

The Third International Workshop on Recent LHC Results and related topics was held from 10–12 October 2018 at the Albanian Academy of Sciences. This event was the third of its kind to be held in Tirana and its history lies in October 8, 2012, when Professor Ludwik Dobrzynski and Professor Daniel Denegri, two eminent personalities in the field of physics came in Tirana and held a meeting with the Albanian scientists involved in the area at the Rectorate of the University of Tirana, Albania and decided to organise the first workshop in LHC results from 8-9 October, 2012. Prior to this event, Professor Dobrzynski and Professor Denegri came into contact with the Albanian physicist working at CERN at that time, Artan Boriçi. The agreement between the Albanian government and CERN was signed in Shkodra subsequently after the Workshop held in the same city. The second workshop was ran from 26-27 September, 2016, in Tirana. This workshop had both educational and scientific importance.

Given the importance of physics and its implication to other life sciences, the situation of this scientific field in Albania, and the increasing demand of the specialists in the country, Professor Ludwik Dobrzynski, the chairman of the Scientific Committee and Organising Committee proposed the third event to be held at the Albanian Academy of Sciences, in Tirana. Professor Vasil Tole, General Secretary of the Albanian Academy of Sciences and one of its members, Acad. Salvator Bushati the Chairman of the Section of Natural and Technical Sciences and Acad. Floran Vila, physicist, member of the Department of Physics at the University of Tirana and member of the Albanian Academy of Sciences were very enthusiastic about the idea and the closer collaboration between the Academy and the Department of Physics of the Faculty of Natural and Technical, University of Tirana.

So, the workshop was organized by the Albanian Academy of Sciences, University of Tirana, CERN, the Institute of Nuclear Physics of France, Italy, and Switzerland, and supported by the Embassy of France, the Embassy of Italy, the Embassy of Switzerland in Albania and the Italian Institute of Culture.

A list of guests included the ambassadors of Italy, France and the representative of the Swiss Embassy in Albania, the Dean of the Faculty of Natural and Technical Sciences, Deputy Minister of Education, Sports and Youth, from private universities in Albania, General Secretary of the Albanian Academy of Sciences and other representatives from the higher education institutions in Albania and Professor Christoph Schäfer, Senior Adviser for Relations with CERN Non-Member States.

Greetings were made on behalf of the Ministry of Education, Sports and Youth by the Deputy Minister, Dr. Besa Shahini and on behalf of the Academy by Professor Bushati, on behalf of the Faculty of Natural Sciences by the Dean of the Faculty, Prof. Spiro Drushku. In their talk they emphasised the importance of scientific research for Albania, the potential of the young generation of researchers, the funding opportunities when studying abroad. In his talk, Acad. Bushati, the Chairman of the Section of Natural and Technical Sciences mentioned the beauty of physics and its implication with other science areas such as medicine, environment, earth

sciences etc. He talked about the importance of the young researchers to the Section of Natural and Technical Sciences and the Academy and also the use of science to solve many problems of our everyday life, the science diplomacy.

The Deputy Minister, Dr. Shahini draw attention to the importance of scientific research and the partnership with international prestigious institutions involved in the scientific research as a means to address knowledge transfer , the standards defined in the Chapter 25 of “acquis communautaire” and reforms undertaken by the Albanian Government. Dr. Shahini, stated that the Ministry and she personally willingly give the consent on the fruitful collaboration of Albanian scientific institutions and CERN the European Organisation for Nuclear Research.

Prof. Drushku give credit to the collaboration between the Albanian Academy of Sciences and the Faculty of Natural Sciences of the University of Tirana as it guarantees the objectives for the future to be determined with CERN.

H.E. Alberto Cutillo, Ambassador of Italy in Albania, H.E. Christina Vasak, Ambassador of France in Albania and Mrs. Debora Kern, representative of the Embassy of Switzerland in Albania also greeted the event. In their talks, the ambassadors reported about the importance of scientific research to the economy of any country, our everyday life and future, how it answers our questions and needs like the end of the world, whether aliens exist or not, health, environment, nanotechnology etc. They emphasised once again, on behalf of their respective governments as members of the EU, the support of the European Union to the Albanian researchers, the projects the EU finances like HORIZON 2020, IPA, TAIEX etc.

