

C. K. MAJUMDAR MEMORIAL SUMMER WORKSHOP IN PHYSICS 2025

Organised jointly by

Indian Association of Physics Teachers (Regional Council 15) [IAPT RC 15]
and

S. N. Bose National Centre for Basic Sciences [SNBNCBS], Kolkata

(July 15, 2025 to July 24, 2025)

VENUE: FERMION, SNBNCBS

PROGRAMME SCHEDULE

Tuesday, July 15, 2025

<i>Time</i>	<i>Name of the Speaker</i>	<i>Affiliation</i>	<i>Title of the talk /Event</i>
<u>SESSION I</u> Inaugural Session			
09:45 a.m. to 10:15 a.m.	Prof. Ranjit Biswas	Dean, Academic Program, S N Bose National Centre for Basic Sciences, Salt Lake	<i>Welcome Address</i>
10:15 a.m. to 10:30 a.m.	Dr. Bhupati Chakrabarti	Former General Secretary, IAPT	<i>A few words about IAPT and the Workshop</i>
10:30 a.m. to 11:00 a.m.	<i>TEA BREAK</i>		
11:00 a.m. to 12:15 p.m.	Prof. Krishnendu Sengupta	IACS, Kolkata	<i>Phase transitions: Landau theory and beyond</i>
12:15 p.m. to 01:30 p.m.	Dr. Shubhasis Haldar	S N Bose National Centre for Basic Sciences, Salt Lake	<i>Proteins as nano-machines</i>
01:30 p.m. to 02:30 p.m.	<i>LUNCH BREAK</i>		
<u>SESSION II</u>			
02:30 p.m. to 03:30 p.m.	Dr. Surajit Chakrabarti	Formerly in Department of Physics, Maharaja Manindra Chandra College, Kolkata	<i>Address to the participants</i>
03:30 p.m. to 05:30 p.m.	<i>Laboratory Work</i>		

Wednesday, July 16, 2025

<i>Time</i>	<i>Name of the Speaker</i>	<i>Affiliation</i>	<i>Title of the talk / Event</i>
<u>SESSION I</u> 09:30 a.m. to 10:45 a.m.	Dr. Parijat Dey	S N Bose National Centre for Basic Sciences, Salt Lake	<i>Ising model of ferromagnets</i>
10:45 a.m. to 11:00 a.m.	TEA BREAK		
11:00 a.m. to 12:15 p.m.	Prof. Bhupendra Nath Dev	Centre for Quantum Engineering, Research and Education, TCG CREST, Kolkata	<i>Quantum Science to Quantum Technology</i>
12:15 p.m. to 01:30 p.m.			
01:30 p.m. to 02:30 p.m.	LUNCH BREAK		
<u>SESSION II</u> 02:30 p.m. to 05:30 p.m.	Laboratory Work		

Thursday, July 17, 2025

<i>Time</i>	<i>Name of the Speaker</i>	<i>Affiliation</i>	<i>Title of the talk / Event</i>
<u>SESSION I</u> 09:30 a.m. to 10:45 a.m.	Dr. Manik Banik	S N Bose National Centre for Basic Sciences, Salt Lake	<i>Evolution of Physical Worldviews: The Shifting Foundations of Physics</i>
10:45 a.m. to 11:00 a.m.	<i>TEA BREAK</i>		
11:00 a.m. to 12:15 p.m.	Prof. Nirmalya Ghosh	IISER KOLKATA	<i>Angular momentum, Geometric Phase and Spin-orbit interaction: A Twist in the Tale of Light</i>
12:15 p.m.to 01:30 p.m.			
01:30 p.m.to 02:30 p.m.	<i>LUNCH BREAK</i>		
<u>SESSION II</u> 02:30 p.m.to 05:30 p.m.	<i>Laboratory Work</i>		

