ANNUAL REPORT 2021-22

भारतीय प्रौद्योगिकी संस्थान रोपड़

INDIAN INSTITUTE OF TECHNOLOGY ROPAR

ANNUAL
REPORT
2021-22 (APRIL '21- MARCH '22)

IIT ROPAR : AT A GLANCE

DEPARTMENTS & CENTERS

DEPARTMENTS	:	11
CENTERS	:	3

STUDENTS ADMITTED IN AY 2021-22

UG PROGRAMME	:	363
PG PROGRAMME	:	215
PHD	:	160

STUDENTS STRENGTH

UG PROGRAMME	:	1343
PG PROGRAMME	:	408
PhD	:	737

NUMBER OF DEGREE AWARDEES

B. TECH.	:	245
M. TECH.	:	125
M. SC.	:	78
MS-R	:	08
PhD	:	52

FACULTY & STAFF STATISTICS

FACULTY	:	164
NEW JOINING	:	17
STAFF	:	109
NEW JOINING	:	03

RESEARCH PRODUCTIVITY

JOURNALS	:	424
CONFERENCES	:	113
BOOK CHAPTERS	:	52
BOOKS	:	10

ICSR & II

NUMBER OF CONSULTANCY PROJECTS	:	104
OUTLAY	:	4.01CR.
NUMBER OF SPONSORED PROJECTS	:	37
OUTLAY	:	10.51CR.

GRANTS (IN CRORES)

SERB-CRG	:	2.79
MeitY	:	1.23
SERB-RJF RAMANUJAN FELLOWSHIP	:	1.19
DST/TMD/HFC	:	0.74
OTHERS	:	4.56
TOTAL	**:**	**10.51**

CONTENT

FROM THE DIRECTOR'S DESK

The year 2021, like the previous year, was equally challenging owing to the second wave of the pandemic. As a result, academic activity got disrupted this year, like it did in the previous year. However, the Institute continues to be ranked as one of the top universities of the country and among the best in the world.

A major achievement for the Institute came through the announcement of the MHRD's National Institutional Ranking Framework (NIRF), in which IIT Ropar ranked 19th in the Engineering category among top engineering institutions and was placed 31st in Overall category among all the participating universities and institutions in the country. The credit for this success goes entirely to the faculty members, students, research scholars as well as the officers and staff members and well-wishers of the Institute.

It has also been ranked high by international agencies :

1. In Times Higher Education, World University Rankings 2021, IIT Ropar stood in the bracket of 351-400.
2. In Times Higher Education, Asia University Rankings 2021, IIT Ropar stood at 55th rank in Asia.
3. In Times Higher Education, Emerging Economies Rankings 2021, IIT Ropar is ranked 86th and last but not the least;
4. In Times Higher Education Young University Rankings, we secured the 63rd Rank coming to top 100 in the world.

Besides such achievements, the Institute is imparting Internship Programme to the students of other institutes through the Continuing Education and Outreach activities. The Institute is also a minor centre for QIP (Quality Improvement Programme). The main objective of the programme is to upgrade the expertise and capabilities of teachers of the AICTE approved degree-level engineering institutions.

There has been considerable progress in Research and Development front during the last one year. Our research quality and impact can be ascertained from the average citation per paper, which stands at 17.21. This is the highest but one among all the second generation IITs as per recent Scopus data. During the current year, the faculty members and scholars of the institute published 570 papers in high impact international journals with an H-Index of 79. During 2020-21, we have published 681 manuscripts and produced 52 research scholars. Our 163 research scholars have attended various conferences in India and abroad during this period.

13 students from the departments of Mathematics, Chemistry, Electrical Engineering, Computer Science and Engineering, Biomedical Engineering and Metallurgical and Materials Engineering, have been selected for the Prime Minister Research Fellowship (PMRF).

The Institute has received 311 projects so far with an outlay of Rs.230 crore. Thanks to the vibrant research culture at the institute driven by the young faculty members, there is a growing trend each passing year for availing external funding. IIT Ropar is intensively involved in the national initiatives, such as; IMPRINT, Uchhatr Aviskar Yojana (UAY), SPARC, VAJRA and STARS. IIT Ropar saw a surge in consultancy projects which has gone up to Rs. 14.56 crore with 222 projects.

Adding to our social responsibility, IIT Ropar has taken up an R&D initiative in the domain of digital agriculture in the framework of National Mission on Interdisciplinary Cyber-Physical Systems (NM - ICPS) funded by the Department of Science & Technology, Government of India. A Technology Innovation Hub – AWaDH has been set up at IIT Ropar as a mission mode mega project to deploy technology in the agriculture ecosystem reflecting upon the seed-to-fork model in line with the developed nations. Some of the priority areas of the hub are to develop cyber-physical systems for (i) water and soil quality assessment; (ii) water treatment and management; (iii) agriculture automation and information systems; (iv) stubble management and urban Farming; and (vi) mapping of hazardous substances in the soil and water.

Office of International Relations is putting its its best to internalize the campus and promote bilateral collaborations. In line with the policy of Government of India, the IR promotes students from ASEAN and SAARC to join the institute.

The placement results for the academic year 2020-21 at IIT Ropar have been very encouraging. A good and encouraging response from industry was seen for the campus recruitment process as a result of which 81.77% of our undergraduate students were placed.

In July this year, a consortium consisting of IIT Ropar, ANRA Technologies (US), Swiggy (Delhi) and Better Drones (Delhi) conducted experimental Beyond Visual Line of Sight (BVLOS) operations of Remotely Piloted Aircraft Systems (RPAS) forDirectorate General of Civil Aviation (DGCA), at IIT Ropar.

The TBIF (Technology Business Incubator Foundation) has constituted a Business Evaluation and Monitoring Committee, which evaluates the business proposals. At present, TBIF is hosting eight startups, whereas seven companies have made its exit attaining entrepreneurial level. Start-ups have been given soft loans from Technology Innovation and development foundation (TIDE) & Prototype development Innovation fund (PDIF) from IIT Ropar.

Institute has continued to take many initiatives to facilitate and foster strong positive alumni relationships. Despite the continuing phase of the unfortunate COVID-19 pandemic, we hosted many alumni-student activities online and received overwhelming responses from both the alumni as well as students.

IIT Ropar launched KendriyaVidyalaya in the campus in the month of March with classes starting from Ist to Vth. The establishment of Central School in the campus will be a unique combination of higher and school education.

The progress of IIT Ropar on all fronts has been creditable in the past year and I would like to acknowledge the devoted efforts of the faculty, staff and administration of the Institute towards these goals. I will now present an annual report of the Institute activities this year.

THE INSTITUTE

Motto:

धियो यो नः प्रचोदयात्

(deploy our intellect on the right path)

Mission:

To foster a transformative learning environment and a culture of excellence enabling creation of knowledge and development of socially responsible, enterprising leaders contributing significantly to national progress and humanity

Vision:

To be a trendsetter among the technology universities born in this millennium

EXECUTIVE SUMMARY

This year has been unlike any other in the past, as we are amidst the raging Covid-19 pandemic. Since its inception in 2008, the Institute has been growing steadily both in terms of its breadth and the student number. As of date, Seven B.Tech., Three M.Sc. and Eleven M.Tech programmes are offered in 10 departments and Ph.D. in 11 departments. Also, the student number on campus stands well over 2498, more significantly, with almost equal number of undergraduate and postgraduate students.

The Institute also maintains a healthy student-faculty ratio of about 14:1. In addition, the Institute has introduced the culture of postdoctoral fellows funded from internal as well as external sources.

IIT Ropar is gaining prominence both at national and international levels and it is gradually being recognized for its significant contributions. I am delighted to say that during the ongoing COVID-19 crisis, the Institute has contributed towards the development of various technologies to combat Covid-19, starting from making DIY mask to UVGI technology based UVSAFE, which has been recently used in IPL at Dubai to sanitize the rooms of the players. IIT Ropar has thus adhered to its vision of “Contribution to knowledge, Contribution to Society, Contribution to the NATION”, thereby making a vital contribution to India's Technology revolution even during the days of crisis and giving back to the society that nurtured it.

In addition to imparting quality education to students, the research and development work in both theoretical and applied aspects of science and technology deserve special mention and it is heartening to see the extent of Research and development going on in the Institute as a part of its culture. IIT Ropar faculty members have extended wide range of consultancy services to various research and development efforts in the fields of engineering, science and humanities.

IIT Ropar, in fact, has been making special efforts towards the development of its region, i.e., ‘Punjab’. A number of research projects are being pursued with a special focus on agriculture, health and water which are of direct relevance to the growth of this region. From stubble management to ground water management, IIT Ropar is playing a pivotal role in finding low cost affordable solutions and modern ways for combatting major challenges of the region. With the objective that the graduating engineers should have sufficient training to identify and address the problems of the society, there are several courses incorporated as a part of the IIT Ropar’s curriculum, in which students go to the nearby villages, identify problems and try to find low cost solutions.

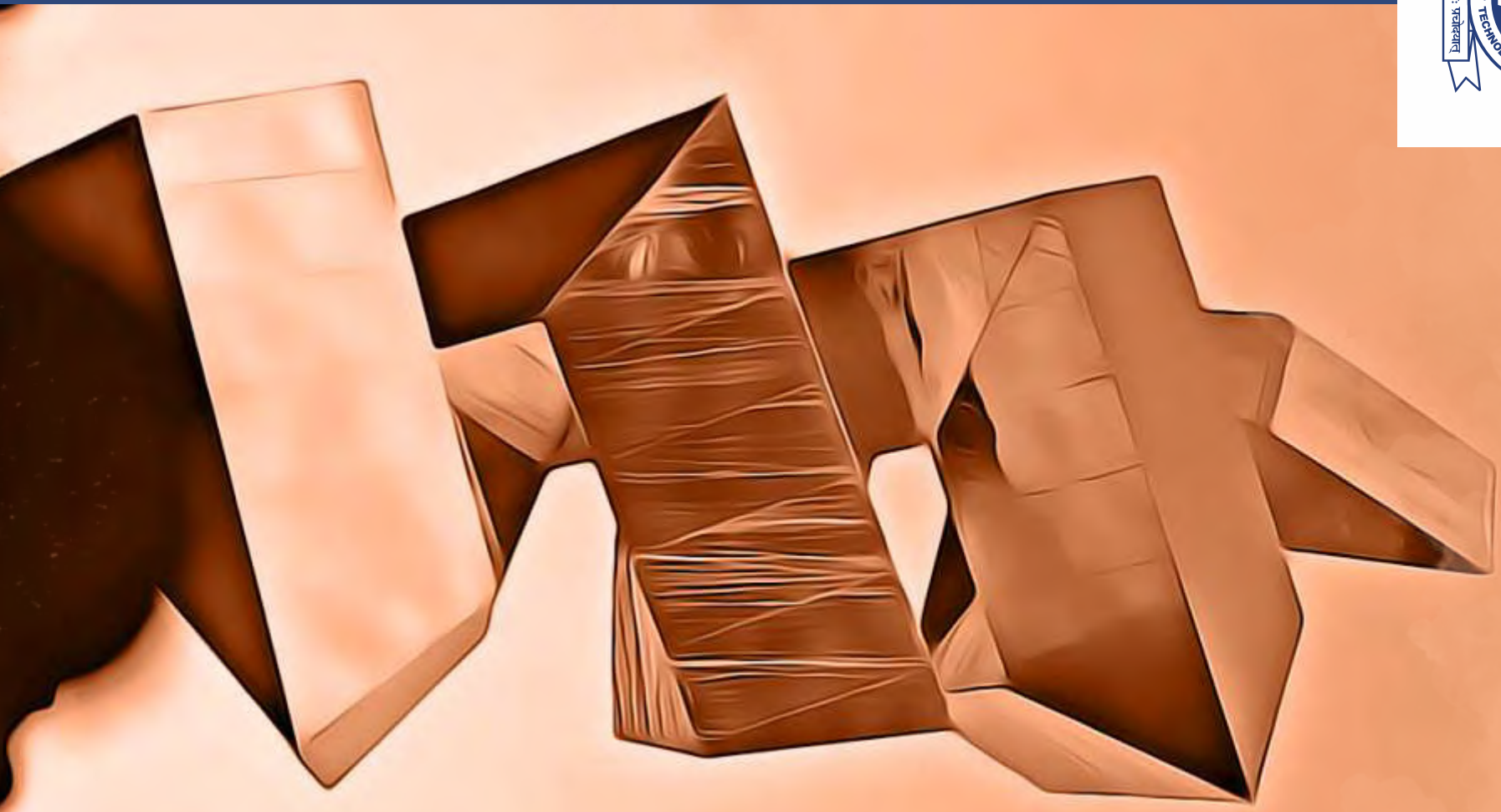
IIT Ropar is effectively collaborating with the Industry-Academia-Government. The Institute has entered into numerous MoUs and joint-degree programs with various reputed universities from Australia, Canada, UK, Taiwan,etc., and national institutes like PGIMER. Furthermore, IIT Ropar has also taken on the responsibility of mentoring the state engineering colleges to improve the quality of their academics.

Over the decade of its existence, coveted technologists and scientists have visited the campus and flagship global companies have hired our graduates to make them great business leaders with excellent management skills to fulfil Industry 4.0 dream of the Nation.

The next big revolution that is unfolding in the world is the field of Bioengineering. IIT Ropar is one amongst the first to establish the Department of Biomedical Engineering which indeed is a thoughtful move towards aspiring to be one of the leaders of this revolution.

IIT Ropar looks forward for an attempt to create irreversible momentum for a healthy and safe Nation by R&D efforts through Science and Technology.

RANKING



RANKING

IIT Ropar made a mark in **Times Higher Education Asia University Rankings 2021** with the **55th rank** and has stood among the **top 100 universities in Asia.**


Hindustan Times

TIMES HIGHER EDUCATION | ASIA UNIVERSITY RANKINGS 2021

IIT Ropar once again in top 100, but Panjab varsity slips further this year

PU'S SLIDE IN RANKING

114 (2018) 136 (2019) 149 (2020) 175 (2021)

IIT Ropar stood among the top 100 with **86th rank in Times Higher Education Emerging Economics University Rankings 2022** attaining the **4th position among best performing institutions in India.**

IIT Ropar ranked among the top **20 Emerging Institutions in India,** being ranked **19th in NIRF Rankings.** The Institute has been also ranked in overall category, bagging the **31st rank** in India.

IIT Ropar made a mark by ranked between the brackets of **351-400** in the world in in **Times Higher Education World University Ranking.**

IIT Ropar ranked **63rd in Times Higher Education Young University Rankings.**

RESEARCH INITIATIVES

RESEARCH INITIATIVES BY IIT ROPAR


IIT team's drone for post-disaster help

1. **Drone for Post-Disaster Help:** IIT Ropar researchers have come up with post-disaster management communication during emergency situation with the concept of device to device (D2D) communication with drones.


वायरस के खात्मे के लिए इलेक्ट्रोलाइज्ड पानी भी कारगर

2. **Alternative to Alcohol-Based Disinfectant:** IIT Ropar professors develops alternative to alcohol-based disinfectant, Electrolyzed water can be used as "a powerful natural tool" to combat COVID-19.


TOI

3. **Acoustic Repellent System:** IIT Ropar researchers have come up with a concept of acoustic repellent system (ARS) for crop protection against animal attacks in agricultural fields.

4. **Driver Drowsiness Detection Algorithm:** Brilliant researchers of IIT Ropar have developed an algorithm for driver drowsiness detection. They have used computer vision algorithms to extract facial features such as eye closure & yawning, followed by machine learning techniques to effectively detect driver's alertness.

5. **Sarcasm Detector:** Researchers of IIT Ropar have developed a code to detect sarcasm in news headlines. The "Sarcasm Detector" works using neural networks to understand how a computer learns the pattern of sarcasm.

6. **AmbiTAG:** IIT Ropar developed AmbiTAG" India's first indigenous temperature data logger for vaccines, blood and body organs, perishable products. IIT Ropar will give away the AmbiTag device at production cost for COVID vaccine transportation.

7. **Containment Box:** IIT Ropar and DMC Ludhiana designed containment box for protecting frontline healthcare workers fighting the COVID-19 Pandemic.

8. **Eco-friendly Mobile Cremation System:** IIT Ropar develops a portable tech-traditional eco-friendly mobile cremation system that uses first of its kind technology that involves smokeless cremation despite using wood.

9. **Power-free CPAP device JIVAN VAYU:** IIT Ropar develops Nation's first Power-free CPAP device 'JIVAN VAYU' to save lives in villages and low resource areas and during transit of patients from ambulance to hospitals.


IIT Ropar develops oxygen rationing device 'AMLEX'

10. **Oxygen Rationing Device –** AMLEX: IIT Ropar develops first-of-its-kind Oxygen rationing device – AMLEX. It supplies a required volume of oxygen to the patient during inhalation and trips when the patient exhales CO_2.


FakeBuster: A DeepFakes Detection Tool for Video Conferencing Scenarios

11. **Fake Buster:** A team of IIT Ropar and Monash University researchers have developed a detector Fake Buster to identify imposters attending virtual conferences without anyone's knowledge.


IIT device reduces fainting risk while donating blood

12. **Electronic Massager for Calf Muscles:** The researchers of IIT Ropar have developed an electronic massager for calf muscles that can reduce the risk of fainting among the blood donors during or after the blood donation.

13. **A Machine Learning Model that Accurately Predicts In-Hospital Outcomes:** IIT Ropar in association with Harvard University, MIT USA, MGH Global Health, Dayanand Medical College Ludhiana developed a Machine Learning model that accurately predicts In-Hospital outcomes at the admission to a cardiac unit.

14. **Biomimetic Implant Device:** IIT Ropar researchers developed a Biomimetic Implant Device for Osteogenesis Imperfecta. Congratulations to Dr. Jitendra Prasad and his team on the grant for this patent.

15. **Mercury Free Blood Pressure Monitor:** IIT Ropar has developed an alternative to the mercury blood pressure monitor that works just like the mercury type but is free of mercury.

INFRASTRUCTURE DEVELOPMENT

INFRASTRUCTURE DEVELOPMENT

The Institute has developed Academic areas, Administrative areas and student's zone along with residential facilities for faculty and staff to provide an environment for over all development of students.

The construction of the Campus is taken up in three Phases, Phase 1A, 1B & 1C. In which construction of Phase 1A & 1B have been completed and Phase 1C construction is going on at advance stage. During 2021-22 the works of Phase 1B were completed by CPWD. The approx plinth area of these works is 65809 sqm. In this phase the following buildings have been completed. Type 5 Residences (64 flats), Type 6 Residences (8 flats), Visitor's Hostel, Electrical Sub -station 4, Workshop Block, Central Research Facility, Auditorium & Library Lecture Hall, Dining Hall II, Boys Hostel (720 Capacity), Girls Hostel (Ravi 260 Capacity) and Campus School.

The Auditorium has a capacity of 773 seats with a foyer/lounge area for holding wide range of events ranging from exhibition, talks, seminars, and cultural events. This Library & Auditorium building centrally located between the Academic block & Admin Block. The Library facility is distributed on two levels; ground floor block consists of photocopy & printing, as well as the reading section , while the first floor block holds the office, digital section and reading section. The building has central courtyard to mild the temperature & provide outdoor interaction between students.

The Visitor's Hostel was completed and was made functional. The space is distributed in four levels having 38 rooms with dining and lounge facilities. The building has an independent kitchen.

The Central Research Facility building has been taken over and made functional. Dining Hall-II is designed for 600 seating capacity distributed in two levels (G+1) floors, 300 on each floor with independent kitchen. Residential accommodation of 72 for the faculty and the staff have been constructed and is functional.

The works involving Phase 1C are going on at a steady pace. The following buildings will be completed in this phase: Super Academic Block, Type 5 residences (24 flats), Type 6 residences (24 flats), Type 2B residences (24 flats), ESS 5, 6& 7, Liquid Nitrogen Plant (Now Tinkering Lab) and Boys Hostel 520 capacity. The Hostel building having capacity of 520 seats is of single and triple occupancy. Students are provided with space for recreational facilities (indoor gym, badminton court etc.) in hostel. The hostel will be taken over in the coming months.

The Super Academic Block building is designed to house teaching activities for seven departments (Chemical Engineering, Physics, Mathematics, Humanities & Social Science, Biomedical Engineering and Civil Engineering). The designed space is for classrooms, laboratories, computer labs, faculty offices, seminar halls, conference rooms and interactive areas.

The building has five levels and three different blocks. The Ground floor, First floor and Second floor with houses the laboratories, cafeteria, Computer labs, seminar hall and Classrooms. The third and mezzanine floor, houses the faculty office, HoD department office, PhD seating, departmental office. The entrance is directed towards the central courtyard which allows the integration of visual environments and to produce a mild climate.

