

Ice-cream, Innovation and Intellect in Vancouver

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January 5, 2017

Fall Meeting of the APS Division of Nuclear Physics (DNP)

October 13, 2016 to October 16, 2016

Vancouver, BC, Canada

Meeting host:

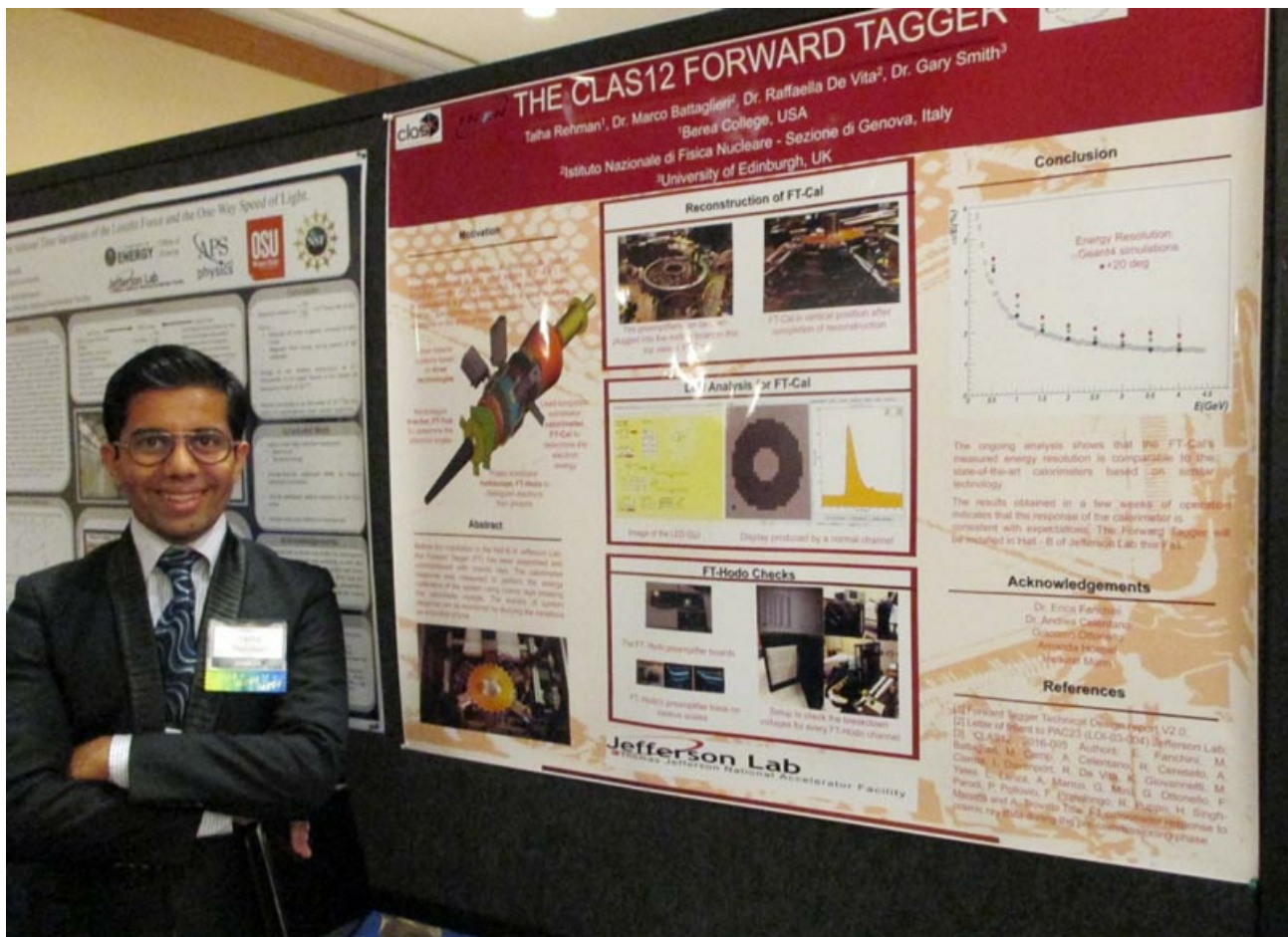
American Physical Society

By:

Talha Rehman

SPS Chapter:

Berea College



I am an international student from Pakistan, who is currently a sophomore at Berea College. Berea College is a work-study liberal arts college where every enrolled student pays no-tuition to receive an education. The SPS chapter here has been actively

involved in the outreach activities for high school students.

