

## Program Schedule

### Recent trends in Condensed Matter Physics

Organized by the Department of Solid State Physics, IACS, Kolkata

16<sup>th</sup> - 17<sup>th</sup>, January 2018

Venue: CV Raman Hall, IACS

#### Day 1: 16<sup>th</sup> January 2018

10:30 – 11:00 : *Inauguration & Opening remarks*

#### Session 1

(Chairperson: Indra Dasgupta)

11:00 – 11:30 : **Feo Kusmartsev**  
Loughborough University, UK  
*Topological Weyl-metal - insulator phase transitions in quantum well Ge/Sn/Ge structures*

11:30 – 12:00 : **Biplab Sanyal**  
Uppsala University, Sweden  
*Ultrafast demagnetization dynamics of amorphous FeGd alloys: insights from atomistic spin dynamics simulations*

12:00 – 12:30 : *Tea break*

#### Session 2

(Chairperson: Aswini Ghosh)

12:30 – 13:00 : **Karthik V. Raman**  
TIFR Hyderabad, India  
*Understanding proximity induced superconductivity using tunneling spectroscopy*

13:00 – 13:30 : **Atindra Nath Pal**  
SNBNCBS, Kolkata, India  
*Extreme intra-molecular spin filtering through a single molecular junction*

13:30 – 15:00 : ***Lunch break***

### **Session 3**

**(Chairperson: Durga Basak)**

15:00 – 15:30 : **Sankar Dhar**  
Shiv Nadar University, Greater Noida, India  
*Novel functional oxides by tailoring cations and anions*

15:30 – 16:00 : **Kalyan Mandal**  
SNBNCBS, Kolkata, India  
*Transition Metal Oxide Nanostructures: Surface Effects*

16:00 – 16:30 : ***Tea break***

### **Session 4**

**(Chairperson: Saurav Giri)**

16:30 – 17:00 : **Subir K. Das**  
JNCASR, Bengaluru, India  
*Ballistic aggregation of fractal objects*

17:00 – 17:30 : **Aparna Deshpande**  
IISER Pune, India  
*Dirac point tuning of topological insulator surface  $\text{Bi}_2\text{Se}_3(111)$  with molecules*

17:30 – 19:00 : ***Poster Session***

## Day 2: 17<sup>th</sup> January 2018

### Session 5

(Chairperson: Amlan J. Pal)

- 10:30 – 11:00 : **Chandrabhas Narayan**  
JNCASR, Bengaluru, India  
*Searching new topological phases under pressure*
- 11:00 – 11:30 : **Subhankar Bedanta**  
NISER, Bhubaneswar, India  
*Magnetization reversal in dots and antidot lattices*
- 11:30 – 12:00 : **Tea break**

### Session 6

(Chairperson: Subham Majumdar)

- 12:00 – 12:30 : **Satyajit Banerjee**  
IITK, Kanpur, India  
*Evidence of superconducting and magnetic fluctuations both above and below  $T_c$  in  $BaFe_{2-x}Co_xAs_2$  single crystals*
- 12:30 – 13:00 : **Niladri Banerjee**  
Loughborough University, UK  
*Superconducting spintronics – developments and outlook*
- 13:00 – 13:15 : **Closing remarks**
- 13:15 – 15:00 : **Lunch and interaction**