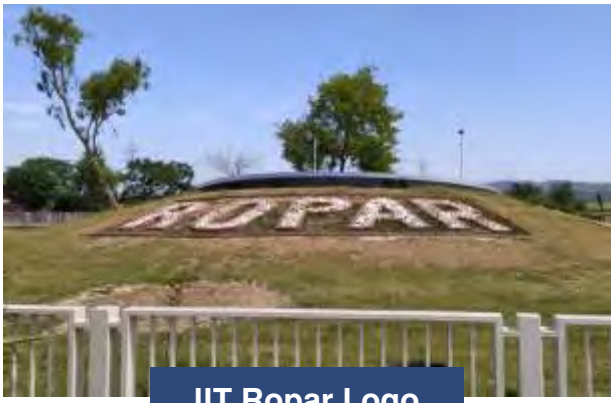
The vertical circulation is distributed in a ramp, stairs and elevators. Horizontally all the three blocks are connected via sky walks at higher level. The super roof is introduced in this building to lower the heat gain from the direct sun and also provide space for installation of solar panels.

The campus follows the sustainable and green development like use of local material, waste water treatment, pedestrian friendly movement, preservation of existing trees on site, etc.

The overall progress of Phase 1A, 1B & 1C is 88.75%.

IIT ROPAR-PHASE-1A

IIT ROPAR LOGO



IIT Ropar Logo

IIT Ropar Entrance Gate Complex

Main Gate Area

IIT Ropar Entrance Gate Complex

Spiral Structure

Administrative Building (G+3)

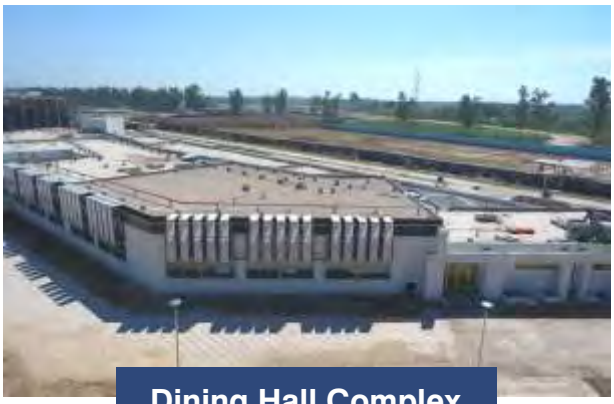
Department of Computer Science & Engineering

Department of Electrical Engineering

Department of Mechanical Engineering

Department of Chemistry

Lecture Hall Complex



Dining Hall Complex

Director Residence (G+1)

Boys Hostel (690 Cap)

Girls Hostel (100 Cap)

Type-4 Residences
(7 blocks-56 Units) (G+3)

IIT ROPAR PHASE- 1B

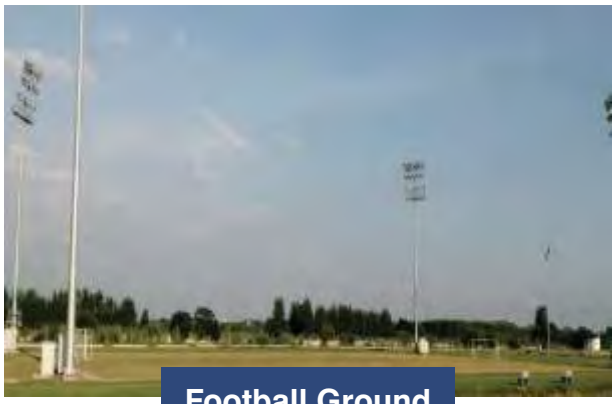
Gate Complex

Sports Complex

Basket Ball Court

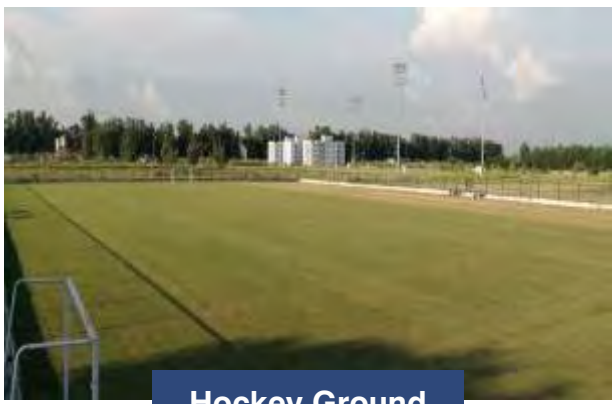
Tennis Court

Cricket Field



Football Ground

Volleyball Court



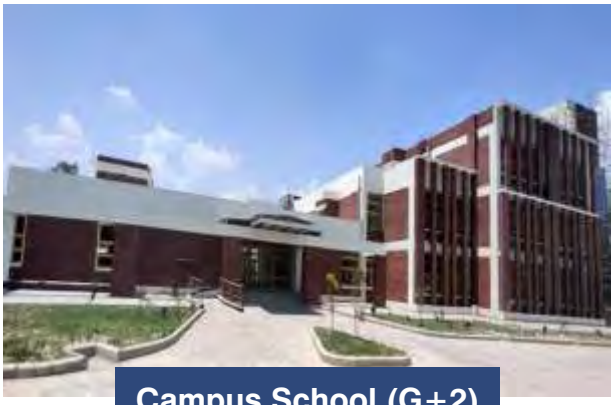
Hockey Ground

Girls Hostel (160 cap) (G+3)

Girls Hostel (100 cap) (G+3)

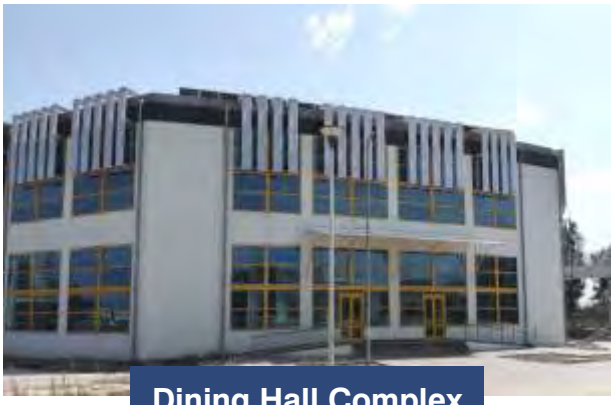
Boys Hostel (720 cap) (G+3)

Boys Hostel (230 cap) (G+3)

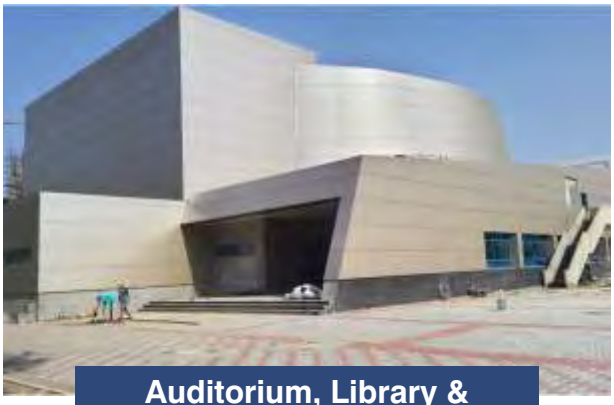


Campus School (G+2)

Central Research Facility Building



Dining Hall Complex



Auditorium, Library &
Data Centre Complex

Visitor Hostel (G+3)

T-5 RESIDENCES

T-5 (Block 1 & 2) Residences

T-5 (Block 3 & 4) Residences

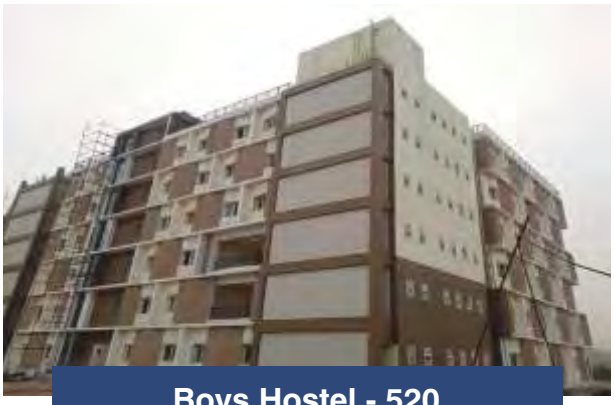
T-5 (Block 5 & 6) Residences

T-5 (Block 7 & 8) Residences

Type-6 Residences
(1 block, 8 units) (G+3)

Workshop (Single Storey)

IIT ROPAR PHASE-1C



Boys Hostel - 520

T2B Residences (G+2)
(24 Units), (02 Blocks)

T6- Residences (G+1) (24 Units),
(06 Blocks)

T6 Residences

T5- Residences (G+3) (24 Units),
(03 Blocks)

ESS- BLOCKS (03 Nos.)

Liquid Nitrogen Plant

Super Academic Block

ACADEMICS

ACADEMICS

IIT Ropar is rapidly progressing in the field of Science and Technology. Since its inception in 2008, IIT Ropar has pursued distinction with committed determination. IIT Ropar has seven Engineering disciplines: Biomedical Engineering, Chemical Engineering, Computer Science and Engineering, Civil Engineering, Electrical Engineering, Mechanical Engineering & Metallurgical & Materials Engineering; four Science Disciplines: Chemistry, Mathematics and Physics; and Humanities and Social Sciences. As of April 2021, IIT Ropar has 1343 students enrolled in its B.Tech. programs, 279 M.Tech. students, 137 M.Sc. students, 2 in MS and 737 Ph.D students. These numbers are anticipated to increase as the Institute is growing at a steady pace. The faculty members of IIT Ropar have a wide range of academic and research experience. They have been trained in the top ranked Institutes within the country and abroad.

The number of students and scholars ADMITTED during year 2021-22

Sr. No.	Department	B.Tech.	M.Tech.	M.Sc.	MS (R)	Ph.D
1.	Biomedical Engineering		14			8
2.	Chemical Engineering	26	12			12
3.	Chemistry			24		14
4.	Civil Engineering	33	13			13
5.	Computer Science & Engineering	82	20			29
6.	Electrical Engineering	83	34			23
7.	Humanities & Social Studies					4
8.	Mathematics			25		7
9.	Mathematics & Computing	30				
10	Mechanical Engineering	80	34			18
11.	Artificial Intelligence		14			
12.	Metallurgical and Materials Engineering	27				9
13.	Physics			25		23
	Total	361	141	74		160

Numbers of students (Category wise)

Sr.No.	Programme	General	OBC	SC	ST	EWS	IR	PD	Male	Female
1.	B.Tech.	141	96	56	30	35		5	289	72
2.	M.Tech.	50	41	23	7	14	6	0	119	22
3.	M.Sc.	30	19	10	6	8	1	0	51	23
4.	MS (R)									
5.	Ph.D	90	37	14	5	11	0	3	115	45

The number of students and scholars ON ROLL in the year 2021-22

Sr. No.	Department	B.Tech.	M.Tech.	M.Sc.	MS (R)	Ph.D
1.	Biomedical Engineering		24			42
2.	Chemical Engineering	87	25			38
3.	Chemistry			44		87
4.	Civil Engineering	129	26			57
5.	Computer Science & Engineering	330	38			78
6.	Electrical Engineering	311	64		2	106
7.	Humanities & Social Studies					51
8.	Mathematics			45		53
9.	Mathematics & Computing	85				
10	Mechanical Engineering	287	65			118
11.	Mechanical Engineering (Dual Degree)	36	10			
12	Artificial Intelligence		27			
13.	Metallurgical and Materials Engineering	78				32
14.	Physics			48		75
	Total	**1343**	**279**	**137**	**2**	**737**

Numbers of ON ROLL students (Category wise)

Sr. No.	Department	GEN	IR	OBC	SC	ST	(EWS)	PD	Male	Female
1.	B.Tech.	567		364	211	103	84	14	1103	240
2.	M.Tech.	95	10	73	44	17	30	0	229	40
3.	M.Sc.	58	2	38	17	7	15	0	94	43
4.	MS (R)	2							2	0
5.	Ph.D	515	2	143	46	7	22	2	507	230

No. of Degrees Awarded

Sr. No.	Department	B.Tech.	Dual Degree	M.Tech.	M.Sc.	Ph.D
1	Artificial Intelligence			9		
2	Biomedical Engineering			10		2
3	Chemical Engineering	19		10		0
4	Chemistry				26	7
5	Civil Engineering	31		8		1
6	Computer Science & Engineering	67		15		6
7	Electrical Engineering	64		37		10
8	Humanities & Social Studies					4
9	Mathematics				22	7
10	Mechanical Engineering	64	08	36		10
11	Metallurgical and Materials Engineering					0
12	Physics				30	5
	Total	**245**	**08**	**125**	**78**	**52**

Scholarships

B. Tech.

Merit cum Means Scholarship

The merit-cum-means scholarship is given to deserving undergraduate students on the basis of All India Rank in JEE Advanced, who have parental annual Income less than or equal to 4.5 lacs. These are permissible to about 25% of the students. The recipient of the Merit cum Means scholarship is exempted from payment of tuition fees and is allotted Rs. 1000/- per month as pocket allowance.

Institute free studentship

The institute offers free studentship to 10% students on the basis of means only. The students are exempted from paying tuition fees. The parental annual income should be less than or equal to Rs. 4.5 lacs

Institute merit prize and certificate

Each year, the Institute offers merit prizes and certificates to top 7% of the students from the B.Tech. programme. A total Amount of Rs.2500/- and a merit certificate is given to the students.

Free messing

The Institute offers the award of free messing to SC/ST students whose parental annual income is less than or equal to 4.5 lacs.

Scholarship given in the 1st semester of AY 2021-22*			
Sr. No.	**Scholarship name**	**Number of Student**	**Amount of Scholarship**
1	Merit-cum-means Scholarship*	292	6411923
2	Free Studentship Scholarship (10%)*	47	966686
3	Merit Prize & Certificate (top 7% students)*	8 9	222500
4	Free Messing Scholarship *	3 4	3,87,825
	Total	462	7988934*
**All the above of the 2021 batch yet to be released, amount is tentative.			

Scholarship for 2nd semester of AY 2021-22 *			
Sr. No.	**Scholarship name**	**Number of Student**	**Amount of Scholarship**
1	Merit-cum-means Scholarship*	300	6641690
2	Free Studentship Scholarship (10%)*	4 7	966686
3	Merit Prize & Certificate (top 7% students) *	5 9	147500
4	Free Messing Scholarship *	6 4	987825
	Total	470	8,743,701*
*All the above of the 2021 batch, MCM of 2019 batch and 7% Merit prize of 2019 and 2020 batch is yet to be released. .			

Total tentative amount to be spent in the financial assistance to B.Tech. students is Rs.16,732,635/- (2021-22)

M.Sc.

Merit cum Means Scholarship

The merit-cum-means scholarship is given to deserving M.Sc. students on the basis of JAM rank and having parental annual Income less than or equal to 4.5 lacs. These are permissible to about 25% of the students. The recipient of the Merit cum Means scholarship is exempted from payment of tuition fees and Rs. 1000/- per month as pocket allowance.

1st semester of AY 2021-22			
Sr. No.	**Scholarship name**	**Number of Student**	**Amount of Scholarship**
1	Merit cum Means Scholarship	25	2,23,375

2nd semester of AY 2021-22*			
Sr. No.	**Scholarship name**	**Number of Student**	**Amount of Scholarship**
1	Merit cum Means Scholarship	22	1,86,092 (Tentative)

OUTREACH PROGRAMME

The Office of Continuing Education and Outreach Activities (CEOA), IIT Ropar conducts world-class certificate programs for participants from Industry, Government Organizations, and Academia. The certificate programs offered include executive education programs for career advancement of working professionals and executives, programs for skill enhancement of manpower in industry with latest know-hows and developments in the subject, and functional development programs (FDPs) for government organizations and academic institutions. The certificate programs focus on thrust areas of regional, national, and global importance, and provide a platform for interaction and collaborations between faculty members and industry personnel. The CEOA office also organizes programs and events related to the social and educational outreach activities of the Institute.

INTERNSHIP REPORT 2021-22

Department of Bio-Medical Engineering			
Sr. No.	**Name of Supervisor**	**Name of Student**	**Institute /College Address**
1	Dr. Srivatsava Naidu	Karan Ramu	People's Education Society University, Bangalore
2	Dr. Srivatsava Naidu	Abhishek Biswas	University of Hyderabad
3	Dr. Bodhisatwa Das	Praveen Prabhat	Indian Institute of Technology, Kanpur
4	Dr. Bodhisatwa Das	Anwesha Roy	Maulana Abul Kalam University of Technology, Kolkata
5	Prof. Javed N Agrewala	Aparna O M	Indian Institute of Science Education and Research, Kolkata

Department of Chemical Engineering			
Sr. No.	**Name of Supervisor**	**Name of Student**	**Institute /College Address**
6	Dr. Asad Hasan Sahir	Anjali Goenka	Dr. BR Ambedkar National Institute of Technology, Jalandhar
7	Dr. Himanshu Paliwal	Rishabh Gupta	Harcourt Butler Technical University, Nawabganj, Kanpur
8	Dr. Navin Gopinathan	Ritu Rani	University of Petroleum and Energy Studies, Dehradun
9	Dr. Himanshu Paliwal	Konda Mounika	National Institute of Technology, Warangal
10	Dr. Navin Gopinathan	Prachi Kumari Shrivastava	Manipal University, Jaipur
11	Dr. Asad H. Sahir	Monica G	National Institute of Technology, Tiruchirappalli, Tamil Nadu
12	Dr. S.Manigandan	Bhupendra Sonawane	University Institute of Chemical Technology, Jalgaon
13	Dr. Asad H. Sahir	Shruti Joshi	National Institute of Technology, Hamirpur
14	Dr. Asad H Sahir	Swati sharma	Banasthali University,Vanasthali Road, Rajasthan
15	Dr. Sarang P. Gumfekar	Shubham Shishodia	Birla Institute of Technology, Mesra, Ranchi
Department of Civil Engineering			
Sr. No.	**Name of Supervisor**	**Name of Student**	**Institute /College Address**
16	Dr. Indramani Dhada	Teegala Uday Kumar	National Institute of Technology, Warangal
17	Dr. Sagar Rohidas Chavan	Priyasha Das	National Institute of Technology, Rourkela
18	Dr. Indramani Dhada & Dr. Putul Haldar	Chilaka Chetan Naveen	National Institute of Technology Warangal
19	Dr. Putul Haldar	Cholleti Shivani	Anurag Group of Institutions, Venkatapur Medchal
Department of Computer Science and Engineering			
Sr. No.	**Name of Supervisor**	**Name of Student**	**Institute /College Address**
20	Dr. Shweta Jain	Rohan Gupta	Institute of Technology, Guru Ghasidas Vishwavidyalaya, Koni, Bilaspur
21	Dr. Venkata M. Viswanath Gunturi	Ankan Bose	Jadavpur University, Kolkata

22	Dr. Shweta Jain	Rajdeep Paul	National Institute of Technology, Silchar
23	Dr. Sujata Pal	Saaketh Mummadi	National Institute of Technology, Warrangal
24	Dr. Sujata Pal	Yuvraj Santosh Kadale	National Institute of Technology, Hamirpur
25	Dr. Sujata Pal	Kundan Kumar Jha	National Institute of Technology, Patna
Department of Chemistry			
Sr. No.	**Name of Supervisor**	**Name of Student**	**Institute /College Address**
26	Dr. Prabal Banerjee	Prerna Rana Singh	Indian Institute of Science Education and Research Berhampur, Odisa
27	Dr. Yashveer Singh	Chetan Saini	Indian Institute of Science Education and Research, Bhopal
Department of Electrical Engineering			
Sr. No.	**Name of Supervisor**	**Name of Student**	**Institute /College Address**
28	Dr. Brajesh Rawat	Arpan Das	Indian Institute of Technology, (ISM) Dhanbad, Jharkhand
29	Dr. Ranjana Sodhi	Devangi	National Institute of Technology, Hamirpur
30	Dr. Satyam Agarwal	Ashoo Ohri	National Institute of Technology, Hamirpur
31	Dr. Satyam Agarwal	Yash Agrawal	Indian Institute of Science Education and Research, Bhauri, Bhopal
32	Dr. Satyam Agarwal	Jasmine Bajaj	Indian Institute of informationTechnology, Guwahati, Bongora
33	Dr. Mahendra Sakare	Vishal Kumar	National Institute of Technology, Delhi
34	Dr. Mahendra Sakare	Siddhant Kaashikar	Indian Institute of Information Technology, Una
Department of Metallurgical and Materials Engineering			
Sr. No.	**Name of Supervisor**	**Name of Student**	**Institute /College Address**
35	Dr. Neha Sardana	Dipesh Kumar Dubey	Indian Institute of Technology, BHU, Varanasi
36	Dr. Abhishek Tiwari	Indrajeet Ghosh	National Institute of Technology, Jamshedpur