The Ambassador Cutillo organised an official reception with the representatives from the Albanian Academy of Sciences, ambassadors, professors from the University of Tirana, and students of excellence studying in and outside the country, and trainees at CERN, etc.

In the second day of the workshop, Professor Christoph Schäfer, Senior Adviser for Relations with CERN Non-Member States, expressed his considerations about the organisation of this workshop and the importance of the cooperation between Albania and CERN. He emphasised that this cooperation is a strategy to the development of scientific research in Albania and CERN clearly supports Albania because science is the key of the social and economic development of any country. In addition, Professor Schäfer reported about the scientific enterprise of CERN technology transfer created and developed at CERN. In response to a question from the audience, he stated that CERN clearly supports Albania, but the initiative must come from Albania.

The second part of the workshop in each day was dedicated to the oral presentations made by students of every academic level to support their academic performance. In addition, a special attention was paid by prof. Denegri and Dobrzynski to the students from the ,Asim Vokshi, Foreign Languages High School, the Lyceum of the French Language, International Highschool and the ‘Harry Fultz’ Technical High School as a means to address the future of physics in Albania and foster intellectual pursuits. The students showed their wonder and interest to the scientific enterprise of CERN.

The scientific novelty of this workshop was the participation of the researchers in the field of particle physics and astrophysics such as Nicola de Filippis and Francesco Laparco from Bari, close partners with the University of Tirana. From theorists we can mention Philippe de Forcrand from ETH Zurich-Switzerland and CERN, Leonardo Giusti from Milan, Italy, and Christof Gatttringer from Graz, Austria. Eva Barabara Holzer from CERN was also a new contributor to the workshop. This event brought together the Albanian diaspora involved in the fundamental physics like Bianka Meçaj from the Johannes Gutenberg University, Mainz (JGU), Germany.

By holding such a prestigious event where experiment meets lattice, as an indispensable tool for complementing experimental discovery with non-perturbative inputs and experimentalists, theorists and lattice field theorists as and astrophysicists come together, it is hoped to find solution to the main questions about physics and enhance this scientific area in the country.

The closing remarks of the round table on the 4th day of the workshop were dedicated to the future physics in the country, weak and the strong points of the workshop, collaboration with other institutions involved in the area such as Institute of Nuclear Physics, Polytechnic University of Tirana and other state universities —all included in the Chart of the Workshop.

This Chart takes account of the changing scientific, political, cultural and social trends in Albania and the government's efforts and the efforts of all the stakeholders to fulfil the requests for the EU membership, especially the Chapter 25 of "acquis communautaire" the for "Science and Research". It recognises the need to respond to future trends in science and emerging technologies and their implications for the way we live and for our environment. The Academy will endeavour to ensure that the Albania becomes an attractive destination for outstanding researchers and scientific collaborators across the world.

In response to the cooperation and multidisciplinary policies of CERN and Section of Natural and Technical Sciences of the Albanian Academy of Sciences, some short -term and medium-term goals for the future came out from the scientific meeting as in the Chart below:

- Raise the scientific community, postgraduate researchers and MA students' awareness about the research activity at CERN and its cooperation policies with the international partners as well as its priority goals, governance and the current achievements
- Identify, evaluate the both human and scientific resources at their respective scientific research institutions and other research bodies in Albania for their current capacity for fundamental research and applied research
- Set up an updatable database of experts and researchers involved in engineering physics, engineering mathematics, medical physics, information technology, engineering and their respective subfields
- Get involved in online CERN courses, like <https://home.cern/about/what-we-do/our-educational-programmes> for the students and anyone interested in this subject

- Run scientific activities (conferences, workshops, consultations) at an international level on current research issues at CERN and its collaboration needs, including business in Albania and scientific diaspora involved in physics and its subfields as close partners
- Inform the audience about cooperation between the AAS and CERN through the official website of the Academy
- Inform and advise constantly the policy-making (diplomacy for science and vice-versa) and decision-making institutions involved in scientific research, technological and innovation development in the country
- Report annually on the activities and cooperation between Albania and CERN
- Commit to achieving the required standards for membership to CERN