INDIAN INSTITUTE OF TECHNOLOGY, KANPUR

CENTRE FOR CONTINUING EDUCATION

Students-Undergraduate Research Graduate Excellence

Annual Report

SURGE-2024

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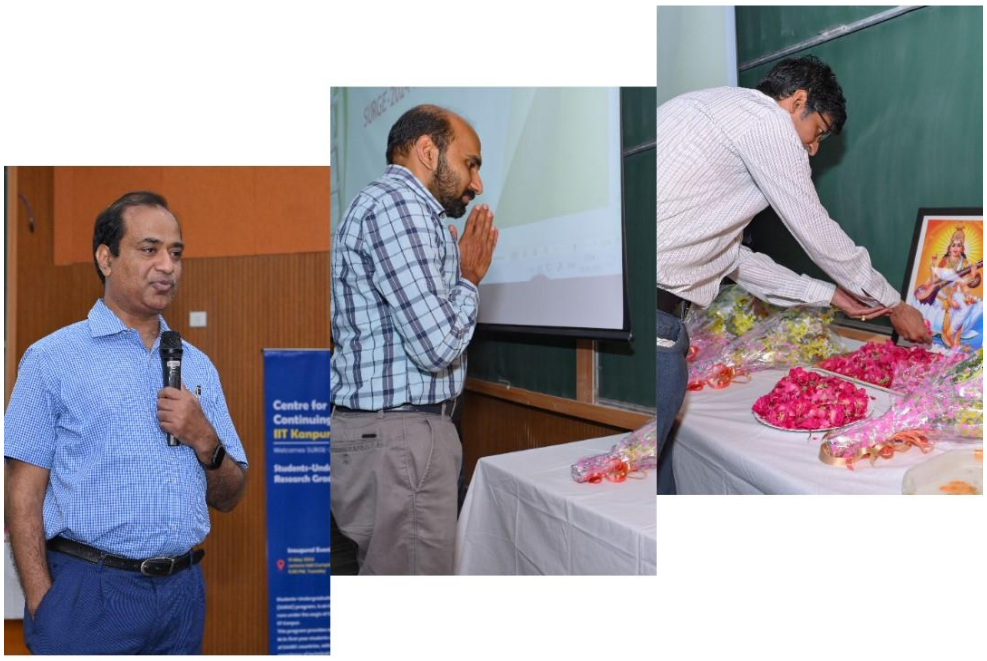


Message from Head, Centre for Continuing Education

Dear Colleagues/students,

Greetings of the day!

SURGE programme of IIT Kanpur has been developed to present opportunities for undergraduate students to carry out research activities under the able mentorship of faculties of IITK in the field of engineering and sciences. Undergraduate research fosters collegiality and welcomes students into the community of researchers and scholars. It promotes self-discovery and helps in bridging the gap between class-room and real world, which leads to social, professional and educational development of the student.

This year SURGE-2024 program has been conducted in offline mode and a total of 325 participants had successfully completed the internship program. The program is being very well received both by participants and mentors. The success of this program is purely attributed to enthusiastic performance and active participation of the SURGE participants, dedicated faculty mentors of IIT Kanpur and the generous unwavering financial support provided by our eminent alumni together with the efficient coordination of CCE staff. It will not be out of the place to mention that by the end of the program, a surprising number of SURGE participants show an inclination towards seeking research and development as their carrier option.

I would like to sincerely congratulate successful SURGE-2024 participants for their successful completion of the internship and their mentors who had guided them in yielding exceptional quality research work at IIT Kanpur, which subsequently helped in improving the effectiveness of this program.

Further, I sincerely thank DoRA for financially supporting this program and I hope that DoRA will continue its support in future also for the benefit of the undergraduate students at large in particular and the program in general.

Last but not the least, I express my heartiest gratitude for the support extended by our Mentors, Evaluation Committee Members, and the CCE Staff for making this program a great success.

Thank you!!!

Prof. BV Rathish Kumar

Head, Centre for Continuing Education

SURGE PROGRAM – AN OVERVIEW

Students-Undergraduate Research Graduate Excellence (SURGE) program, is an approved internship Program of IIT Kanpur, which runs under the aegis of Centre for Continuing Education (CCE), IIT Kanpur. This program provides an opportunity to undergraduate and M.Sc first year students of IITK, Non-IITK and also to the students of SAARC countries, with an objective of giving in-hand experience of technical learning in their field of research.

It is worth mentioning here that this year a total of 1100 applications were received for SURGE-2024 internship from IITK, Non-IITK and students SAARC countries. Among these, 325 students (187 IITK students, 135 Non-IITK students, 3 SAARC students) had successfully completed their internship.

As you are aware that SURGE-2024 program also provides stipend to the participants selected under the Institute Funded category and Project Funded category. This year 60 participants were given stipend under the Institute Funded Category, 17 participants were given stipend by their mentors under the Project Funded Category and 3 students from Nepal were financially supported. This program has also a provision of awarding the participants who produce exceptional quality research work. They are given a cash award under different award categories along with a commendation certificate. However, all the successful participants of this program are given a participation certificate.

A poster Presentation was organised on 10.07.2024 and 11.07.2024 wherein the participants presented the posters of the work done by them during the internship. The posters were evaluated by the Evaluation Committee members.

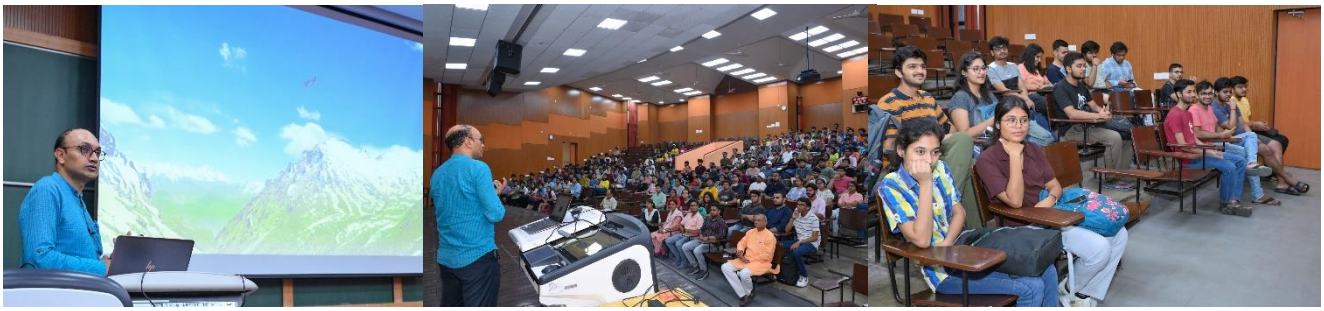
On the last day of completion of SURGE-2024 internship, a farewell dinner was organized by CCE, which was held on 12.07.2024 at Type II Community Center, wherein the certificates were distributed to the eligible participants, followed by the dinner. The event was chaired by Prof. Braj Bhushan (Deputy Director) followed by Prof. A. R. Harish (Dean of Research and Development) and Prof. Kantesh Balani (Dean of Resources and Alumni).

Mentors under whom the participants successfully completed their internship were also invited. Members of SURGE Evaluation Committee who evaluated the Posters and work done (report) by the participants were also invited to attend the felicitation ceremony.

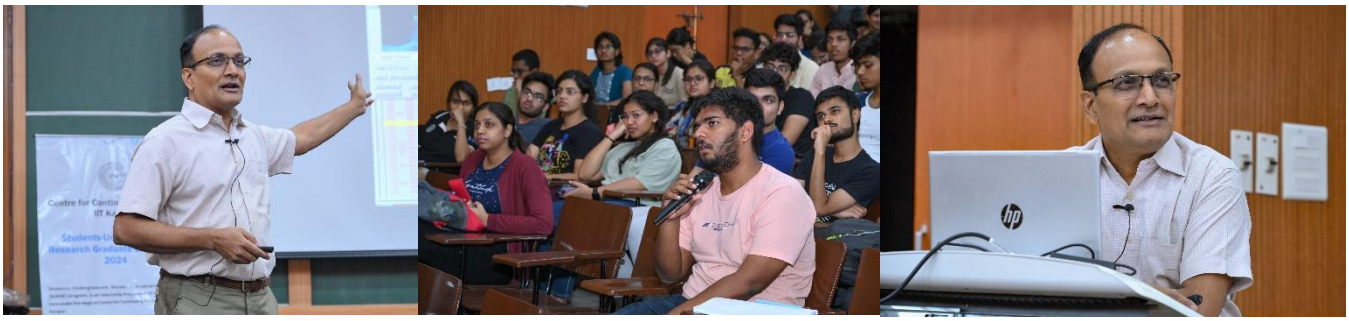
SURGE - 2024 Lecture Series

As a part of SURGE Internship Program this year a series of lectures were conducted wherein faculty members of IIT Kanpur delivered talk on some interesting and generic topics.

