Schedule for Chandrasekhar Lectures & Embedded Discussion Meeting on Strongly Correlated Systems, from Models to Materials

Friday 10th Jan 2014 Morning Session
Venue: Faculty Hall, IISc

9:00 - 9:35 **A. Fujimori** (University of Tokyo, Japan)
Self-energies in correlated metals SrVO3 and SrMoO3

9:35 – 10:10 **F. Aryasetiwan** (Lund University, Sweden)
Electronic Structure of SrVO3 within GW+DMFT

10:10 – 10:45 **S. Biermann** (École Polytechnique, Paris, France)
About empty states and About U: New insights from combined GW and DMFT

10:45-11:15 Tea/Coffee Break

11:15 – 12:30 Antoine Georges (Chandrasekhar Lecture-1)
Quantum Matter from Hot Superconductors to Cold Atoms. (Public Lecture)

12:30-14:00 Lunch

Friday 10th Jan 2014 Afternoon Session
Venue: New Physical Sciences Building Auditorium , IISc

14:00 – 14:35 **D.D. Sarma** (IISc Bangalore, India)
Probing buried interfaces

14:35 – 15:10 **M. Ferrero (**Ecole Polytechnique, Paris , France)
How bad metals turn good: spectroscopic signatures of resilient quasiparticles

15:10 - 15:45 **Vijay Shenoy** (IISc., Bangalore)
Fermions in Synthetic Non-Abelian Gauge Fields

Saturday 11th Jan 2014
Venue: New Physical Sciences Building Auditorium , IISc

9:00 – 10:15 Antoine Georges (Chandrasekhar Lecture-2)
Understanding and Controlling Materials with Strong Electronic Correlations:
Recent Advances from Dynamical Mean-Field Theory.

10:15 - 10:45 Tea/Coffee Break

10:45 – 11:20 **T.V. Ramakrishnan** (BHU, Varanasi, India)
A Ginzburg Landau like Theory for Emergent d wave Superconductivity in the Cuprates

11:20 – 11:55 **André-Marie, Tremblay** (University of Sherbrooke, Canada)
d-wave superconductivity in the one-band Hubbard model, the Cluster Dynamical-Mean-Field point of view.

11:55 - 12:30 **M.Le Tacon** (Max-Planck-Institut für Festkörperforschung, Stuttgart, Germany)
Overview of recent results obtained in high temperature superconducting cuprates obtained by various x-ray scattering experiments

12:30-14:00 Lunch

14:00 – 14:35 Roser Valenti (Goethe-Universität Frankfurt am Main, Germany)
Correlations and pressure effects in Fe-based superconductors:
A first principles investigation
14:35 - 15:10 Markus Aichhorn (Technical University Graz, Austria)
Hunds coupling and magnetism in technetium and chromium oxides

15:10 - 15:40 Tea/Coffee Break

15:40 – 16:15 S. Ray (IACS, Kolkata, India)
Few interesting manifestations of metal-oxygen covalency in solid oxides
16:15 – 16:50 S.R. Hassan (IMSc, Chennai, India)
Topological Phases in the Kitaev-Hubbard Model

Sunday 12th Jan 2014 Excursion

Monday 13th Jan
Venue: New Physical Sciences Building Auditorium , IISc

9:30 - 10:05 A. Millis (Columbia University, NewYork, USA)
Dynamical mean field theory of metal-insulator transitions in transition-metal perovskites in bulk and superlattice form
10:05 - 10:40 T Prushke (University of Goettingen)
And yet they do it - Superconductivity from local spin fluctuations

10:40 - 11:10 Tea/Coffee Break

11:10 - 11:45 P. Werner (University of Fribourg, Switzerland)
Extension of DMFT to nonequilibrium systems
11:45 – 12:20 J W Freeland (Argonne National Lab, USA)
TBA

12:30-14:00 Lunch

14:00 - 14:35 Cedric Weber (Kings College London, UK)
An implementation of dynamical mean field theory for
nano-structures and molecules
14:35 - 15:10 Arti Garg (SINP, Kolkata, India)
Doping a correlated band insulator: A new route to half-metallic behaviour

15:10 - 15:30 Tea/Coffee Break

15:30 - 16:45 Antoine Georges (Chandrasekhar Lecture-3)
Ultra-Cold Atoms meet Mesoscopics and Thermoelectrics.

16:45 - 17:00 Concluding remarks