

C. K. MAJUMDAR MEMORIAL WORKSHOP IN PHYSICS 2022
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 12, 2022 to July 21, 2022)

PROGRAMME SCHEDULE

VENUE : FERMION, SNBNCBS

Tuesday, July 12, 2022

Mode of operation and time	Name of the Speakers	Affiliation	Title of the talk / Event
<u>SESSION I</u> Inaugural Session (OFF-LINE)			
From 10:00 a.m. to 10:15 a.m.	Speaker : Prof. Tanusri Saha Dasgupta	Director, S N Bose National Centre for Basic Sciences, Salt Lake, Kolkata	<i>Welcome Address</i>
From 10:15 a.m. to 10:45 a.m.	Speaker : Dr. Surajit Chakrabarti	Former Vice President, IAPT	<i>A few words about IAPT and the workshop</i>
From 10:45 a.m. to 11:00 a.m.	Speaker : Dr. Birendra Nath Das	Formerly at Department of Physics, Vivekananda College, Thakurpukur, Kolkata And Guest Faculty, Presidency College, Kolkata	<i>Why we need experimental activity for learning Science?</i>
<i>From 11:00 a.m. to 11:30 p.m.</i>	<i>TEA BREAK</i>		
Keynote Address (OFF-LINE)			
From 11:30 a.m. to 01:00 p.m.	Speaker : Prof. Gour P Das	Research Institute for Sustainable Energy (RISE), TCG Centres for Research and Education in Science and Technology, Salt Lake	<i>Is Hydrogen the holy grail for a green energy future?</i>

From 01:00 p.m. to 02:00 p.m.	<i>LUNCH</i> <i>BREAK</i>		
<p><u>SESSION II</u> (OFF-LINE)</p> <p>From 02:00 p.m. to 03:30 p.m.</p> <p>(OFF-LINE) From 03:30 p.m. to 04:00 p.m.</p> <p>(OFF-LINE) From 04:00 p.m. to 05:00 p.m.</p>	<p>Speaker : Prof. Dipak Goswami</p> <p>Speaker : Dr. Surajit Chakrabarti</p>	<p>Department of Physics, Indian Institute of Technology, Kharagpur, WB</p> <p>Formerly at Department of Physics, Maharaja Manindra Chandra College, Kolkata</p>	<p><i>Flexible organic electronic devices for smart healthcare technology</i></p> <p><i>Address to the participants</i></p> <p><i>A Film on S N Bose</i></p>

Wednesday, July 13, 2022

Mode of operation and time	Name of the Speakers	Affiliation	Title of the talk / Event
<p><u>SESSION I</u> (ON-LINE)</p> <p>From 10:00 a.m. to 11:15 a.m.</p>	<p>Speaker : Prof. Somnath Bharadwaj</p>	<p>Department of Physics, Indian Institute of Technology, Kharagpur, WB</p>	<p><i>Probing the Universe with the redshifted Hydrogen 21-cm line.</i></p>
From 11:15 a.m. to 11:30 p.m.	<i>TEA</i> <i>BREAK</i>		
<p>(OFF-LINE) From 11:30 a.m. to 01:00 p.m.</p>	<p>Speaker : Prof. Debshankar Ray</p>	<p>Department of Physical Chemistry, Indian Association of Cultivation of Sciences</p>	<p><i>Quantum dissipation</i></p>

From 01:00 p.m. to 02:00 p.m.	<i>LUNCH</i> <i>BREAK</i>		
<u>SESSION II</u> (OFF-LINE)			
From 02:00 p.m. to 03:30 p.m.	Speaker : Dr. Urna Basu	Department of Theoretical Sciences, S N Bose National Centre for Basic Sciences, Salt Lake, Kolkata	<i>Introduction to Markov processes</i>
(OFF-LINE)			
From 03:30 p.m. to 05:00 p.m.	Speaker : Prof. Amitabha Lahiri	Department of Theoretical Sciences, S N Bose National Centre for Basic Sciences, Salt Lake, Kolkata	<i>Principle of Gauge Invariance</i>

