

Technical Program
Indo-Italy Joint Workshop-2025

18-19 November 2025



Dev & Vardhana Goswami Lecture Hall Complex

Day 1: 18/11/2025 [Tuesday]

08.30-09.30 **Registration & Breakfast**

09.30-10.15 **Inauguration**

10.15-10.45 **High Tea**

Session 1

Chair: Prof. Chandana Rath, SMST, Indian Institute of Technology (BHU), Varanasi

Time	Speaker	Institute	Title
10.45-11.15	Dr. Michaela Kuepferling	Istituto Nazionale di Ricerca Metrologica (INRiM), Torino	Reliable measurements of the Dzyaloshinskii-Moriya interaction for spintronic applications
11.15-11.45	Prof. Jyoti Ranajan Mohanty	Indian Institute of Technology, Hyderabad	Creation and manipulation of magnetic spin texture in a ferrimagnetic thin film system for applications

11.45-12.15 **Poster Presentation and Tea Break**

Session 2

Chair: Prof. Shradha Mishra, Department of Physics, Indian Institute of Technology (BHU), Varanasi

Time	Speaker	Institute	Title
12.15-12.45	Prof. Ritwik Mandal	Indian Institute of Technology (ISM) Dhanbad	Field-Derivative Torque as an Enhancer of Ultrafast Magnetization Switching
12.45-13.15	Prof. Thirupathaiah Setti	S. N. Bose National Centre for Basic Sciences, Kolkata	Doping-Controlled Topological Properties in Kagome Semimetal

13.15-14.15 **Lunch**

Session 3

Chair: Prof. Jyoti Ranjan Mohanty, Indian Institute of Technology, Hyderabad

Time	Speaker	Institute	Title
14.15-14.45	Prof. Soumik Mukhopadhyay	Indian Institute of Technology, Kanpur	TBD
14.45-15.15	Dr. Bhagavan Behera	CSIR-National Aerospace Laboratories, Bengaluru	Linearization strategies of xMR sensors for reversible and bipolar response

15.15-15.30 (Tea Break)

Session 4

Chair: Prof. Jayeeta Lahiri, Department of Physics, Banaras Hindu University, Varanasi

Time	Speaker	Institute	Title
15.30-16.00	Dr. Alessandro Magni	Istituto Nazionale di Ricerca Metrologica (INRiM), Torino	Separating magnetoresistive effects in SOT magnetic field sensor
16.00-16.30	Prof. Sanjay Singh	Indian Institute of Technology (BHU), Varanasi	Atomic ordering and Berry phase-driven anomalous Hall effect in Heusler compounds
16.30-17.00	Prof. Vijay Raj Verma	Central University of South Bihar, Gaya	Electronic and magnetic states of Polycrystalline Skyrmionic MnSi thin film <i>via</i> advanced synchrotron-based soft X-ray magnetic circular dichroism.

17.00-19.00 **Ganga Boating**

19.00- 21.00 **Workshop Dinner**

Technical Program
Indo-Italy Joint Workshop-2025

18-19 November 2025



Dev & Vardhana Goswami Lecture Hall Complex

Day 2: 19/11/2025 [Wednesday]

09.00-09.30 Breakfast

Session 5 Chair: Prof. Chandan Upadhyay, SMST, Indian Institute of Technology (BHU), Varanasi

Time	Speaker	Institute	Title
9.30-10.00	Prof. Chandana Rath	Indian Institute of Technology (BHU), Varanasi	Magnetization Reversal along with Bipolar Switching in Cerium Chromite Nanoparticles doped with Iron
10.00-10.30	Prof. Dushyant Kumar	Indian Institute of Technology, Jodhpur	Quantum Nonlinearity: Unveiling Quantum Rectenna for Sensing and Energy Applications
10.30-11.00	Prof. Himansu Fulara	Indian Institute of Technology, Roorkee	Constriction-based magnetic nano-oscillators for brain-inspired and microwave technologies

11.00-11.15 Tea Break

Session 6 Chair: Prof. Soumik Mukhopadhyay, Indian Institute of Technology, Kanpur

Time	Speaker	Institute	Title
11.15-11.45	Prof. Sandip Chatterjee	Indian Institute of Technology (BHU), Varanasi	TBD
11.45-12.15	Dr. Vittorio Basso	Istituto Nazionale di Ricerca Metrologica (INRiM), Torino	The spontaneous Hall and Nernst effects. Electron scattering and Berry curvature in metallic ferromagnets

Session 7 Chair: Prof. Sandip Chatterjee, Indian Institute of Technology (BHU), Varanasi

Time	Speaker	Institute	Title
12.15-12.45	Dr. Rohit Medwal	Indian Institute of Technology, Kanpur	Atomic ordering and Berry phase-driven anomalous Hall effect in Heusler compounds
12.45-1.15	Prof. Saurabh Srivastav	Indian Institute of Technology (BHU), Varanasi	Fractional Quantum Hall Effect

13.15-14.15 Lunch

Session 8 Chair: Dr. Michaela Kuepferling, INRiM, Torino

Time	Speaker	Institute	Title
14.15-14.45	Prof. Rajiv Singh	Indian Institute of Technology (BHU), Varanasi	TBD
14.45-15.15	Dr. Shivam Verma	Indian Institute of Technology (BHU), Varanasi	SPIN-based NVMs
15.15-15.45	Prof. Biswanath Bhoi	Indian Institute of Technology (BHU), Varanasi	Photon–Magnon Hybridization: Bridging Photonics and Magnonics for Emerging Technologies

15.45-16.00 Closing Session + High Tea