

Brief Summary of the One Week Short Term Course on “Emerging Fields on High Energy Physics”

The TEQIP-III sponsored One week Short Term Course on “Emerging Fields on High Energy Physics” organized by Department of Physics between 15th to 19th July, 2019 concluded on 19th July, 2019.

The course was attended by 51 outstation participants including 11 faculties, 14 PhD students and 26 Master students from various leading academic and research institutes across North India. In addition, 28 internal participants including Master and PhD students of NITJ also attended this course. In this course 12 eminent speakers from some esteemed Indian research and academic institutes participated as resource persons by delivering expert talks and conducting Hands-on Training Sessions.

On the 1st day of short-term course (15th July), Prof. Gautam Bhattacharya, Acting Director, Saha Institute of Nuclear Physics (SINP) in his key-note address motivated the students by introducing the basics of the particle physics with the special emphasis on the importance of the field. In the afternoon session Dr. Satyanarayna Bheesette, Scientific Officer (H), Department of High Energy Physics, Tata Institute of Fundamental Research (TIFR) delivered two expert talks about the importance of detectors development for the particle physics and nuclear physics experiments. Dr. Satyanarayna motivated the students by discussing about how the recent developments in the detectors and instruments fueled or even lead to major discoveries taking place in past several decades.

On the 2nd day (16th July), Prof. Sandeep Sahijpal, Panjab University, Chandigarh discussed the origin and evolution of the universe following by three talks by Prof. Manmohan Gupta, Panjab University, Chandigarh on “Advanced Quantum Mechanics and basics of Quantum Field Theory”.

On the 3rd day (17th July) there were two Hands-On Tutorial sessions on the simulation models like AMPT and HIJING jointly conducted by Dr. Lokesh and Dr. Natasha, Panjab University. The day’s activities also involved the expert talk and another Hands-on Session by Dr. Monika Randhawa, UIET, Panjab University on LATEX software.

The 4th day (18th July) consisted of two expert lectures on the “Importance of Statistics in Physics” by Dr. Manoj Thakur, IIT Mandi which was followed by a Hands-On Tutorial session by Dr. Sushil Chauhan on the “Statistical Tools for High Energy Physics”. On the same day we had a tutorial session on “ROOT software” conducted by Dr. Nitish Dhingra.

The last day (19th July) started with another Hands-on tutorial session on “The Applications of ROOT software in High Energy Physics” by Dr. Rajeev Kumar Sharma, PAU, Ludhiana. The concluding presentation on the “Recent Discoveries at Large Hadron Collider” was delivered by Prof. Suman Bala Beri, Panjab University Chandigarh.

At the end of the course the feedback was also taken from the outstation participants which was quiet encouraging. All the participants were of the opinion that this course was very well planned and they would be very happy to come to course again and will also be recommending other to attend the same.

Coordinators

Dr Suneel Dutt and Dr Arvind Kumar