

Selfie - INSPYRE 2019

Last year, in 2019, thanks to the European class of my high school called CLELAB (*Collège Lycée Experimental Laboratory*), I had the chance to participate to the INSPYRE (*INternational School on modern PhYsics and REsearch*) internship at the LNF. This training session was organised by the LNF-INFN from the 1st to the 5th April 2019. We were 90 students from 14 countries and 44 schools. During this week we were lodged in a hotel in Frascati. This internship was an introduction to the world of research and during those few days we learned so much and met a lot of people.

First, we were welcomed by Catalina Curceanu, one of the INSPYRE's directors and a lead researcher at the LNF. The first day, we learned what the LNF's work is based on and we got the opportunity to meet the other students thanks to a « speed-dating » activity. We attended our first lecture, about the standard model of particle physics given by Antonio Polosa from the university Sapienza Roma. The days after we assisted to nearly 40 hours of conferences about modern physics made by many researchers. Some things were technical and hard to understand but I learned a lot of things about the basics of modern physics and physics in general. And since I am interested in physics, I always tried to catch the most pieces of information I could. Now my science book is full of beautiful calculus. We participated twice to workshops dedicated to experiments on the 3rd and the 4th of April, in smaller student groups. They lasted 4 hours each.

Personally I participated first to an activity called « quantum mechanics experiences ». We calculated the Planck constant with the help of a physicist, S. Bertelli and E. Turri. The second experiment I participated to was « medicine & physics » with G. Gadda from the INFN-Ferrara. During the experiment I learned how the gravity or rather the lack of gravity is a problem for the nervous system of the researchers on the ISS or the spacemen. We studied the working of the MRI and of the ultra sounds. G. Gadda had brought a little MRI with him and we tested it on our throats, it was new for me to link this kind of physics with concrete applications. Furthermore, young physicists came to present their work. When we saw them we could see all the difficulties they passed through and it was kind of reassuring. The third day, on the afternoon, we assisted to a lectio magistralis, « Meet the qubit... and send it around ! » by Paolo Villoresi from the university of Padova. This event was open to the public. Meeting people interested in physics was a great thing because, as students, when we looked around, we were always the awkward person who liked seeing complex equations and understand far fetched things about the world. In the evening, we were invited at the restaurant, it was a pleasant moment to share with the other.

Contrary to the others, I didn't approach the other students a lot, but I saw it could be a perfect moment to make new friends. My favorite part of this internship was when we visited the LNF and its visitor center. Especially the visit of DAΦNE, the biggest accelerator of the LNF. The nuclear physics infrastructures always mesmerized me. In fact, all I did and saw was truly.. inspiring. The INSPYRE experience has been really important for me. I think it's a decisive moment of my career because it gave me a new vision about physics. A vision that we are not used to have at school or in our daily lives. For now, I don't know if I will keep working in nuclear physics or modern physics. But I'll never forget this moment at the LNF. I am very grateful to the directors of this training session and to all the people that made it possible and pleasant.