

Day1: 15-12-2010	
8:30-10:00	Registration & Welcome
10:00-10:15	Tea
10:15-11:45	<u>Statistical Mechanics:</u> S Duttagupta: <i>Persistent current in a mesoscopic ring – its decoherence and consequences for quantum computing</i> J Horbach: <i>Micro- and macro-rheology in glass-forming soft-sphere mixture</i> A Chatterjee: <i>Electrophoresis of Highly Charged colloids</i>
11:45-12:00	Tea
12:00-13:00	<u>Materials simulation</u> S Narasimhan: <i>Using Density Functional Theory to Design Materials</i> T Saha-Dasgupta: <i>Electronic Structure of Complex Materials: from First-principles study to Materials Modeling</i>
13:00-14:00	Lunch
14:00–15:50	<u>Lower Dimensional systems: Clusters</u> C Majumdar: <i>Growth Pattern of Atomic Clusters on Metal and Metal Oxide Substrates: How it differs from the gas phase model</i> P Jena: <i>A New Class of Magic Clusters and Their Potential as Building Blocks of Novel Materials</i> B N Dev: <i>Quantum Size Effect in Electronic and Magnetic Behaviour in Epitaxial Nanostructures</i> V R R Medicherla: <i>Surface Structure of PdAg(100) Alloys: A Synchrotron Radiation Study</i>
15:50-16:05	Tea
16:05-17:55	<u>Strongly correlated systems and smart materials</u> M P Das: <i>Vortex Physics of Novel Superconductors with Two Order Parameters</i> N C Mishra: <i>MODIFICATION OF STRUCTURE AND SUPERCONDUCTIVITY OF $\text{YBa}_2\text{Cu}_3\text{O}_7$ BY INELASTIC INTERACTION OF 200 MeV Ag ION INDUCED SECONDARY ELECTRONS</i> Z Hussain: <i>Magnetism and superconductivity of AFe_2As_2 compounds</i> D Samal: <i>Influence of ferromagnetic layer on pair-breaking, vortex dynamics and critical field in superconductor/ferromagnet heterostructure</i>

Day2: 16-12-2010	
9:00-10:30	<u>Strongly correlated systems and smart materials</u> W Kleemann : <i>Multiferroic and Magnetoelectric Materials</i> S D Mahanti: <i>Exact ground state phase diagram in 2D frustrated classical Heisenberg and XY Models with biquadratic exchange: the story of uudd state in multiferroic manganites</i> S Dhar: <i>Ferromagnetism in lightly Gd doped GaN: The role of defects</i>

10:30-10:45	Tea
10:45-13:05	<p><u>Strongly correlated systems and smart materials</u></p> <p>P Majumdar: <i>Disorder, magnetism and transport in the double perovskites</i></p> <p>A K Raychoudhuri: <i>The never ending surprises of perovskite oxides : The hot issues of a cold area</i></p> <p>S L Chaplot: <i>Role of Dynamics of Atoms in some novel Material Properties</i></p> <p>P Mahadevan: <i>Electron doped CrO₂ : An unusual example of a charge ordered ferromagnet</i></p> <p>M Kar: <i>MAGNETIC ANISOTROPY IN NANOCRYSTALLINE CHROMIUM SUBSTITUTED COBALT FERRITES</i></p>
13:05-14:05	Lunch
14:05-16:25	<p><u>Physics of graphene</u></p> <p>Y Woo Son: <i>Physics of graphene and its nanostructures</i></p> <p>A Shukla: <i>Theory of Electro-Optical Properties of Graphene Nanoribbons</i></p> <p>G P Das : <i>First principles design of hydrogenated graphene and BN sheet and their possible functionalization</i></p> <p>S Satpathy: <i>Modelling Electronic Structure of Graphene: Vacancy States, Magnetism, and Jahn-Teller Interactions</i></p> <p>A Kumar: <i>Quantum Hall Effect and role of disorder in graphene: A high magnetic field study</i></p>
16:25-16:40	Tea
16:40–18:40	<p><u>Statistical mechanics</u></p> <p>P B Sunilkumar: <i>Dynamics of a polyelectrolyte under simple shear.</i></p> <p>K G Ayappa: <i>Investigations on the Melting and Bending Modulus of Polymer Grafted Bilayers using Dissipative Particle Dynamics</i></p> <p>K L Sebastian: <i>The Dynamics of Loop Formation in Semi-flexible Polymers</i></p> <p>G I Menon: <i>Transport and Patterning in Motor-Microtubule Mixtures.</i></p>

