

## ***Programme Schedule***

Venue:Velvett Country Resort, Lonavala, INDIA

### **Day -1 (7.2.2007, Wednesday)**

Chair - **A. Mookerjee** (S.N.Bose National Centre, Kolkata)

10:00 - 10:15 - Welcome address

10:15 - 11:00 - **O. K. Andersen** (Max-Planck Institute, Stuttgart)  
Calculated crystal-fields in  $t_{2g}^1$  and  $t_{2g}^2$  perovskites

11:00 - 11:30 - Tea/coffee

Chair - **A. Mookerjee**

11:30 - 12:00 - **M. Grueninger** (University of Aachen)  
Optical excitations across the Mott-Hubbard gap

12:00 - 12:30 - **K. Maiti** (TIFR, Mumbai)  
Electron correlation and magnetism in 4d transition metal oxides

12:30 - 13:00 - **P. Mahadevan** (S.N.Bose National Centre, Kolkata)  
What drives the insulating state in ultra thin films of an uncorrelated metal?

13:00 - 14:30 - LUNCH

Chair - **A. Taraphder** (IIT Kharagpur)

14:30 - 15:15 - **B. Keimer** (Max-Planck Institute, Stuttgart)  
Spin and charge dynamics in cuprates and cobaltates

15:15 - 16:00 - **A. K. Raychaudhuri** (S.N.Bose National Centre, Kolkata)  
Density of states and tunneling studies on manganites

16:00 - Tea/Coffee

### **Day - 2 (8.2.2007, Thursday)**

Chair - **G. P. Das** (IACS, Kolkata)

8:30 - 9:15 - **P. Bruno** (Max-Planck Institute, Halle)  
Controlling magnetism and self-organization of nanostructures on surfaces by using quantum interferences

9:15 - 9:45 - **U. Waghmare** (JNCASR, Bangalore)  
Polarization, Magnetic ordering and Structural Instabilities in Biferroic Materials: A First-principles Study

9:45 - 10:15 - Tea/coffee

Chair - **G. P. Das**

- 10:15 - 11:00 - **R. Claessen** (University of Wuerzburg)  
Unusual spin-Peierls physics in the spin-1/2 quantum magnet TiOCl
- 11:00 - 11:30 - **R. Valenti** (University of Frankfurt)  
Competing interactions in the low-dimensional quantum magnet TiOCl
- 11:30 - 12:00 - **A. Mahajan** (IIT, Mumbai)  
Magnetic properties of some  $S = \frac{1}{2}$  Heisenberg antiferromagnetic chain and ladder systems
- 12:00 - 12:30 - **E. Sampathkumaran** (TIFR, Mumbai)  
Geometrically frustrated magnetism in spin-chain oxides of the type  $(\text{Ca}, \text{Sr})_3\text{MXO}_6$  - An overview
- 12:30 - 13:00 - **S. Ray Barman** (UGC DAE CSR, Indore)  
Electronic properties of a ferromagnetic shape memory alloy: NiMnGa

13:00 - 14:30 - LUNCH

Chair - **A. Kshirsagar** (University of Pune)

- 14:30 - 15:15 - **D.G. Kanhere** (University of Pune)  
Melting of clusters
- 15:15 - 15:45 - **V. Kumar** (Tohoku University, Sendai, Japan)  
Magnetism in nanoparticles of metals and semiconductors
- 15:45 - 16:15 - **S. Narasimhan** (JNCASR, Bangalore)  
Ab initio computations of size effects in clusters
- 16:15 - 18:00 - Tea + **POSTER**
- 18:00 - 19:30 - *Classical Music performance*

**19:30 onwards special banquet dinner**

**Day - 3 (9.2.2007, Friday)**

Chair - **R. Prasad** (IIT, Kanpur)

- 8:30 - 9:15 - **J. Fink** (IFW, Dresden)  
High resolution ARPES studies of the strongly correlated electronic structure of high-Tc superconductors
- 9:15 - 9:45 - **C. Gros** (University of Frankfurt)  
RVB-Gutzwiller approach to strongly correlated superconductors

9:45 - 10:15 - Tea/coffee

Chair - **R. Prasad**

- 10:15 - 11:00 - **A. Fujimori** (University of Tokyo, Japan)  
Chemical pressure effects on the Fermi surface and band structure of electron-doped cuprate superconductors
- 11:00 - 11:30 - **L. Boeri** (Max-Planck Institute, Stuttgart)  
Superconductivity in Heavily Electron-Doped Graphite
- 11:30 - 12:00 - **S.N.Kaul** (University of Hyderabad, Hyderabad)  
A new unconventional (possibly d-wave) superconductor:  $\text{LaAg}_{1-x}\text{Mn}_x$
- 12:00 - 12:30 - **P. Lemmens** (University of Braunschweig)  
Local polar distortions and inhomogeneous electronic states in magnetocapacitive spinels and spin state switching materials
- 12:30 - 13:00 - **M. De Raychaudhury** (S.N.Bose National Centre, Kolkata)  
Origin of ferromagnetism in pyrochlore and chalcospinel

13:00 - 14:30 - LUNCH

Chair - **S. K. De** (IACS, Kolkata)

- 14:30 - 15:00 - **F. Lechermann** (University of Hamburg)  
Strong electronic correlation effects in the multiorbital  $\text{BaV}_3\text{S}_7$  compound
- 15:00 - 15:30 - **T. Saha-Dasgupta** (S.N.Bose National Centre, Kolkata)  
Strong correlations in  $\text{V}_2\text{O}_3$  - NMTO  $t_2g$  Wannier functions and dynamical mean-field study
- 15:30 - 16:00 - **K. Held** (Max-Planck Institute, Stuttgart)  
Dynamical vertex approximation - a step beyond dynamical mean field theory

16:00 - Tea

**Day - 4 (10.2.2007, Saturday)**

Chair - **D. G. Kanhere** (University of Pune)

- 8:30 - 9:15 - **D.D. Sarma** (IACS, Kolkata)  
Phase separation in strongly correlated electron system
- 9:15 - 9:45 - **P. Blochl** (Clausthal University of Technology)  
How Nature breaks the strongest bond: The workings of the enzyme nitrogenase
- 9:45 - 10:15 - **H. O. Jeschke** (University of Frankfurt)  
Ab initio study of metalorganic coordination complexes

10:15 - 10:45 - Tea/coffee

Chair - **D. G. Kanhere**

10:45 - 11:15 - **S. Ogale** (NCL, Pune)  
Oxide Based Diluted Magnetic Semiconductors

11:15 - 11:45 - **I. Dasgupta** (IIT, Mumbai)  
First principles electronic structure of diluted  
magnetic semiconductors with high Curie temperature

11:45 - 12:15 - **P. Raychaudhuri** (TIFR, Mumbai)  
Probing Ferromagnets using Andreev Reflection  
Spectroscopy

12:15 - 12:45 - **I. Das** (SINP, Kolkata)  
Spin dependent transport in half-metallic  
nanostructures

12:45 - 13:00 - **Vote of thanks**

13:00 - 14:00 - LUNCH

14:00 - *Excursion*