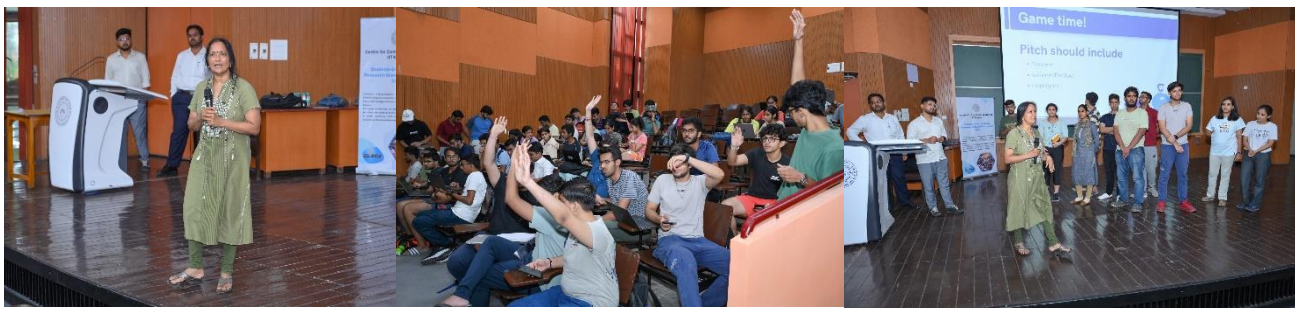
1. **Lecture 1 - Dr. Abhishek (AE)**
   Topic: “Unmanned Aerial Vehicle (UAV)”



2. **Lecture 2 - Prof. B. V. Rathish Kumar (MTH)**
   Topic: “A Peep into Mathematics at the frontiers of Science and Technology”



Lecture 3 – SIIC Team
Topic: “Entrepreneurship and SIIC”



SURGE - 2024 AWARDS

To encourage and appreciate the efforts and hard work of the participants, SURGE program provides the following awards to its participants;

(i) **Dr. Elizabeth and Dr. Verkey Cherian Award**

a) For producing exceptional quality research for overall Best Project, which carries a cash award of Rs. 5,000/- plus a commendation certificate.

b) For producing exceptionally Outstanding Poster, which carries a cash award of Rs. 5,000/- plus a commendation certificate.

(ii) **Best Project Award for Engineering**

For producing exceptional quality research in Engineering, which carries a cash award of Rs. 10,000/- plus a commendation certificate.

(iii) **Best Project Award for Sciences**

For producing exceptional quality research in sciences, which carries a cash award of Rs. 10,000/- plus a commendation certificate.

The awardees are selected, based on their overall performance, by a team of evaluators comprising eminent faculties from the various departments of our institute.

This year following participants were awarded the aforesaid awards under various categories;

1. **Dr. Elizabeth and Dr. Verkey Cherian Award for Best Poster**

Name	Institute Name	Department	Mentor Name	Project Title
Mr. Naman Sharma	IIT Kanpur	Electrical Engineering	Dr. Koteswar Rao J	3D Neurological Gait Recognition
Mr. Sidharth Kumar Das	IISER Pune	Physics	Dr. Manas Khan	Dynamics of Active Brownian Particles in Media with Varying Viscosity: Effects on Persistence Time and Particle Behavior

2. **Dr. Elizabeth and Dr. Verkey Cherian Award for Best Project**

Name	Institute Name	Department	Mentor Name	Project Title
Mr. Parichay Gupta	IIT Bhubaneswar	School of Mechanical Sciences	Dr. Arvind Kumar	Investigation of Evaporation by Photomolecular Effect
Mr. Manas Kumar	IIT Kanpur	Mathematics & Statistics	Dr. Shankar Prawesh	Large Scale Crowd Simulation Using ML and Computer Vision

3. Best Project Award for Sciences

Name	Institute Name	Department	Mentor Name	Project Title
Mr. Rohan Chandra	IIT Bombay	Chemistry	Dr. Basker Sundararaju	Synthesis of Chiral N,O Ligands and Its Catalytic Potential
Mr. Debjit Das	IIT Bombay	Chemistry	Dr. Nisanth N Nair	Rate Calculation for Enhanced Sampling Simulation

4. Best Project Award for Engineering

Name	Institute Name	Department	Mentor Name	Project Title
Ms. Keerthika Kadagala	IIT Kanpur	Electrical Engineering	Dr. Raghvendra Kumar Chaudhary	Flexible Antenna for Wireless Communications
Mr. Abhinav Kumar	NIT Warangal	Biotechnology	Dr. Hamim Zafar	Computational Analysis of Cervical Cancer Single-Cell datasets

SURGE-2024 EVALUATION COMMITTEE

Sno	Name	Department
1	Dr. Rajesh Ranjan	AE
2	Dr. Vishal Govind Rao	CHM
3	Dr. Adithya Vadapalli	CSE + CGS
4	Dr. Thirumulanathan D	ECO
5	Dr. Ram Prasad Potluri	EE
6	Dr. Ushasi Roy	ME
7	Dr. Shivam Tripathi	MSE
8	Dr. Aakash Chand Rai	SEE
9	Dr. Prerna Gautam	DoMS
10	Dr. Amar Agarwal	ES
11	Dr. Rituraj	EE
12	Dr. Swamy Peruru	EE
13	Dr. Indranil Chowdhury	MTH
14	Dr. Anusmita Sahoo	BSBE

15	Dr. Soumik Mukhopadhay	PHY
16	Dr. Sudib K. Mishra	CE
17	Dr. Ishan Bajaj	CHE
18	Dr. Rajarshi Sengupta	DESIGN
19	Dr. Avinash Deshpande	SPASE

SURGE FUNDING

Institute Funded Category (Support from DORA):

Under this category, a maximum of 60 SURGE participants (IITK and Non-IITK) and a maximum of 04 participants of SAARC countries are financially supported by DORA, IIT Kanpur through donations received from Alumni.

This year 60 SURGE participants and 03 participants of SAARC country *(Nepal)* received a stipend for Rs. 12,500/- and their administrative charges were also reimbursed. The SAARC candidates were also reimbursed their travel expenses. The details of these participants are mentioned below;

S.No.	Name	Mentor name	Mentor Deptt	Category
1	Mr. Aayush Singh	Dr. Srinivas Arigapudi	EcoSci	IITK
2	Mr. Abhinav Kumar	Dr. Swagata Mukherjee	PHY	IITK
3	Mr. Abhinav Kumar	Dr. Hamim Zafar	BSBE	Non-IITK
4	Mr. Akshit Goyal	Dr. Muthukumar T	MATH	IITK
5	Mr. Aman Cheema	Dr. Apratim Kaviraj	PHY	IITK
6	Mr. Arpit Prasad	Dr. R Vijaya	PHY	Non-IITK
7	Mr. Aseem Chandra Pathak	Dr. Amit Agarwal	PHY	IITK
8	Mr. Ayush Mishra	Dr. Siddhartha Panda	CHE	Non-IITK
9	Mr. Debasis Mandal	Dr. Manas K Ghorai	CHM	IITK
10	Mr. Dhruv Budhedeo	Dr. Rakesh Kumar Mathpal	AE	IITK
11	Mr. Dhruv Rai	Dr. Sanjiv Kumar	EcoSci	IITK
12	Mr. Gujjati Sathvik	Dr. Ashoke De	AE	Non-IITK
13	Mr. Harsh Patel	Dr. Vishal Govind Rao	CHM	IITK
14	Mr. Ishaan Gupta	Dr. Somesh K Mathur	EcoSci	IITK
15	Mr. Kavin Kabilan	Dr. Arun K Saha	ME	Non-IITK
16	Mr. Malhar Date	Dr. Tanmoy Maiti	MSE	Non-IITK
17	Mr. Mayank Agrawal	Dr. Shakti S. Gupta	ME	IITK

18	Mr. Mohammed Junaid Ahmed	Dr. Navrose	AE	IITK
19	Mr. Naman Singh	Dr. Bharat Lohani	CE	Non-IITK
20	Mr. Naveen Kumar Raghav	Dr. Niraj Mohan Chawake	MSE	Non-IITK
21	Mr. Parichay Gupta	Dr. Arvind Kumar	ME	Non-IITK
22	Mr. Piyush Yadav	Dr. Bipin Kumar Gupta	CE	Non-IITK
23	Mr. Prakhar Srivastava	Dr. Amit Verma	EE	Non-IITK
24	Mr. Prakhar Tripathi	Dr. Kartick C Sarkar	SPASE	IITK
25	Mr. Pranav Kumar A R	Dr. Sachin Y. Shinde	ME	Non-IITK
26	Mr. Pranshu Jain	Dr. Ritika Gautam	CHM	IITK
27	Mr. Pratik Chetan Kubal	Dr. Dipak Kumar Giri	AE	Non-IITK
28	Mr. Rangan Pal	Dr.Ajay Vikram Singh	AE	IITK
29	Mr. Ritayan Mukherjee	Dr. D Chaitanya Kumar Rao	AE	Non-IITK
30	Mr. Rohit Verma	Dr. Rituraj	EE	IITK
31	Mr. Samaresh Barman	Dr. D. H. Dethe	CHM	IITK
32	Mr. Sankha Subhra Chakraborty	Dr. Amit Kuber	MTH	Non-IITK
33	Mr. Sattam Roy	Dr. Krishanu Biswas	MSE	Non-IITK
34	Mr. Soumo Roy	Dr. Tushar Sandhan	EE	Non-IITK
35	Mr. Sundresh N	Dr. Arnab Samanta	AE	Non-IITK
36	Mr. Tanush Reddy Vaka	Dr. Sharvari N. Ghosh	SPASE	Non-IITK
37	Mr. Thogiti Amar Sathwik	Dr. Abhishek Gupta	EE	IITK
38	Mr. Tushar Sahu	Dr. Subhajit Roy	CSE	IITK
39	Mr. Umang Garg	Dr. Akash Choudhary	CHE	IITK
40	Mr. Usaid Riyaz	Dr. Sudib Kumar Mishra	CE	Non-IITK
41	Mr. Vedansh Pandey	Dr. Tushar Sikroria	ME	IITK
42	Mr. Yash Rai	Dr. Amar Nath Ray Chowdhury	CE	Non-IITK
43	Mr.Baivab Das	Dr. Shashank Shekhar	MSE	Non-IITK
44	Ms. Aishna Jain	Dr. Rajesh Ranjan	AE	Non-IITK
45	Ms. Diya Saraf	Dr. Dipin S.Pillai	CHE	IITK
46	Ms. Eeshwari Jeevan Sunkersett	Dr.Ashok Kumar	BSBE	IITK
47	Ms. Misha Kumari	Dr. Venkata Suresh Mothika	CHM	Non-IITK
48	Ms. Mounika Musugu	Dr. Subrahmanya Swamy Peruru	EE	Non-IITK
49	Ms. Mudita Jain	Dr.Rohit Budhiraja	EE	IITK
50	Ms. Nitanshi Bhardwaj	Dr. K M Sharika	CogSci	Non-IITK
51	Ms. Padmapriya S	Dr. Rajat Mittal	CSE	Non-IITK
52	Ms. Parul Singh	Dr. Anoop Singh	DoMS	Non-IITK
53	Ms. Ramyani Bakshi	Dr. Jonaki Sen	BSBE	Non-IITK
54	Ms. Samiya Khan	Dr. Raghavendra Singh	CHE	Non-IITK