Day3: 17-12-2010	
9:00-10:30	<p><u>Strongly correlated systems and smart materials</u></p> <p>R Prasad: <i>Born Effective Charges, Spontaneous Polarization and Optical Properties of Bismuth Titanate from First-principles</i></p> <p>R Nath: <i>Synthesis, structure, and properties of tetragonal Sr₂Mn₃As₂O₂ and Sr₂Mn₂CuAs₂O₂ containing alternating CuO₂-type and FeAs-type layers</i></p> <p>D Behera: <i>Fluctuation Induced Magneto-conductivity Studies in YBa₂Cu₃O₇ + BaTiO₃ Composite High T_c Superconductors</i></p> <p>K Senapati: <i>Phase periodic conductance oscillations at subgap voltages in SNINS junctions</i></p>
10:30-10:45	Tea
10:45-13:05	<p><u>Electronic structure of excited states</u></p> <p>M K Harbola: <i>Construction of energy functionals for excited-states calculations</i></p>

	<p>T Niehaus: <i>An approximate TDDFT method and its application to the luminescence spectra of Silicon nanocrystals</i></p> <p>L Kronik: <i>Theoretical spectroscopy with optimally tuned range-separated hybrid functionals</i></p> <p>R Baer: <i>Molecular Conical Intersections and Density Functional Theory</i></p> <p>P Ghosh: <i>Computational Approaches to Charge Transfer Excitations in a ZnTPP-C₇₀ complex</i></p>
13:05-14:05	Lunch
14:05-16:25	<p><u>Quantum dots and wires</u></p> <p>E Räsänen: <i>Density-functional studies on semiconductor quantum dots and rings</i></p> <p>V A Singh: <i>Electronic properties of quantum dots</i></p> <p>I Dasgupta: <i>Electronic Structure of Functional Nanomaterials</i></p> <p>B R Mehta: <i>Complexities of metal nanoparticle – hydrogen interaction: basic issues and novel applications</i></p> <p>P Sarkar: <i>Band gap modulation of GaAs Nanowires by surface modulation</i></p>
16:25-16:40	Tea
16:40–18:40	POSTER

Day4: 18-12-2010	
9:00-10:00	<p><u>Quantum dots and wires</u></p> <p>S K Bandopadhyay: <i>Effect of Annealing Temperature on Magnetism in Co-doped ZnO Nanomaterials</i></p> <p>A Singha: <i>Electron Dimer Molecules in Optically Tunable Semiconductor Quantum Dot</i></p> <p>S Rath: <i>Refractive index modulation of Ge oxide films with thermal annealing and MeV ions</i></p>
10:00-10:15	Tea
10:15-12:35	<p><u>Electron transport: nano to meso</u></p> <p>J B Neaton: <i>Charge and Energy Transport in Molecular Junctions with Self-Energy Corrections</i></p> <p>T P Pareek: <i>Spin transport and associated spin torque</i></p> <p>G V Pai: <i>Tunable Spin Filtering using Quantum Wire Network</i></p> <p>M Desmukh: <i>Nanoelectromechanical (NEMS) devices to study mesoscopic physics</i></p> <p>S Pandey: <i>Investigation of the role of spin-orbit coupling on spin-based transport properties of Iron Pnictide materials</i></p>
12:35-14:00	Lunch
14:00 -16:00	<u>Statistical mechanics</u>

	S Puri: <i>Cooling in Freely-evolving Granular Gases</i> B Bagchi: <i>(Title awaited)</i> R Rajesh: <i>Disorder-Order-Disorder transition in a system of long rods on the Bethe lattice</i> S K Das: <i>Kinetics of Phase Separation</i>
16:00-16:15	Tea
18:00-19:30	Cultural program

Day5: 19-12-2010	
9:00-9:50	<u>Statistical mechanics</u> S Sengupta: <i>Network forming nano-particles</i> D K Satpathy: <i>Complex fluids in nano-confinement</i>
9:50-10:15	Tea
10:15-12:30	<u>Chemistry with electronic structure</u> K D Sen: <i>Electronic structure calculations of spherically confined N-electron atoms</i> P Chattaraj: <i>All-metal Aromaticity and Conceptual DFT</i> P Padmanabhan: <i>The Role Of Hydrogen Bonding In Hydration And Swelling Of Layered Double Hydroxides: A Molecular Dynamics Study</i> Concluding remarks
	Lunch