Friday, July 18, 2025

<i>Time</i>	<i>Name of the Speaker</i>	<i>Affiliation</i>	<i>Title of the talk / Event</i>
<u>SESSION I</u> 09:30 a.m. to 10:45 a.m.	Dr. Saquib Shamim	S N Bose National Centre for Basic Sciences, Salt Lake	<i>Two-dimensional topological insulators</i>
10:45 a.m. to 11:00 a.m.	<i>TEA BREAK</i>		
11:00 a.m. to 12:15 p.m.	Prof. P. K. Ahluwalia	Himachal Pradesh University, Shimla	<i>Pope of Physics: Enrico Fermi's Legacy as a Quantum Physicist and a Teacher</i>
12:15 p.m. to 01:30 p.m.	Dr. Bhupati Chakrabarti	Formerly Associate Professor, City College, Kolkata	<i>Paradigm Shift in Realising the SI Units: From Natural Phenomena to Natural Constants</i>
01:30 p.m. to 02:30 p.m.	<i>LUNCH BREAK</i>		
<u>SESSION II</u> 02:30 p.m. to 05:30 p.m.	<i>Laboratory Work</i>		

Saturday, July 19, 2025

<i>Time</i>	<i>Name of the Speaker</i>	<i>Affiliation</i>	<i>Title of the talk / Event</i>
<u>SESSION I</u> 09:30 a.m. to 10:45 a.m.	Dr. Barun Ghosh	S N Bose National Centre for Basic Sciences, Salt Lake	<i>Geometry and Topology in Quantum Materials</i>
10:45 a.m. to 11:00 a.m.	<i>TEA BREAK</i>		
11:00 a.m. to 12:15 p.m.	Prof. Ananda Dasgupta	IISER KOLKATA	<i>An exploration of quantum mysteries Lecture I</i>
12:15 p.m. to 01:30 p.m.	Prof. Swagatam Das	ISI KOLKATA	<i>Bridging Equations to Algorithms: Opportunities at the Intersection of Science and Machine Learning</i>
01:30 p.m. to 02:30 p.m.	<i>LUNCH BREAK</i>		
<u>SESSION II</u> 02:30 p.m. to 04:30 p.m.	Dr. Syed Minhaz Hossain	IEST, SHIBPUR	<i>Colors around us: The Physics of light scattering</i>
4:30 p.m. to 5:30 p.m.	<i>Students' interaction session with Prof. P. K. Ahluwalia</i>		

Sunday, July 20, 2025

<i>Time</i>	<i>Name of the Speaker</i>	<i>Affiliation</i>	<i>Title of the talk / Event</i>
<u>SESSION I</u> 09:30 a.m. to 10:45 a.m.	Prof. Abhirup Dutta	Department of Astronomy, Astrophysics and Space Engineering (DAASE), Indian Institute of Technology Indore	<i>Advances and opportunities in Radio Astronomy</i>
10:45 a.m. to 11:00 a.m.	TEA BREAK		
11:00 a.m. to 12:15 p.m.	Prof. Sunandan Gangopadhyay	S N Bose National Centre for Basic Sciences, Salt Lake	<i>Schwinger's source theory: Disturbing the vacuum Lecture I</i>
12:15 p.m. to 01:30 p.m.	Prof. Abhirup Dutta	Department of Astronomy, Astrophysics and Space Engineering (DAASE) Indian Institute of Technology Indore	<i>Emerging Trends in Space Sciences</i>
01:30 p.m. to 02:30 p.m.	LUNCH BREAK		
<u>SESSION II</u> 02:30 p.m. to 03:45 p.m.	Prof. Sunandan Gangopadhyay	S N Bose National Centre for Basic Sciences, Salt Lake	<i>Schwinger's source theory: Disturbing the vacuum Lecture II</i>