55	Ms. Samya Raj	Dr. Dharmaraja Allimuthu	CHM	IITK
56	Ms. Srushti Bhasme	Dr. Amitabha Bandyopadhyay	BSBE	Non-IITK
57	Ms. Tripti Singh	Dr. Devpriya Kumar	CogSci	Non-IITK
58	Ms. Urmila Ghosh	Dr. Sabuj Kundu	CHM	IITK
59	Ms. Vani Mahajan	Dr. Sudeep Bhattacharjee	PHY	Non-IITK
60	Ms. Uditi Singhal	Dr. Prakash Chandra Mondal	CHM	Non-IITK

Participant from SAARC countries (Nepal)

S. No.	Name	Mentor Name	Mentor Dept	Category
1	Ms. Dibyashree Basu	Dr. BV Rathish Kumar	MTH	SAARC
2	Mr. Sheshraman Shrestha	Dr. G R Abhijith	CE	SAARC
3	Mr. Shubham Kumar Gupta	Dr. BV Rathish Kumar	MTH	SAARC

Project Funded Category (Support from Mentors):

Under this category the participants get financial support from their mentors, based on their overall performance. This year 17 participants received stipend from their respective mentors. The details of these participants are mentioned below;

S.No.	Name	Mentor name	Mentor Deptt	Category
1	Mr. Aniket Shinde	Dr. Vaibhav Arghode	AE	IITK
2	Mr. Atharv Sadashiv Mali	Dr. Priyanka Ghosh	CE	Non-IITK
3	Mr. Kshitij Bagga	Dr. N. P. Gurao	MSE	IITK
4	Mr. Kuldeep Singh	Dr. Sudipta Dubey	PHY	Non-IITK
5	Mr. Kushagra Goel	Dr. Vishal Govind Rao	CHM	Non-IITK
6	Mr. Manas Kumar	Dr. Shankar Prawesh	DoMS	IITK
7	Mr. Rakesh Yamjala	Dr. Amitangshu Pal	CSE	Non-IITK
8	Mr. Shashank Pillai	Dr. Shashank Shekhar	MSE	Non-IITK
9	Mr. Siddalingeshwar Patil	Dr. Pranav Joshi	ME	Non-IITK
10	Mr. Somnath Mahato	Dr. Thiruvancheril G. Gopakumar	CHM	IITK
11	Mr. Suryansh Dwivedi	Dr. R. Sankar	BSBE	IITK
12	Mr. Swapnil Sen	Dr. Arun K Saha	ME	Non-IITK
13	Ms. Ajjarapu Durga Swathignya	Dr. Chithra	EE	Non-IITK
14	Ms. Khushi Agarwal	Dr. Anoop Singh	DoMS	Non-IITK
15	Ms. Nidhi Gautam	Dr. Vishal Govind Rao	CHM	Non-IITK
16	Ms. Sakshi Shukla	Dr. Arunabh Meshram	MSE	Non-IITK

17	Ms. Shruti Jain	Dr. N. P. Gurao	MSE	Non-IITK

SURGE-2024 IITK PARTICIPANTS

S. No.	Name	Mentor Name	Mentor Dept	Tittle
1	Mr. Aaditya Raj Yadav	Dr. Rituraj	EE	Simulating MZI using MEEP
2	Mr. Aatif Hasan	Dr. Prashant Pathak	SPASE	Develop and Implement a SHWFS for a Celestron 11 Telescope
3	Mr. Aayush Jaiswal	Dr. Vipul Arora	EE	Melody Estimation at Scale with Active Learning
4	Mr. Aayush Singh	Dr. Srinivas Arigapudi	Eco Sci	Exploring Algorithmic Collusion by Q-Learning Models in Imperfectly Monitored Environments
5	Mr. Abhinav Kumar	Dr. Swagata Mukherjee	PHY	Understanding the effect of pile up in the general purpose hadron collider experiments.
6	Mr. Abhishek Maurya	Dr. Tushar Sandhan	EE	Clustering GPU for multinode training
7	Mr. Abhishek Sahu	Dr. Tushar Sandhan	EE	Clustering GPU for multinode training
8	Mr. Aditya Kumar Raj	Dr. Tushar Sandhan	EE	Machine Learning Driven P300 Signal Classification for Enhanced BCI Intent Recognition
9	Mr. Aditya Singh Chouhan	Dr. Joydeep Dutta	Eco Sci	Study on Ito's Integral and Ito's Calculus
10	Mr. Adwait Vilas Kadam	Dr. Tushar Sandhan	EE	Improve the detection of defects occurring during robot picking and dropping activities using ArmBench Dataset
11	Mr. Adwik Gupta	Dr. Vipul Arora	EE	Raga Classification Using Raga Classification
12	Mr. Ahmad Raza	Dr. Nitin Gupta	BSBE	Experimental Study of Oviposition Behavior of WildType and Transgenic Aedes Aegypti
13	Mr. Ajay Singh Panwar	Dr. Tushar Sandhan	EE	Automated Tumor Proportion Score Analysis
14	Mr. Akarsh Verma	Dr. Koteswar Rao J	EE	Complex-valued GAN
15	Mr. Akshit goyal	Dr. Muthukumar T	MTH	Conservation Laws
16	Mr. Alankrit Gupta	Dr. Sri Sivakumar	CHE	Development of Highly Selective Catalyst for the Alkylation of Aniline with Methanol to Synthesize Mono Methyl Aniline and Di Methyl Aniline
17	Mr. Aman Cheema	Dr. Apratim Kaviraj	PHY	Scattering in double delta well potentials using S Matrix Theory
18	Mr. Aman MISHRA	Dr. Tushar Sandhan	EE	Medical Image Segmentation using PyTorch

19	Mr. Anant Gauniyal	Dr. Salil Goel	CE	GNSS Processing and Data Handling
20	Mr. Anas Ali	Dr. Vishal Agarwal	CHE	Exploring Activity of Gas Phase CrCl2 for CH4 Pyrolysis with AI ML Transition State Detection
21	Mr. Aniket Shinde	Dr. Vaibhav Arghode	AE	Flammability Limits of Premixed Flames of Hot and Diluted Mixtures
22	Mr. Anil Kumar Kumawat	Dr. D. H. Dethe	CHM	Enantioselective total synthesis of Walsucochinoid M
23	Mr. ANU PAL	Dr. Subrata Sarkar	ME	Simulation of Flows and Particle Deposition Analysis in Healthy vs Asthma/COPD-affected Human Lung Airway.
24	Mr. Anubhav Tiwari	Dr. Santosh Nadimpalli	MTH	Algebraic Sets
25	Mr. Anuj Gargya	Dr. Sai P Pydi	BSBE	Computational Analysis of Lipidomics Data of Peritoneal and Bone Marrow Derived Macrophages
26	Mr. Aryan Satyaprakash	Dr. Neelanjan Datta	Eco Sci	Optimal monetary policy with signal extraction from Indian bond markets
27	Mr. Aseem Chandra Pathak	Dr. Amit Agarwal	PHY	Transport in quantum materials
28	Mr. Ashutosh Rabia	Dr. Tushar Sandhan	EE	ML driven P300 signal classification for enhanced BCI Intent Recognition
29	Mr. Ashwin Chaubey	Dr. Arjun Ramakrishnan	BSBE	EEG Source Derived Coupling Between rAI and dACC in Patch Foraging Task
30	Mr. Atharv Moghe	Dr. Koteswar Rao J	EE	Federated Learning for Foreground Detection
31	Mr. Atharva Singh	Dr. Arnab Hazra,Dr. Minerva Mukhopadhyay	MTH	parameter estimation using dnn
32	Mr. Bandaru Venkata Sritan	Dr. Tushar Sandhan	EE	Anti-Spoof fingerprint system using ML model
33	Mr. Bhavya Garg	Dr. Ashok Kumar	BSBE	Hyaluronic acid modified thermoresponsive latex particles for inflamation and targeted drug delivery
34	Mr. Chitresh Meena	Dr. Sanjiv Kumar	Eco Sci	Climate Shocks and Its Impact on Sovereign Bonds
35	Mr. Darshan	Dr. Chinmoy Kolay	CE	Developing Structural Analysis Kit
36	Mr. Debasis Mandal	Dr. Manas K Ghorai	CHM	Lewis Acid Catalyzed Dynamic Kinetic Resolution of Racemic N-Sulfonylaziridines with 1-phenyl-3-((phenylamino)methyl)-1H-pyrrole-2,5-dione to the Contruction of N-hetero-Compounds.
37	Mr. Devdhar Patil	Dr. Subrahmanya Swamy Peruru	EE	Applicaitons of Machine Learning in Recommendation Systems
38	Mr. Dhruv Budhedeo	Dr. Rakesh Kumar MTHpal	AE	Numerical Estimation of Shock Standoff Distance for Objects at High Altitude
39	Mr. Dhruv Rai	Dr. Sanjiv Kumar	Eco Sci	The Economic Consequences of Climate Change on Sovereign Debt
40	Mr. DIVYAM AGARWAL	Dr. Abhilash Patel	EE	Mobile Manipulator

