

Program Schedule
7th National Conference on Electronic Structure (NCES)

Organized by
Department of Physics & Centre for Computational and Integrative Sciences
SRM University – AP, Andhra Pradesh

In association with
Tata Institute of Fundamental Research, Mumbai
S. N. Bose National Centre for Basic Sciences, Kolkata

21-23 November 2024

21st November, Thursday 2024

Venue: THEATRE, SR Block, SRM University -AP

8.30 a.m. to - 9.30 a.m.: Registration, Theatre, SR Block, SRM University-AP

9.30 a.m. - 9.45 a.m.: Inaugural Session, Theatre, SR Block, SRM University-AP

Morning Session: 9.45 a.m. – 1:00 p.m.

Session I & II

9.45 a.m. – 10.30 a.m.	Theatre	Invited Lecture 1	Prof. E. V. Sampathkumaran	Title: 4f hybridization induced exotic magnetism of Nd based compounds - An unexplored avenue.
10.35 a.m. – 11.05 a.m.	Theatre	Invited Lecture 2	Prof. Sugata Ray	Title: Unusual electro-resistance response accompanied by metal-insulator transition in a mixed-valent vanadate
Tea/Coffee Break 20 mints				
11.25 a.m. – 11.55 p.m.	Theatre	Invited Lecture 3	Dr. Bahadur Singh	Title: Obstructed atomic insulators: From concept to materials realizations
12:00 a.m. – 12:30 p.m.	Theatre	Invited Lecture 4	Dr. Debraj Choudhuri	Title: Volatile resistive-state switching in some titanate-spinel compounds
12:35 p.m. – 1.05 p.m.	Theatre	Invited Lecture 5	Dr. Preeti Bhobe	Title: Kondo-like transport and ferromagnetism in Mn substituted Fe ₂ TiSn

***20 min. lecture + 10 min. discussion**

01. 05 p.m. – 2.00 p.m.: Lunch Break for all participants, In front of SR Block

Afternoon Session: 2.00 p.m. – 5.45 p.m.

Session III

2.00 p.m. – 2.30 p.m.	Theatre	Invited Lecture 6	Dr. Indranil Sarkar	Title: Interplay of electronic structure and spin dynamics of Ferromagnet/Nonmagnet interfaces
2.35 p.m. – 3:05 p.m.	Theatre	Invited Lecture 7	Dr. Surajit Saha	Title: Can spin-phonon coupling suppress an otherwise expected phase transition?
3.10 p.m. – 3.40 p.m.	Theatre	Invited Lecture 8	Dr. Dibyendu Bhattachary a	Title: Operando X-ray Absorption Spectroscopy measurements on energy materials using Indus-2 synchrotron radiation source

**20 min. lecture + 10 min. discussion*

Tea/Coffee Break 20 mints

Session IV

4.00 p.m. – 4.30 p.m.	Theatre	Invited Lecture 9	Prof. Krishna Kumar S R menon	Title: Magnetic domain imaging with magnetostriction: An electron microscopic approach
4:35 p.m. – 5:05 p.m.	Theatre	Invited Lecture 10	Dr. Sudipto Kanungo	Title: Berry curvature induced anomalous Hall state in the designed topological heterostructure
5:10 p.m. – 5.40 p.m.	Theatre	Invited Lecture 11	Dr. Soma Banik	Title: Electronic band engineering in $\text{Co}_{1-x}\text{Fe}_x\text{Sn}$ Kagome semimetal with doping

**20 min. lecture + 10 min. discussion*

Bus will leave to Red Fox Hotel at 6:00 p.m

Dinner for External Experts and Speakers at Red Fox Hotel

22nd November, Friday 2024

Venue: Theatre, SR Block, SRM University -AP

Session V

Morning Session: 9.30 a.m. – 12.45 p.m.