37	Dr. Abhishek Tiwari	Shubham Kumar Roy	National Institute of Technology, Jamshedpur
38	Dr. Khushboo Rakha	Vigneshwaran. E	National Institute of Technology, Tiruchirappalli
39	Dr. Khushboo Rakha	Dewal Choudhary	Indian Institute of Technology, Bhubaneswar
Department of Physics			
Sr. No.	**Name of Supervisor**	**Name of Student**	**Institute /College Address**
40	Dr. Vishwa Pal	Aishwarya C B	International School of Photonics, Cochin University of Science and Technology, Cochin
41	Dr. Rakesh Kumar	Vrinda Dhanda	Department of Physics, Panjab University, Chandigarh
42	Dr. Rakesh Kumar	Aditi Sharma	Thapar University, Patiala
43	Dr. Rajesh V Nair	Vidyalakshmi A	International School of Photonics, CUSAT, Kerala
Department of Mechanical Engineering			
Sr. No.	**Name of Supervisor**	**Name of Student**	**Institute /College Address**
44	Dr. Chandrakant K Nirala	Kishalay Raj	Birla Institute of Technology, Mesra, Ranchi
45	Dr. Dhiraj K Mahajan	Aditya Balaji	Indian Institute of Information Technology Design & Manufacturing, Jabalpur
46	Dr. Dhiraj K Mahajan	Ameya Athavale	Shri Govindram Seksaria Institute of Technology and Science, Indore
47	Dr. Dhiraj K Mahajan	Ananya Tayal	National Institute of Technology, Jalandhar
48	Dr. Dhiraj K Mahajan	Simranjit Singh	Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, Punjab
49	Prof. Harpreet Singh	Sachin Mahato	Jadavpur University, Kolkata
50	Prof. Harpreet Singh	Simranjeet Singh	Baba Banda Singh Bahadur Engineering College, Fatehgarh Sahib, Punjab
51	Dr. Navin Kumar	Priom Agrawal	National Institute of Technology, Raipur
52	Dr. Sachin Kumar	Dibakar Chaudhary	National Institute of Technology, Hamirpur

53	Dr. Sachin Kumar	Md Danish Quamar	Indian Institute of Technology, Ropar
54	Prof. Harpreet Singh	Shivanshi Chaudhary	Indian Institute of Technology, Ropar
55	Prof. Harpreet Singh	Rohith Premanandan	Indian Institute of Technology, Ropar
J&K Internship (2021-2022)			
Department of Electrical Engineering			
Sr. No.	**Name of Supervisor**	**Name of students**	**Institute /College Address**
1	Dr. K. Ramachandra Sekhar	Mehak Bilal	Institute of Technology, Zakura Campus, Kashmir University
2	Dr. Sam Darshi	Adfar Sajad	Cluster University, Srinagar
3	Dr. A. V. Ravi Teja	Hibba Syed	Islamic University of Science and Technology, Jammu & Kashmir
Department of Chemical Engineering			
Sr. No.	**Name of Supervisor**	**Name of students**	**Institute /College Address**
4	Dr. Asad Hasan Sahir	Gaurav Kumar	Indian Institute of Technology, Ropar
5	Dr. Asad Hasan Sahir	Mehnaz Rashid	National Institute of Technology, Srinagar
6	Dr. Asad Sahir Hassan	Basit Qayoom Chowdhary	National Institue of Technology, Srinagar
7	Dr. Asad Hasan Sahir	Meenakshi Sharma	Sardar Beant Singh State University, Gurdaspur
8	Dr. Sarang P. Gumfekar	Sajad Hussain Mallah	Central University of Kashmir
9	Dr. Saikat Roy	Shariq Shabir	National Institute of Technology, Srinagar
10	Dr. Sarang Gumfekar	Aurif Ahmad Mir	University of Kashmir
Department of Mathematics			
Sr. No.	**Name of Supervisor**	**Name of students**	**Institute /College Address**
11	Dr. Bidhan Chandra Sardar	Peerzada Faizan Shafi	National Institute of Technology, Srinagar
Department of Civil Engineering			
Sr. No.	**Name of Supervisor**	**Name of students**	**Institute /College Address**
12	Dr. Putul Haldar	Uzma Iftikhar	National Institute of Technology, Srinagar

Karya Internship- (2021-2022)			
Department of Physics			
Sr. No	**Name of the Supervisor/ Faculty of Indian IIT Ropar under which the internship has been done.**	**Name of Student**	**Name of the University/ Institute from where he/she belongs to:**
1	Dr. Rajesh V. Nair	Tanisha Bohra	Jai Narain Vyas University, Jodhpur
2	Dr. Pushpendra P. Singh	Divyansha Kanwar Solanki	Government College, Bhilwara
Department of Chemistry			
3	Dr. Tharamani C.N	Kiran Tiwari	M.L.V. Government College, Bhilwara, Rajasthan
4	Dr. Yashveer Singh	Himani Gupta	Raj Rishi Autonomous College, Alwar, Rajasthan

RESEARCH AND DEVELOPMENT ACTIVITIES

RESEARCH AND DEVELOPMENT ACTIVITIES

IIT Ropar puts immense emphasis on promoting cutting edge research and publications of high quality and not quantity. IIT Ropar firmly believes that this is the key to our recognition in the international research community. IIT Ropar offers Ph.D degrees in all disciplines. At present, IIT Ropar has 737 Ph.D scholars in the Institute. 52 Ph.D scholars have successfully defended their thesis and 160 scholars have joined the Ph.D program previous year.

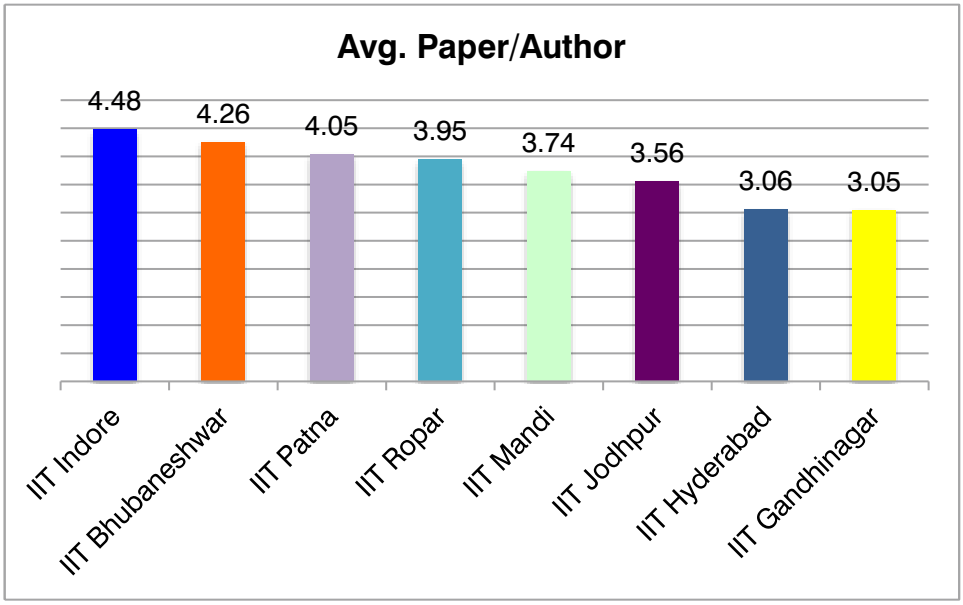


Figure 1: Average Paper per Author

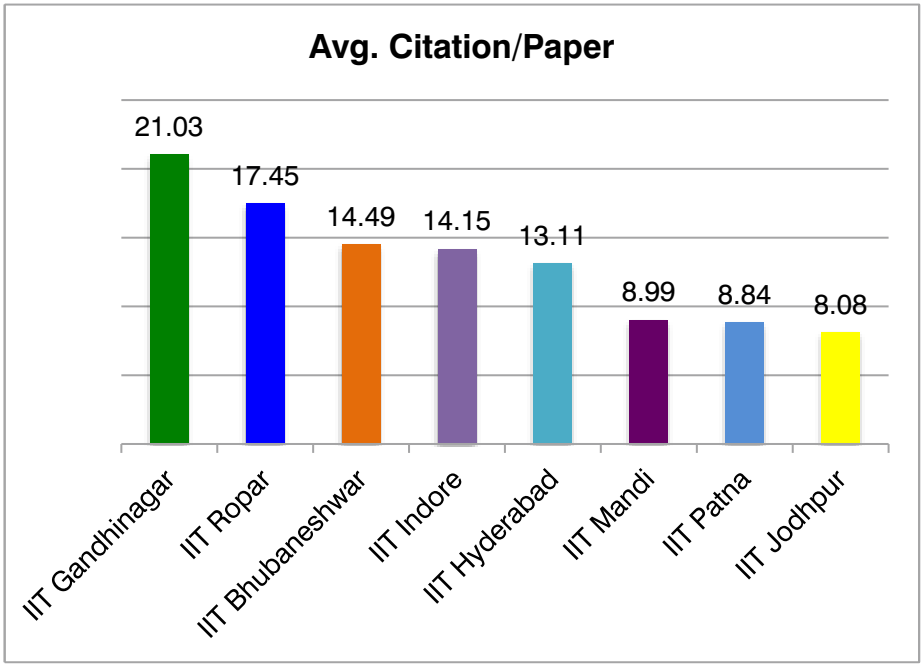
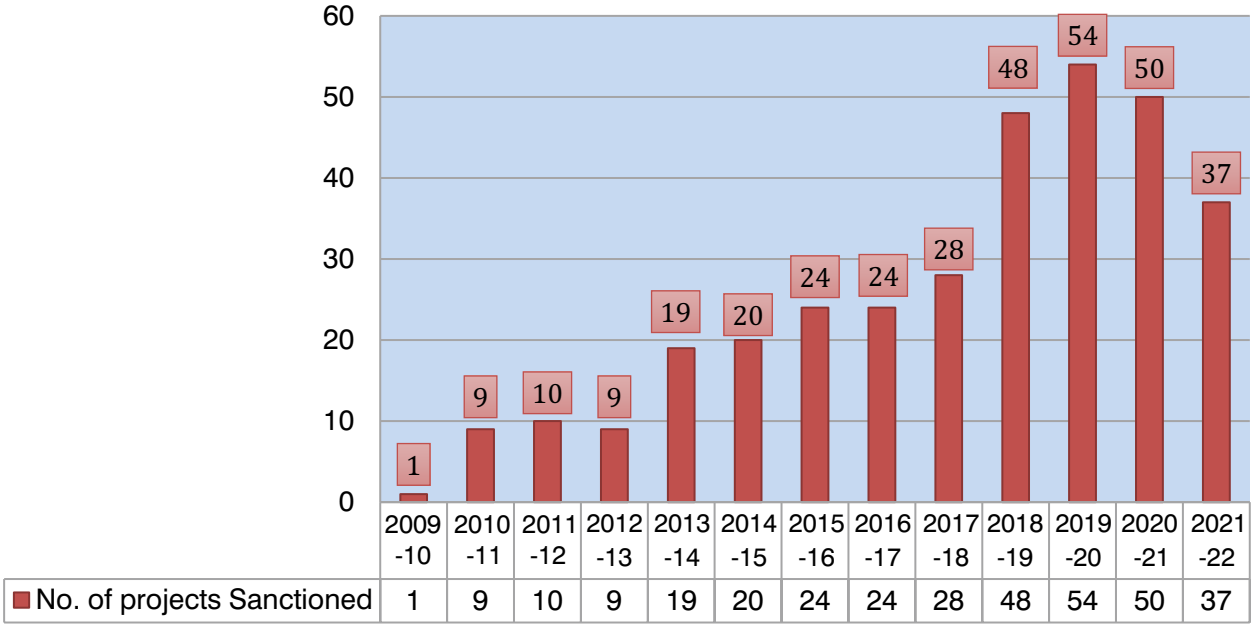


Figure 2: Average Citation per Paper

THE GROWTH OF R&D IN THE LAST YEAR

Sponsored Research Projects Sanctioned Annually

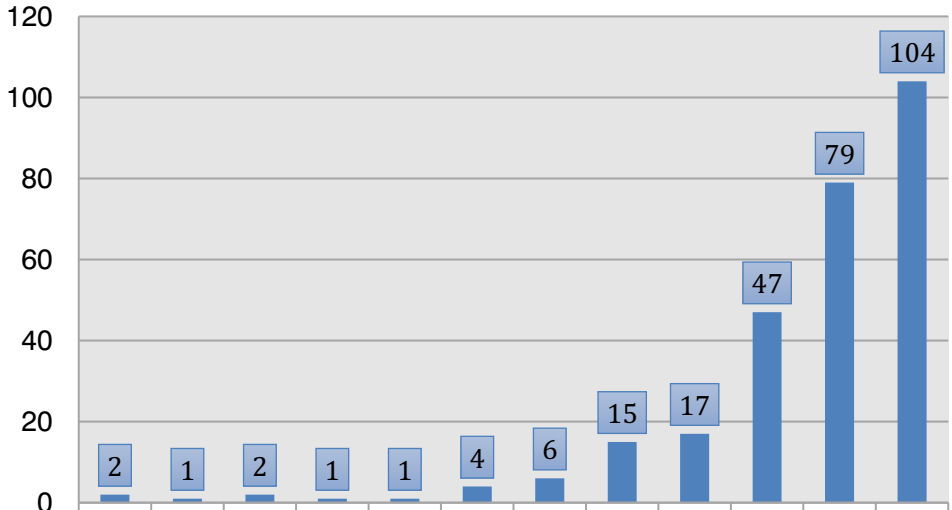
No. of Projects Till Date : 333



	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
No. of projects Sanctioned	1	9	10	9	19	20	24	24	28	48	54	50	37

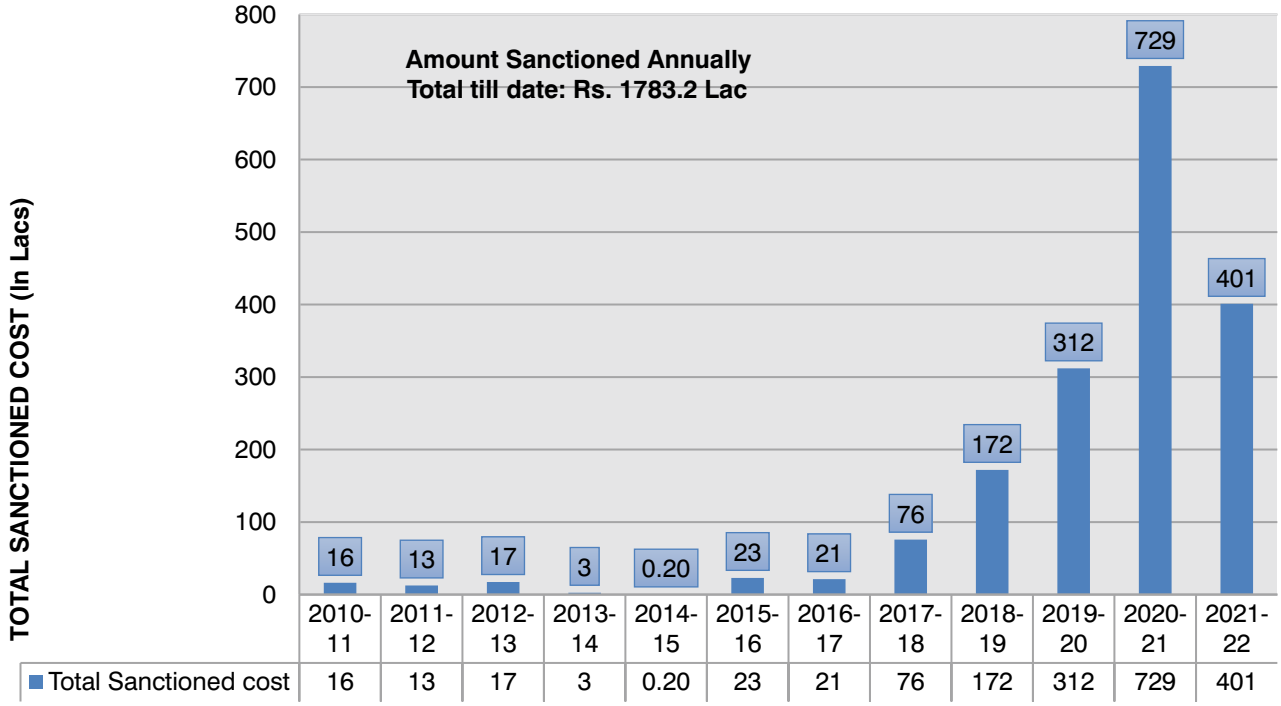
Consultancy Projects Sanctioned Annually

No. of Project till date :279



	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
No. of projects Sanctioned	2	1	2	1	1	4	6	15	17	47	79	104

OVERVIEW



CONSULTANCY ACTIVITIES

Consultancy activities were taken up for the government, public sector and industry, both Indian and international. The types of consultancy provided included expert advice, retainership, product/ process/ software development, analysis, evaluation, product design and limited testing. IIT Ropar received 104 projects in 2021-22 with a sanctioned amount of Rs. 4.01 crores.

LIST OF CONSULTANCY PROJECTS INITIATED

Consultancy Project money Sanctioned from Non-Internal Sources FY 2021-22

(Rs. in Crores)

Sr. No	Funding Agency	Name of Faculty Member	Department	Title of Project	Total Sanctioned Amount
1	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof checking the structural design of 40m single span major permanent bridge with steel superstructure over Naruab Nallah (Niru-1) at Km 43.125	0.01
2	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof checking the structural design of 40m single span major permanent bridge with steel superstructure over over Goutum-Shung Nallah (Niru-2) at Km 57.300	0.01

3	Industrial Consultancy	Dr. L. Vijay Anand	Department of Civil Engineering	Environmental Site Assessment Study of Waryana Dumpsite	0.27
4	Industrial Consultancy	Dr. L. Vijay Anand	Department of Civil Engineering	Design Vetting of Sewage Treatment Plant	0.01
5	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof checking the structural design of 60m single major permanent bridge with steel superstructure over Sumdo river at Km 147.070	0.01
6	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof checking the structural design of the spherical bearings	0.0045
7	Industrial Consultancy	Dr. Ramjee Repaka	Department of Mechanical Engineering	Structural Audit of Manufacturing Units and Technical Audit of flow meters installed in the manufacuring units in the state of Punjab	0.13
8	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Vetting of PEB GUN SHED at Pithoragarh	0.0039
9	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof Checking of proposed buildings for HPMC-Parala - Shimla Project	0.04
10	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof checking the porposed 300m Prestressed Concrete Girder Bridge on Anammkheri Ghat in Distrit Haridwar in the State of Uttrakhand	0.04
11	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Vetting of PEB Foundation for Med Repair Shed at Leh	0.0028
12	Industrial Consultancy	Dr. Venkata M. Viswanath Gunturi	Department of Computer Science and Engineering	Spatio-Temporal Data Driven Approach for Network and Route Optimization in Azure Cloud Services	0.06
13	Industrial Consultancy	Dr. L. Vijay Anand	Department of Civil Engineering	Vetting of Basic Engineering Process of 4 MLD STP	0.01
14	Industrial Consultancy	Prof. Harpreet Singh	Department of Mechanical Engineering	Cold Spray Coating Service	0.07
15	Industrial Consultancy	Dr. Sagar Rohidas Chavan	Department of Civil Engineering	Climate Change and its Impact on National Water Security	0.06
16	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof checking the structural design of 540m span PSC Grider bridge over river Yamuna	0.04
17	Industrial Consultancy	Dr. L. Vijay Anand	Department of Civil Engineering	Vetting of STP Process Design	0.02
18	Industrial Consultancy	Dr. Anupam Bandyopadhyay	Department of Chemistry	Synthesis of Ganiralix Related Impurities	0.04

19	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof checking the audio visual building, Leh	0.0028
20	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof checking the proposed PEBs for rural development complex and resource centre, Kargil	0.01
21	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof checking the proposed PEB for resource centre, Leh	0.0036
22	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof checking the Structural Design of Quench WTP and Scale WTP PEBs	0.0025
23	Industrial Consultancy	Dr. Reet Kamal Tiwari and Dr. Indramani Dhada (CI)	Department of Civil Engineering	Ascertain Natural Path & Flow of River Siswan Passing through Village Bhranjoia and Kansal, SAS Nagar Mohali	0.10
24	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Vetting of Structural design and drawing of box type sewer	0.0018
25	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Construcation of Mobile addiction and Impact assessment tool along with counselling module for affected person	0.07
26	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof Checking the Structural Design of Retaining Walls	0.01
27	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof checking the structural design of 60m steel bridge superstructure over Rimkhim Gad at Km 13.0 and Proof checking the structural design of 60m steel bridge superstructure over Pagal Nallah at Km 8.875	0.01
28	Industrial Consultancy	Dr. Indramani Dhada PI, Dr. Neelkanth Nirmalkar and Dr. Tarak Mondal (members)	Department of Civil Engineering	Random verification of Annual Inventory on Hazardous Waste Management	0.04
29	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof Checking the Structural Design of Bridge Across Khadi Khad Joining the Florence City, Pathankot	0.01
30	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	"Improvement and Widenning to two lane wih Paved shoulder of Road from Km 29 200 to Km 49 200 (Total Length 20 200 Km) i.e. Fultali-Jurichhara Section of NH-208 (Package-II) in the State of Tripura on EPC basis" Proof checking/independent review of design and drawings of Minor Bridges (08Nos)	0.02