41	Mr. Garv Gulati	Dr. Hiranya Sahoo	ES	Determining the best possible locations on Mars for Life to occur
42	Mr. GAUTAM KUMAR	Dr. Deepa M. Veedu	ES	Universal law for the Earthquake foreshock using Machine Learning
43	Mr. Harsh dixit	Dr. Somnath Bhowmick	MSE	Accelerated Prediction of Stacking Fault Energy in FCC Materials Using Machine Learning
44	Mr. Harsh Kumar Singh	Dr. Nilesh Badwe	MSE	Development of low temperature solder alloys.
45	Mr. Harsh Patel	Dr. Vishal Govind Rao	CHM	Inhibiting Phase Segregation in Cesium Lead Mixed-Halide Perovskite Nanocrystals
46	Mr. Harsh Shah	Dr. Abhishek	AE	Analysis on Vertical axis wind air turbine
47	Mr. Ishaan Gupta	Dr. Somesh K Mathur	Eco Sci	Assessing the Impact of Delhi Meerut Expressway on Regional Development in India Using DiD
48	Mr. JEFRIN JO W	Dr. Vipul Arora	EE	Language Agnostic Voice Search System
49	Mr. Jyotish Singha	Dr. Sanjiv Kumar	Eco Sci	Impact of climatic challenge as a financial risk on insurer, banking equity and stock markets.
50	Mr. Kalahastri Sai Ruthvik	Dr. Sanjiv Kumar	Eco Sci	Analysing Macroeconomic variables in the economy using the Vector autoregression(VAR) model
51	Mr. Kamal Sharma	Dr. Mrinmay Biswas	MTH	Moving Plane Method
52	Mr. Karunaya garg	Dr. Salil Goel	CE	Leveraging Inertial Sensors for Road Infrastructure Quality Assessment
53	Mr. Kaushal Jain	Dr. Akash Anand	MTH	NUMERICAL APPROXIMATION OF HIGHLY OSCILLATORY INTEGRALS
54	Mr. Keyansh vaish	Dr. Koteswar Rao J	EE	Co-Segmentation using Personalised Segment Anything Model(PerSAM)
55	Mr. Kinshuk Siyol	Dr. Ragvi Garg	Eco Sci	How people make decisions over others money
56	Mr. Kollamoram Karthik	Dr. Koteswar Rao J	EE	FCCNs for facial Keypoints detection
57	Mr. Kshitij Bagga	Dr. N P Gurao	MSE	Accelerated crystal plasticity simulations for deformation behaviour of materials using machine learning
58	Mr. Kuldeep Sandip Thakare	Dr. Koteswar Rao J	EE	Federated Learning for Foreground Detection
59	Mr. Kuldeepak Dhar Dwivedi	Dr. Arnab Hazra,Dr. Minerva Mukhopadhyay	MTH	Parameter Estimation Using Neural Networks
60	Mr. Kundan Kumar	Dr. Adithya Vadapalli	CSE	MPC Protocol for Range Queries on Distributed Segment Trees
61	Mr. KUSHAGRA TIWARI	Dr. Akash Choudhary	CHE	Numerical analysis of diffusiophoretic motion
62	Mr. Likith Sai Jonna	Dr. Rituraj	EE	Accelerating Unitary Matrix Multiplication using Multiple Waveguide Interference in a Modified MZI Setup
63	Mr. Manas Ashish Sontakke	Dr. Harshwardhan H. Katkar	CHE	Data-Acquisition and Data-Logging for Bio-Reactor Modelling

64	Mr. manas Kumar	Dr. Shankar Prawesh	DoMS	Large Scale Crowd Simulation ML and Computer Vision
65	Mr. Mantavya Upadhyay	Dr. Rajiv Jindal	SEE	Short Term Electricity Demand Forecasting: Seq2Seq Encoder Decoder Model with LSTM Units
66	Mr. Mayank Agrawal	Dr. Shakti S. Gupta	ME	Human Following Feature in Quadruped
67	Mr. Mayur Agrawal	Dr. Sanjiv Kumar	Eco Sci	Exploring the Efficacy of the Betting Against Beta Strategy in the Indian Market: A Comprehensive Analysis Using NIFTY 50 Stocks
68	Mr. Mitesh Gulpariya	Dr. Harshal Rajan Mulay	DoMS	Analysis of Liquidity in Banking Sector in India
69	Mr. Mohammed Junaid Ahmed	Dr. Navrose	AE	Large Scale Flow Computations using GPU-Accelerated Spectral Element Navier-Stokes Solver
70	Mr. Mohd Shaikh Sabir	Dr Rohit Medwal	PHY	Spin wave memory and interference for neuromorphic computing
71	Mr. Mrigank Kumar	Dr. Vivek Verma	MSE	Enhancing the physical properties of the PVA film by crosslinking method
72	Mr. Naitik Harbhajanka	Dr. Sanjiv Kumar	Eco Sci	Early Warning System
73	Mr. Naman sharma	Dr. Koteswar Rao J	EE	ML-Based Approaches for the Identification and Modeling of Neurological disorders: A Comprehensive Review
74	Mr. Navya Nihal	Dr. Sanjiv Kumar	Eco Sci	ARIMA LSTM Model to predict Volatility of Stock Market using Random Forest Technique
75	Mr. Nikhil Gupta	Dr. Shakti S. Gupta	ME	Industrial Inspection using Cameras
76	Mr. Nitansh Gupta	Dr. Salil Goel	CE	VLP-16 Sensor Simulation using ROS
77	Mr. omkar prusty	Dr. T. Tripathy	EE	localization using motion capture system
78	Mr. Paaritosh Jain	Dr. Prashant Pathak	SPASE	Estimating Adaptive Optics Error Budget for a 2-Meter Himalayan Chandra Telescope
79	Mr. prakhar shrivastav	Dr. Koteswar Rao J	EE	ML-Based Approaches for the Identification and Modeling of Neurological disorders: A Comprehensive Review
80	Mr. Prakhar Tripathi	Dr. Kartick C Sarkar	SPASE	Investigating the Late Evolution of Supernova Remnants
81	Mr. Pranay Chaudhari	Dr.Subrahmanyam Saderla	AE	Development and automation of fixed wing UAV
82	Mr. Pranay Saxena	Dr. Salil Goel	CE	LiDAR (VLP-16) simulation and Automation in ROS
83	Mr. Pranjul Shikhar Verma	Dr. Gururaj Mirle Vishwanath	EE	Artificial Intelligence Based Cost Optimization in Indian Railways for Minimizing Overall Carbon Emissions
84	Mr. Raghav Madan	Dr. Subhajit Roy	CSE	PINN Application in Wave Simulation
85	Mr. Rajvardhan Manish Singhee	Dr. Deepa M. Veedu	ES	Decoding Chaos using Numerical Simulations and Machine Learning
86	Mr. Rangan Pal	Dr.Ajay Vikram Singh	AE	Effect of sensitization in detonation wave structure

87	Mr. Ranjan Mali	Dr. Manas K Ghorai	CHM	Cu(I) catalyzed dynamic kinetic resolution of racemic aziridines for synthesis of aza-heterocycles
88	Mr. Ritesh Sanjay Baviskar	Dr. Ashutosh Modi	CSE	Multi-Modal contextualised emotion prediction
89	Mr. Ritik Vipul Shah	Dr.Rohit Budhiraja	EE	Modifying L1 Controller in 5G network for mutliple PUCCH formats
90	Mr. Riyanshu Kumar	Dr. S R Sahoo	EE	Navigating Robot Using Voice Commands
91	Mr. Rohan Singh	Dr. Supratik Banerjee	PHY	Multi-spacecraft data analysis for Solar wind turbulence
92	Mr. Rohit Raj	Dr. Deepa M. Veedu	ES	Exploring Shear Slip on Faults to Predict Time Remaining until the Next Laboratory Earthquake
93	Mr. Rohit Verma	Dr. Rituraj	EE	Photonic Accelerator for Matrix Vector Multiplication
94	Mr. Ruthvik Jagan Shiva Sai Tunuguntla	Dr. Subhajit Roy	CSE	Quantum Circuit Simulation with SAT Solvers
95	Mr. Samaresh Barman	Dr. D. H. Dethe	CHM	Total Synthesis of Radarin A
96	Mr. Samyak Jain	Dr. Subrahmanya Swamy Peruru	EE	Application of MCMC to Wireless Signals
97	Mr. Sanchit Sharma	Dr. Apratim Kaviraj	PHY	S Matrix analysis of the bound states in square well potentials
98	Mr. SANTOSH KUMAR	Dr. Madhav Ranganathan	CHM	Determination of Equilibrium Crystal Shape of ZnO using DFT Calculations
99	Mr. Sanyam Shivhare	Dr. Sanjiv Kumar	Eco Sci	Inflation Prediction in India, Machine Learning and FX Reserves and GSCPI Integration for Enhanced Forecasting
100	Mr. SARASWAT	Dr. Subrata Sarkar	ME	Drag reduction through biomimetic fish scale arrays
101	Mr. Shantanu Bairagi	Dr. Akash Anand	MTH	Inverse scattering solution
102	Mr. Shivang Agarwal	Dr. Tushar Sandhan	EE	Simulation and Edge Development for Autonomous Nano Drone Navigation
103	Mr. Shovan Barui	Dr. Ashis K Patra	CHM	A Simple Story on Bis(tridentate)ruthenium(II) Polypyridyl Complexes
104	Mr. Sofiyaan Sameer	Dr. Tushar Sandhan	EE	Visual Perception of Nano Drones
105	Mr. Somnath Mahato	Dr. Thiruvancheril G. Gopakumar	CHM	Understanding the molecular self assembly on surface
106	Mr. Sooryansh Malani	Dr. Amar Kumar Behera	Design	Design and Development of a Functionally Resilient Multi-Robots System
107	Mr. SOUMEN MISHRA	Dr. Gopal Hazra	PHY	Atmospheric Escape from Hot Jupiter
108	Mr. Soumyadeb Saha	Dr. Koteswar Rao J	EE	Automatic Cosegmentation using Segment Anything Model
109	Mr. Srijan Anand	Dr. Koteswar Rao J	EE	Semantic Segmentation using FCCNs : Fully Complex-valued Convolutional Networks
110	Mr. Sudharsan K	Dr. Avinash Kumar Agarwal	ME	Rate of injection measurement

