

Program Overview

Day 1: Sunday, December 18, 2022

08:00-09:30	Registration <i>(Venue: Reception area of G P Birla Auditorium)</i>
09:30-10:15	Inaugural Function <i>(Venue: G P Birla Auditorium)</i>
10:15-11:00	Plenary Talk PL-01: U. V. Waghmare (JNCASR, Bangalore) <i>Metavalent Bonding Origins of Unusual Properties of Group IV Chalcogenides</i>
11:00-11:30	High Tea
11:30-13:00	Plenary Talks PL-02: Dhananjai Pandey (IIT, BHU) <i>Premartensitic and Precursor Phenomena in Magnetic Shape Memory Alloys</i> PL-03: Samit K. Ray (IIT, Kharagpur) <i>Light matter interactions in 2D semiconductors for quantum photonics</i>
13:00-14:00	Lunch Break
14:00-16:00	Quantum Materials <i>(Venue: G P Birla Auditorium)</i> IT-01: Jeroen van den Brink (IFW, Dresden, Germany) <i>Surface induced electronic Berry curvature in Berry curvature free bulk materials</i> IT-02: S. M. Yusuf (BARC, Mumbai, India) <i>Quantum Magnetism in Spin Systems of Lower Dimension</i> IT-03: Surjeet Singh (IISER, Pune, India) <i>Weyl phase and Quantum Criticality in Pyrochlore Iridates</i> IT-04: Syed Hassan (IMSc, Chennai, India) <i>The mystery of Linear Resistivity of Metals</i>

16:00-18:00	Tea and Poster Presentation
	Poster Presentation: Contributory Paper <i>(Venue: Near Main building)</i>
	a0001 to a0006, b0001 to b0005, c0001 to c0012, d0001 to d0011, e0001 to e0005, f0001 to f0009, g0001 to g0005, h0001 to h0009, i0001 to i0008, j0001 to j0006, k0001 to k0010, l0001 to l0016, m0001 to m0003, y0001 to y0013
18:30-19:30	Evening Talk <i>(Venue: G P Birla Auditorium)</i>
	ET-01: Dr. R. Chidambaram <i>(Former PSA, GoI; Former chairman, AEC)</i> <i>From Raman Effect to Nuclear Power</i>

Day 2: Monday, December 19, 2022

09:30-11:00	Glassy Phenomenon <i>(Venue: Auditorium 1)</i>
	<p>IT-05: M. S. R. Rao (IIT, Madras) <i>Physics and Technology of Nanocrystalline Diamond</i></p> <p>IT-06: P. S. R. Krishna, (BARC, Mumbai) <i>Local Structure of glasses and disordered crystalline systems: Reverse Monte Carlo analysis of X-ray and Neutron Diffraction data</i></p> <p>IT-07: Atul Khanna (GNDU, Punjab) <i>Synthesis and characterization of superionic Li+ and Na+ oxychloride materials for energy storage applications</i></p>
09:30-11:00	Multiferroics <i>(Venue: Auditorium 2)</i>
	<p>IT-08: Ratanmala Chatterjee (IIT, Delhi) <i>Multiferroic Molecular Magnet: Magneto-Electric (M-E) Coupling observed in Spin Triangle Based Metal (III) Carboxylate [M3O(O2CPh)6(py)3] ClO4.py (M= Fe, Ga).</i></p> <p>IT-09: D. G. Kuberkar (S University, Rajkot) <i>Electronic Structure Modifications in Multiferroic thin films</i></p> <p>IT-10: Manoranjar Kar (IIT Patna) <i>Magnetic Interaction Studies In Bimagnetic Nanocomposite By Δh Versus M ($\Delta h \sim M$) Plot</i></p>
11:00-11:30	Tea Break
11:30-13:00	Contributed Oral Presentations <i>(Venue: Auditorium 1)</i>
	a0005, a0011, a0026, , c0035, e0005, f0003
11:30-13:00	Contributed Oral Presentations <i>(Venue: Auditorium 2)</i>