31	Joint R&D project	Dr. Atharva Poundarik	Department of Bio-Medical Engineering	Development and characterization of bone replacement materials	0.21
32	Joint R&D project	Dr. Atharva Poundarik	Department of Bio-Medical Engineering	Development and characterization of medical polyurethane materials and dressings	0.14
33	Industrial Consultancy	Dr. Dhiraj Kumar Mahajan	Department of Mechanical Engineering	Development of Gas Driven Mini-Turbine for Automotive Applications	0.05
34	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof checking of spherical bearing design & drawings for Delhi-Vadodara Greenfield Alignment Project	0.01
35	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof Checking the Structural Design of the proposed bridge Rewari	0.01
36	Industrial Consultancy	Dr. Aditya Singh Rajput (CI) and Dr. Mitesh Surana (Co-CI)	Department of Civil Engineering	Special Repair to East Gate Secutity Wall at Fort William, Kolkata	0.01
37	Industrial Consultancy	Dr. Aditya Singh Rajput (CI) and Dr. Mitesh Surana (Co-CI)	Department of Civil Engineering	Structural Design of Gate at Vijay Smarak Security Wall, Fort William, Kolkata	0.01
38	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof checking of structural design and drawings of storage tank	0.02
39	Industrial Consultancy	Dr. Putul Haldar	Department of Civil Engineering	Vetting of Structural Drawings of ESR Standard Warehouse	0.01
40	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Validation of the structional stability of the design for the installation of the mobile towers (in reference of ongoing project 19-20)	0.01
41	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof Checking Detailed Design & Drawings of Culvert and Retaining Wall	0.0025
42	Industrial Consultancy	Dr. Deepti R Bathula	Department of Computer Science and Engineering	Deep Learning for PPD Risk Prediction	0.02
43	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof checking the PEB industrial shed for new Titanium shop at Midhani, Kanchanbagh, Hyderabad	0.02
44	Industrial Consultancy	Dr. Putul Haldar	Department of Civil Engineering	Vetting of hospital building at Moga, Punjab	0.01
45	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof Checking of MJB 130M Span Durga Bridge on Leh-Chalunka Road	0.02

46	Joint R&D project	Dr. Atharva Poundarik	Department of Bio-Medical Engineering and Metallurgical and Materials Engineering	Bacteriophage cocktails for combatting antibiotic resistance in the poultry and animal husbandry industry	0.21
47	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof checking the minor bridge across Sidhwan canal	0.01
48	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof Checking the Design & Drawings of weather shelter at Bhuj	0.0045
49	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof Checking of PEBs Dining Shed & Orl Shed at Uttarakhand	0.0033
50	Industrial Consultancy (Corporate Social Responsibility Funds (CSR)	Dr. Dhiraj Kumar Mahajan	Department of Mechanical Engineering	Negative Pressure Chamber for Isolating Covid 19 Patients	0.08
51	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof Checking of 2x15m Plate Girder Bridges Block Bani, Distt Kathua, J&K	0.01
52	Industrial Consultancy	Dr. Balwinder Sodhi	Department of Computer Science and Engineering	Core Banking Solution Consultancy for PSCB	0.20
53	Industrial Consultancy	Dr. Anupam Bandyopadhyay	Department of Chemistry	Synthesis of Exenatide and Technology Transfer	0.05
54	Industrial Consultancy	Dr. L. Vijay Anand	Department of Civil Engineering	Vetting of 4 MLD STP at Kartarpur Town, Jalandhar Dist	0.01
55	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof checking the Design & Drawings of Skull Melting Shed PEB	0.01
56	Industrial Consultancy	Dr. Balwinder Sodhi	Department of Computer Science and Engineering	Broadridge NHO Program (Batch#2) Project reference: BROADRIDGE/NHO2020-B2/B.SODHI	0.08
57	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Foundation Design & Proof Checking the Design & Drawings of Insulated House at Leh	0.01
58	Industrial Consultancy	Dr. Balwinder Sodhi	Department of Computer Science and Engineering	Broadridge NHO B3/2021	0.11
59	Industrial Consultancy	Dr. Putul Haldar	Department of Civil Engineering	Proof Checking of Structural Drawings of Business Square B-11,124/P Shahpur Road, Ludhiana (Punjab) for RKS Builders	0.01

60	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof Checking the flyover at Bharat Nagar Junction	0.08
61	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof Checking of 115M Motorable Bridge over Nallah at Ganjote to Phalni Road	0.01
62	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof Checking of Proposed PED for Animal Operation Theater, HP	0.0014
63	Industrial Consultancy	Dr. Putul Haldar	Department of Civil Engineering	Proof checking of structural drawings of "Prop. Plan of Miniplex to be built at Green City Square Near AIIMS Hospital,, Dabwali Road, Bathinda	0.03
64	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof Checking of Bearing Forces of Dah and Reru Bridges	0.0035
65	Industrial Consultancy	Dr. Putul Haldar	Department of Civil Engineering	Proof checking of Structural Drawings of Commercial Building to be built on property M C No B xx -4066/1251/3-B (UID No B020-00338) plot No 16H-17H Situated at Sarabha Nagar Taraf Sunet Ludhiana	0.02
66	Industrial Consultancy	Dr. Ekta Singla	Department of Mechanical Engineering	Geometrical Design of Actuator Specific Links	0.0049
67	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof Checking of 75m Motorable Bridge on Palali to Machali Road	0.01
68	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof Checking the Design & Drawings of Sports Hostel at Kargil	0.01
69	Industrial Consultancy	Dr. Putul Haldar	Department of Civil Engineering	Vetting of revised Structural Drawings of ESR Standard Warehouse	0.0043
70	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Vetting the Structural design and drawing of 3 MLD ATP at Adampur District- Jalandhar	0.0035
71	Industrial Consultancy	Dr. Suman Kumar	Department of Electrical Engineering	Development of Lora end-node system for parking application	0.04
72	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof checking of Tail End	0.0021
73	Industrial Consultancy	Dr. Puneet Goyal	Department of Computer Science and Engineering	Applied Computer Vision, Image Processing and Analytics for Biometric Authentication	0.15
74	Industrial Consultancy	Dr. Aditya Singh Rajput (CI) and Dr. Mitesh Surana (Co-CI)	Department of Civil Engineering	Vetting Of Structural Design and Drawings Of 585- L, Model Town, Jalandhar	0.0030

75	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof Checking the structural conditional assessment of Sasthri Bridge at Prayagraj	0.02
76	Industrial Consultancy	Dr. Aditya Singh Rajput (CI) and Dr. Mitesh Surana (Co-CI)	Department of Civil Engineering	Proof Checking of RCC Overhead Tank of 2L Capacity	0.0035
77	Industrial Consultancy	Dr. Aditya Singh Rajput (CI) and Dr. Mitesh Surana (Co-CI)	Department of Civil Engineering	Vetting of Structural Design and Drawings of National Sports Complex Building, Patiala, Punjab	0.02
78	Industrial Consultancy	Dr. Putul Haldar	Department of Civil Engineering	Proof Checking of Structural Drawings of "Commercial Site situated at Khasra No. 2506/1MIN (0-2) (0-8), MCA No. Z2-08258, Z2-08260, Main Power Road Bathinda	0.02
79	Industrial Consultancy	Dr. Anupam Agarwal	Department of Mechanical Engineering	Fabrication of SMA Material Actuators	0.0047
80	Industrial Consultancy	Dr. Rajendra Srivastava	Department of Chemistry	Characterization and Engineering/Outsourcing of Synthesization of Adsorbents (Existing or Oterwise) According to and for the Requirement of BRY-AIR (Asia) Pvt. Ltd.	0.14
81	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof Checking the bridges, culverts and retaining walls on Amabala-Chandigarh Section	0.04
82	Industrial Consultancy	Dr. Aditya Singh Rajput (CI) and Dr. Mitesh Surana (Co-CI)	Department of Civil Engineering	Structural Audit of Existing Masonry Structure, NSNIS, Patiala	0.06
83	Industrial Consultancy	Dr. Aditya Singh Rajput (CI) and Dr. Mitesh Surana (Co-CI)	Department of Civil Engineering	Vetting of Structural Drawings of overhead water tank of 632 KL capacity	0.0035
84	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof Checking the Design & Drawings of PEBs	0.01
85	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof Checking the Design & Drawings of PEB Shed for Parking at Kochi	0.0050
86	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof Checking the Structural Audit of Multistoreyed Flats of NBCC Green View, Gurugram	0.02
87	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof Checking the Design & Drawings of Fire Station for Integrated Check Post, Attari	0.0050
88	Industrial Consultancy	Dr. Dhiraj K. Mahajan	Department of Mechanical Engineering	Testing and analysis of corrosion testing of stainless-steel medical implants as per ASTM standard F21229-19a	0.01
89	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Structural Design and Drawing for Two End Spans of Rail Over Bridge in Ludhiana	0.02

90	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof Checking of 60m MJB PMT Hinachi Bridge Road	0.01
91	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof Checking of 72m Motorable Bridge on Palali to Machail Road	0.01
92	Industrial Consultancy	Dr. Narinder Singh	Department of Chemistry	Guidelines, Protocols & Technical Know-How for the prepration of Formulations from given materials	0.09
93	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof checking the fabrication drawings of RDSO 72M spam	0.0035
94	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof checking the flyover and VUPs for six lane Elevated highway between Beas to Jandiyala in the State Of Punjab	0.13
95	Industrial Consultancy	Dr. Sarang P. Gumfekar	Department of Chemical Engineering	Development and application of Encapsulated Phase Change Materials (PCM) with Tunable Surface Interactions and High Thermal Energy Storage	0.06
96	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof Checking the Launching Methodology of Steel Truss for 71 M Span at RHS ROB for Ahmedabad Viramgam Maliya Road Project	0.01
97	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof Checking of 35rn Motorable on Phalini to Dharmari, Reasi	0.0037
98	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof Checking the Design & Drawings of Covid Centre, Chandi Nagar	0.0042
99	Joint R&D project	Dr. Atharva Poundarik	Department of Bio-Medical Engineering	Training to Boston Scientific Employees (Trainees) pertaining to Polymer Science and Engineering	0.09
100	Industrial Consultancy	Prof. Harpreet Singh	Department of Mechanical Engineering	Commercialisation of Nobel Cause-An Eco Friendly Cremation Incinerator	0.0035
101	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof Checking the proposed Rehabilitation of PSC Box Girder at Malerkotla	0.01
102	Industrial Consultancy	Dr. Indramani Dhada PI, Dr Narinder Singh and Dr. Suman Kumar (Co-PI)	Department of Civil Engineering, Chemistry and Electrical Engineering	Preparation of DPR and RFP for Upgradation, Operation and Maintenance of Garbage Processing Plant at Chandigarh	0.38
103	Industrial Consultancy	Dr. Deepti R Bathula	Department of Computer Science and Engineering	Machine Learning for PPD Risk Prediction	0.04
104	Industrial Consultancy	Dr. Muthulingam Subramaniyan	Department of Civil Engineering	Proof Checking the Structural Design of Proposed Check Post, Kullu (HP)	0.0018
				Total	**4.01**

LIST OF SPONSORED PROJECTS

Sponsored Project money Sanctioned from Non-Internal Sources FY 2021-22

(Rs. in Crores)

Sr. No.	Funding Agency	Name of Faculty Member	Department	Title of Project	Total Sanctioned Amount
1	GCRF with Cardiff University	Dr. Nitin Auluck	Department of Computer Science and Engineering	Development of Compressed Hydrogen-Fuel Cell Integrated System for Light Duty Vehicles	0.03
2	Ministry of Electronic & Information Technology (MeiyY)	Dr. Sarang P. Gumfekar (Chief Investigator) Joint project with NIT Warangal, Telangana	Department of Chemical Engineering	Development of Electrically Conductive Adhesives for the Microelectronic Packaging and Flexible Film Circuits	0.57
3	CSIR	Dr. Indranil Chatterjee	Department of Chemistry	Divergent Synthesis of Fused Polycycle and Spirocyclic Framework by Merging Photoredox and Organocatalysis: A Rapid Technique to Obtain Molecular Complexity	0.07
4	CSIR	Dr. Debaprasad Mandal	Department of Chemistry	Design of Rapid and Tough High Performance Self-Healing Polymers	0.09
5	DRDO-ARMREB	Dr. Prabhat K. Agnihotri	Department of Mechanical Engineering	Development of Non-destructive test methodologies to sense and quantify environmental and operational damage in the composite armour panels	0.52
6	DST/TMD/HFC	Dr. Dhiraj Kumar Mahajan	Department of Mechanical Engineering	Additive Manufacturing & Machine Learning based Development of Indigenous Hydrogen Fuel Cell Stack	0.74
7	DRDO-ARMREB	Dr. Navin Kumar (Co-PI) and Dr. Nitin Rameshrao (PI from BITS PILANI	Department of Mechanical Engineering	Investigation on Dynamic Deformation Behavior of Tungsten Heavy Alloys (WHAs) for Defence Applications	0.25
8	DBT (joint reseach project with Dr. H.S. Shekawat, IIT Guwahati	Dr. Mukesh Saini	Department of Computer Science and Engineering	Centre for depression diagnosis and medication adherence	0.05
9	CSIR	Dr. T J Dhilip Kumar	Department of Chemisrtry	AB INITIO Study of Metal Anchored Graphyne And Graphdiyne Framework Materials For Energy Storage	0.03

10	DBT	Dr. Yashveer Singh (PI) and Dr. Durba Pal (Co-PI)	Department of Chemistry	Antisense oligonucleotide-loaded, 3D printed, double-layered, and multifunctional wound healing matrix to target angiogenesis in chronic diabetic wounds	0.38
11	SERB-SRG	Dr. Abhishek Tiwari	Department of Metallurgical and Materials Engineering	Application of configurational force based concept of material inhomogeneity to enhance crack resistance of materials	0.32
12	SERB	Dr. Vijay Kant, Lovely Professional University, Jalandhar, Mentor Prof. Narinder Singh	Department of Chemistry	Teachers Associateship For Research Excellence (TARE)	0.10
13	SERB-TARE	Dr. Mohit Kapoor, Chitkara University, Chandigarh Mentor Dr. Prabal Banerjee	Department of Chemistry	Development and Synthesis of Antiviral Toolkit Using Nickel Catalyzed Sustainable C-H Functionalization	0.10
14	SERB-TARE	Dr. Sahaj Saxena, Thapar Institute of Enfineering & Technology, Patiala, Mentor Prof. Navin Kumar	Department of Mechanical Engineering	Cyber Security Analysis of Artificial Pancreas Control System	0.10
15	Mission Tandrust Punjab	Dr. Narinder Singh (PI) and Dr. Gagandeep Singh (Young Scientist, IIT Ropar (Co-PI)	Department of Chemistry	Water Analysis and Purification of Saline Ground Water of South-West Areas of Punjab State	0.18
16	SERB-RJF Ramanujan Fellowship	Dr. Monika Gupta	Department of Chemistry	Molecular Engineering of Azobenzene-derived Liquid Crystalline Systems for Robust and Tunable Solid-State Solar Thermal Fuels	1.19
17	ARDB-DRDO	Dr. Sachin Kumar (PI) and dr. Manish Agrawal (Co-PI)	Department of Mechanical Engineering	Development of a Localized Gradient Damage based Extended-FE Model for Fatigue Analysis of Aircraft Components	0.23
18	HEFCW GCRF Facilitation Grant	Dr. Sujata Pal	Department of Computer Science and Engineering	HEFCW GCRF Facilitation Grant: Internet of things in Healthcare	0.02
19	SERB-MATRICS	Dr. Partha Sharathi Dutta	Department of Mathematics	Collective Dynamics in Adaptive Ecological Networks	0.07

20	Central Power Research Institute (CPRI)	Dr. Bibhu Prasad	Department of Electrical Engineering	Study on Detection of False Data Injection (FDI) Attacks in Smart Grid Cyber-Physical Systems: A Machine Learning Approach	0.14
21	DST	Dr. Bodhisatwa Das	Department of Bio-Medical Engineering	Dual release of anti-inflammatory molecules from core-shell nanofibers for chronic wound healing	0.30
22	SERB-CRG	Dr. Devarshi Mrinal Das	Department of Electrical Engineering	Design and development of an IoT enabled Pulse-Oximeter system for integrating with oxygen concentrators	0.09
23	SERB-NPDF	Dr. Revathi A.	Department of Chemistry	NPDF	0.20
24	SERB	Dr. Mahendra Sakare	Department of Electrical Engineering	Low power programmable multiple uncorrelated output PRBS generator integrated circuit	0.26
25	SERB-CRG	Dr. Sandeep Gautam	Department of Physics	Thermal melting of the emergent patterns in spin-orbi coupled spinor condensates	0.25
26	SERB	Dr. Sam Darshi	Department of Electrical Engineering	Reliability Enhancement for Vehicle-2-Pedestrian (V2P) Communication Scenario using Peer Conscious Opportunistic Network Coded Cooperation	0.39
27	SERB-MTR	Dr. M. Prabhakar	Department of Mathematics	Polynomial and Numerical Invariants of Spatial Theta-Graphs	0.07
28	SERB-CRG	Dr. Ravi Mohan Prasad	Department of Metallurgical and Materials Engineering	Simultaneous Separation and Sensing of Hydrogen and Carbon Monoxide/Carbon Dioxide using Polymer-Derived Ceramics Membranes for Hydrogen Purification	0.47
29	SERB-CRG	Dr. Vishwa Pal	Department of Physics	Next generation of high power ultrafast fiber lasers based on controlled space-time dynamics in amplifying nonlinear multimode fiber	0.48
30	SERB-CRG	Dr. Pratik Ray	Department of Metallurgical and Materials Engineering	Designing improved bond coat materials through co-doping of reactive elements	0.52
31	SERB-CRG	Dr. Ekta Singla	Department of Mechanical Engineering	Unconventional Architecture Design and Development of Modular Library for Non-Repetitive Robotic Applications	0.36

32	SERB-CRG	Dr. Manish Agrawal	Department of Mechanical Engineering	Functionally graded materials: Thermoelastic analysis along with design framework using hybrid elements and deep learning	0.27
33	DST-WOS-A	Dr. Lopamudra Palodhi (Dr. Manoranjan Mishra, Mentor)	Department of Mathematics	Pattern formation : A Thermodynamic Study	0.32
34	MeitY	Dr. K. Ramachandra Sekhar	Department of Electrical Engineering	The AI Enabled Solar based Multi-port High Gain Electric Vehicle AC Charging Station for Domestic and Commercial use	0.66
35	SERB-CRG	Dr.Devarshi Mrinal Das	Department of Electrical Engineering	A Noise-Power-AANoise-Power-Area Optimised Instrumentation Amplifier for Sensing Applicationsrea Optimised Instrumentation Amplifier for Sensing Applications	0.34
36	DST-CSRI-PDF	Dr. Shivjot Gill, Mentor Dr. Parwinder Singh	Department of Humanities and Social Sciences	Mental health in Sports: Determining the effectiveness of Psychological Capacity Building Program (PCBP) on cognitive correlates of athletes in individual sports	0.19
37	LAM Research Idea Unlock Award	Dr. Prabhat K Agnihotri	Department of Mechanical Engineering	Design and Synthesis of novel thermal interface material as a potential replacement for the silicone-based gels in bowl assembly	0.19
				Total	**10.51**