111	Mr. Suneet Kumar Maharana	Dr. Koushik Pal	PHY	Development of Machine-learning Models to Predict Thermal Conductivity of Materials Utilizing Crystal Structures and COHP Energies
112	Mr. Suryansh Dwivedi	Dr. R. Sankar	BSBE	Finding bents and kinks in protein structure through machine learning algorithm.
113	Mr. Tarun Sridhar	Dr. Harshal Rajan Mulay	DoMS	Analysis of NPAs in the Banking Sector in India
114	Mr. Thejas Kasilingam	Dr. Somnath Bhowmick	MSE	Deep Generative Models for Predicting Microstructures in Novel Compositions and Temporal Progressions
115	Mr. Thogiti Amar Sathwik	Dr. Abhishek Gupta	EE	Optimal design of a RIS-aided 6G THz network
116	Mr. Tinku Pratap	Dr. D. H. Dethe	CHM	Asymmetric total synthesis of triterpenoid malabaricane
117	Mr. Tushar Sahu	Dr. Subhajit Roy	CSE	Robust implementation of Ball-Larus Profiler in LLVM compiler framework
118	Mr. Ujjawal	Dr. S R Sahoo	EE	NA
119	Mr. Ujjwal Bisaria	Dr. Tushar Sandhan	EE	Machine Learning-Based Fruit Ripening Prediction: Assessing Ripeness Levels Over Time
120	Mr. Umang Garg	Dr. Akash Choudhary	CHE	Hydrodynamics of linked model microswimmers
121	Mr. Utkarsh Singhal	Dr. Sanjiv Kumar	Eco Sci	Using machine learning to predict clean energy stock prices: How important are market volatility and economic policy uncertainty?
122	Mr. V Nikhil	Dr. Subrahmanya Swamy Peruru	EE	Application of Graph Models to Wireless Signals
123	Mr. Varun Gupta	Dr. Salil Goel	CE	Traffic Scenario Analysis at IITK Campus using LiDAR Technology.
124	Mr. vedansh Pandey	Dr. Tushar Sikroria	ME	Development of an in house python -based image processing tool for Particle Image Velocimetry (PIV)
125	Mr. Vishesh Bhardwaj	Dr. Ketan Rajawat	EE	Comm. Aware multi-UAV Coverage Path Planning
126	Mr. VIVEK KUMAR	Dr. Pooja Singla	MTH	Classical groups and Geometric algebra
127	Mr. Yash Tomar	Dr. Somesh K Mathur	Eco Sci	Quantifying the Impact of the Golden Quadrilateral highway on firm level performances
128	Mr. Yash Verma	Dr. Abhishek	AE	AUTONOMOUS DRONE LANDING ON MOVING SHIP
129	Ms. Aaditi Agrawal	Dr. Vipul Arora	EE	Voice Search System
130	Ms. Aafreen Malik	Dr. Pooja Singla	MTH	Finite Group Theory
131	Ms. Akanksha Tiwari	Dr. Koteswar Rao J	EE	ML based Roads condition classification and Image Generation for Modified cleaned Roads
132	Ms. Akshita Agarwal	Dr. Prashant Pathak	SPASE	A signal to noise estimator for exoplanet characterization using Cubesats

133	Ms. Anishya Maurya	Dr. Shankar Prawesh	DoMS	Deep Learning for Text and Image Classification
134	Ms. ARUSHI GUPTA	Dr. Abhishek	AE	Development of Visualization Environment for UAV Flight Simulator
135	Ms. Ayushi Mehta	Dr. Koteswar Rao J	EE	Semantic Segmentation using FCCNs : Fully Complex-valued Convolutional Networks
136	Ms. DEVARAYA AKHILA	Dr. Amar Kumar Behera	Design	Resilience in Multi-Robot Systems
137	Ms. Dharvi Singhal	Dr. Abhilash Patel	EE	Mobile Manipulator
138	Ms. Divya Choudhary	Dr. Pritam Chakraborty	AE	Two-Scale Thermo-Mechanical Analysis of Integrated Thermal Protection System Panels for Reusable Launch Vehicles
139	Ms. Divyanshi Sharma	Dr. Sanjiv Kumar	Eco Sci	An ARIMA-LSTM model for predicting volatile Stock return price series with random forest technique
140	Ms. DIYA SARAF	Dr. Dipin S.Pillai	CHE	Reduced order model for wetting of axisymmetric droplet
141	Ms. Eeshwari Jeevan Sunkersett	Dr.Ashok Kumar	BSBE	Development Of Polyurethane And Chitosan Based Porous Cryogels Loaded With Oxygen Generating Microparticles For Skin Tissue Engineering
142	Ms. Gajula Geethanjali	Dr.Subrahmanyam Saderla	AE	Object Detection for a UAV Simulator
143	Ms. Gopika Sivani K S	Dr. Abhishek	AE	Development of Novel Low-Noise Propellers for UAVs
144	Ms. Harshika Agrawal	Dr. Rituraj	EE	Design and Simulation of Mach-Zehnder Interferometers Using COMSO
145	Ms. Harshita Chhuttani	Dr. Ashok De	AE	Investigation of Rotor Wing Using Vortex Particle Method
146	Ms. Ishi Jain	Dr. Shankar Prawesh	DoMS	Personalized Recommendation Using Discrete Choice Modelling
147	Ms. Keerthana D Reddy	Dr.Subrahmanyam Saderla	AE	Setup for Performance of Battery pack at high altitudes
148	Ms. Keerthika Kadagala	Dr.Raghvendra Kumar Chaudhary	EE	Low profile, Wide bandwidth Flexible Monopole Antenna for Wireless Communications
149	Ms. Khushi	Dr. PK Panigrahi	ME	Plasma Actuator Design and Implementation for Improving Wind Turbine Performance
150	Ms. Khushi Sahu	Dr. Tushar Sandhan	EE	Object detection and segmentation for robotic grasping
151	Ms. Lali	Dr. Chinmoy Kolay	CE	Optimum location of an Outrigger in a Tall building
152	Ms. Madhu Varshini N	Dr. Tushar Sandhan	EE	Algal cell segmentation, precise background detection
153	Ms. Manvi Bengani	Dr. S R Sahoo	EE	SLAM Survey
154	Ms. Manvi Verma	Dr. Abhilash Patel	EE	Mobile Manipulator Development for Pick and Place for Assisting in Surgery

155	Ms. Mudita Jain	Dr.Rohit Budhiraja	EE	LVI based Channel Estimation and Data Detection for Massive MIMO Systems with One Bit ADCs
156	Ms. N Medha Reddy	Dr. Amar Kumar Behera	Design	Resilience in Multi-Robot Systems
157	Ms. Naina	Dr. Tushar Sandhan	EE	Antispoofing model using ML
158	Ms. Nandini Bhattad	Dr. Shankar Prawesh	DoMS	Airline Itenary Choice Modeling Using Machine Learning
159	Ms. Nandini Vaid	Dr. Soumya Ranjan Sahoo	EE	Design and control of a 5 DOF manipulator
160	Ms. Neelam Rathore	Dr. Ritika Gautam	CHM	Ruthenium(II) Complexes in Antimicrobial Photodynamic Therapy (aPDT): A Strategic Approach to Overcoming Antibiotic Resistance
161	Ms. Norah Srivastava	Dr. Ketan Rajawat	EE	Communication aware Coverage Path Planning
162	Ms. Pranshu jain	Dr. Ritika Gautam	CHM	Ir(III) Complexes as Effective PDT Agents: Harnessing ROS for Protein Inactivation for Anticancer and Antibacterial Application
163	Ms. Radhika Agrawal	Dr. Partha Narayan Mishra	CE	TDR and VNA for measurement of soil state variables (water content and density)
164	Ms. Riddhima Vijayvargiya	Dr. Tushar Sandhan	EE	Anti-Spoof fingerprint system using ML
165	Ms. Ritika Minz	Dr. Ramesh Ramapanicker	CHM	Synthesis of Side Chain Alkynyl Amino Acid
166	Ms. Ritul	Dr. Vipul Arora	EE	Optimizing Speaker Diarization: Advances in Segmentation and Clustering Techniques
167	Ms. Riya Gupta	Dr. Balaji Devaraju	CE	Modelling the non-gravitational forces affecting LEO-Satellites
168	Ms. Riya Sanket Kashive	Dr. Chinmoy Kolay	CE	Analysis of Load Limiting Devices in Suspension Towers
169	Ms. Rudhraa R	Dr. Sruti Srinivasa Ragavan	CSE	Virtual Exhibition Platform
170	Ms. Rupali Srivastava	Dr. Ushashi Roy	ME	Large plastic deformation under impact
171	Ms. Saloni Mittal	Dr. Salil Goel	CE	Web Hosting Traffic Scenario Analysis Using LiDAR Data in IITK Campus
172	Ms. Samya Raj	Dr. Dharmaraja Allimuthu	CHM	Synthesis and evaluation of small molecule scaffolds for kinase modulation.
173	Ms. Sanya	Dr. Tushar Sandhan	EE	Anti-Spoof fingerprint system using ML model
174	Ms. Savi	Dr. Koushik Pal	PHY	Development of Advanced Machine-learning Models based on Crystal Graph Convolutional Neural Network for Accurate Materials Property Prediction
175	Ms. Shalini Kurva	Dr. Amar Kumar Behera	Design	Resilience in Multi-Robot System
176	Ms. Sharah P S	Dr. Vipul Arora	EE	Music Ornamentation Labeling in Prasar Bharati Dataset
177	Ms. Shivani Gupta	Dr. Shankar Prawesh	DoMS	Geospatial Visualization of Water Samples and Water Quality Indexes