I had a summer research position at Jefferson Lab, and when my mentor pointed out the possibility of presenting my summer work in Vancouver, I found it too irresistible to say no. I had never been to Canada before and I found it an interesting prospect to attend a conference in a new country. Apart from the opportunity of presenting my work, I was also excited to attend this particular meeting to meet other undergraduate students like me who have worked at different institutions during the summer.

Even traveling for this wonderful conference turned out to be quite an exciting experience as the plane I boarded for my last connection to Vancouver consisted of many students holding poster-tubes for their poster presentation at the DNP meeting. I befriended them on my way on the plane and on landing at the Vancouver airport, I was able to recognize several other faces of friends from Jefferson Lab.

This great experience was made possible for many undergraduates by Conference Experience for Undergraduates (CEU) awards given through funds devoted by national labs to encourage undergraduate participation in DNP meeting. Dr. Shelly R. Leshner, who is the director of the CEU, did a remarkable job in organizing special events for the undergraduates. During my interview of Dr. Leshner, she recalled that it was one of the CEU experience during one of DNP meeting which she attended as an undergraduate to present her research poster which attracted her to pursue a career in Nuclear Physics as a professor.



The CEU events included the much awaited undergraduate poster session, Grad school fair, seminars and the yummy ice-cream social! Our first CEU meeting for all undergraduates was scheduled for Friday at 10:00 am where we went over some important information, which provided navigational help for the conference attendees. This meeting was followed by our first CEU Nuclear Physics Seminar by Dr. Heather Crawford from Lawrence Berkeley National Lab. The positive aspect of this seminar was that it was jargon free and was specifically designed for an undergraduate audience. This as well helped the audience to grasp the information and ask some interesting questions.

Later that afternoon we had the CEU Research Poster Session which was attended by the large number of conference attendees who asked students very interesting questions regarding their work. During the poster session, it was very encouraging for the undergraduate

participants to meet some of the well-known physicists who appreciated their work. This made them feel welcome at the event to meet the larger nuclear physics community.

The most fun event of the day was CEU Ice Cream Social that night which was attended by all CEU participants. The executive committee members of the Division of Nuclear Physics attended this session as well. The Chair, Dr. Gordon Cates himself addressed the undergraduates. It was very motivating to see the executive committee members to join us and recall their student lives while addressing our questions. Yes, the ice-cream was delicious! This also provided an opportunity for undergraduates to discuss with each other their research experiences. I was surprised to hear how much diversity there existed in different students' work which were carried out at different institutions.



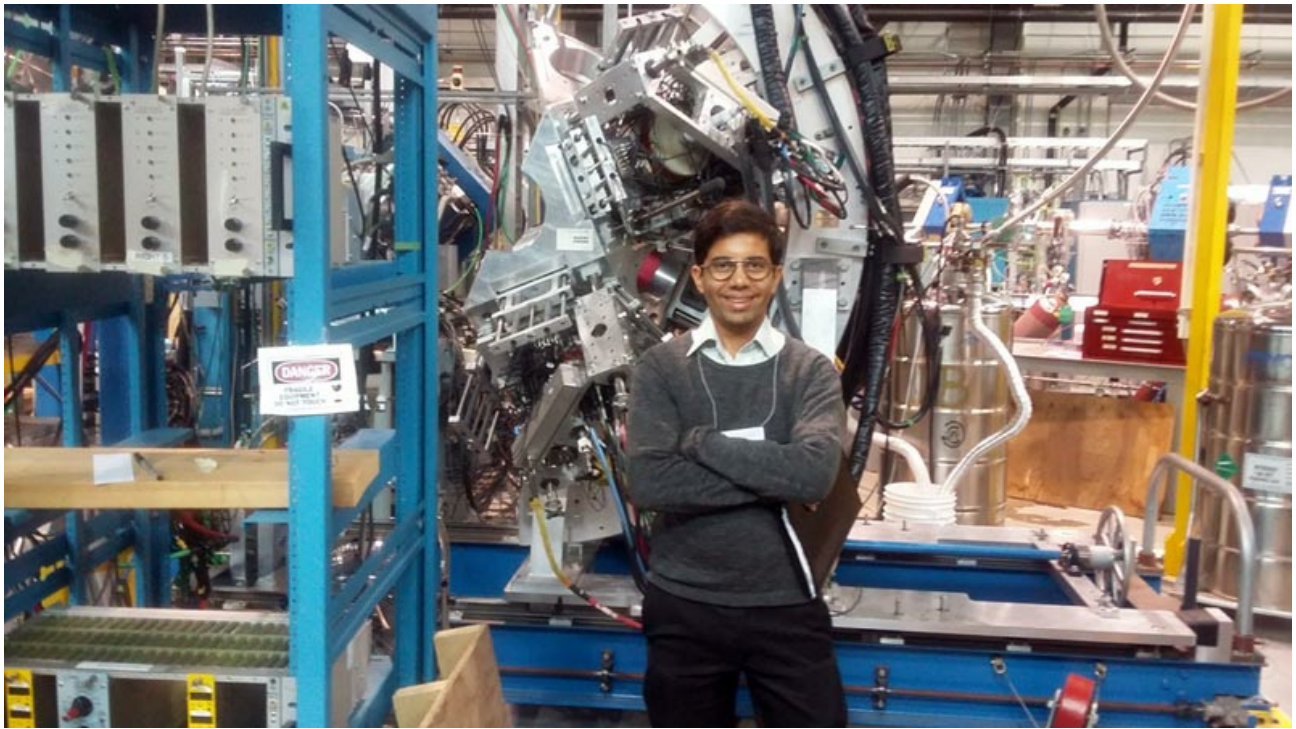
The next day also turned out to be very exciting. CEU hosted a special “Applying to Graduate School” session in which Dr. Jolie Cizewski who is the professor at Rutgers, The State University of New Jersey, shared her important insights. Her presentation included a worksheet which the students followed through, during her presentation. She emphasised on preparing for Graduate Studies, and provided students with guidelines on personal statement, fellowships and other components of graduate school application. Dr. Cizewski's session was followed by CEU Nuclear Physics Seminar II by Kate Scholberg from Duke University. Dr. Scholberg's talk was designed specifically for an undergraduate audience and was based on the topic of neutrinos. I appreciated the breakdown of this talk which included the mention of different detectors.