AUGMENTATION OF RESEARCH INFRASTRUCTURE

LIST OF INSTRUMENTS

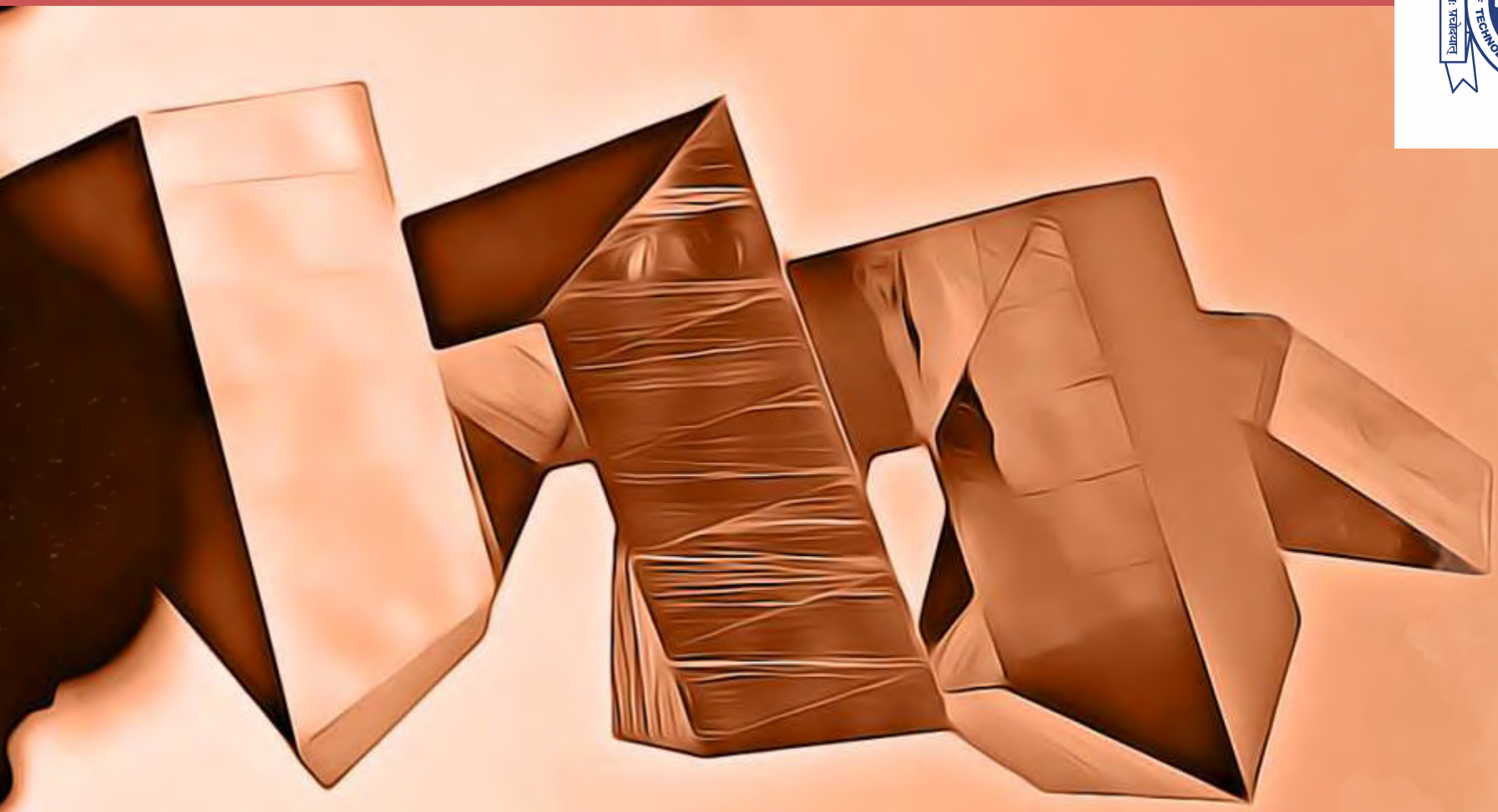
1. "LABMAN SCIENTIFIC INSTRUMENTS Sonicator System"
2. "Tyrone 1 X AMD DDR4SDRAM with ECC 32 GB"
3. KAMBILL GEOMASTERP SERIES V2
4. Air quality monitor and ozone analyzer
5. Analytical Semi-Micro Balances
6. Diamond membrane containing nano-pillar arrays with emnedded NV Centers
7. Picosecond 532nm diode laser along with driver and accessories
8. Freeze Dryer and LabFreez Rotary Vacuum Pump
9. Microplate Elisa Reader

10. PI Mars XYZ Piezon-nanopositioning system
11. function generator
12. 1310nm laser diode module and 1550nm diode module
13. Tyrone 2 X Intel DDR4 SDRAM with ECC 128 GB
14. Digital Storage Oscilloscope
15. Insert Gas Workstation (Glove-box 2 or 2 ports system)
16. Multi Channel Gas Chromatograph
17. Four Probe controlled Environment Gas Testing Chamber
18. Chemical Vapour Deposition System
19. QUADRO RTX 6000 GPU CARD
20. Current Probe; DC Coupled: 50 MHZ BW: 20 A: BNC interface
21. Handheld Spectrum Analyzer
22. Vacuum Oven & Vacuum Pump
23. Ultrasonic Processor
24. Spin Coating Unit with Integrated Syringe Pump
25. "FLUKE Three phase Power Quality Analyzers 4 Channel 400 kiloWatt"
26. Soft Tissue Measurement Device
27. Environment Chamber
28. HeidolphHot plate Magnetic Stirrer
29. CCD Camera
30. Switch Reluctance Motor development
31. Mock Circulatory System
32. Kyowa Contact Angle Meters-DMe-211 Plus
33. SS Bright Bars
34. Non-refrigerated Centrifuge and Accessories
35. Hydrogen Leak Detector
36. DIgSILENT Power Factory Software
37. Digital mass flow controller woth Inbuilt display
38. Evergreen 2*200 mJ, 532 nm 15Hz
39. Clean Room Partition and Doors'
40. Honeycomb Tabletop
41. HP Workstation
42. Filament winding
43. Brust Test of Type IV Cylinder (Services)
44. Website Redesign & Development
45. Cylinder Filled with Nitrogen Gas
46. Analytical Balance
47. NI PXIe-1073 Integrated MXIe

THRUST AREAS OF RESEARCH

1. Water
2. Cancer Research
3. Environmental Issues
4. Electrical vehicles
5. Microgrid
6. Artificial intelligence and big data
7. Drug de-addiction
8. Manufacturing
9. Agriculture
10. R&D for combating COVID-19
11. Health care
12. Additive Manufacturing
13. BioMechanical Engineering
14. Energy Efficiency and Sustainability
15. Intelligent Mechanical Systems
16. Micro/Nano Engineered Systems
17. Climate Change impacts on Water Resources
18. Seismic Safety of Built Environment
19. Geoinformatics for Natural Processes
20. Earthquake Engineering
21. Natural hazard mitigation and disaster management
22. High Temperature Processes and Materials for Structural Applications
23. Energy and Functional Materials
24. HVDC Light
25. Neuromorphic Computing

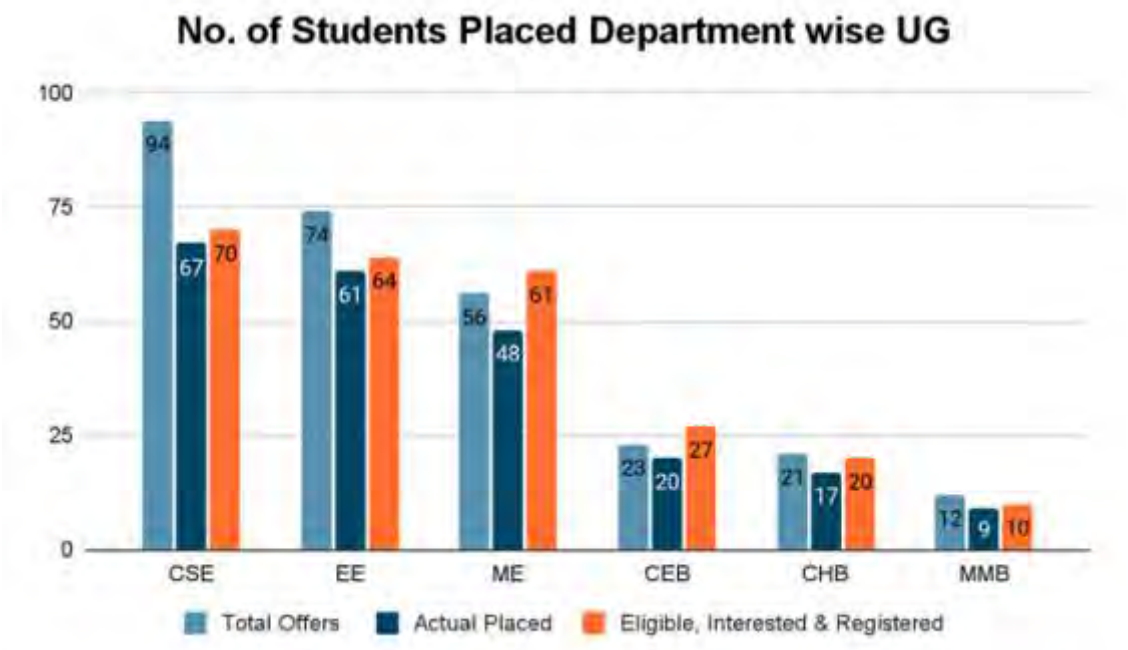
CAREER DEVELOPMENT PLACEMENT CELL (CDPC)

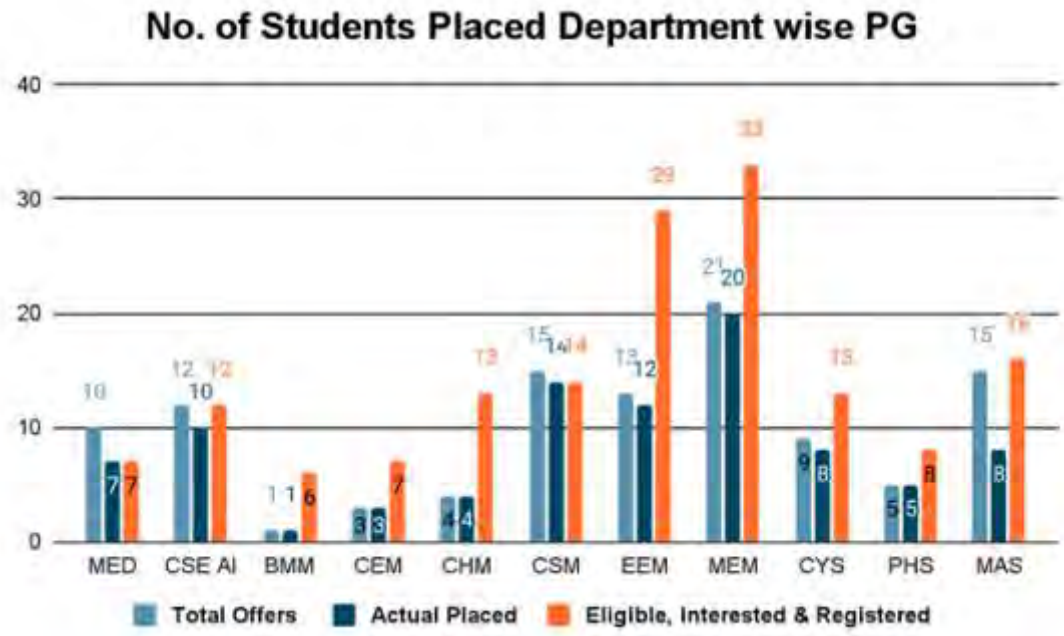


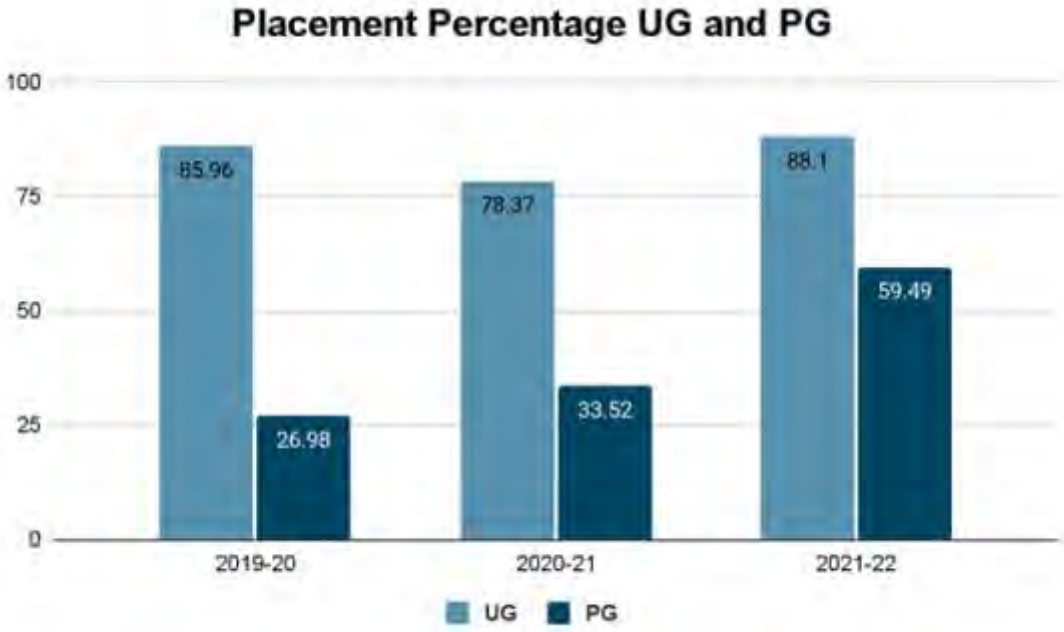
CAREER DEVELOPMENT PLACEMENT CELL

The placement results during placement session of 2021-22 at IIT Ropar have been very encouraging. A good and encouraging response from the industry was seen for the campus recruitment process as a result of which 88.10% of our students were placed. 95.71 % of the Computer Science students, 95.31% of Electrical Engineering students, 78.69 % of the Mechanical Engineering students, 74.69% of Civil Engineering students, 85% of Chemical Engineering and 90% of Metallurgical and Materials Engineering students have been offered positions in core-technical, consultancy and IT companies. An average package of over 18.80 lakhs per annum was offered to students this year. Some of the premier companies where our students (2022 graduating batch) got placed are:

Microsoft, Goldman Sachs, Amazon, Nvidia, Walmart, Flipkart, Publicis Sapient, Samsung Research Institute Bangalore, Strand Life Sciences, Wipro, Google, American Express, Decimal Point Analytics, Nutanix, Infosys, Intellewings, Tata Electronics, Adobe, Micron Technologies, Texas Instruments, ThoughtSpot, Sprinklr, Jio Saavn, Oracle, Urban Company, Swiggy, Coin DCX, Zomato, Mathworks, Cashfree Payments Limited, Deloitte, Nurture.Farm, Toppr, Brane Enterprises, Bajaj Autos, Chegg India, Komprise, Future First, Singularity Dynamics Private Limited, Tata Digital, ICICI Bank, Quantile Analytics, Tiger Analytics, L&T Infotech, SCA Technologies, Gemini Solutions, Cubastion Consulting, Ernst and Young, Synopsis, Yellow.ai, Contata, Accenture, II-VI Incorporated, Zolostays, L'Oreal, Helium Consulting, Byju's, Congo Port, LogicFruits Technology, Udaan, Jungleworks, Ceremorphic, HCL Technologies, AmDocs, Kanvic Consulting, Brillio, Bharat Electronics Limited, Arcelor Mittal & Nippon Steel, Advantage Club, Ola Electric, Maruti Suzuki, Qualcomm, Affine Analytics, Mercedes Benz, Admitkard, Droom, Ericsson Global, Edupace, Air Liquide, Thought Genesis, Bharat Petroleum Corporation Limited, Siemens Gamesa Renewable Energy, Aakash Institute, Steel Strips India Limited, Edupace Etc.







A good number of Internship opportunities were also offered to the students this year. Some of the premier companies/institutes that have offered summer internships to our students (2023 graduating batch) are:

Google, Microsoft, Amazon, Samsung Research Institute, Goldman Sachs, Yodlee, American Express, Oracle, Kvantum, Truminds, Flipkart, Factwise, Strand Life Sciences, Athmin Technologies, PB Partners LLC, Walmart Labs, Salesforce, Publicis Sapient, GE Healthcare, Arista Networks, DE Shaw, Newzera, Radisys, Trident, Logic Fruit Technologies, Nvidia, Texas Instruments, Siemens, Accenture, Hyperverge, Shipsy, Tata Steel, Codenation, Nutanix, IrageCapital, Analog Devices, Axxela, Hyperverge, Intuit, Fabheads, TMI Group (Japan), Angnext, Ramboll, Aurestech Systems, Micron Technologies,Frugal Testing, Decimal Point Analytics, Intellewings, Semusi Technologies, Ubreathe, Flexiele, Kaypear, MyHashCode, Wipro, Mymoma, K-12 Techno Services, Whitehat junior Etc.

As a part of Professional Development the following activities were conducted:

- Interactive session of Importance of behavior in career by Mr. Suresh Kumar, Executive Officer & CHRO, Polycab Wires India.
- Virtual session on Future Skills required in core engineering domain by Mr. Chirag Aneja, Human Resource officer, Grey Orange.
- Special session on finding a post doc in US for PhD scholars by Dr. Palavi Esawara, Associate Director, Planning & Operation, PhD Network, Northeastern University, Boston.
- Session by Ms. Vinita Ramtri, Global Head, API Standards & Governance, HSBC, London on Women in Finance
- Interaction on Diversity, Equity & Inclusion by Ms. Diya Khanna, Global Diversity Program Manager, Amazon, USA
- Virtual interaction session by Dr. Mousumi Bhat, Senior Director, Micron Technology, UK on Careers in Semiconductor Industry.
- Interaction session with assistance from department of Chemical Engineering by Ms. Maggie John, Advisory Board member of SETI Institute and heads Carrier Acquisition and Engagement Programs, Convoy on Chemical Engineer & Management Leader.
- Virtual session on Data Analytics by Ms. Ranjani Mani, Director, Analytics & Data Science, VMware India & Mr. Deepak Nair, Senior Business Analyst, VMware India.
- Session on Interpersonal & Communication Skills by Ms. Parul Mukherjee, Associate HR Manager, Rodhe & Schwarz.
- Session with department of Electrical Engineering on Intro & Basics of SOC design by Ms. Anusha Reddy Kotha, SOC Design Engineer, Intel.
- Session on Data Analytics by Ms. Muskan Sahu, Decision Scientics, Axtria Analytics.
- Session on “From Engineering to Psychology: Challenges and Opportunities” by Ms. Zahra Fatouraei.
- Interactive session on Women Entrepreneurship with Ms. Ayushi Kapoor, PhD Scholar IIT Roorkee.
- Interaction session on How to start with Open Source contribuation by Ms. Jyotsana Gupta, Senior Software Developer, Gojek.
- The Process of Pursuing Higher Education in Abroad' by Swetha Manickavasagam, Arizona State University.
- Session with SWE Singapore on “Being hired in the midst of the pandemic”.
- Interaction session on “Finding a post Doc in US” with Ms. Pallavi Eswara, Director, Office of Post Doctoral Affaris, North Eastern University, USA.

TECHNOLOGY BUSINESS INCUBATOR FOUNDATION

Bolstering the Nation’s entrepreneurial and start-up ecosystem is the need of the hour in order to achieve the vision of “AtmaNirbharBharat”. Aligning with the goal, IIT Ropar - Technology Business Incubator Foundation (IITR-TBIF) has been set up, which is an independent Section-8 Not-for-profit Company of the institute. This incubator is being funded by the Department of Science & Technology (DST), New Delhi. This incubator is an umbrella programme for nurturing ideas and innovations (knowledge-based and technology-driven) into successful start-ups. It was formed in 2016 to host Technology Business Incubator (TBI) under NIDHI TBI Scheme of Department of Science & Technology, Government of India.

It is housed within the Administration Block of the institute with a floor area of 10,000 sq. feet and its extension of 10,000 sq ft is currently under development for housing heavy equipment. The incubator has its own Board of Directors with Prof. Rajeev Ahuja (Director-IIT Ropar) as the Chairman. Prof. Naveen Kumar (Dean, R&D) is one of the directors of TBIF along with Dr. Anshu Dhar Jayal, Mech., Dr. Shashi Shekhar Jha, CSE, Dr. Harpreet Singh, Coordinator, Mech., Dr. Ashish Sahani, Director, Biomedical Devices; are on the TBIF's board of Directors. Dr. Srikant Sekhar Padhee, is the Faculty- In-charge of TBIF and heads the day to day operations of the organization with Mr. Avik Chakraborty, as the Chief Operating Officer of the Incubator. Infrastructure-wise the incubator provides co-working spaces as well as individual fully furnished offices for incubates, along with common amenities such as conference room, pantry, printing facility and a library. TBIF has a state-of-the-art electronic prototyping lab and a product fabrication lab. We also have a central high performance server available for use by our incubatees. We fund startups in the form of Soft loans and Seed grants. Funded mentorship support from our large pool of technical and business mentors can be availed by our incubatees. TBIF is run professionally with time bound SOPs around selection and monitoring of startups into our incubation program. TBIF is growing rapidly and aims to be one of the top business incubators of the country in the near future.

