



Physics Research Workshop Schedule

6Th-7Th February, Venue: L 16

DAY 1: 6th February (Saturday)

9:00 - 9:30

Registration

9:30 - 9:45

Inauguration

Condensed Matter Theory: Electronic Structure Calculations

Chair: Sushil Auluck

9:45 - 10:30

Opening Keynote Address by Arun Bansil: Exploration of Quantum Matter: from Schroedinger to Dirac/Einstein

10:30 - 11:00

Tea Break

11:00 - 11:30

Manoj K. Harbola: Study of adiabatic-connection in ground-state density functional theory.

11:30 - 12:00

D. V. L. K. Prasad: Electronic structure and lattice dynamics of compressed low-Z molecular solids.

12:00 - 14:00

Lunch Break and Poster

Complex System and Dynamics

Chair: Y. N. Mohapatra

14:00 - 14:30

Mahendra K. Verma: Free Turbulence, Walled Turbulence and Universal Theories

14:30 - 15:00

Satyajit Banerjee: Evidence of interplay between magnetic and superconducting fluctuations above T_c in doped Iron Arsenide Superconductor

15:00 - 15:20

Shraddha Sharma: Dynamical Phase Transitions: non-equilibrium real time quantum phase transitions.

15:20 - 15:50

Tea Break

Optics and Plasma Physics

Chair: G. Ravindra Kumar

15:50 - 16:20

Sudeep Bhattacharjee: Pulse modulated wave induced plasma states and self excited instability.

16:20 - 16:50

Saikat Ghosh: Interplay of classical and quantum dynamics in a thermal ensemble of Rubidium atoms.

16:50 - 17:10

Pramod K. Pandey: Laser produced air plasma waveguide using pico-sec and nano-sec pulses

17:10 - 17:30

Sriram Guddala: Linear and non-linear optical properties of meta material perfect optical absorbers.

17:30 - 18:30

Tea and Poster Session

DAY 2: 7th February (Sunday)

Quantum Condensed Matter Systems

Chair: Debashish Chowdhury

10:00 - 10:30

Mandar Deshmukh: Spin and valley resolved Landau level crossing in tri-layer ABA stacked graphene - signatures of quantum phase transitions.

10:30 - 11:00

Satyabrata Patnaik: Emergent Properties of Chalcogenide Superconductors

11:00 - 11:30

Tea Break

11:30 - 11:50

Gyanendra S. Singh: Two dimensional superconductivity in LaAlO₃/SrTiO₃ interfaces.

11:50 - 12:10

Dushyant Kumar: Room Temperature Multi-color Emission from Ar*-irradiated SrTiO₃.

12:10 - 12:30

Sourav Biswas: Random telegraphic signal due to thermal bi-stability in superconducting weak link.

12:30 - 14:30

Lunch and Poster Session

High Energy Physics

Chair: Pankaj Jain

14:30 - 15:00

Joydeep Chakraborty: Cousin of Higgs

15:00 - 15:20

Suratna Das: Particle physics potentials in inflationary cosmology

15:20 - 15:40

Sudhakar Upadhyay: Generalization of BRST symmetry

15:40

**Concluding session: Announcement of Best Poster Awards
Vote of Thanks**

Concluding Tea