Moreover, Graduate School Information Fair was arranged for undergraduates, later that evening in which many renowned professors like Dr. Redwine from MIT, Dr. Igor Strakovsky

and Dr. Evangeline Downie from George Washington University were present to answer the queries of the students regarding admissions. One other unique aspect about this Grad School Fair which benefited the students was that both US and Canadian institutes were represented at this fair.

Furthermore, this conference presented before the students a great networking opportunity. Apart from ice-cream social which is previously mentioned, during this meeting, there was a welcome reception on the 13th October and a banquet on 15th October. During the networking reception, I met Dr. Nadia Fomin from University of Tennessee, Knoxville who was interested in the prospects to arrange a Grad-school visits for members of SPS at Berea College. I also met Dr. Sidney Cahn from Yale University who shared with me details regarding his Nuclear Anapole Moment Experiment. During the banquet, students were able to meet scientists and professors one on one. During this time I had the pleasure of meeting Dr. Karsten Heeger and Dr. Reina Maruyama from Yale University. Their graduate students shared with me the funny story of their fellow student who took her tortoise with her to the trip to Grand Canyon! Later, I had the chance to chat with Dr. Gordon Cates, the Chair of Division of Nuclear Physics regarding his career as a physicist. Everyone was very welcoming and down to earth which made these events seem very friendly for undergraduates. A special note: Desserts at the banquet were delicious!

The highlights of the meeting also included plenary session on 13th October. The plenary talks include talks by: Dr. Gerald Gwinner on “testing fundamental symmetries with trapped atoms and ions,” Dr. Michelle J. Dolinski on “current and future searches for neutrinoless double beta decay,” Dr. Nadia Fomin on “Life and Death of a Free Neutron,” and Dr. Kent Paschke on “Measurements of Parity Violation in Electron Scattering.” Other conference highlight included public lecture on the perspectives on innovation by Distinguished Professor Emeritus Vaclav Smil from the University of Manitoba. This lecture by Prof. Smil, who in 2010 was named by Foreign Policy magazine to its list of FP Top 100 Global Thinkers, was attended by a large crowd from all different careers. In this Prof. Smil presented the historic perspective of innovation to highlight stagnation in innovation, in the energy sector.



Last, but not the least there were free tours arranged for the undergraduates to visit TRIUMF – the only Canadian national lab. I enjoyed my tour a lot as the tour guides who were graduate students made the tour very informative for us. It was interesting to note how TRIUMF was not only contributing to different areas in physics like medical physics, but also involved in cryogenic testing of Superconducting radio frequency (SRF) cavities and for export to India!

Overall, my experience was very positive and I am thankful to my mentor, Conference Experience for Undergraduates (CEU), Society of Physics Students (SPS) and the physics department at Berea College for making this possible for me to become part of this wonderful experience.