178	Ms. Shreya Roy	Dr. Tushar Sandhan	EE	Portable seed health detecting device
179	Ms. Shreya Shukla	Dr. Amar Agarwal	ES	Determining the maximum and minimum impedance in a system comprising blocks arranged in series
180	Ms. Simran Mohanty	Dr. Abhijit Kushari	AE	structural analysis of a typical military jet engine intake
181	Ms. Sirinxa Xavier	Dr. Tushar Sandhan	EE	Autonomous Navigation using Crazyflie 2.1
182	Ms. Sneha Barman	Dr. Tushar Sandhan	EE	Automated Lung Morbidity Detection from Non-Invasive Images using CNNs
183	Ms. Sudarshana Karmakar	Dr. Nisanth N. Nair	CHM	Analysis of High-Dimensional Free Energy Landscapes Using Neural Network
184	Ms. Tejasri Saladi	Dr. Tushar Sandhan	EE	Antispoofing of fingerprint using ML techniques
185	Ms. Thallapally Meghana	Dr. Salil Goel	CE	Experimental Evaluation of LiDAR Odometry Mapping
186	Ms. Urmila Ghosh	Dr. Sabuj Kundu	CHM	Ni(II) Catalyzed Transfer Hydrogenation of Alkynes
187	Ms. Vishakha Goyal	Dr. Tushar Sandhan	EE	Distribution Analysis of Mitochondria

SURGE-2024 NON-IITK PARTICIPANTS

S. No.	Name	Mentor Name	Mentor Dept	Tittle
1	Mr. Aaryan Siwach	Dr. Sarvesh Mishra	ME	Development of conformal tool with internal cooling channel for milling of complex-shaped components
2	Mr. Abdul Rahman khan	Dr Arvind Kumar	ME	Functionally graded structures for implants using ML
3	Mr. Abhinav Kumar	Dr. Hamim Zafar	BSBE	Computational Analysis of Single Cell Cervical Cancer Datasets.
4	Mr. Adarsh Sahu	Dr. Kantesh Balani	MSE	Leveraging Machine Learning for the determination of cerium and cobalt content in Bioglass scaffold for improved angiogenesis and mechanical properties
5	Mr. Akeel Hussain Bhat	Dr. Rajesh Sathiyamoorthy	CE	Numerical Analysis of Stone Columns for Liquefaction Mitigation Using Plaxis 3D
6	Mr. Amakcham Sarthi Singh	Dr. Sapam Ranjita Chanu	PHY	Implementation of Lock in Amplifier on FPGA
7	Mr. Aman Kapoor	Dr. Vipul Arora	EE	Efficient Method for sampling from a Probability Distributed Functions
8	Mr. Amandeep Saha	Dr. Tanmoy Maiti	MSE	Data-driven Approach to Predict the Thermoelectric Properties of Oxide Perovskites
9	Mr. Anirudh Gupta	Dr. Arjun Ramakrishnan	BSBE	EEG analysis: Techniques, Pre-processing and Basic/Preliminary Insights

10	Mr. Anmol Maini	Dr. Prabodh Bajpai	SEE	Wind and Solar Power Forecasting with Load Forecasting using advanced Machine Learning techniques.
11	Mr. Anshuman Sahoo	Dr. Pragathi Balasubramani	CSE	EEG Signal Analysis for Harmful Brain Disorder Classification using Non Linear Time Series Features and Deep Learning
12	Mr. Antony Raja Arulsekar	Dr. Pradeep Moise	AE	Simulations of low-frequency oscillations on airfoils in the incompressible regime
13	Mr. Arghya Das	Dr. Ashutosh Modi	CSE	Autonomous landing of an unmanned aerial vehicle on a slow moving platform
14	Mr. ARPIT PRASAD	Dr. R Vijaya	PHY	Design and demonstration of Optical Amplifiers
15	Mr. Aryan Gupta	Dr. Tushar Sandhan	EE	Detection of Neuromuscular Disorder using EMG and GSR Sensor
16	Mr. Aryan Kushan	Dr. Pradeep Moise	AE	Confinement Effects on Vortex Breakdown in Swirling Jets
17	Mr. Ashish Yadav	Dr. Tushar Sandhan	EE	Detection of Neuromuscular Disorder using EMG and GSR Sensor
18	Mr. Atharv Sadashiv Mali	Dr. Priyanka Ghosh	CE	Numerical investigations on attenuation response of machine foundations under vertical excitation.
19	Mr. Ayan Kumar De	Dr. Sabuj Kundu	CHM	Visible light mediated C-P bond formation
20	Mr. Ayan Prakash	Dr. Nikunj Arunkumar Bhagat	BSBE	Decoding Error-related Potentials from EEG Signals during Electrically Stimulated Upper-limb Movements
21	Mr. ayush Kumar Sinha	Dr. J Ram Kumar	ME	Novel mechanisms for handling intra-oral lesions
22	Mr. Ayush Mishra	Dr. Siddhartha Panda	CHE	Sustainability assessment of techniques for water quality monitoring
23	Mr. Baivab Das	Dr. Shashank Shekhar	MSE	Development of Asymmetric CCRP Dies to Enhance the Mechanical Properties of Pure Copper Sheets
24	Mr. BANDI JAYASATYADURGARAO	Dr. Bharat Lohani	CE	Enhancing Tree Species Classification Using LiDAR and Satellite Imagery with Random Forest Modelling
25	Mr. Biswarup Mahato	Dr. Raju Kumar Gupta	CHE	Photocatalytic CO? Reduction Over Bismuth Oxyhalide (BiOX, where X = Cl, Br, I) Catalysts
26	Mr. Bolla Sahu Samrat	Dr. Umesh Madanan	ME	Parametric Study of a Thermosyphon Integrated Forward Evaporator-Based Single-Stage Desalination Device
27	Mr. Chandramouli Bhattacharya	Dr. Abhilash Patel	EE	Study on the Robustness of Biomolecular Oscillators
28	Mr. Debjit Das	Dr. Nisanth N Nair	CHM	Rate Calculation for Enhanced Sampling Simulation
29	Mr. Devashish Gupta	Dr. Sarang Ingole	MSE	Optimization and Performance Analysis of CZTS-Based Solar Cells Using SCAPS-1D Simulation
30	Mr. DIVYANSH CHAWLA	Dr. Sruti Srinivasa Ragavan	CSE	A Comparative Analysis and Implementation of Virtual Exhibition Platforms Using ReactJS and Vite

31	Mr. Gujjati Sathvik	Dr. Ashoke De	AE	Influence of Injector Geometry and back pressures on Rotating Detonating Engine and Combustion Instabilities generated in an integrated Linear Aerospike Engine Setup
32	Mr. Harshit Kumar	Dr. Abhishek	AE	UAV Gust Wall System
33	Mr. Harshvardhan Ruikhedkar	Dr. Arun K. Perumal	AE	Drag Reduction in Automobiles
34	Mr. hemansh Shridhar	Dr. Tushar Sandhan	EE	Detecting Nasopharyngeal anomalies in pediatric population using Artificial Intelligence
35	Mr. Isshaan Singh	Dr. Hamim Zafar	CSE	Integrative Multi-Omics Approach for Generating Protein Expression Profiles from Spatial Transcriptomics Data
36	Mr. Jayesh Sanjay Damakale	Dr Arvind Kumar	ME	Post processing of additively manufactured Titanium alloys
37	Mr. Jeevansh Yadav	Dr. Rakesh Kumar	AE	Comparing cfd analysis of flow around cylinder using Ideal Gas Model and Real Gas Aungier Redlich Kwong Model in Ansys Fluent.
38	Mr. Kartik Sahu	Dr. Satyadev Nandakumar	CSE	Interactive Command-Line Tool integrated with a Type-Safe Web Server
39	Mr. Kavin Kabilan	Dr. Arun K Saha	ME	Numerical study on mixed convective flow and heat transfer past a square cylinder at incidence
40	Mr. Kondareddy mourya	Dr. P K Panigrahi	ME	Effects of eccentricity on forced convection and phase change material based hybrid battery thermal management system
41	Mr. Krishan Vaibhav	Dr. Nagaditya Poluri	EE	Beamforming network
42	Mr. KULDEEP SINGH	Dr. Sudipta Dubey	PHY	Interfacing of Measurement Equipment
43	Mr. Kushagra Goel	Dr. Vishal Govind Rao	CHM	Modulating FRET Orientation: The Role of Isothiocyanate Groups on CsPbBr3-Rhodamine Interactions
44	Mr. Malhar Date	Dr. Tanmoy Maiti	MSE	Synthesis and Characterisation of Novel High Entropy Thermoelectric Oxides
45	Mr. Manish Prajapati	Dr.Abhishek Gupta	EE	Determining the distribution of mitochondria in cells via microscopic images.
46	Mr. Mohak Khetan	Dr. Amey Karkare	CSE	Performance analysis of the data collected from the microgrid setup as part of the UI ASSIST project
47	Mr. MOHD RAVISH	Dr. Dipak Kumar Giri	AE	Vibration damping of fast rotating discs for an Electrodynamic Suspension System
48	Mr. Naman Labhsetwar	Dr. Amey Karkare	CSE	Solar Energy Generation Prediction with Weather Correlation Using Machine Learning
49	Mr. NAMAN SINGH	Dr. Bharat Lohani	CE	Creating virtual simulations for real-world driving scenarios.

