

**Theme Meeting on Scientific Opportunities of ANURIB**  
25-27 April 2023, Ajay Divetia Hall, Variable Energy Cyclotron Centre, Kolkata

**PROGRAMME**

Updated on 24/4/2023

<b>DAY-1 25-04-2023 [Tuesday]</b>	
09.30	Registration at the venue
<b>INAUGURAL SESSION</b>	
09.55	Welcome address by Convener
10.00	Inaugural talk – Accelerator activities at VECC, Sumit Som, VECC [30+10 min]
10.40	Journey towards ANURIB – Arup Bandyopadhyay, VECC [30+10 min]
11.20	<i>Tea will be served in the foyer of Ajay Divetia Hall</i>
11.40	Status update on the ANURIB project – Vaishali Naik, VECC [25+5 min]
12.10	Low energy experimental beam-lines in ANURIB – Siddhartha Dechoudhury, VECC [15+5 min]
12.30	Experimental Nuclear Physics research facility at VECC – Sarmistha Bhattacharyya, VECC [30+10 min]
13.15	<i>Director's Lunch at VECC Lounge</i>
<b>TECHNICAL SESSION-1 : NUCLEAR PHYSICS</b>	
<b>Chair ALOK CHAKRABARTI ; Coordinator SARMISTHA BHATTACHARYYA</b>	
14.30	Spectroscopy of Exotic Isotopes and Possibilities at ANURIB– Rudrajyoti Palit, TIFR, India [30+10 min]
15.10 11.40	Total Absorption spectroscopy, beta decay of neutron rich nuclei – Alejandro Algora, Univ. of Valencia, Spain [30+10 min] ONLINE
15.50	Transfer and sub-barrier fusion reaction studies of nuclei away from stability – Adadhana Srivastava, BARC, India [30+10 min]
<b>TECHNICAL SESSION-2 : MULTI-DISCIPLINARY RESEARCH &amp; APPLICATIONS</b>	
<b>Chair DINAKAR KANJILAL ; Coordinator PRASANTA KARMAKAR</b>	
16.30 13.00	Challenges and advantages of e-LINAC based positron beam facility – Andreas Wagner HZDR, Germany [30+10 min] ONLINE
17.10 13.40	Positron emitting Radioactive ion beams for simultaneous treatment and imaging – Daria Boscolo, GSI, Germany [30+10 min] ONLINE
<i>Tea will be served in the foyer of Ajay Divetia Hall from 15.30 till 17.30</i>	
<b>TECHNICAL SESSION-3 : NUCLEAR PHYSICS</b>	
<b>Chair ALOK CHAKRABARTI ; Coordinator SARMISTHA BHATTACHARYYA</b>	
18.30 09.00	Nuclear physics of exotic nuclei and its implications in astrophysics – Ingo Wiedenhover, Florida State University, USA [30+10 min] ONLINE
19.30	<i>Dinner at VECC Lounge</i>
End of Day-1 programme	

