

REPORT

113th DAE-BRNS-IANCAS National Workshop and Outreach Program on “Nuclear Sciences and Applications of Radioisotopes”

At

Department of Physics,
Netaji Subhash University of Technology, Dwarka, New Delhi
February 2-6, 2026

The 113th DAE-BRNS-IANCAS National Workshop and Outreach Program on “Nuclear Sciences and Applications of Radioisotopes” was jointly organized by IANCAS & Department of Physics, Netaji Subhash University of Technology, Dwarka, New Delhi during February 2-6, 2026. Dr. Suparna Sodaye, and Shri Ashwani Kumar served as the workshop coordinator and practical coordinator, respectively. Dr. Pargin Bangotra, Department of Physics, Netaji Subhash University of Technology, served as the local coordinator. Dr. Sushmita, Department of Chemistry, NSUT, served as the local co-convenor. The workshop was attended by about 63 participants from 23 different institutes all over India. In addition to participants from various departments of the Host University, it included, participants from various colleges and other universities from in and around National Capital Region (NCR) Delhi, Gurugram University, IIT-Ropar, NIT-Jalandhar, Cochin University of Science and Technology, Aligarh Muslim University, Ramkrishna Mission Vivekananda Centenary College-Kolkata, Christ Church College-Kanpur, CSJMU-Kanpur, IIEST-Shibpur, UIET Panjab University-Chandigarh and Sardar Beant Singh University-Gurdaspur. Each participant was given a Workshop Participation Certificate and one IANCAS book on Fundamentals of Radiochemistry was given to each participating institute/college.





The inaugural function of the Workshop was graced by Prof. Anand Srivastava, Vice Chancellor, NSUT as the Chief Guest, and Dr. P.K. Mohapatra, President IANCAS and former Director, RC&IG, BARC as Guest of Honour. Dr. Pargin Bangotra, Local Convener of the Workshop, in his brief welcome address, urged the participants for their active participation in the Workshop for gaining the experience and knowledge of nuclear sciences by the eminent resource persons. In his welcome address, the Vice-Chancellor highlighted the crucial role of nuclear science in societal development and urged participants to make full use of the opportunity to learn from the distinguished experts. Dr. P.K. Mohapatra briefed the audience about the various activities of IANCAS in particular, and about DAE in general. Later, he

delivered a keynote lecture on the topic “Nuclear power and societal applications of radiation and radiotracers” which was well received by the audience.

Dr. Suparna Sodaye briefed about the theme of the Workshop and emphasized that the Workshop would provide an excellent platform for interaction with eminent scientists and would provide hands-on training with nuclear detectors. Prof. Rakesh Tiwari, Head, Dept. of Physics, proposed the vote of thanks at the end of the inaugural function.



The technical program of the Workshop (enclosed) comprised of 14 Technical Lectures, covering the fundamentals of Nuclear and Radiochemistry, interaction of radiation with matters, radiation detection and measurements, radioanalytical techniques, actinide chemistry, nuclear reactors, production and application of radioisotopes in healthcare, agriculture, hydrology and industry. A total of 8 resource persons conducted the workshop along with 2 guest speakers (list enclosed). The technical lectures also included two special talks: (i) Nuclear power and societal applications of radiation and radiotracers, and (ii) Mandates of DAE and Career opportunities in DAE. All the lectures were held during the morning sessions, whereas the experiments were conducted in the afternoon sessions. Afternoon experiments included: (1) GM Counter, (2) Gamma-ray Spectrometry and shielding experiments using NaI(Tl) detector, and (3) Measurement of environmental Radioactivity. On the last day of the Workshop, a quiz competition was organized which was eagerly participated and appreciated by the participants.



Valedictory function was held on February 6, 2026. Dr. Rajesh V. Pai, Head, FCD, BARC was the Chief Guest of the function. All the participants were given participation certificates by the Chief Guest. On behalf of IANCAS, Dr. Pai donated one GM Counter to the Dept. of Physics, Netaji Subhash University of Technology for their academic use. Dr. Bangotra Local Convener of the Workshop, in his valedictory address, declared the Workshop a grand success. He mentioned that through this Workshop the





participants could acquire the knowledge of Nuclear Sciences and Technology and their utilization for mankind. He urged the participants and faculties of the University to utilize the experience and knowledge gained in the Workshop in their teaching and research. Finally, Shri Ashwani Kumar, practical coordinator, proposed the vote of thanks, and the five days National Workshop was concluded with the National Anthem.

Suparna Sodaye
Workshop Coordinator

Technical Program

Time	Lecture / Title	Proposed speaker
February 02, 2026 – Monday		
09:45 – 10:30	Inauguration Session	
10:30 – 11:00	Tea break	
11:00 – 12:00	Keynote address: Nuclear power and societal applications of radiation and radiotracers	Dr. P.K. Mohapatra
12:00 – 13:00	L1: Radioactivity and Decay	Dr. Suparna Sodaye
13:00 – 14:00	Lunch	
14:00 – 15:00	L2: Nuclear Structure and Stability	Dr. S.K. Sharma
15:00 – 16:00	L3: Introduction to Practicals, and Formation of Groups	Shri Ashwani Kumar
February 03, 2026 – Tuesday		
09:45 – 10:45	L4: Interaction of Radiation with Matters	Dr. S.K. Sharma
10:45 – 11:00	Tea break	
11:00 – 12:00	L5: Radiation Detection and Measurements	Shri Ashwani Kumar
12:00 – 13:00	L6: Accelerators and nuclear reactions	Dr. Suparna Sodaye
13:00 – 14:00	Lunch	
14:00 – 16:00	Hands on Experiments with Nuclear Detectors	
February 04, 2026 – Wednesday		
09:45 – 10:45	L7: Nuclear Reactors	Dr. Bal Govind Vats
10:45 – 11:00	Tea break	
11:00 – 12:00	L8: Production of Radioisotopes	Dr. K.V.V. Nair
12:00 – 13:00	L9: Applications of Radiation and Radioisotopes in Industry and environment	Shri Annadasankar Roy
13:00 – 14:00	Lunch	
14:00 – 16:00	Hands on Experiments with Nuclear Detectors	
February 05, 2026 – Thursday		
09:45 – 10:45	L10: Application of Radioisotopes in Healthcare and Agriculture	Dr. K.V.V. Nair
10:45 – 11:00	Tea break	
11:15 – 12:00	L11: Application of Nuclear Analytical Techniques in Research	Shri Sunil Kumar
12:00 – 13:00	L12: Radiation Safety and Setting up a Radiological Laboratory	Shri Ashwani Kumar
13:00 – 14:00	Lunch	
14:00 – 16:00	Hands on Experiments with Nuclear Detectors	
February 06, 2026 – Friday		
09:45 – 10:45	L13: Nuclear waste management	Dr. Bal Govind Vats
10:45 – 11:00	Tea break	
11:00 – 12:00	L14: Mandates of DAE and Career opportunities in DAE	Dr. Rajesh V. Pai
12:00 – 13:00	Quiz based on Workshop Technical Program and Practicals	