50	Mr. nAVEEN KUMAR RAGHAV	Dr. Niraj Mohan Chawake	MSE	Elevated-Temperature Creep Deformation of Additive Manufactured SS-316L Steel
51	Mr. Omkar Rajendra Lunge	Dr. Ashish Garg	SEE	Extracting Device Parameters of Perovskite Solar Cells Using Electrical Characterization Techniques
52	Mr. Parichay Gupta	Dr Arvind Kumar	ME	Investigation of Evaporation by Photomolecular Effect
53	Mr. Pathikreet Chowdhury	Dr. Vipul Arora	EE	Leveraging Controllable Neural Symbolic Regression for Equation Discovery from Data
54	Mr. Pervez Shaik Mohammed	Dr. Tushar Sandhan	EE	Mental Stress Quantfcaton using ECG signals and relieving it through Generatve Music
55	Mr. Piyush yadav	Dr. Bipin Kumar Gupta	CE	Finite Element Analysis of Axially Loaded Pile through Abaqus
56	Mr. Praharsh Tiwari	Dr. Mohammed Ibrahim Sugarno	AE	Experiment Design to Study the Break Up and Atomisation of Droplets in Supersonic Flows
57	Mr. Prakhar Srivastava	Dr. Amit Verma	EE	Ohmic contacts formation with beta Ga2O3 through Laser annealing
58	Mr. PRANAV KUMAR A R	Dr. Sachin Y. Shinde	ME	Designing an Experimental Setup for the d. Analysis of Hydrodynamic Forces on Flexible Flaps Due to Combined Pitching and Heaving Motion and Post-Process Analysis for Pure Pitching Motion.
59	Mr. Pranav Naveenkumar Karkera	Dr. Rakesh Kumar	AE	CFD Modelling of High Speed Flows
60	Mr. Pratik Chetan Kubal	Dr. Dipak Kumar Giri	AE	Slip Compensated Control for Planetary Rover
61	Mr. Pratyush Kumar Mohanty	Dr. V Shankar	CHE	Linear Stability analysis of the viscoelastic Taylor-Couette flow in the finite gap limit using the FENE-P model
62	Mr. PUSHPENDER KUMAR SINGH	Dr. Harshwardhan H Katkar	CHE	Free energy estimation of a star polymer translocating through a nanopore using metadynamics
63	Mr. Raghav Anand	Dr. Venkata Suresh Mothika	CHM	Thiazolo[5,4-d]thiazole Covalent Organic Frameworks (COF): Synthesis and Prospective Applications
64	Mr. Rahul Rajwar	Dr. Raju Kumar Gupta	CHE	Conversion of Sugarcane Bagasse into Activated Hydrochar
65	Mr. rAJ GAURAV	Dr. Devpriya Kumar	CSE	Improvement of Sense of Agency During Upper-Limb Movement for Motor Rehabilitation Using Virtual Reality
66	Mr. Rakesh Yamjala	Dr. Amitangshu Pal	CSE	Human Actions Detection based on Logical Analysis using Yolo model
67	Mr. Ritayan Mukherjee	Dr. D Chaitanya Kumar Rao	AE	Building Microscopic Pringles with Evaporating Cellulose Nanocrystal Droplets
68	Mr. Rohan Chandra	Dr. Basker Sundararaju	CHM	Synthesis of Chiral N,O Ligands and Its Catalytic Potential
69	Mr. Rupesh Singh	Dr. S R Sahoo	EE	Study of Event Triggered Based Strategy for Control of DC Microgrids

70	Mr. Sankha Subhra Chakraborty	Dr. Amit Kuber	MTH	Topics in Homological Algebra
71	Mr. Sattam Roy	Dr. Krishanu Biswas	MSE	Synthesis and Characterization of Ti0.33Zr0.33Hf0.33N (High entropy Nitrides) via chemical route
72	Mr. Shashank Pillai	Dr. Shashank Shekhar	MSE	A study on the corrosion behaviour of epoxy based organic coating incorporated with micaceous iron oxide and silicon dioxide nanocomposite
73	Mr. Shivansh Chadha	Dr. Abhishek	AE	Design and Development of 4-DOF Enhanced Kinematic Robotic Platform
74	Mr. Shubhranshu Srivastava	Dr. Dipak Kumar Giri	AE	Implementation, testing, and validation of control systems for an in-house spacecraft simulator testbed
75	Mr. Siddalingeshwar S Patil	Dr. Pranav Joshi	ME	Pressure Signal Triggering in PSV
76	Mr. Siddharth Mishra	Dr. Niraj Sinha	ME	Analysis, Application and Characterization of Additively manufactured HDPE/MWCNT nanocomposite.
77	Mr. Siddharth Mohanty	Dr. Kantesh Balani	MSE	Effect of Graphene Nanoplatelets and Zinc Oxide reinforcements on Ultrahigh Molecular Weight Polyethylene for Biomedical Applications
78	Mr. Sidharth Kumar Das	Dr. Manas Khan	PHY	Dynamics of Active Brownian Particles in Media with Varying Viscosity, Effects on Persistence Time and Particle Behavior
79	Mr. Soumo Roy	Dr. Tushar Sandhan	EE	Efficient Heavy Object Lifting via Human Robot Imitation Learning and Advanced Sensing
80	Mr. Soumya Banerjee	Dr. Rahul Sarkar	MSE	Effect of gangue particles (alumina) on the reduction kinetics of Iron ore using hydrogen
81	Mr. Subhasish Das	Dr. J Ram Kumar	ME	Garbage Compressing Dustbin & Club-foot Braces
82	Mr. Sundresh N	Dr. Arnab Samanta	AE	Control of Boundary layer in a Flat plate using periodic blowing and suction.
83	Mr. Swapnil Sen	Dr. Arun K Saha	ME	Kinetic energy budget in the flow past a two dimensional inclined square cylinder
84	Mr. Tanush Reddy Vaka	Dr. Sharvari N. Ghosh	SPASE	Modelling spherical evolution of cosmological density and velocity fields in f(R) (modified gravity) accounting for the chameleon mechanism.
85	Mr. Tirupati dhidhi	Dr. Krishanu Biswas	MSE	The effect of silicon addition on the mechanical properties of equiatomic Fe-Cr-Ni medium entropy alloy
86	Mr. Tushir sahu	Dr. Tushar Sandhan	EE	Unsupervised Synergistic Depth Estimation via Double Decoder CNN for Endoscopic Images
87	Mr. Ujjwal Sahu	Dr. Sarang Ingole	MSE	Study on a new design for piezoresistive material based motion sensor

88	Mr. Usaid Riyaz	Dr. Sudib Kumar Mishra	CE	Static Analysis of Tehri Dam Intake Structure
89	Mr. Vibhav Baba	Dr. Amey Karkare	CSE	Vulnerability Analysis for Microgrid Testbed
90	Mr. Vishwarup De	Dr. Amar Kumar Behera	Design	Design and Development of an Interactive Interface for Manufacturing of Plastic Bottles through the Product Life-Cycle
91	Mr. Yash Rai	Dr. Amar Nath Ray Chowdhury	CE	Characterization of PU Foam and numerical modelling of sandwich CFS composite beam
92	Ms. Adri Katyayan	Dr. Amey Karkare	CSE	Consumer Mobile Application monitoring as a part of Smart City Pilot Project
93	Ms. AISHNA jAIN	Dr. Rajesh Ranjan	AE	Computations and Analysis of flow over a high-speed low-pressure turbine blade
94	Ms. Ajjarapu Durga Swathignya	Dr. Chithra	EE	Analog VLSI
95	Ms. Anika Govil	Dr. Rajesh Srivastava, Dr. Saumyen Guha, Dr. Shivam Tripathi	CE	Bridge Modelling
96	Ms. ANUPRABHA DUTTA	Dr. Shilpi Gupta	EE	Design Of Photonic Crystal Cavity
97	Ms. Anushka Yamini	Dr. Bushra Ateeq	BSBE	Cancer hallmarks and cell-based assays to understand the oncogenic potential
98	Ms. Ashwini Kulkarni	Dr. Prashant Pathak	SPASE	High-Contrast Imaging for Exoplanet Detection Using Advanced Image Processing Techniques
99	Ms. DIYALA DEY	Dr. Krishanu Biswas	MSE	Effect of Nb and V addition on microstructural evolution and mechanical properties of (TiHfZr)96-xAlx Medium Entropy Alloy
100	Ms. Gaurangi Gupta	Dr. Amey Karkare	CSE	Web Monitoring Application for Distributed Energy Resources (DERs)
101	Ms. Ishita Singh	Dr. Rohit Budhiraja	EE	Enhancing 5G Network Efficiency: Mimicking the MAC Layer for nFAPI Interface
102	Ms. Khushi Agarwal	Dr. Anoop Singh	DoMS	Keyword Extraction from docs
103	Ms. Mayukhi Paul	Dr. Hamim Zafar	CSE	Mosaic Integration of Single Cell Multiomic Data Using a Modified Variational Autoencoder
104	Ms. Minakshi Uniyal	Dr. Somnath Bhowmick	MSE	Study of microstructure modelling by phase field modelling using CALPHAD
105	Ms. Misha kumari	Dr. Venkata Suresh Mothika	CHM	Synthesis and characterization of persistent pie extended blatter radical conjugate
106	Ms. Mounika Musugu	Dr. Subrahmanya Swamy Peruru	EE	Intra WebShare
107	Ms. nidhi gautam	Dr. Vishal Govind Rao	CHM	Enhancing Photocatalytic Amine Oxidation via Ferrocene-Modified Lead Halide Perovskite Nanocrystals