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<b>DAY-2 26-04-2023 [Wednesday]</b>	
<b>TECHNICAL SESSION-4 : NUCLEAR PHYSICS</b>	
<b>Chair ALOK CHAKRABARTI ; Coordinator SARMISTHA BHATTACHARYYA</b>	
09.20 12.50	Study of neutron-rich nuclei at RIKEN RI Beam Factory – Hiroyoshi Sakurai, RIKEN, Japan [30+10 min] ONLINE
10.00	Detector Instrumentation activities for nuclear physics at IUAC – A. Jhingan, IUAC, India [25+5 min]
10.30	Radioactive ion beam in nuclear astrophysics – G. Gangopadhyay, Univ. Calcutta, India [25+5 min]
<b>TECHNICAL SESSION-5 : MULTI-DISCIPLINARY RESEARCH &amp; APPLICATIONS</b>	
<b>Chair DINAKAR KANJILAL ; Coordinator PRASANTA KARMAKAR</b>	
11.00	Atomic collisions using low and high energy ion beams at wider perturbation strengths– Lokesh Tribedi, TIFR, India [30+10 min]
11.40	Emulation of irradiation damage in reactor structural materials using ion beams at VECC – Gayathri Banerjee, VECC [25+5 min]
12.10	Research using BARC positron beam facility – Dhanadeep Dutta, BARC, India [25+5 min] ONLINE
12.40	Carbon ion radiotherapy (CIRT): A highly interdisciplinary approach can overcome the hurdles in cancer treatment – Utpal Ghosh, Kalyani University, India [25+5 min]
13.15	<i>Lunch at VECC Lounge; Tea will be served in the foyer of Ajay Divetia Hall from 10.30 till 12.30</i>
<b>TECHNICAL SESSION-6 : NUCLEAR PHYSICS</b>	
<b>Chair ALOK CHAKRABARTI ; Coordinator SARMISTHA BHATTACHARYYA</b>	
14.30 11.00	Precision mass measurements for nuclear and neutrino physics studies as well as for tests of fundamental symmetries – Klaus Blaum, Max-Planck-Institut für Kernphysik, Heidelberg, Germany [30+10 min] ONLINE
15.10 11.40	ISOLDE Facility, some highlights of recent work and plans for the future. – Sean John Freeman, CERN Switzerland [30+10 min] ONLINE
15.50 12.20	CERN-MEDICIS : a dedicated isotope mass separation facility for medical research – Thierry Stora, CERN Switzerland [25+5 min] ONLINE
16.20	Nuclei away from stability and the r-process – Rajdeep Chatterjee, IIT Roorkee, India [25+5 min]
16.50	Nuclear fission studies using gas jet transport system – Rahul Tripathy, BARC India [25+5 min] ONLINE
17.20	Exploring Nuclear Reaction Dynamics using Radioactive Ion Beams through $\alpha$ and $\gamma$ -Decay Spectroscopy – B.P. Singh, AMU, India [25+5 min]
17.50	Theoretical perspectives of exotic nuclei – Jhilum Sadhukhan, VECC [25+5 min]
	<i>Tea will be served in the foyer of Ajay Divetia Hall from 15.30 till 17.30</i>
19.30	<i>Dinner at VECC Lounge</i>
End of Day-2 programme	

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<b>DAY-3 27-04-2023 [Thursday]</b>	
<b>TECHNICAL SESSION-7 : MULTI-DISCIPLINARY RESEARCH &amp; APPLICATIONS</b>	
<b>Chair</b> DINAKAR KANJILAL ; <b>Coordinator</b> PRASANTA KARMAKAR	
09.30	Ion beam interaction with Semiconductors and nano-scale materials – Debdulal Kabiraj, IUAC, India [25+5 min]
10.00	Ion beam fabrication and analysis of materials – Tapobrata Som, IOP, India [25+5 min]
10.30	Surface and nano-science research prospects using ANURIB – Prasanta Karmakar, VECC [25+5 min]
11.00	Ion irradiation on ZnO and other metal oxides: prospects, challenges and future directions – Anindya Sarkar, Bangabashi Morning College, Kolkata [25+5 min]
11.30	Proposed fast neutron beam facility at VECC and its possible applications– Kaushik Banerjee, VECC [25+5 min]
12.00	Research activities in radiation biology at the UCC-DAE-CSR – Dr. Anindita Chakraborty, UGC-DAE-CSR Kolkata [25+5 min]
12.30	Nuclear solid state techniques at VECC – Dirtha Sanyal, VECC [25+5 min]
13.15	<i>Lunch at VECC Lounge; Tea will be served in the foyer of Ajay Divetia Hall from 10.30 till 12.30</i>
<b>TECHNICAL SESSION-8 : NUCLEAR PHYSICS</b>	
<b>Chair</b> ALOK CHAKRABARTI ; <b>Coordinator</b> SARMISTHA BHATTACHARYYA	
14.20 08.50	Decay spectroscopy of Neutron-rich Exotic Nuclei – Zsolt Podolyak University of Surrey, UK [30+10 min] ONLINE
15.00	Experiments using VECC Penning Trap, cryogenics operations and future outlook – Parnika Das, VECC [25+5 min]
15.30	Journey towards limits of existence of atomic nuclei – Ushasi Dutta, SINP, India [25+5 min]
16.00	Gamma spectroscopy with low-energy RIB: possibilities with ANURIB– Gopal Mukherjee, VECC [25+5 min]
<b>CONCLUDING SESSION</b>	
<b>Coordinator</b> ARUP BANDYOPADHYAY	
16.30	SUMMARY TALK ON NUCLEAR PHYSICS – ALOK CHAKRABARTI
17.00	SUMMARY TALK ON MULTI-DISCIPLINARY RESEARCH & APPLICATIONS – D. KANJILAL
	<i>Tea will be served in the foyer of Ajay Divetia Hall from 15.30 till 17.30</i>
19.30	<i>Dinner at VECC Lounge</i>
	End of event