Thursday, July 14, 2022

Mode of operation and time	Name of the Speakers	Affiliation	Title of the talk / Event
<u>SESSION I</u> (ON-LINE)			
From 10:00 a.m. to 11:15 a.m.	Speaker : Dr. Achintya Pal	Retired Exploration Geophysicist and Executive of ONGC	<i>Voyager Mission and Voice of Indian Classical Music</i>
From 11:15 a.m. to 11:30 p.m.	<i>TEA</i> <i>BREAK</i>		
(OFF-LINE)			
From 11:30 a.m. to 01:00 p.m.	Speaker : Dr. Biplab Sanyal	Division of Materials Theory Department of Physics and Astronomy, Ångströmlaboratoriet, Uppsala University, Sweden	<i>The magical world of magnetism</i>
From 01:00 p.m. to 02:00 p.m.	<i>LUNCH</i> <i>BREAK</i>		

<u>SESSION II</u> (OFF-LINE)			
From 02:00 p.m. to 03:30 p.m.	Speaker : Prof. Supratik Pal	Physics and Applied Mathematics Unit, Indian Statistical Institute, Kolkata	<i>Scopes and Challenges in Research in Cosmology</i>
(OFF-LINE)			
From 03:30 p.m. to 05:00 p.m.	Speaker : Dr. Urna Basu	Department of Theoretical Sciences, S N Bose National Centre for Basic Sciences, Salt Lake, Kolkata	<i>Random walk and diffusion</i>

Friday, July 15, 2022

Mode of operation and time	Name of the Speakers	Affiliation	Title of the talk / Event
<u>SESSION I</u> (OFF-LINE)			
From 10:00 a.m. to 11:15 a.m.	Speaker : Dr. Surajit Chakrabarti	Formerly at Department of Physics, Maharaja Manindra Chandra College, Kolkata	<i>Doing Physics Experiments at home could be fun</i>
From 11:15 a.m. to 11:30 p.m.	<i>TEA BREAK</i>		
(ON-LINE)			
From 11:30 a.m. to 01:00 p.m.	Speaker : Prof. Suvrat Raju	International Centre for Theoretical Sciences, TIFR, Bengaluru	<i>Black Holes and reversibility of time</i>
From 01:00 p.m. to 02:00 p.m.	<i>LUNCH BREAK</i>		

<p><u>SESSION II</u> (OFF-LINE)</p> <p>From 02:00 p.m. to 03:30 p.m.</p> <p>(OFF-LINE)</p> <p>From 03:30 p.m. to 05:00 p.m.</p>	<p>Speaker : Dr. Bhupati Chakrabarti</p>	<p>Formerly at Department of Physics, City College, Kolkata</p>	<p><i>A second nobel prize for Einstein: why it remained elusive</i></p> <p><i>Students' Session</i></p>
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Saturday, July 16, 2022

Mode of operation and time	Name of the Speakers	Affiliation	Title of the talk / Event
<p><u>SESSION I</u> (ON-LINE)</p> <p>From 10:00 a.m. to 11:15 a.m.</p>	<p>Speaker : Dr. A.R.Usha Devi.</p>	<p>Department of Physics Bangalore University, Bangalore</p>	<p><i>Foundation of Quantum Theory</i></p>
<p>From 11:15 a.m. to 11:30 p.m.</p>	<p><i>TEA</i> <i>BREAK</i></p>		
<p>(OFF-LINE)</p> <p>From 11:30 a.m. to 01:00 p.m.</p>	<p>Speaker : Prof. Soumitra Banerjee</p>	<p>Department of Physical Sciences, Indian Institute of Science Education and Research, Kolkata, Mohanpur Campus</p>	<p><i>An Introduction to chaos theory</i></p>
<p>From 01:00 p.m. to 02:00 p.m.</p>	<p><i>LUNCH</i> <i>BREAK</i></p>		
<p><u>SESSION II</u> (OFF-LINE)</p> <p>From 02:00 p.m. to 03:30 p.m.</p>	<p>Speaker : Prof. Ayan Banerjee</p>	<p>Department of Physical Sciences, Indian Institute of Science Education and Research, Kolkata, Mohanpur Campus</p>	<p><i>'Deciding' the fate of Schroedinger's cat: Visualizing quantum mechanics using light.</i></p>

