

13th Annual Student Research Symposium

15th October and 16th October 2025

Agenda -15th Oct 2025	
09:30 - 09:40 AM	Inauguration
09:40 - 11:00 AM	Session 1: Electronics (ELE)
09:40 - 10:00 AM	1. Enhancing the growth quality of perovskite on MeO-2PACz by introducing a Phenethylammonium seed layer Bhumika Sharma PI: K. L. Narasimhan, Sushobhan Avasthi
10:00 - 10:20 AM	2. Synchronous polarization switching at sub-coercive field through stochastic resonance in ferroelectric thin-film capacitors Vivek Dey PI: Pavan Nukala
10:20 - 10:40 AM	3. Optimization and Optical Response of Niobium Nitride Nanowire Devices Ashutosh Vishwakarma PI : Sushobhan Avasth
10:40 - 11:00 AM	4. In-situ hybridization of thin film semiconductor Anil Yadav PI : Aditya Sadhanala
11:00 - 11:20 AM	Tea
11:20 - 12:20 AM	Industry Talk
12:30 - 02:00 PM	Lunch
02:00 - 04:00 PM	Session 2: Photonics & Lasers (PNL) + Quantum Science and Technologies (QST) + Quantum Science and Technologies (QST)
02:00 - 02:20 PM	1. Silicon photonics enabled tunable multi-band dual LFM waveform generation Viresh Bhan PI: Shankar Kumar Selvaraja
02:20 - 02:40 PM	2. Measuring Phase Difference in Frequency Domain Pump-Probe Measurements Sudipta Nayak PI: Akshay Naik
02:40 - 03:00 PM	3. Phase Transition in Sb ₂ Se ₃ Enabled by N-Doped Silicon Heaters for Photonic Memory Applications Rakshitha K PI: Shankar Kumar Selvaraja
03:00 - 03:20 PM	4. Fast monitoring of spectral broadening in seed sources for narrow linewidth fiber lasers Soubhik Pal PI : Supradeepa
03:20 - 03:40 PM	5. Probing Phonon Modes in Reconstructed twisted Homo and Hetero Bilayer System Sushil Kumar Sahu PI : Manish Jain and Chandan Kumar
03:40 - 04:00 PM	6. AlN piezo-Opto mechanics for microwave to optical transduction Rishab Navaneet PI : Akshay Naik
4:00 - 6:00 PM	Poster Session + Tea

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Agenda -16th Oct 2025	
09:40 - 11:00 AM	Session 3: Micro, Nano Mechanics & Microfluidics (MNM)
09:40 - 10:00 AM	1. A Hybrid MEMS combining Piezoelectric and Ferroelectric Thin-film Functionalities Linnet Thomas C I PI : Gayathri Pillai
10:00 - 10:20 AM	2. Bistability-Induced Motility in Magnetically Driven Microstructure Paramita Modak I PI : Ambarish Ghosh
10:20 - 10:40 AM	3. Experimental Analysis of Quality factor dependency on device dimensions in Support Transducer Topology Resonator Raeann Jesma R I PI : Gayathri Pillai
10:40 - 11:00 AM	4. Thermally Driven MHz-range Mechanical Modes in Optomechanical Crystal Cavity Pratip Ghosh I PI : Akshay Naik
11:00 - 11:15 AM	Tea
11:15 - 12:15PM	Industry Talk
12:15 - 14:00PM	Lunch + Networking with Industry Startup Alumni
14:00 - 16:00 PM	Session 4: Materials
02:00 - 02:20 PM	1. Temperature assisted ferroelectric to paraelectric phase transitions in In ₂ Se ₃ Shubham Kumar Parate I PI : Pavan Nukala
02:20 - 02:40 PM	2. Nitrogen-Doping-Induced Ferroelectric Phase Transition in Epitaxial Y:HfO ₂ via Rapid Thermal Annealing Soumyajyoti Mondal I PI : Pavan Nukala
02:40 - 03:00 PM	3. Phase-Selective Growth of MoTe ₂ via CVD for Phase change applications Vijeyan C I PI : Srinivasan Raghavan
03:00 - 03:20 PM	4. Instabilities and Electronic Phase Transitions within MEBs Shriganesh Neeramoole I PI : Ambarish Ghosh
03:20 - 03:40 PM	5. Investigating the Role of Oxygen Vacancy Redistribution in Ferroelectric Behavior of Yttria doped Hafnia thin films Anudeep Tullibilli I PI : Pavan Nukala
03:40 - 04:00 PM	6. Epitaxial In-Plane Ferroelectric BaTiO ₃ Integration on Si for Electro-Optic Applications: Role of Pulsed Laser Deposition Growth Parameters Yeswanth Pattipati I PI : Srinivasan Raghavan
04:00 - 04:20 PM	High Tea
04:20 - 05:00 PM	Session 5 - Nano Bio Technology
04:20 - 04:40 PM	1. Label-Free Detection Using Solid-State Nanopores Simran I PI : Manoj Varma
04:40 - 05:00 PM	2. ALD-Optimized Al ₂ O ₃ Gate Dielectrics on 2D MoS ₂ : Enabling Next-Gen ISFETs Ananya Tiwari I PI : Navakanata Bhat
05:00 - 05:20 PM	3. Optoelectronic Stimulation of Retinal Organoids Sharmistha Das I PI : Vini Gautam
05:20 - 05:40 PM	4. Detection of Post Translational Modifications in peptides using graphene nanopore Pranjal Sur I PI : Manoj Varma
05:40 - 06:00 PM	Prize Distribution & Concluding Remarks