- **Years of existence** : Five Years
- **Total number of startups supported** : 26
- **Impact created on the ecosystem.**
  - **Scalability of operations:** We have been able to increasingly accommodate a higher number of incubatees over the years. As we ramp up our operations, we are restructuring ourselves to evolve into a much more potent home for fresh entrepreneurs.
  - **Quality mentorship:** As we delve deeper into the Start-Up ecosystem and fresh entrepreneurial minds,we are getting more sensitised to the needs of start-ups, thereby drastically improving the quality of our various mentorship sessions and talks held by experts from all necessary fields. We are seeing a much higher rate of ideas being brought to life, as the confidence levels of our incubatees now allow them to take bolder steps.
  - **Large Phygital Resource pool:** To cater to every need of start-ups, right from fabrication labs for manufacturing to providing server/cloud space to IT/ITES genres of startup, we strive to be a 'one-stop-shop' for all our incubatees needs. We have a very large entrepreneurship library, manufacturing labs, and resources for legal and corporate compliance.
  - **Discounted Services:** Our market due diligence results in us being able to provide our start-ups access to most of their required services at much discounted rates than market. This has proven very handy as it reduces their overheads by a large margin.
- **Current number of startups under incubation** : 19
- **Plans and Projections for next three years.**
  - Build all labs and facilities planned under Nidhi-TBI
  - Grow at the rate of at-least 1 company per month
  - Build capabilities for equity financing of companies.
  - Build the Startup accelerator system at Chandigarh.

- **Objectives of the Incubator**
  - To be the top business incubator of the Punjab region.
  - To provide low-risk capital to startups. Incubator will absorb risk through appropriate channeling of government funds.
  - Minimize the bureaucratic hurdles for startups by providing support in all government and legal compliances. Startups should focus only on product and business development.
  - To build facilities to such a degree that entrepreneurs incubated with us do not have to spend on procuring equipment and building facilities. They should spend most of the seed funds only for manpower and consumables.

- **Core competences of the Incubator (Thrust areas of the Incubator)**
  a. IT and IT-enabled Services
  b. Manufacturing
  c. Healthcare Technologies
  d. Clean Energy
  e. Agriculture

Total Physical Infrastructure (Size of the Incubator in sq.ft) and highlighting details of dedicated administrative space, common facilities, lab facilities, etc. is 20000 sq. ft.

S.no	Workspace Type (Open space/Cubicle)	Work space size	No. of cubicle	Occupancy Status
1.	Cubicle	60 sq. ft.	12	Under construction
2.	Private office	120 sq. ft.	7	4 Occupied
3.	Semi Private Space	90 sq. ft.	12	4 Occupied

- **Virtual Incubatees:**

S.no	Name of the Startup	Present Location of the incubatee	Engagement model with the incubatee
1.	Dron Digital Services Pvt. Ltd.	Rajasthan	Soft loan tenure relaxation. Online product development support and mentorship.
2.	Daktarz Pvt. Ltd.	Chandigarh	Soft loan of Rs. 500000. Online support on mentorship, cloud servers and graphics design. Graphics Design support.
3.	Curartors Pvt. Ltd	South Delhi	Seed grant of Rs. 200000. Online support on mentorship, cloud server support access to Digital Entrepreneurship Library. Legal support.
4.	Snizzr Technologies Private Limited	Ajmer, Rajasthan	Seed grant of Rs. 200000. Online support on mentorship, cloud server support access to Digital Entrepreneurship Library.
5.	Meal Bell Pvt. Ltd.	Ludhiana, Punjab	Seed grant of Rs. 450000. Online support on mentorship, cloud server support access to Digital Entrepreneurship Library.
6	Shinaizel Pvt. Ltd.	Uttar Pradesh	Seed grant of Rs. 450000. Online support on mentorship, cloud server support access to Digital Entrepreneurship Library.

7	Makris Pvt. Ltd.	Phagwara, Punjab	Seed grant of Rs. 450000. Online support on mentorship, cloud server support access to Digital Entrepreneurship Library.
8	Vanix Technologies Pvt. Ltd.	Andhra Pradesh	Seed grant of Rs. 450000. Online support on mentorship, cloud server support access to Digital Entrepreneurship Library.
9	Padhakku Pvt. Ltd.	Pune, Maharashtra	Seed grant of Rs. 450000. Online support on mentorship, cloud server support access to Digital Entrepreneurship Library.

- **Value added services offered by the Incubator to its incubatee startups.**

S.no	Type of support	Details
1.	Mentoring Support	• Large mentor pool • Funded mentorship of upto 4 hours per month. We pay the mentors Rs. 2000 per hour. • Links to Mentors through TiE Chandigarh
2.	Technical Support	• Access to High performance server in-house • Access to Cloud computing service from Google and Amazon on reimbursement basis. • Access to Electronic Manufacturing and Testing facility • Access to Wet Lab • Access to 3D Printing and product prototyping
3.	Financial Support	• Funding in form of Seed grants upto Rs. 4.5 lakhs • Funding in form of Soft loans upto Rs. 20 Lakhs • Financial compliance support through affiliated CA/CS
4.	Legal and IPR Support	• Services of affiliated Corporate lawyers are available from Talwar Advocates, Chandigarh at pre-negotiated subsidised rates. • Services of patenting are available from affiliated patent lawyers from FITT, IIT Delhi at pre-negotiated and subsidized rates. • We also provide end-to-end IPR filing support against equity.
5.	Networking Support	• Talks by eminent Entrepreneurs and VCs every month. • During monthly evaluation, key weaknesses and requirements of startups are identified and Mentors are identified and connected on a rolling basis.
6.	Staffing Support	• Connect affiliated startups with Placement cell of IIT Ropar to identify interns from academic programs of IIT Ropar.
7.	Co-working Space support	• Very low-cost Co-working spaces, private office spaces and semi-private office spaces are available. • The corporate offices of TBIF are under construction. Architectural design has been completed, tendering is pending.
8.	Marketing and Promotion support	• Subsidised graphic design support provided to startups through affiliated Graphic designer. • Twitter, Linkedin and Instagram engagement with posts of our startups and sharing them on our own handles. • Non-tech startups are provided with the facility of creating a basic website under our website itself without spending money on domain name and hosting.

9.	Internal monitoring mechanism for startups	• Weekly evaluation cum mentoring meeting with one startup per week in a round robin fashion. • Re-evaluation of progress before release of every tranche of a grant/loan.
10.	Any other support, please specify	• Full fledged, entrepreneurship library with a large number of physical and digital books on entrepreneurship and business. Subscription to Harvard Business Review, Amazon Audible and Coursera. • Subscription to Autocad and Microsoft Office. • B/W and Colour printing facility on a central printer. • Full-fledged conference room facility. • Dry-pantry service with unlimited Tea and Coffee through vending machine, Refrigerator and microwave oven.

Details of present Incubatees at the Incubator

Sr. No.	Name of the founders	Name of the Startup	DPIIT Registration (Y/N). If Y please provide number.	Incubated Virtually or Physically	Sector of the startup	Brief about the startup must include 1. Problem Identified 2. Solution 3. Product/Service offered 4. Revenue/Traction Max word limit: 100.	Date of initiation of the Incubation	Seed fund raised (If Y, mention quantum and source) in lakhs
1	Harsh Sahay & Sonu Kumar Kedia	Dron Digital Services Pvt. Ltd.	N	Virtually	IT/ITES	Dron Digital brings full Campus digitization solutions for day to day needs of students and school/college administration via intra-campus mobile App and website. Dron manages the database of every user's activities and does data analytics of user's previous choices. Revenue: 1 Lakh	13.11. 2017	N
2	Basil M Varghese, Rohit Kumar Varma& Geo Raju	Augniscient (P) Ltd.	N	Virtually	Manufacturing	Augniscient aims at bringing augmented reality into industries such as Defence, Healthcare, Warehousing and Automobiles. Revenue: Product launch couldn't succeed	16.10. 2018	N

3	Shivanshi Verma & Sandeep Kumar	Yoboshu Pvt. Ltd	N	Physically	Healthcare	Yoboshu focuses on developing a digital platform to promote healthy lifestyle, food and exercise through affiliated coaches, dieticians and social engagements. Revenue: Rs.50000	11.11. 2019	N
4	Jatin Goyal & Uneet Patel	Vafo Layovers Pvt. Ltd.	N	Virtually		An online marketplace for vacation rentals, primarily budget homestays. It includes a variety of accommodations like houses, apartments. cottages, farm-houses, villas etc. All homes shall be fully furnished so the guests Revenue: Rs. 50K	30.09. 2019	N
5	Amit Bhati & Akshit Dangi & Jeevant Sah	ScratchNest Pvt. Ltd.	N	Physically	Manufacturing	ScratchNest pioneers in delivering customized experiences of the next-gen technologies and bringing innovation to everything you use. They develop RFID, LoRa, IoT, NBIoT, WiFi, and Bluetooth devices, crafted totally from scratch. Revenue: Rs. 10 Lakhs	4.10. 2019	N

6	Ashwani Kumar & Rana Marghoob & Ahmad Usmani & Mandhatya Singh	Logier Technologies Pvt. Ltd.	N	Physically	IT/ITES	Logier's is attempting to develop a new business model with their Travier app that will create a revolution in the courier services and logistics sector. In this concept anyone who is travelling can act as courier service and anyone wants to parcel their item can contact the traveller with the help of their app. Revenue: Rs. 100000	17.06. 2019	N
7	Akash Deep Goyal & Ajit kumar Goyal & Kanta Goyal	Dakters Software Consulting Private Limited	N	Virtually	Healthcare and IT	AI based personalized Healthcare System Startup 'DakterZ' DaktarZ App will help to locate registered Healthcare practitioners on the platform in your vicinity according to your needs. Other aims of the company are: a. Provide ambulance in Emergency Situation. b. Affordable and Accessible Health Care Services c. Decrease in the number of road fatalities Revenue: Rs. 100000/-	28.06. 2019	N

8	Sarthak Joshi & Kaikash Chandra Joshi	Curartors Private Ltd	N	Virtually	IT/ITES	Chitr-cart, a future mobile application and website, aims to provide a universal platform for art enthusiasts across the world, creating a strong link between artists and buyers. There will be equal opportunities given to all artists. They will be able to sell their artworks and at much lesser commissions. (They can set their artworks prices on their own, categories and descriptions. Buyers can search). E-auctions will be held online on the application where people from any region across the globe can take part in bidding the price of the artwork online. Buyers will be able to differentiate between original works and prints. Revenue: Rs. 100000/-	9.12. 2020	Y TBIF: Rs 25 Lakh
9	Gupta Tanya Sanjeev & Saharsh Anand	WeVixit Private Ltd	N	Physically	Manufacturing	Inbuilt envelope with sanitary pads for easy and right disposal/ Envelope with absorbing capabilities to avoid leakage. In accordance with Red Dot Campaign, SWaCH and will be incinerator ready. Revenue: Rs. 100000/-	5.01. 2021	Y Rs. 15 Lakh

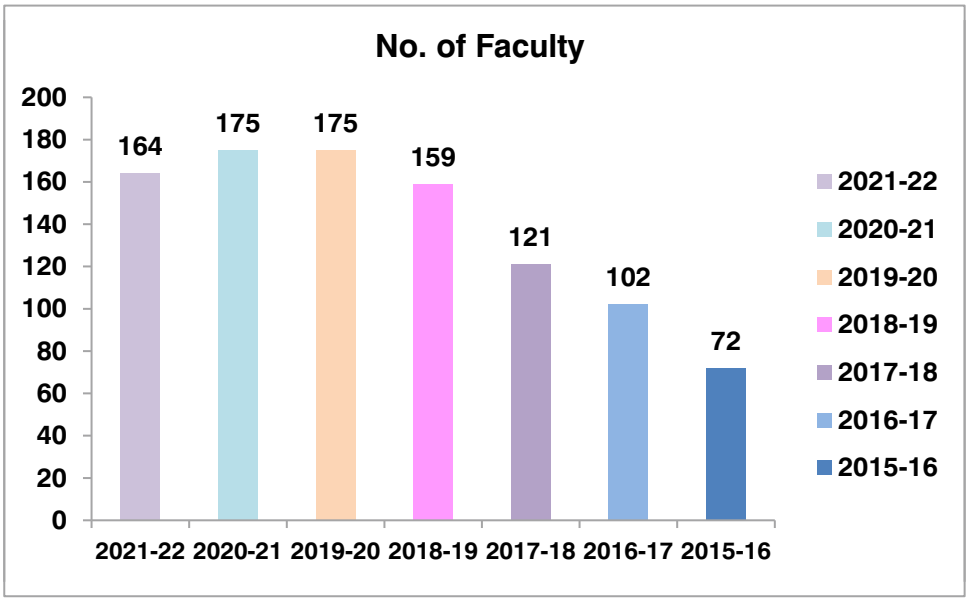
10	Tanishq Vaishnv & Manoj Matwa	Snizzr Technologies Private Limited	N	Virtually	edTech	Social Media Platform related to Poetry. Idea is to provide a platform where people can get their literature work reviewed by experts. Platform is not only for poems but for any kind of literature. Aim is to create a new digital platform for reading and writing. Multiple languages are supported . System rewards the best writers. The piece of work also gets published in famous magazines. Revenue: Rs. 100000/-	5.01. 2021	Y Rs. 25 Lakh
11	Rahul Shukla, Dr Ashish Sahani & Dr. Gagandeep Singh	Epilepto Systems private Ltd	N	Physically	Manufacturing	Epilepto Systems is developing a smartwatch that can detect seizures in patients of epilepsy and alert the family care-givers. They are also developing an App that can be used for self-management of epilepsy. They are a BIRAC funded company under the BIG grant Scheme. Revenue: Rs. 5 Lakhs	5.01. 2021	Y BIRAC Rs. 50 Lakh
12	Jigar Nilesh Mehta & Shruti Balwani	Entrainer Health Pvt Ltd.	N	Virtually	IT/ITES	A novel AI backed Mobile app to monitor the exercise routine of Health Conscious individuals. Intention is to put an end to all excuses of not exercising. Revenue: Rs. 100000/-	28.01. 2021	Y TBIF Rs. 7.3 Lakh
13	Savneet Kaur & Ritish Garg	Meal Bell Pvt. Ltd.	N	Virtually	Agritech	Catering services for Kindergarten and Play-schools Revenue: Rs. 100000/-	17.02. 2021	Y TBIF Rs. 4.8 Lakh

14	Varun Katiyar & Tushar Goel	Shinaizel Pvt. Ltd.	N	Physically	Manufacturing	Affordable and efficient cooling jackets for Indian market Revenue: Rs. 100000/-		Y TBIF Rs. 4.8 Lakh
15	Madhav Anand & Mehak Anand	Makris Pvt. Ltd.	N	Virtually	IT/ITES	Makris provides an Ultimate School/College Management web/android/iOS app which is capable of managing hostel, transport, fees, attendance, students, exams and everything else one can think of under one roof at the 50% price of competition. Revenue: Rs. 100000/-	25.05. 2021	Y TBIF Rs. 4.8 Lakh
16	Muddasani Satyanara yana & Ashwani Rana	Vanix Technologi es Pvt. Ltd.	N	Physically	Manufacturing	Vanix designs Customized High-end FPGA Boards for Industrial and Academia R&D purposes. Revenue: Rs. 100000/-	01.06. 2021	Y TBIF Rs. 4.8 Lakh
17	Palak Jain, Jatin Batra	Padhakku Pvt. Ltd.	N	Virtually	IT/ITES	Padhakku is an Ed-tech startup working with a vision to create a one stop solution. They offer various services like renting out books, strategic studying for Placements (currently providing Insights of more than 90+ companies) and free ebooks. Revenue: Rs. 100000/-	1.06. 2021	Y TBIF Rs. 4.8 Lakh

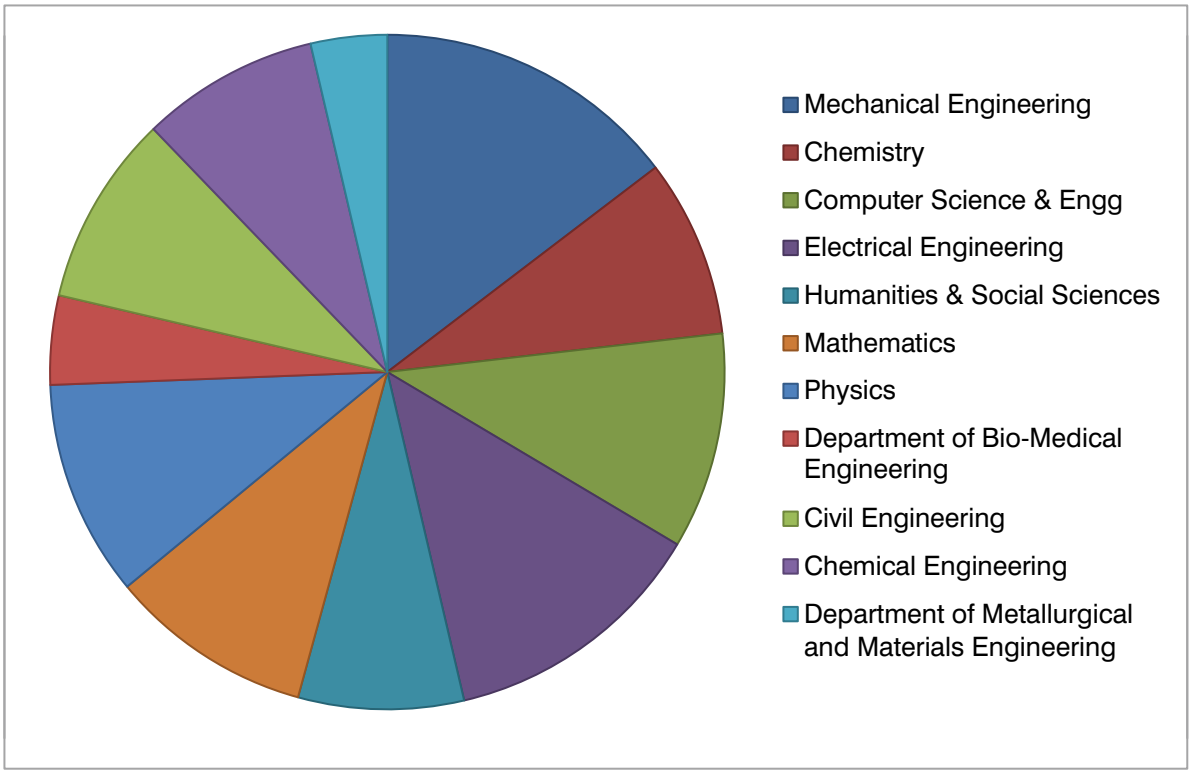
18.	Shubhendra Gautam, Vivek Yadav	Zynix Technoking Pvt. Ltd	N	Virtually	Manufacturing	Development of an interactive talking mirror that simulates how various outfits/products look on a customer by streamlining the whole buying process providing personalized recommendations based on the user's personal data. Revenue: Rs. 50K		Y TBIF Rs. 4.8 Lakh

FACULTY & STAFF

YEAR WISE TOTAL NUMBER OF FACULTY



DEPARTMENT WISE FACULTY DISTRIBUTION 2020-21



GENDER WISE FACULTY 2020-21

PHD OF FACULTY MEMBERS 2020-21

FACULTY STATISTICS

IN POSITION - FACULTY & STAFF

Faculty	Visiting Faculty	Scientific Officer	Group A	Technical Staff	Administrative Staff
164	2	0	11	40	54

APPOINTED DURING 2021-22 (FACULTY & STAFF)

Faculty	Visiting Faculty	Group A	Technical Staff	Administrative Staff
1	Nil	Nil	2	Nil

APPOINTED DURING 2021-22 (FACULTY)

ID No.	Name	Designation	Department	Joining Date
10198	Prof. Jatinder Kumar	Professor	Mathematics	27.03.2022

INTERNAL FACULTY APPOINTED IN HIGHER GRADES DURING 2021-22

ID No.	Name	Designation	Department	Date
10047	Prof. Chakradhar Reddy	Professor	Electrical Engineering	26.11.2021
10013	Prof. Navin Kumar	Professor	Mechanical Engineering	26.11.2021
10014	Prof. Manoranjan Mishra	Professor	Mathematics	26.11.2021
10006	Prof. Rajendra Srivastava	Professor	Chemistry	26.11.2021
10004	Prof. Narinder Singh	Professor	Chemistry	26.11.2021

RESIGNED OR RELIEVED FACULTY DURING 2021-22

ID	Name	Designation	Department	Date of Relieving
20043	Prof. A.K Chakraborti	Visiting Professor	Chemistry	24.05.2021
20038	Dr. Priya Ghatwai	Visiting Faculty	Department of Metallurgical and Materials Engineering	31.05.2021
10049	Dr. Ravibabu Mulaveesala	Associate Professor	Electrical Engineering	12.06.2021
20031	Prof. Deepak Kashyap	Visiting Professor	Civil Engineering	30.06.2021
10109	Dr. Dipanjan Kumar Dey	Assistant Professor	Humanities and Social Sciences	30.06.2021
20040	Prof. Bijoy Bourah	Visiting Professor	Humanities and Social Sciences	01.07.2021
10089	Dr. Vinayak Hande Gopal	Assistant Professor	Electrical Engineering	27.07.2021
20042	Prof. Raman Suri	Professor-in-charge	Central Research Facility	31.07.2021
10080	Dr. Narayanan C. Krishnan	Assistant Professor	Computer Science and Engineering	20.12.2021
10140	Dr. Devaraj P	Assistant Professor	Humanities and Social Sciences	15.12.2021
10074	Dr. Chittaranjan Mishra	Assistant Professor	Mathematics	31.12.2021
10178	Dr. S. Ramanathan	Associate Professor	Computer Science and Engineering	29.01.2021

EXTRAORDINARY LEAVE / DEPUTATION / SABBATICAL (FACULTY)

Name	Designation	Department	Nature of leave
Mr. Sanjeev Bharadwaj	Junior Engineering (Civil)	Work and Estate	Proceeded on deputation to Delhi Police Housing Corporation Limited w.e.f. 16.07.2021 (A/N).