	c0070, g0042, h0026, h0032, i0024, j0019
13:00-14:00	Lunch Break
14:00-16:00	<p>Superconductivity (Venue: Auditorium 1)</p> <p>IT-11: Amit Ghosal (IISER Kolkata) <i>New Paradigm For Superconducting Vortices with Non-metallic Cores</i></p> <p>IT-12: A. K. Verma (BARC , Mumbai) <i>Role of Theory in Synthesis of Novel Hydrogen-rich Superconductors</i></p> <p>IT-13: R. P. Singh (IISER, Pune, India) <i>Search for Time-Reversal Symmetry Breaking in Unconventional Superconductors</i></p> <p>Contributed Oral Presentations <i>k0058 and k0064</i></p>
14:00-16:00	<p>Soft Condensed Matter Physics (Venue: Auditorium 2)</p> <p>IT-14: Swapan Ghosh (CBS, Mumbai University) <i>Concept of Density across Length Scales and Modelling of Soft Condensed Matter Systems</i></p> <p>IT-15: Rajesh Ganpathy (JNCASR, Bangalore) <i>Melting On A Sphere</i></p> <p>IT-16: C. Kamal (RRCAT, Indore) <i>P Hydrogen Bonding Motifs of Water on TiO₂ (110) surface</i></p> <p>Contributed Oral Presentations <i>b0003 and b0006</i></p>
	Tea and Poster Presentation
16:00-18:00	<p>Poster Presentation: Contributory Paper (Venue: Near Main building)</p> <p>a0008 to a0018, b0006 to b0011, c0016 to c0044, d0012 to d0023, e0007 to e0012, f0010 to f0028, g0006 to g0009, h0011 to h0020, i0011 to i0015, j0009 to j0011, k0012 to k0028, l0018</p>

	to l0033, m0006 to m0017, t0001 to t0033
18:30-19:30	Evening Talk <i>(Venue: G P Birla Auditorium)</i>
	ET-02: Indranil Manna (VC, BIT Mesra)

Day 3: Tuesday, December 20, 2022

09:30-11:00	Advanced Experimental Techniques <i>(Venue: Auditorium 1)</i>
	IT-17: M. K. Chattopadhyay (RRCAT, Indore) <i>FEL based facility for IR-THz spectroscopy of materials</i>
	IT-18: Ravi Shankar Singh (IISER Bhopal) <i>Photoemission Spectroscopy: A Direct Probe to Study the Electronic Structure</i>
	Contributed Oral Presentations <i>d0021 and d0030</i>
09:30-11:00	Young Achiever Award Presentation <i>(Venue: Auditorium 2)</i>
11:00-11:30	Tea Break
11:30-13:00	Contributed Oral Presentation <i>(Venue: Auditorium 1)</i>
	c0069, e0033, f0033, I0003, I0018, I0024
11:30-13:00	Young Achiever Award Presentation-Continued <i>(Venue: Auditorium 2)</i>
13:00-14:00	Lunch Break
14:00-16:00	Photo Voltaics <i>(Venue: Auditorium 1)</i>
	IT-19: K. S. Narayan (JNCASR, Bangalore) <i>Imaging studies of solar cells and panels</i>
	IT-20: A. K. Chauhan (BARC, Mumbai) <i>Challenges for the development of futuristic organic devices</i>

	<p>IT-21: Ayan Dutta (IACSs Kolkata) <i>Singlet Fission in Organic Chromophoric Aggregates: Increasing Coupling Between Molecules</i></p> <p>IT-22: Pabitra Nayak (TIFR, Hyderabad) <i>Emerging soft semiconductors for opto-electronics application</i></p>
14:00-16:00	<p style="text-align: center;"><i>Low dimensional Physics</i> <i>(Venue: Auditorium 2)</i></p> <p>IT-23: Sougata Pal (Murshidabad, WB) <i>Common Defects Accelerate Charge Separation and Reduce Recombination in CNT/Molecule Composites: Atomistic Quantum Dynamics</i></p> <p>IT-24: Somya Bera (IIT, Bombay) <i>Dynamical properties of strongly disordered interacting spin chains in one dimensions</i></p> <p>IT-25: Sourav Dutta (TIFR, Mumbai) <i>Quantum Interference based Coherent Control of a Photochemical Reaction</i></p> <p>IT-26: S. Singh Kushvaha (NPL, Delhi) <i>Low dimensional epitaxial GaN: Growth and Applications</i></p>
	Tea and Poster Presentation
16:00-18:00	<p style="text-align: center;">Poster Presentation: Contributory Paper <i>(Venue :Near main building)</i></p> <p>a0019-a0026, b0012 to b0017, c0045 to c0074, d0025 to d0031, e0014 to e0020, f0029 to f0050, g0011 to g0016, h0021 to h0031, i0017 to i0023, j0017 to j0025, k0030 to k0050, l0034 to l0053, m0018 to m0023</p>
18.30-19.30	Cultural Program