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Sl.No.	Title	Advisor	Research Vertical	Remark
1	Yogesh Sahu	Prof. Srinivasan Raghavan	Electronics	Poster
2	Shonkho Shuvro	Prof. Digbijoy Nath	Electronics	Poster
3	PALLAVI GAUR	Prof. Sreetosh Goswami	Electronics	Poster
4	Arup Basak	Prof. Pavan Nukala	Electronics	Poster
5	Jishnu Ghosh	Prof. Digbijoy Nath	Electronics	Poster
6	Harivignesh S	Prof. Sreetosh Goswami	Electronics	Poster
7	Deepika Jangid	Prof. Aditya Sadhanala	Electronics	Poster
8	R Poyoja	Prof. Aditya Sadhanala	Electronics	Poster
9	ESHAN PANDEY	Prof. Sushobhan Avasthi	Electronics	Poster
10	Abdul Kashif Shah	Prof. Digbijoy Nath	Electronics	Poster
11	Taha Saquib	Prof. Digbijoy Nath	Electronics	Poster
12	Nithya G	Prof. Prosenjit Sen	Materials (all aspects)	Poster
13	Kartick Biswas	Prof. Pavan Nukala	Materials (all aspects)	Poster
14	Swagatika Nayak	Prof. Sushobhan Avasthi	Materials (all aspects)	Poster
15	Bidyabhusan Kundu	Prof. Sreetosh Goswami	Materials (all aspects)	Poster
16	Rahul Lakra	Prof. Pavan Nukala	Materials (all aspects)	Poster
17	Abhishek Kumar	Prof. Pavan Nukala	Materials (all aspects)	Poster
18	Sakshi Chandola	Prof. Srinivasan Raghavan	Materials (all aspects)	Poster
19	Jyoti Saxena	Prof. Aditya Sadhanala	Materials (all aspects)	Poster
20	Phani Shankar Borra	Prof. Pavan Nukala	Materials (all aspects)	Poster
21	Nishant Kumar Sharma	Prof. Prosenjit Sen	Materials (all aspects)	Poster
22	Manavendra Pratap Singh	Prof. Akshay Naik	Materials (all aspects)	Poster
23	Gokul Krishna	Prof. Pavan Nukala	Materials (all aspects)	Poster
24	Jishnu Ghosh	Prof. Digbijoy Nath	Materials (all aspects)	Poster
25	Ishita Bansal	Prof. Prosenjit Sen	Micro, Nano Mechanics, Micro fluidics	Poster
26	Jyothish Raj	Prof. Gayathri Pillai	Micro, Nano Mechanics, Micro fluidics	Poster
27	Allu Sai Nandan Reddy	Prof. Prosenjit Sen	Micro, Nano Mechanics, Micro fluidics	Poster
28	Deya Ganguly	Prof. Akshay Naik	Micro, Nano Mechanics, Micro fluidics	Poster
29	Garvit Gupta	Prof. Saurabh Chandorkar	Micro, Nano Mechanics, Micro fluidics	Poster
30	Imnatoshi	Prof. Prosenjit Sen	Micro, Nano Mechanics, Micro fluidics	Poster
31	Shreeraj	Prof. Saurabh Chandorkar	Micro, Nano Mechanics, Micro fluidics	Poster
32	Ankur Jaiswar	Prof. Ambarish Ghosh	Nano Bio Technology	Poster
33	Anushree Chakraborty	Prof. Vini Gautam	Nano Bio Technology	Poster
34	Gargi Mandal	Prof. Vini Gautam	Nano Bio Technology	Poster
35	Anindita Tarafdar	Prof. Vini Gautam	Nano Bio Technology	Poster
36	Chintada Guna Sai	Prof. Vini Gautam	Nano Bio Technology	Poster
37	Bipul Ch Sarkar	Prof. Vini Gautam	Nano Bio Technology	Poster
38	Mayank Mitram	Prof. Manoj Varma	Nano Bio Technology	Poster
39	Avisekh Pal	Prof. Manoj Varma	Photonics and Lasers	Poster
40	Anooja P S	Prof. Shankar Kumar Selvaraja	Photonics and Lasers	Poster
41	Devansh Srivastava	Prof. Shankar Kumar Selvaraja	Photonics and Lasers	Poster
42	Avari Roy	Prof. Aditya Sadhanala	Photonics and Lasers	Poster
43	Mukta Janpandit	Prof. Shankar Kumar Selvaraja	Photonics and Lasers	Poster
44	Purna Pal	Prof. Prosenjit Sen	Quantum Science and Technology	Poster