APPOINTED DURING 2021-22 (STAFF)

S.no.	Employee Code	Names	Designation	Category	Department	Date of Joining
1	4072	Dr. Nilotpal Singha	Consultant (Mass Spectrometry Facility)	On Contract	Central Research Facility	26.11.2021
2	4073	Mr. Deepak Kumar Srivastava	Project Assistant (Technical)	On Contract	Department of Metallurgical and Materials Engineering	09.12.2021

STAFF PROMOTED THROUGH LDE/DPC DURING 2021-22

S.no.	Employee Code	Names	Designation	Department	Date of Joining
Through DPC (Departmental Promotion Committee)					
1.	30054	Mr. Nagendra Singh	Senior Lab Assistant	Chemistry	23.09.2021
2.	30066	Ms. Pooja Pandey	Senior Lab Assistant	Humanities & Social Science	23.09.2021
3.	30053	Ms. Samita Saini	Senior Lab Assistant	Chemistry	23.09.2021
4.	30062	Mr. Neeraj Sharma	Senior Lab Assistant	Maths	23.09.2021
5.	30076	Ms. Santosh Deogam	Senior Assistant	Electrical Engineering	24.09.2021
6.	30075	Ms. Neha Dandhare	Senior Assistant	Academics	24.09.2021
7.	30056	Mr. Harsimranjit Singh	Technical Superintendent	Central Research Facility	24.09.2021
8.	30067	Mr. Kamaljeet Singh	Technical Superintendent	Electrical Engineering	24.09.2021
Through LDE (Limited Departmental Exam)					
9.	30082	Mr. Sahil Kapoor	Junior Lab Assistant	Physics	25.03.2022
10.	30081	Mr. Jaspreet Singh	Junior Lab Assistant	Electrical Engineering	25.03.2022

STAFF RELIEVED/LEFT DURING 2021-22

S.no.	Employee Code	Names	Designation	Department	Date of Leaving
1.	30063	Mr. Dhirendra Kumar	Junior Lab Assistant	Electrical Engineering	30.11.2021
2.	30107	Mr. Punit Kumar	Junior Lab Assistant	Mechanical Engineering	15.12.2021

INTERNATIONAL RELATIONS & ALUMNI AFFAIRS

ADMISSION OF INTERNATIONAL STUDENTS

Office of International Relations is putting its all possible endeavors to internalize the campus and promote bilateral collaborations. In line with the policy of Government of India, the IR promotes students from ASEAN and SAARC to join the institute. Currently IIT Ropar has about 15 international students from different region of the world and expects the number of applications to go up in the coming years.

MoU SIGNING WITH SEBELAS MARET UNIVERSITY INDONESIA

With specific focus on ASEAN, SAARC, IIT Ropar has entered into MoU with Sebelas Maret University Indonesia. The main objective of these MoUs is to promote academic cooperation in the following areas- faculty exchange, student exchange, joint research projects, exchange of scientific and teaching materials and joint conferences/workshops/lectures.

MoU SIGNING WITH TAIPEI ECONOMIC AND CULTURAL CENTRE

IIT Ropar has also entered into MoU with Taipei Economic and Cultural Centre in consideration of establishment of Taiwan Education Centre at IIT Ropar. Recently, a Mandarin teacher has joined IIT Ropar through Taiwan Education Centre and the Hon'ble Mr. Baushuan Ger, Ambassador, Taiwan to India visited campus along with his team for the inauguration of the Taiwan Education Centre.

MoU SIGNING WITH DALHOUSIE UNIVERSITY, CANADA

The MoU between IIT Ropar and Dalhousie University was signed via a virtual mode on 18 January 2022 followed by a workshop between the faculty members of Dal and IIT Ropar and possible funding opportunities were discussed. The MoU was signed by Prof. Matthew Hebb, Vice-President, Government and Global Relations – Dalhousie University and Prof. Rajeev Ahuja, Director, IIT Ropar in the presence of Dr. Prachi Kaul, Director, Shastri Indo-Canadian Institute.

MoU SIGNING WITH UNIVERSITY OF SASKATCHEWAN, CANADA

Pitching further, the MoU between IIT Ropar and University of Saskatchewan was signed on 24 January 2022 via online mode. The MoU was signed by Dr. Baljit Singh, Vice President Research, USask and Prof. Rajeev Ahuja, Director, IIT Ropar. The MoU signing ceremony was held in the presence of Gene Makowsky, Minister of Advanced Education Saskatchewan, Patrick Hébert, Consul General of Canada in Chandigarh, Dr. Prachi Kaul, Director, Shastri Indo-Canadian Institute. The MoU was followed by a round-table discussions between faculty members of IIT Ropar and USask to explore the research areas and brainstorming sessions were carried out.

VISITORS TO IIT ROPAR:

Hon'ble Ambassador of Indonesia to India, H.E. Mr. Mochammad Rizki Safary, visited IIT Ropar with his team with a specific focus to expand collaboration between IIT Ropar and topmost Indonesian Universities.

Applied for Schemes:

- Office of International Relationshas applied for Indonesian International Student Mobility Awards internship scheme by which Government of Indonesia allocates merit internships to selected universities across the Globe.
- Office of International Relations has also applied for a proposal from Embassy of India, Cairo, Egypt regarding opening of a technical institutions and other key arrangements in collaboration with Govt. of Egypt in their country.
- Further, Office of International Relations has applied for SII Infrastructure support scheme CSSS, Champion services sector scheme (CSSS) of Ministry of Commerce, Govt of India for building of international hostel.

ALUMNI AFFAIRS

Institute has continued to take many initiatives to facilitate and foster strong positive alumni relationships. Despite the continuing phase of the unfortunate COVID-19 pandemic, we hosted many alumni-student activities online and received overwhelming responses from both the alumni as well as students. Alumni talks covered a wide range of topics including entrepreneurship opportunities, start-up culture and challenges, placement preparation and opportunities in SDE, core and non-core fields and research opportunities. Some alumni members from abroad also provided insights about the higher education opportunities in the USA, Europe, Denmark, etc. We have also started conducting regular virtual alumni meets

where alumni could reunite with their batchmates to reminisce their memories, get to know where they are currently and also provide an opportunity to network with each other professionally to build a stronger career. Recently, an alumni e-meet for the batch of 2012 & 2013 was concluded and tuned out to be a great event. Our alumni office and alumni students relationship cell also participated in the flagship global virtual technology conference PI-WOT, organised by PanIIT Alumni India in September 2021, where our campus virtual tour and achievements were showcased to IITians worldwide and the collaborations with industry partners were also explored.IIT Ropar have very strong relationship with its alumni. The Institute is proud of its Alumni and their achievements.

IIT Ropar Distinguished Alumni Awards 2022:

Name	Entry Number	Batch	Category	Organizations
Mr. Annanya Sarthak	P2010ME1090	B.Tech ME 2014	Entrepreneurship/Start-up related	CEO, Awign Enterprises Pvt. Ltd
Ms. Rupinder Kaur	P2008EE1028	B.Tech EE 2012	Public services/Academia/ Socialist related	IAS 2021, IPS 2020
Mr. Shikhar Gupta	P2008ME1128	B.Tech ME in 2012	Industry/MNC related	Product Manager, DeHaat

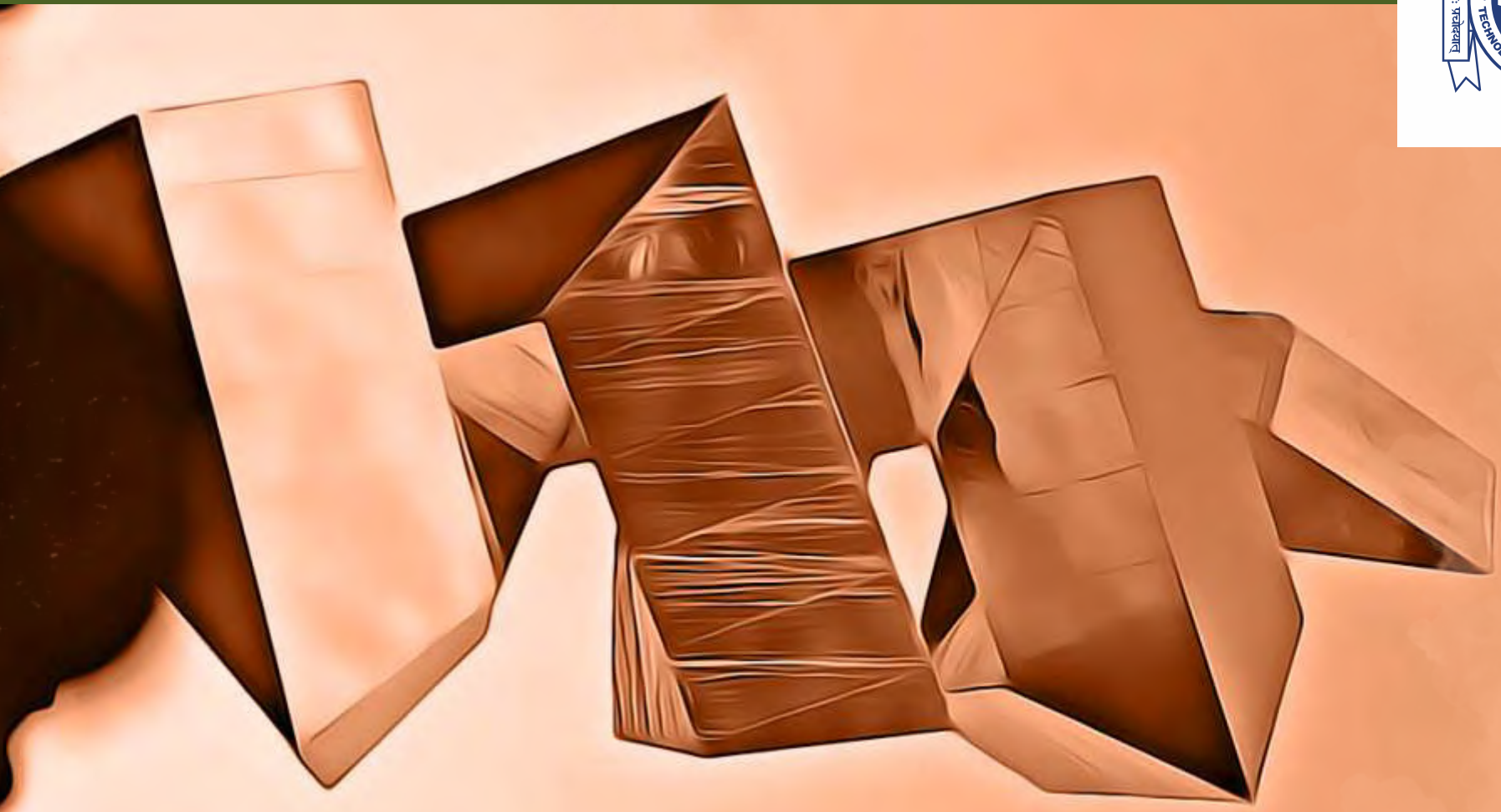
Shikhar Gupta
B.TechME2012
Product Manager, DeHaat
Selected for Industry/ MNC related Awards

Rupinder Kaur
B.TechEE2012
IAS2021, IPS 2020
Selected for Public services/Academia/ Socialist

Annanya Sarthak
B.TechME2012
CEO, Awign
Selected for Entrepreneurship/ Start-up related Awards

EVENTS & ACTIVITIES

HELD DURING 2021-22



EARTH DAY CELEBRATION

IIT Ropar planted 200 trees on Earth day to enjoy nature and appreciate its beauty every day.

CERTIFICATE COURSE ON ARTIFICIAL INTELLIGENCE & CYBER PHYSICAL SYSTEMS

IIT Ropar has launched a Certificate course on Artificial Intelligence & Cyber Physical Systems for Agriculture Automation.

INTERNSHIP CARNIVAL FOR UNDERGRADUATES

IIT Ropar under iHub-AWaDH launched Online Internship Carnival for undergraduate students on the theme "Technovations in the domain of Agriculture & Water."

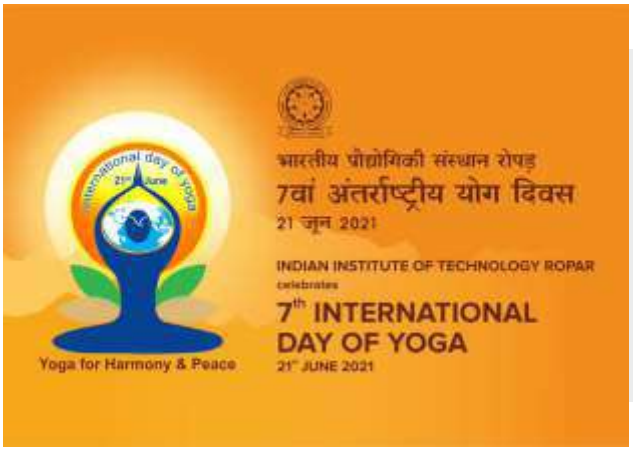
SHORT TERM COURSE ON NUMERICAL METHODS IN ENGINEERING

Department of Mechanical Engineering of IIT Ropar offered a short term course on "Numerical Methods in Engineering: Advances and Applications" during July 05-08, 2021 under the Advanced Knowledge in Nutshell (AKIN) program.

ENVIRONMENT DAY 2021

IIT Ropar on World Environment Day 2021 distributed the saplings of Tulsi, Kari Patta, Aloe Vera, Sada Bahar, Giloy and Ajwain to IIT Ropar fraternity for planting in the homes/gardens to promote the environment.

INTERNATIONAL DAY OF YOGA 2021



IIT Ropar celebrated International Day of Yoga 2021 following all Covid-19 protocols. Officials, including the Director, Registrar, Faculty, Non-teaching staff, Students participated in the celebration.

9TH INTERNATIONAL CONFERENCE ON ADVANCEMENT & FUTURISTIC TRENDS IN MEHANICAL AND MATERIALS ENGINEERING WAS ORGANIZED AT IIT ROPAR

The 9th International Conference on "Advancement and Futuristic Trends in Mechanical and Materials Engineering" AFTMME - 2021 was inaugurated by Dr. K. Radhakrishnan, Ex-Chairman, ISRO at IIT Ropar on 9th December 2021. The occasion was graced by Prof. Rajeev Ahuja, Director IIT Ropar and Prof. Buta Singh, Vice Chancellor MRSPTU.

75TH INDEPENDENCE DAY

It was a joyous morning in IIT Ropar on Thursday. The Director, faculty, staff, students and others gathered at the front lawn of the Institute to witness a unique celebration: the unfurling of the National flag on 75th Independence Day; that was celebrated at the permanent campus of IIT Ropar with much gaiety. The flag hoisting ceremony was held at 09:30 hrs which was followed by the singing of the National Anthem. The Director addressed the Institute fraternity. In his address he reminded the fraternity of the contributions of the Great Leaders in making the country a Republic and in the documentation of Constitution of India. He also informed the need of the hour and the importance of dedicated efforts of every individual for the growth of the country, especially stressing upon the power of youth.

The day also featured with students singing patriotic songs. The patriotic fervor of the students on this day was seen lending a festive air to the occasion.

Food and refreshments on the house were served and the patriotic aura was sustained throughout the function. The event came to an end with everyone returning with a burning desire to excel in their lives and contributing to the best of their capabilities for the welfare and growth of our beloved motherland.

INDUSTRY DAY 2021

IIT Ropar, in association with the Confederation of Indian Industries (CII) Punjab, organized an "Industry Day 2021"on the theme "Bridging the Industry-Academia gap." Around 30 industrialists, representing diverse sectors such as capital goods, engineering, auto ancillaries, textiles, paints and coatings, metals, food processing, infrastructure, hand tools, amongst others, participated in the event. From Government of Punjab, Sh. Rajat Agarwal, IAS, Chief Executive Officer, Punjab Bureau of Investment Promotion, Sh. Sibin C, IAS, Director, Industries & Commerce, Punjab and Dr. Jatinder Kaur Arora, Executive Director, Punjab State Council for Science & Technology-cum-Chief Executive Officer, Punjab Research & Innovation-cum-Member Secretary, Punjab Biodiversity Board attended the event and congratulated IIT Ropar for organizing this event, on a subject that is the need of the hour – Industry-Academia Collaboration.

COLLABORATION WITH NIT SRINAGAR AND NIT JALANDHAR

IIT Ropar and National Institute of Technology (NIT) Srinagar, J&K and NIT Jalandhar have signed an MoU for collaboration on academic and research activities in the areas of mutual interest including collaborative research works, joint supervision of PhD students, joint workshops and seminars, etc.

The MoU is a part of IIT Ropar's initiative to welcome meritorious students from NITs to spend their final semester(s) at IIT Ropar, pursue courses and do a project. The students will go through a rigorous selection process, and subject to their continued excellence, will be considered for an early admission to PhD programs at IIT Ropar.

SPARC PROJECT

IIT Ropar under the SPARC Project, "Development of efficient computational techniques for convection-diffusion-reaction type problems in econophysics" organized Indo-Australian lecture series in Econophysics. The Scheme for Promotion of Academic and Research Collaboration (SPARC) under the Ministry of Human Resources and Development, Government of India aims at improving the research ecosystem of India's Higher Educational Institutions by facilitating academic and research collaborations between Indian Institutions and the best institutions in the world from 28 selected nations to jointly solve problems of national and/or international relevance. This lecture series was a part of the SPARC project between Monash University and Indian Institute of Technology Ropar.

VIGILANCE AWARENESS WEEK 2021

IIT Ropar observed Vigilance Awareness Week 2021 from 26th October to 1st November 2021. The week observed various activities that include talks, quizzes, Essay writing competitions etc.

10TH CONVOCATION AT IIT ROPAR

The Tenth Annual Convocation of Indian Institute of Technology Ropar (IIT Ropar) was held virtually on Thursday, December 30, 2021. Prof. Rajeev Ahuja, Director, IIT Ropar presented his Annual Report. Sh. S.K.Munjal, Chairman, Hero Enterprise was the Chief Guest and Dr. K. Radhakrishnan, Chairman Board of Governors, IIT Ropar presided over the function. This year, 510 students graduated from the various academic programmes of IIT Ropar.

ATAL FACULTY DEVELOPMENT PROGRAMME

Department of Mechanical Engineering organized an AICTE sponsored Atal FDP on "Advances in Numerical Methods for Engineering Structures: Fundamentals towards Applications" during Oct 25-29, 2021.

METRIX 3.0

Department of Mechanical Engineering, IIT Ropar organized an annual research interaction event, "METRIX 3.0"; (Mechanical Engineering Time for Research Ideas EXchange), on the 21st and 22nd October 2021. The event was held in hybrid mode (online-offline)

consisting of poster presentation, research lab video demonstration and research talks by Mechanical Engineering students, motivational and technical talks delivered by the invited experts in their respective domain. The event provides a platform for researchers in academia (Ph.D./M.Tech. scholars, Post-Doc fellows, Project JRF/SRF) and Industry professionals to interact and present their work through oral/poster presentations.

15-DAY-IN-CAMPUS FUNCTIONAL DEVELOPMENT PROGRAMME (FDP)

In a first of its kind initiative, IIT Ropar offered 15-day-in-campus Functional Development Programme (FDP) to 24 Executives of SJVN (Formerly known as Satluj Vidyut Nigam Limited) on hydroelectric power generation, Remote Sensing and GIS tools for data generation for various Hydrological studies pertaining to DAM, Assessing hydropower potential of a dam by using hydrological models, Frequency analysis for assessing hydropower potential of a dam and related areas.

