for the party will be communicated after registration and guests will be invited to dress accordingly. The best costume will win a prize!
- **Nations party.** Delegations from different countries will bring the best of their food and drinks for everyone to enjoy!
- **That's amore party.** Push your networking on another level with this light romance-oriented party.
- **Italian Food Night.** Enjoy the best of Italian food in this delicious event; you will not be disappointed by the culinary treats that this ICPS will have for you.

ICPS2017

The **XXXII ICPS** in Turin will have something on offer for everyone, from the most sophisticated physics student to the “I-am-almost-on-holiday” participant.

The **Organizing Committee** is working hard to make sure that all participants enjoy the best possible experience.

We very much look forward to welcoming you to Italy next August!

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