(ON-LINE) From 03:30 p.m. to 05:00 p.m.	Speaker : Dr. A.R.Usha Devi.	Department of Physics Bangalore University, Bangalore	Principle of Quantum Information
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Sunday, July 17, 2022

Mode of operation and time	Name of the Speakers	Affiliation	Title of the talk / Event
<u>SESSION I</u> (OFF-LINE) From 10:00 a.m. to 11:15 a.m.	Speaker : Dr. Bhupati Chakrabarti	Formerly at Department of Physics, City College, Kolkata	<i>Non-destructive exploration of the hidden parameters of a mechanical black box</i>
From 11:15 a.m. to 11:30 p.m.	<i>TEA BREAK</i>		
(OFF-LINE) From 11:30 a.m. to 01:00 p.m.	Speaker : Dr. Chinmoy Kumar Ghosh	Former Director of the National Centre for Innovation at IGNOU	<i>Hundred Years of Stern-Gerlach Experiment</i>
From 01:00 p.m. to 02:00 p.m.	<i>LUNCH BREAK</i>		
<u>SESSION II</u> (OFF-LINE) From 02:00 p.m. to 03:30 p.m.	Speaker : Prof. Ayan Banerjee	Department of Physical Sciences, Indian Institute of Science Education and Research, Kolkata, Mohanpur Campus	<i>Optical tweezers: Commanding particles by light.</i>
(ON-LINE) From 03:30 p.m. to 04:00 p.m.	<i>Students' Session</i>		

(ON-LINE)			
From 04:00 p.m. to 05:00 p.m.	Speaker : Dr. Sridip Pal	School of Natural Sciences Institute for Advanced Study, Princeton University, New Jersey, USA	<i>Quantum Gravity through the lens of Conformal Field Theory</i>

Monday, July 18, 2022

Mode of operation and time	Name of the Speakers	Affiliation	Title of the talk / Event
<u>SESSION I</u> (OFF-LINE)			
From 10:00 a.m. to 11:15 a.m.	Speaker : Dr. Ananda Dasgupta	Department of Physical Sciences, Indian Institute of Science Education and Research, Kolkata, Mohanpur Campus	<i>The (not so simple) pendulum</i>
From 11:15 a.m. to 11:30 p.m.	<i>TEA</i>		<i>BREAK</i>
(OFF-LINE)			
From 11:30 a.m. to 01:00 p.m.			<i>Students' Session</i>
From 01:00 p.m. to 02:00 p.m.	<i>LUNCH</i>		<i>BREAK</i>
<u>SESSION II</u> (OFF-LINE)			
From 02:00 p.m. to 03:30 p.m.	Speaker : Dr. Md. Mabud Hossain	Department of Physics, Aliah University, New Town, Kolkata	<i>Atom-Laser Interaction: Basic Theory and Experimental Realisation by Pump-Probe Laser Spectroscopy -- I</i>
(ON-LINE)			
From 03:30 p.m. to 05:00 p.m.	Speaker : Dr. Kausiksankar Das	Department of Physics, University of Maryland, Eastern Shore, USA	<i>Role of Dimensions and Scaling in Natural Evolution to Technological Evolution.</i>