9.30 a.m. – 10:00 a.m.	Theatre	Invited Lecture 12	Prof. Biplab Sanyal	Title: Two-dimensional metallic ferromagnets: fundamental insights from ab initio theory
10.05 a.m. – 10:35 a.m.	Theatre	Invited Lecture 13	Dr. Anita Halder	Title: Half-metallic Transport and Spin-Polarized Tunneling in 2D Ferromagnets: Towards 2D
Session VI				
10:40 a.m. – 11:00 a.m.	Tea/Coffee Break 20 mints			

11.00 a.m. – 11.30 p.m.	Theatre	Invited Lecture 14	Dr. Abir De Sarkar	Title: Sculpting Materials for Self-Powered Electronics
11.35 a.m. – 12.05 p.m.	Theatre	Invited Lecture 15	Dr. Krishna Prasad Maity	Title: Electro-optical control of graphene magnetoresistance using ferroelectric substrate
12:10 a.m. – 12:40 p.m.	Theatre	Invited Lecture 16	Dr. Tanmoy Das	Title: Fractional and Quasi-Orbitals

**20 min. lecture + 10 min. discussion*

12:45 p.m to 1:00 p.m Group Photo

1.00 p.m. – 2.00 p.m.: Lunch Break, In front of SR Block

Afternoon Session: 2.00 p.m. – 5.40 p.m.:

Session VII

2.00 p.m. – 2.30 p.m.	Theatre	Invited Lecture 17	Dr. Ajay Kumar Shukla	Title: Design, development, and performance of a versatile graphene epitaxy system for the growth of epitaxial graphene on SiC
2.35 p.m. – 3:05 p.m.	Theatre	Invited Lecture 18	Prof. Vaitheeswaran	Title: Ferroelectric Properties in Layered Antiferromagnet Cu(OH) ₂

3.10 p.m. – 3.40 p.m.	Theatre	Invited Lecture 19	Dr. J P Rajapandiyan	Title: Surface-enhanced Raman spectroscopy and its applications.
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**20 min. lecture + 10 min. discussion*

Evening Session: 3.40 p.m. – 5.40 p.m.:

Poster session with Tea/Soft drinks in front of SR Block

**Four best Poster will be selected by expert panel
members**

**7.30 p.m. – 9.30 p.m.: Banquet Dinner at Lemon Tree Premier,
Vijayawada**

<https://www.lemontreehotels.com/lemon-tree-premier/vijayawada/hotel-vijayawada>

**Bus will start at 6:00 P.M to venue for Banquet Dinner, please wear the
conference ID card**

23rd November, Saturday 2024

Venue: Tiered Classroom

Session VIII

Morning Session: 9.40 a.m. – 12.35 p.m.

9.40 a.m. – 10:10 a.m.	Tiered Classroom	Invited Lecture 20	Dr. Ravi Sankar Singh	Title: Origin of dimensional crossover in quasi- one-dimensional hollandite $K_2Ru_8O_{16}$
10.15 a.m. – 10:45 a.m.	Tiered Classroom	Invited Lecture 21	Dr. Jayita Nayak	Title: Electronic Structure and Magneto-transport Properties of Magnetic Topological Materials.
10:45 a.m. – 11.00 a.m.	Tea/Coffee Break 15 mints			

***20 min. lecture + 10 min. discussion**

Session IX

11:00 a.m. – 11:30 a.m.	Tiered Classroom	Invited Lecture 22	Prof. Sudhakar Chandran	Title: Li-Ion Conduction in Grain Boundary-Tailored Solid-State Electrolytes: Local Electronic and Structural Influences—A Case Study
11.35 a.m. – 12.05 p.m.	Tiered Classroom	Invited Lecture 23	Prof. Anjan K Gupta	Title: Gate tunable vortex transport regimes in hybrid devices of lead (Pb) and 2D materials
12.05 a.m. – 12.35 p.m.	Tiered Classroom	Invited Lecture 24	Dr. Siddhartha Ghosh	Title: Optical and Magnetic Properties of Cr doped CdSe Quantum Dots

***20 min. lecture + 10 min. discussion**

Overall Discussion and Closing of NCES 2024 and Certificate distribution:

12:35 p.m. to 1:15 p.m.

Lunch Break, In front of SR Block

1:15 p.m. – 2.00 p.m.

Tour – 2:00 to 6:00 p.m. – Durga Temple.

Dinner for external experts and speakers at Red Fox Hotel