Monday, July 21, 2025

<i>Time</i>	<i>Name of the Speaker</i>	<i>Affiliation</i>	<i>Title of the talk / Event</i>
<u>SESSION I</u> 09:30 a.m. to 10:45 a.m.	Dr. P. S. Panchfule	S N Bose National Centre for Basic Sciences, Salt Lake	<i>The Porous World– With (Nearly) Nothing</i>
10:45 a.m. to 11:00 a.m.	TEA BREAK		
11:00 a.m. to 12:15 p.m.	Prof. Ananda Dasgupta	IISER KOLKATA	<i>An exploration of quantum mysteries Lecture II</i>
12:15 p.m. to 01:30 p.m.	Students' Session		
01:30 p.m. to 02:30 p.m.	LUNCH BREAK		
<u>SESSION II</u> 02:30 p.m. to 05:30 p.m.	Laboratory Work		

Tuesday, July 22, 2025

<i>Time</i>	<i>Name of the Speaker</i>	<i>Affiliation</i>	<i>Title of the talk / Event</i>
<u>SESSION I</u> 09:30 a.m.to 10:45 a.m.	Dr. Urna Basu	S N Bose National Centre for Basic Sciences, Salt Lake	<i>From Passive to Active: Exploring Nonequilibrium Dynamics</i>
10:45 a.m. to 11:00 a.m.	<i>Tea BREAK</i>		
11:00 a.m. to 12:15 p.m.	Prof. Anjan Barman	S N Bose National Centre for Basic Sciences, Salt Lake	<i>Fundamentals and Frontier Applications of Laser Science</i>
12:15 p.m.to 01:30 p.m.	Prof. Satyaki Bhattacharya	Saha Institute of Nuclear Physics, Kolkata	<i>Artificial intelligence in particle physics: Higgs discovery and beyond</i>
01:30 p.m.to 02:30 p.m.	<i>LUNCH BREAK</i>		
<u>SESSION II</u> 02:30 p.m.to 05:30 p.m.	<i>Laboratory Work</i>		

Wednesday, July 23, 2025

<i>Time</i>	<i>Name of the Speakers</i>	<i>Affiliation</i>	<i>Title of the talk / Event</i>
<u>SESSION I</u> 09:30 a.m. to 10:45 a.m.	Prof. Ranjit Biswas	S N Bose National Centre for Basic Sciences, Salt Lake	<i>The Physics and Chemistry of Physical Chemistry: A Few Examples</i>
10:45 a.m. to 11:00 a.m.	<i>TEA BREAK</i>		
11:00 a.m. to 12:15 p.m.	Prof. Suman Chakrabarty	S N Bose National Centre for Basic Sciences, Salt Lake	<i>Computational Methods in Physics: From Molecular Simulation to Machine Learning</i>
12:15 p.m.to 01:30 p.m.	Dr. Arijit Halder	S N Bose National Centre for Basic Sciences, Salt Lake	<i>Variational principle in Quantum Mechanics and some of its applications</i>
01:30 p.m.to 02:30 p.m.	<i>LUNCH BREAK</i>		
<u>SESSION II</u> 02:30 p.m.to 04:00 p.m.	Dr. Achintya Pal	Retired Exploration Geophysicist, ONGC	<i>Thomas Young— ‘The (last) man who knew everything’</i>
04:00 p.m. to 05:15 p.m.	Dr. Ramkrishna Das	S N Bose National Centre for Basic Sciences, Salt Lake	<i>The Explosive Universe</i>
05:15 p.m. to 06:45 p.m.	<i>Skywatch</i>		

Thursday, July 24, 2025

<i>Time</i>	<i>Event</i>
09:30 a.m. to 10:45 a.m.	<i>STUDENTS' SESSION</i>
10:45 a.m. to 11:30 a.m.	<i>TEA BREAK & GROUP PHOTOGRAPH</i>
11:30 a.m. to 12:15 p.m.	<i>STUDENTS' SESSION</i>
12:15 p.m. to 01:30 p.m.	<i>VALEDICTORY SESSION</i>
01:30 p.m. to 02:30 p.m.	<i>LUNCH</i>

***** *END OF THE PROGRAMME* *****