Day 4: Wednesday, December 21, 2022

	<p style="text-align: center;">Spintronics (Venue: Auditorium 1)</p>
09:30-11:00	<p>IT-27: Koteswar Rao Bommiseth (IIT, tirupati) <i>Quantum Magnetism in $S = 5/2$highly frustrated spin chains</i></p> <p>IT-28: Jhuma Sannigrahi (IIT, Goa) <i>Unconventional magnetism as a consequence of the orbital effect in $Ba_4Ru_3O_{10}$</i></p> <p>Contributed Oral Presentation <i>d0025</i></p> <p>Introduction to IPA</p>
09:30-11:00	<p style="text-align: center;">Surface and Interface Physics (Venue: Auditorium 2)</p>
	<p>IT-29: Mukul Gupta, (UGC DAE CSR, Indore) <i>Structure and magnetic properties of transition metal nitride thin films probed using soft x-ray absorption spectroscopy at BL-01, Indus-2</i></p> <p>IT-30: Bhagwati Prasad (IISc, Bengaluru) <i>Beyond CMOS computing: Spintronics, Ferroelectrics, and Iontronics</i></p> <p>IT-31: Sujit Manna (IIT, Delhi) <i>Search for Majorana Zero Modes on an Island in a Sea of Gold</i></p>
11:00-11:30	<p style="text-align: center;">Tea Break</p>
11:30-13:00	<p style="text-align: center;">Contributed Oral Presentations (Venue: Auditorium 1)</p> <p style="text-align: center;">g0004, i0011, m0019, m0032, j0018, k0059</p>
11:30-13:00	<p style="text-align: center;">Surface and Interface Physics (Venue: Auditorium 2)</p>

	<p>IT-32: Pratap Kumar Sahoo (NISER Bhubneswar) <i>Excitonic Properties at the Surface and Interface of Nanomaterials</i></p> <p style="text-align: center;">Best Thesis Presentation (Venue: Auditorium 2)</p>
13:00-14:00	Lunch Break
14:00-16:00	<p style="text-align: center;">Functional Materials (Venue: Auditorium 1)</p> <p>IT-33: Narayan Pradhan (IACS Kolkata) <i>Facets Controlled Photoluminescence Properties of Lead Halide Perovskite Nanocrystals</i></p> <p>IT-34: Ela Rout (BIT, Mesra) <i>Conduction mechanism in barium based advanced electrolyte for PC-SOFC applications</i></p> <p>IT-35: S. Chattopadhyay (Dresden, Germany) <i>Spin-charge-lattice coupling in Cairo pentagonal RMn_2O_5 ($R =$ Lanthanides, Bi, Y) multiferroics</i></p> <p>IT-36: Sunita Keshri (BIT, Mesra) <i>Enhancement of Transition Temperature in K-doped Manganite Perovskites</i></p>
14:00-16:00	<p style="text-align: center;">Best Thesis Presentation (Venue: Auditorium 2)</p> <p style="text-align: center;">Tea and Poster Presentation</p>
	Poster Presentation: Contributory Paper (Venue :Near main building)
16:00-18:00	a0029-a0035, b0018 to b0023, c0075 to c0096, d0032 to d0039, e0020 to e0029, f0051 to f0064, g0018 to g0026, h0032 to h0045, i0024 to i0029, j0027 to j0031, k0051 to k0071, l0054 to l0076, m0024 to m0032

18.30-19.30

Interaction with Industries

Day 5: Thursday, December 22, 2022

09:30-11:00	<p style="text-align: center;">Energy Materials <i>(Venue: Auditorium 1)</i></p> <p>IT-37: G. P. Das (RISE Kolkata) <i>Is Hydrogen the holy grail for a sustainable energy future?</i></p> <p>IT-38: Sudip Chakraborty (HRI, Prayagraj) <i>Materials Modelling for Energy Scavenging: A Computational Roadmap</i></p> <p>IT-39: Chandra S. Sharma (IIT Hyderabad) <i>Uncovering the Potential of Candle Soot Nanocarbon for Energy Storage Applications</i></p>
11:00-11:30	Tea Break
11:30-13:15	<p style="text-align: center;">Poster Presentation: Contributory Paper <i>(Venue :Near main building)</i></p> <p>a0036-a0042, b0024to b0027, c0097 to c0108, d0040 to d0044, e0030 to e0036, f0065 to f0078, g0027 to g0042, h0046 to h0053, i0030 to i0034, j0032 to j0039, k0072 to k0092, l00077 to l0103, m0033 to m0037</p>
13:15-14:00	Lunch Break
14:00-15:30	Award Presentations and Concluding Session <i>(Venue: Auditorium 1)</i>