Tuesday, July 19, 2022

Mode of operation and time	Name of the Speakers	Affiliation	Title of the talk / Event
<p align="center"><u>SESSION I</u> (OFF-LINE)</p> <p>From 10:00 a.m. to 11:15 a.m.</p>	<p>Speaker : Prof. Manik Pradhan</p>	<p>Department of Theoretical Sciences, S N Bose National Centre for Basic Sciences, Salt Lake, Kolkata</p>	<p><i>Laser spectroscopy and its applications to biomedical sciences</i></p>
<p>From 11:15 a.m. to 11:30 p.m.</p>	<p><i>TEA</i> <i>BREAK</i></p>		
<p align="center">(OFF-LINE)</p> <p>From 11:30 a.m. to 01:00 p.m.</p>	<p>Speaker : Prof. Tanusri Saha Dasgupta</p>	<p>Director, S N Bose National Centre for Basic Sciences, Salt Lake, Kolkata</p>	<p><i>Quantum Materials by Computation</i></p>
<p>From 01:00 p.m. to 02:00 p.m.</p>	<p><i>LUNCH</i> <i>BREAK</i></p>		
<p align="center"><u>SESSION II</u> (OFF-LINE)</p> <p>From 02:00 p.m. to 03:30 p.m.</p>	<p>Speaker : Dr. Ramkrishna Das</p>	<p>Department of Astrophysics and Cosmology, S N Bose National Centre for Basic Sciences, Salt Lake, Kolkata</p>	<p><i>What does a Telescope tell ?</i></p>
<p align="center">(OFF-LINE)</p> <p>From 03:30 p.m. to 05:00 p.m.</p>	<p>Speaker : Dr. Tapas Baug</p>	<p>Department of Astrophysics and Cosmology, S N Bose National Centre for Basic Sciences, Salt Lake, Kolkata</p>	<p><i>Star Formation</i></p>

Wednesday, July 20, 2022

Mode of operation and time	Name of the Speakers	Affiliation	Title of the talk / Event
<u>SESSION I</u> (ON-LINE) From 10:00 a.m. to 11:15 a.m.	Speaker : Dr. Praveen Pathak	Homi Bhabha Centre For Science Education -TIFR, Mumbai	<i>Smartphone-based physics experiments</i>
From 11:15 a.m. to 11:30 p.m.	<i>TEA</i> <i>BREAK</i>		
(OFF-LINE) From 11:30 a.m. to 01:00 p.m.	Speaker : Dr. Md. Mabud Hossain	Department of Physics, Aliah University, New Town, Kolkata	Atom-Laser Interaction: Basic Theory and Experimental Realisation by Pump-Probe Laser Spectroscopy - II
From 01:00 p.m. to 02:00 p.m.	<i>LUNCH</i> <i>BREAK</i>		
<u>SESSION II</u> (OFF-LINE) From 02:00 p.m. to 03:30 p.m.	Speaker : Prof. Kalyan Mandal	Department of Condensed Matter Physics and Material Sciences S N Bose National Centre for Basic Sciences, Salt Lake, Kolkata	<i>Magnetism and magnetic materials : Bulk to Nano</i>
(ON-LINE) From 03:30 p.m. to 05:00 p.m.	Speaker : Dr. Kausiksankar Das	Department of Physics, University of Maryland, Eastern Shore, USA	<i>Designing Simple Experiments to Solve Big Problems</i>

Thursday, July 21, 2022

Mode of operation and time	Name of the Speakers /Chairperson	Affiliation	Title of the talk / Event
<p style="text-align: center;"><u>SESSION I</u> (OFF-LINE)</p> <p>From 10:00 a.m. to 11:15 a.m.</p>			<i>Students' Session</i>
From 11:15 a.m. to 11:30 p.m.	<i>TEA BREAK</i>		
<p style="text-align: center;">(OFF-LINE)</p> <p>From 11:30 a.m. to 01:00 p.m.</p>			<i>Students' Session</i>
From 01:00 p.m. to 02:00 p.m.	<i>LUNCH BREAK</i>		
<p style="text-align: center;"><u>SESSION II</u> (ON-LINE)</p> <p style="text-align: center;">VALEDICTORY SESSION</p> <p>From 02:00 p.m. to 03:30 p.m.</p>	<p>Speaker : Prof. Subhas Chandra Samanta</p> <p>Speaker : Prof. Samit Kumar Ray</p>	<p>Formerly of Medinipur College, Medinipur</p> <p>INAE Chair Professor Department of Physics IIT Kharagpur 721 302, India Adjunct Professor & Former Director, S. N. Bose National Center for Basic Sciences, Salt Lake, Kolkata</p>	

***** END OF THE PROGRAM *****