108	Ms. Nitanshi Bhardwaj	Dr. K M Sharika	CSE	Understanding the role of low level visual features in emotional perception
109	Ms. Padmapriya S	Dr. Rajat Mittal	CSE	Separation between sensitivity and block sensitivity
110	Ms. Parul Singh	Dr. Anoop Singh	DoMS	Automation of Regulatory updates for the Indian Power Sector
111	Ms. RAMYANI BAKSHI	Dr. Jonaki Sen	BSBE	Mice model for understanding role of Wnt signaling in cortical development
112	Ms. Renu	Dr. Pragathi Balasubramani	CSE	Electrophysiological analysis to study the effect of Transcranial Random Noise Stimulation (tRNS) for the treatment of ADHD
113	Ms. Richa Bagiri	Dr. Sandeep Verma	CHM	Synthesis of hydrogen sulfide releasing CAG peptide taregeting Leishmaniasis
114	Ms. Rishika Kanungo	Dr. Amitabha Bandyopadhyay	BSBE	Investigating the role of GPCR genes in mouse embryonic limb development.
115	Ms. Rituparna Satapathy	Dr. Sandeep Verma	CHM	Synthesis of tripeptide RKH and its derivatives for antimicrobial activity.
116	Ms. Riya Pal	Dr. Tushar Sandhan	EE	Detection of Neuromuscular Disorder using EMG and GSR Sensor
117	Ms. Rupkatha Chowdhury	Dr. Hamim Zafar	CSE	Mosaic Integration of Single Cell Multiomic Data Using a Modified Variational Autoencoder
118	Ms. Sakshi A Ninawe	Dr. Arjun Ramakrishnan	BSBE	Analysing the Efficacy of a Go/No-Go Task for Testing Learned-Helplessness
119	Ms. SAKSHI SHUKLA	Dr. Arunabh Meshram	MSE	On hydrometallurgical extraction of aluminium from aluminium dross
120	Ms. SAMIYA KHAN	Dr. Raghavendra Singh	CHE	Kinetic Study of Wnt Pathway
121	Ms. SAMPURNA SARKAR	Dr. S R Sahoo	EE	Simulation Study of Totem Pole PFC using GaN MOSFET
122	Ms. Saniya Akhtar	Dr. J Ram Kumar	ME	Interactive User Interface for Oral Diagnostic System
123	Ms. Shiksha singh	Dr Arvind Kumar	ME	Generating layered Model of Additive manufactured structures for Finite Element Analysis of stress and deformation
124	Ms. shivani khare	Dr. Rahul Sarkar	MSE	Kinetic Modeling of External Desulphurisation by powder injection
125	Ms. Shreya Singh Dixit	Dr. Rahul Mangal	CHE	Pair Interaction of Janus Particle.
126	Ms. Shruti	Dr. Rahul Sarkar	MSE	H2 based reduction of iron oxide at low and moderate temprature
127	Ms. shruti Jain	Dr. N P Gurao	MSE	Deformation behaviour of two-phase microstructures in load reversal and strain control low cycle fatigue using full field crystal plasticity simulations.
128	Ms. Srushti Bhasme	Dr. Amitabha Bandyopadhyay	BSBE	Investigation of the possible role of G protein-coupled receptors (GPCRs) in limb development.
129	Ms. Suhani Mehta	Dr. Ritika Gautam	CHM	De Novo adamantane based prochelators for Chemodynamic therapy via Glutathione- Depletion

130	Ms. Swathy S	Dr. Naren Naik	EE	obtaining volumetric tetrahedral mesh of human liver from surface triangular STL mesh
131	Ms. Tripti Singh	Dr. Devpriya Kumar	CSE	Investigating the Body-Part Centric Multi-Sensory Integration Mechanism: Impact of Right-Hand Target Discrepancies on Left-Hand Performance under Spatial Lag Conditions
132	Ms. Uditi Singhal	Dr. Prakash Chandra Mondal	CHM	Multifunctional Properties of Benzyl Viologen: A Study of Electrochromism, Photochromism and Electrical Conductivity
133	Ms. Vallabhi Upadhyay	Dr. Amitabha Bandyopadhyay	BSBE	Expression Analysis of Galectin-1 and CRABP-1 in developing chick embryos
134	Ms. Vani Mahajan	Dr. Sudeep Bhattacharjee	PHY	Molecular dynamics simulations of confined atmoshpheric pressure cryoplasma
135	Ms. Vernika Gupta	Dr. Malay Banerjee	MTH	Intermittency Route to Hidden Attractor : Numerical Detection

SURGE-2024 SAARC PARTICIPANT

S. No.	Name	Mentor Name	Mentor Dept	Tittle
1	Ms. Dibyashree Basu	Dr. BV Rathish Kumar	MTH	Follicle recognition project
2	Mr. Sheshraman Shrestha	Dr. G R Abhijith	CE	Hydraulic and water quality modelling of water distribution systems using EPANET an open-source package
3	Mr. Shubham Kumar Gupta	Dr. BV Rathish Kumar	MTH	Brain Tumor Segmentation using Deep Learning Models.

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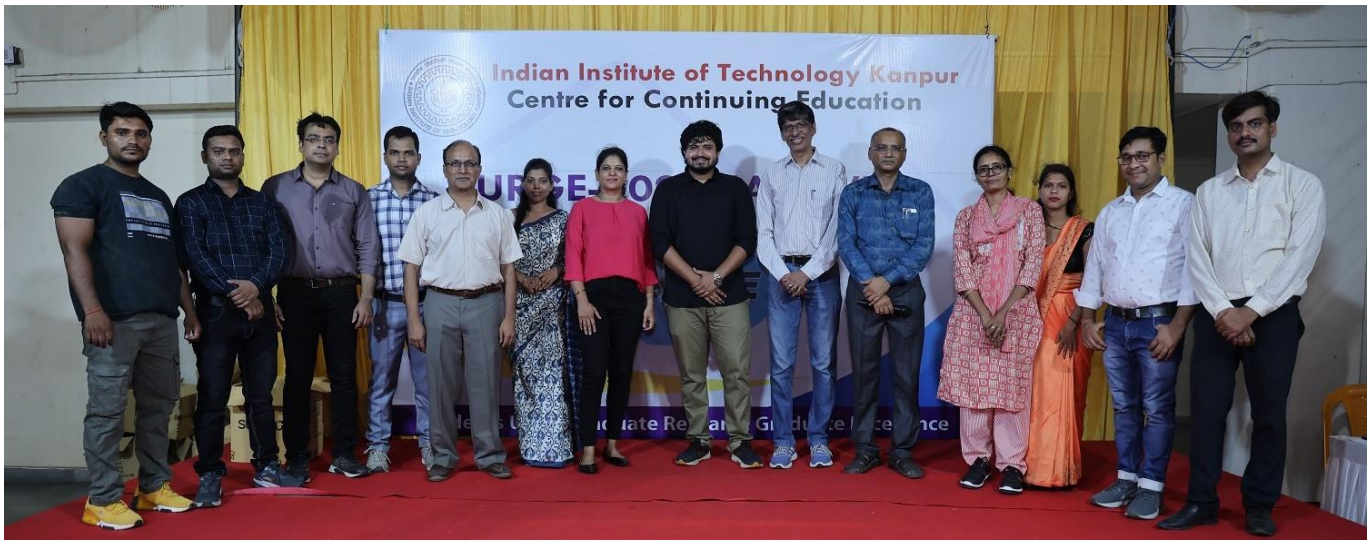
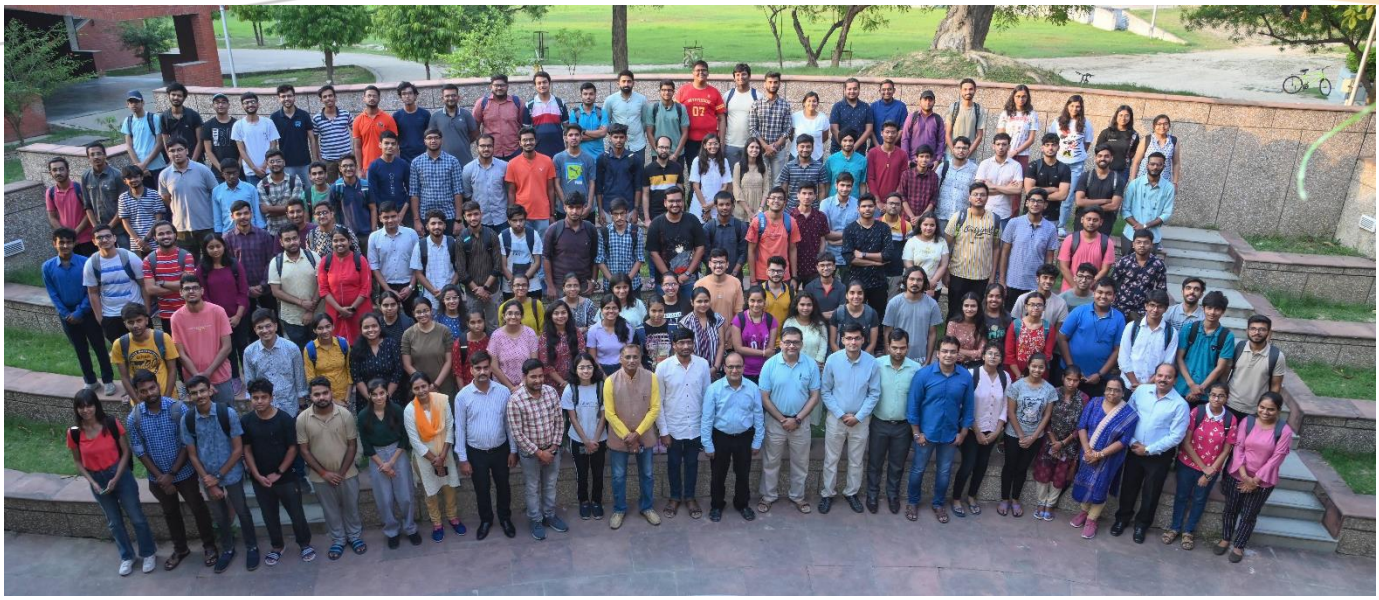
- The students for their enthusiastic and active participation.
- CCE staff for coordinating the SURGE program efficiently.





WITH THANKS

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