TAIWAN EDUCATION CENTER




IIT Ropar has launched a Taiwan Education Center on its campus, in a bid to promote education and cultural relations between India and Taiwan. The center will also promote Mandarin (Chinese) language among Indian students and faculty to facilitate better understanding and cooperation between higher educational institutions of Taiwan and India. The MoU has been signed between the delegation from Taiwan, including Hon'ble Ambassador of Taiwan Mr. Baushuan Ger, Mr. Peters Chen, Director, Education Division, Ministry of Education, Taiwan, Dr. Chin Tsan Wang, Director Science and Technology Division, Ministry of Science and Technology Taiwan, Ms. Ellie Chiang, Assistant Director, Science and Technology Division, Taiwan and Mr. Charles Cheng, Secretary, TECC, Ministry of Foreign Affairs and Professor Rajeev Ahuja, Director and Dr. C.C. Reddy, Dean International Relations from IIT Ropar.

FOUNDATION DAY



IIT Ropar celebrated Foundation Day on 24th February, 2022. Keeping in view the Pandemic situation, the programme was organized in Virtual mode. Sh. K. Sanjay Murthy, Hon'ble Secretary, Higher Education, Ministry of Education, Government of India, graced the celebration as the Chief Guest and delivered an outstanding Foundation Day lecture.

Dr. K. Radhakrishnan, Chairman BOG, IIT Ropar also graced the occasion. The event was organized in online mode keeping Covid-19 restrictions intact, with less physical presence and more virtual presence of the fraternity and guests.

Prof. Rajeev Ahuja briefly highlighted the journey of the institute and the rapid strides it is making in its development. He also stressed on how the campus has clean and green environment and has grown to uniquely offer single seated accommodations to its students.

73RD REPUBLIC DAY

IIT Ropar conveyed its greetings and best wishes on 73rd Republic Day to the citizens of India. IIT Ropar celebrated the day in hybrid mode adhering to Covid-19 protocol.

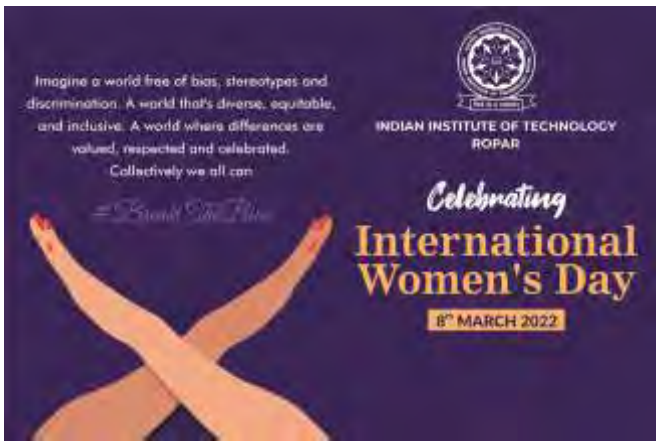

NATIONAL SCIENCE DAY

IIT Ropar joined the nationwide National Science Day celebrations on 28th February, 2022 to commemorate the discovery of the Raman Effect by Indian Physicist C. V. Raman. A talk on "Pioneers of R&D in India" was delivered by Prof. Arun Grover, Former VC, Panjab University Chandigarh.

INTERNATIONAL WOMEN'S DAY CELEBRATION

IIT Ropar celebrated International Women's Day by organizing various online and offline activities/events. To mark the occasion of International Women's Day an online Panel Discussion on the topic "Break the bias: Women in various roles and gender biases" was also organized.

A self defense workshop was organized for IIT Ropar fraternity. The initiative came at a time when women empowerment is the need of the hour. Learning lifesaving self–defense skills is an inevitable part of empowerment, which builds confidence and ensures independence, stronger sense of safety among women.



"THE ELUCIDATORS" BAGGED 1ST PRIZE

IIT Ropar student's team "The Elucidators" bagged 1st Prize among 848 participating teams in Aeonea Event organised by IIT Roorkee. The team pitched a product and marketing strategy for Ed-Tech Startup "GeeksforGeeks".

INAUGURATION OF 3RD NATIONAL FRONTIERS OF SCIENCE

IIT Ropar hosted 3rd National Frontiers of Science (NatFoS-2022) brainstorming meeting and was inaugurated by Dr. Parvinder Maini, Scientist, Ministry of Earth Sciences, Government of India.

CERTIFICATE OF APPRECIATION BY OFFICE OF CONTROLLER GENERAL OF PATENTS, DESIGNS AND TRADEMARKS

IIT Ropar received appreciation certificate from Office of Controller General of Patents, Designs and Trademarks for active participation in the National Intellectual Property Awareness Mission (NIPAM) launched by Government of India.

SHORT-TERM CERTIFICATE PROGRAM IN BRIDGE ENGINEERING

Department of Continuing Education and Outreach Activities organized a short-term certificate program in bridge engineering from February 24th - 28th, 2022 in hybrid mode (Offline and Online).

5 DAYS WORKSHOP ON ARTIFICIAL INTELLIGENCE

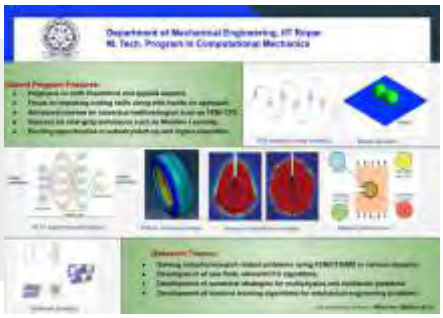
IIT Ropar in association with CSIR_CSIO organizes 5 days workshop on Artificial Intelligence for Social Good. IIT Ropar invites students, professionals to come and learn from the world's leading researchers during this workshop.

AN ONLINE AWARENESS SESSION ON "BASICS ON INTELLECTUAL PROPERTY"

IIT Ropar presented an online awareness session on "Basics on Intellectual Property" under NIPAM on 9th February 2022. Mr. Sukhdeep Singh, Assistant Controller of Patents & Designs, was the Chief Guest and keynote Speaker on this occasion.

20TH INDIAN SOCIETY OF MECHANICAL ENGINEERS CONFERENCE

Department of Mechanical Engineering organized 20th Indian Society of Mechanical Engineers Conference (ISME 20) on Advances in Mechanical Engineering in hybrid mode.



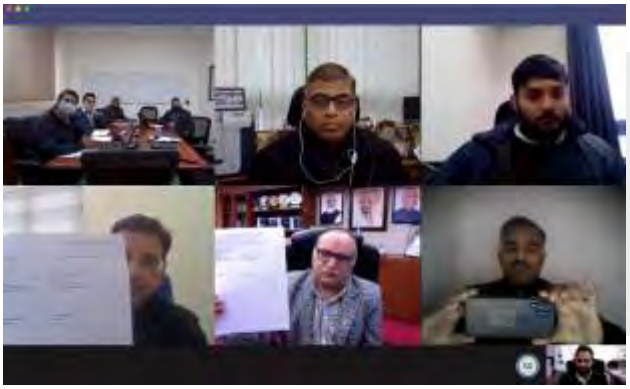
THREE-DAY BI-NATIONAL LECTURE SERIES

Department of Humanities and Social Sciences of IIT Ropar in association with Shastri Indo-Canadian Institute organized a three-day bi-national lecture series.

PROFESSIONAL DEVELOPMENT PROGRAM IN CORROSION MANAGEMENT AND TECHNOLOGY

IIT Ropar and Confederation of Indian Industry announced Online Post Graduate Professional Development Program in Corrosion Management and Technology.

MoU WITH SBL SPECIALITY COATINGS PVT. LTD.



IIT Ropar entered into an MoU with SBL Speciality Coatings Private Limited for Grant for pursuing Fellowship to PhD students under CSR initiative.

MoU WITH DIRECTORATE OF CENSUS OPERATIONS PUNJAB

Directorate of Census Operations Punjab signed an MoU with IIT Ropar to set up a Census Data Research Workstation for researchers to analyze data. Dr. Abhishek Jain, IAS, Director, Census Operations Punjab formalised the collaboration.

FACULTY DEVELOPMENT PROGRAM ON "TOPICS IN HARDWARE SECURITY"

IIT Ropar organized an AICTE_INDIA Training and Learning (ATAL) Faculty Development Program (FDP) titled "Topics in Hardware Security"

राजभाषा गतिविधियां

संस्थान की प्रमुख राजभाषा उपलब्धि

आई.आई.टी. रोपड़ राजभाषा शील्ड से पुरस्कृत

नगर राजभाषा कार्यान्वयन समिति (नराकास), रुपनगर की अर्धवार्षिक बैठक तथा वार्षिक राजभाषा शील्ड का पुरस्कार वितरण समारोह आई.आई.टी रोपड़ में संपन्न हुआ। इस बैठक में आई.आई.टी रोपड़ के निदेशक प्रो. राजीव आहूजा, श्री नरेन्द्र मेहरा, सहायक निदेशक, राजभाषा विभाग, भारत सरकार, श्री एस. के. सचदेवा, अंचल प्रबंधक यूको बैंक, श्री एस. के. श्रीवास्तव, एनएफएल नंगल के मुख्य महाप्रबंधक, नराकास रुपनगर के अध्यक्ष श्री राजिन्द्र कुमार जसरोटिया तथा आई.आई.टी रोपड़ के कुलसचिव श्री रविंदर कुमार विशेष रुप से उपस्थित थे।

प्रो. राजीव आहूजा, निदेशक, आईआईटी रोपड़ वार्षिक राजभाषा शील्ड के साथ

इस बैठक में सभी मान्यवरों की उपस्थिति में वर्ष 2019-20 और वर्ष 2020-21 की नराकास, रुपनगर की वार्षिक राजभाषा शील्ड प्रदान की गई। इसमें आई.आई.टी. रोपड़ को वर्ष 2019-20 और वर्ष 2020-21 हेतु द्वितीय स्थान की वार्षिक राजभाषा शील्ड प्रदान की गई। इस राजभाषा शील्ड को आई.आई.टी रोपड़ को निदेशक प्रो. राजीव आहूजा को प्रदान की गई।

इस पुरस्कार वितरण समारोह में नराकास रुपनगर की पत्रिका रुपसागर का भी विमोचन किया गया तथा रुपसागर पत्रिका के संपादक मंडल के सदस्य के रुप में अपने दायित्व का निर्वहन करने हेतु आई.आई.टी रोपड़ के हिंदी अनुवादक डॉ. गिरीश प्रमोदराव कठाणे को स्मृतिचिन्ह प्रदान किया गया।

प्रशिक्षण उपलब्धियाँ

(फरवरी 2021 से जुलाई 2021) 61वां सत्र

28 अक्टूबर 2021 को संपन्न हिंदी टाइपिंग परीक्षा में संस्थान के तीन सदस्य उत्तीर्ण

केंद्रीय हिंदी प्रशिक्षण संस्थान, नई दिल्ली द्वारा संचालित 61वां (सत्र फरवरी 2021 से जुलाई 2021) हिंदी शब्द संसाधन/हिंदी टंकण पत्राचार पाठ्यक्रम प्रशिक्षण में भारतीय प्रौद्योगिकी संस्थान के कुल 03 सदस्यों ने माह अक्टूबर में संपन्न परीक्षा को प्रथम विशेष श्रेणी में उत्तीर्ण किया।

सुश्री जसप्रीत कौर,
कनिष्ठ सहायक,
गणित विभाग

श्री नवीन,
वरिष्ठ सहायक,
निदेशक सचिवालय

सुश्री मनदीप कौर,
कनिष्ठ सहायक,
स्थापना अनुभाग

(अगस्त 2021 से जनवरी 2022) 62वां सत्र

केंद्रीय हिंदी प्रशिक्षण संस्थान, नई दिल्ली द्वारा आयोजित हिंदी शब्द संसाधन (हिंदी टाइपिंग) पत्राचार प्रशिक्षण का 62वां सत्र (अगस्त 2021 से जनवरी 2022) की माह जनवरी 2022 में संपन्न परीक्षा में संस्थान के निम्न दो सदस्य प्रथम विशेष श्रेणी में उत्तीर्ण हुए।

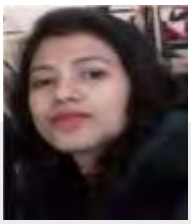
श्री सौरभ भाटिया,
कनि. सहायक,
भंडार एवं क्रय

सुश्री पूनम,
वरिष्ठ सहायक,
शैक्षणिक अनुभाग

हिंदी भाषा प्रशिक्षण

हिंदी शिक्षण योजना, राजभाषा विभाग, गृह मंत्रालय, भारत सरकार द्वारा संचालित हिंदी भाषा प्रशिक्षण (सत्र जनवरी-मई 2021 और जुलाई-नवंबर 2021) के प्राज्ञ, प्रबोध तथा पारंगत हेतु पंजीकृत सदस्यों की परीक्षा भारतीय प्रौद्योगिकी संस्थान रोपड़ में आयोजित की गई थी। यह परीक्षा दिनांक 16, 17 और 18 नवंबर को संस्थान में आयोजित परीक्षा का परिणाम दिनांक 31 दिसंबर 2021 को राजभाषा विभाग की वेबसाइट पर घोषित/प्रविष्ट किया गया था।

हिंदी प्रबोध और हिंदी प्राज्ञ परीक्षा उत्तीर्ण सदस्य (सत्रः जनवरी-मई 2021)



हिंदी प्रबोध
सुश्री नबनीता चक्रबोर्ती,
कनिष्ठ अधीक्षक

हिंदी प्राज्ञ
डॉ. ब्रिजेश कुंभाणी,
सहायक प्राध्यापक, विद्युत अभि. विभाग

हिंदी प्राज्ञ
सुश्री समिता सैनी,
प्रयोगशाला सहायक

हिंदी पारंगत परीक्षा उत्तीर्ण सदस्य
सत्रः जनवरी-मई 2021

श्री रविंदर कुमार,
संयुक्त कुलसचिव

श्री लगवीश कुमार
संयुक्त कुलसचिव

श्री विजय कुमार, अधीक्षक,
भंडार एवं क्रय अनुभाग

सुश्री रुबल बत्ता,
कनि. सहायक,
डायरी एवं प्रेषण अनुभाग

श्री संतोष देवगम,
वरिष्ठ सहायक, विद्युत अभि.

सुश्री नेहा डण्ढारे,
वरिष्ठ सहायक,
शैक्षणिक अनुभाग

श्री आशीष गौड़,
कनि. सहायक,
भंडार एवं क्रय अनुभाग

सुश्री परविंदर कौर,
कनि. सहायक, शैक्षणिक अनुभाग

श्री समनेन्द्र सिंह,
कनि. अधीक्षक,
भंडार एवं क्रय अनुभाग

सुश्री रितिका,
कनिष्ठ अधीक्षक,
शैक्षणिक अनुभाग

श्री विजय सिंह,
लेखा अधिकारी

श्री विपिन कुमार,
लेखा अधिकारी

श्री नवीन,
वरि. सहायक,
निदेशक सचिवालय

सत्रः जुलाई-नवबंर 2021

सुश्री पूनम,
वरिष्ठ सहायक,
शैक्षणिक अनुभाग

श्री संदीप सिंह,
कनि. सहायक,
शैक्षणिक अनुभाग

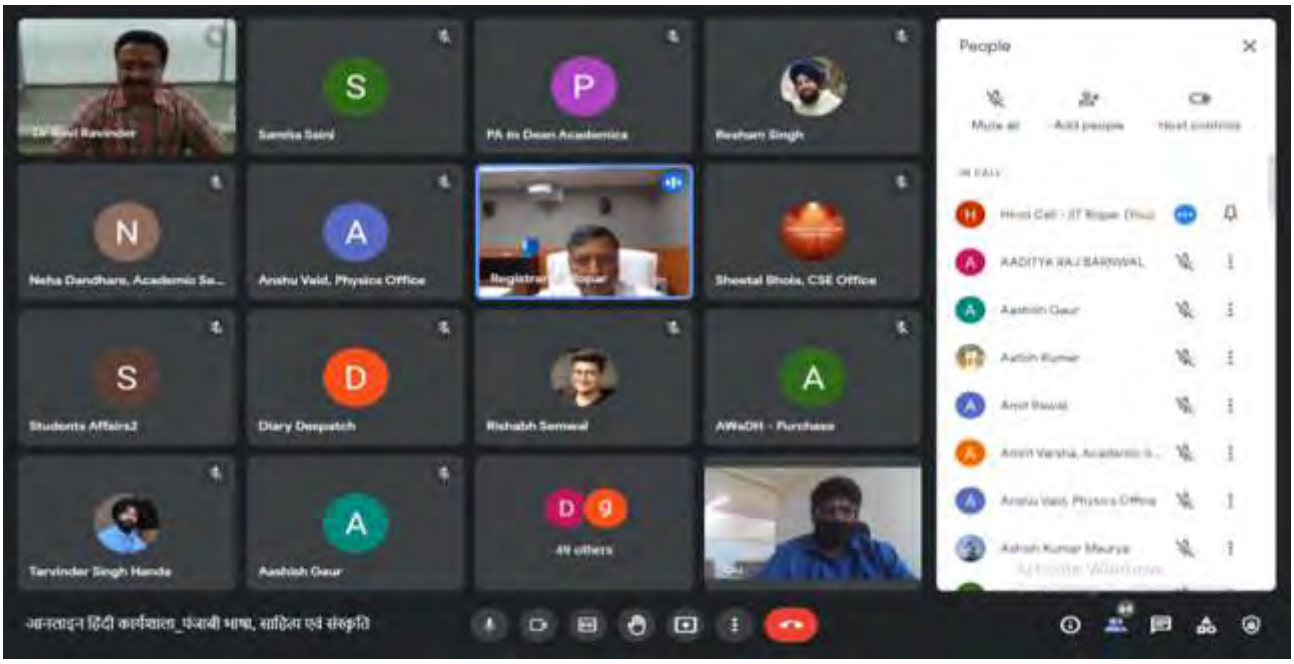
हिंदी कार्यशालाएं

भा.प्रौ.सं. रोपड़ में ऑनलाइन हिंदी कार्यशाला का आयोजन (दिनांक 29 जून, 2021)

भारतीय प्रौद्योगिकी संस्थान रोपड़ के हिंदी प्रकोष्ठ द्वारा दिनांक 29 जून, 2021 को दोपहर 3.00 बजे ऑनलाइन माध्यम से हिंदी कार्यशाला का आयोजन किया गया। इस कार्यशाला का विषय "पंजाबी भाषा, साहित्य और संस्कृतिः अतीत, वर्तमान और भविष्य" था।

यह कार्यशाला संस्थान में कार्यरत् कर्मचारियों में निज भाषा के प्रति अपनत्व के भाव को अंकुरित करने तथा निज भाषा को महत्व को समझकर हिंदी और पंजाबी के समान तत्वों से उन्हें अवगत कराना था। इस कार्यशाला में दिल्ली विश्वविद्यालय के पंजाबी विभाग के प्रोफेसर एवं प्रमुख डॉ. रवि रविंदर वक्ता के रुप में आमंत्रित थे।

इस अवसर पर श्री रविंदर कुमार, कार्यवाहक कुलसचिव, भा.प्रौ.सं. रोपड़ ने आमंत्रित वक्ता महोदय तथा अन्य सहभागियों का औपचारिक स्वागत किया। अपने स्वागत संबोधन में कार्यवाहक कुलसचिव महोदय ने अपने विचार साझा करते हुए कहा कि हमें यह नहीं भूलना चाहिए कि यदि हमें हिंदी को आगे बढ़ाना है तो सबसे पहले भारत की तमाम भाषाओं पर भी हमें उतना ही ध्यान देना होगा।



औपचारिक स्वागत के पश्चात डॉ. रवि रविंदर जी ने अपने व्याख्यान में पंजाबी भाषा तथा हिंदी के साथ इसके संबंधों का विस्तृत विवरण प्रस्तुत किया। मुख्य वक्ता महोदय ने सभी से अपने विचार साझा करते हुए यह बताया कि हर एक व्यक्ति को अपनी मातृभाषा, निज भाषा के प्रति स्वाभिमान का भाव रखना चाहिए न कि हीनता का।

वक्ता महोदय ने आगे यह भी कहा कि आज के इस युग में भाषा को बचाने की आवश्यकता नहीं है अपितु भाषा को समयानुरुप ढ़ालने तथा इसमें वांछित परिवर्तन करने की आवश्यकता है। अपनी संबोधन में वक्ता महोदय ने कहां कि भाषा के संवर्धन एवं विकास में परिवार की, परिवार के बाद समाज की तथा इसके बाद विद्यालय, महाविद्यालय तथा अंत मे विश्वविद्यालय की भूमिका होती है। अतः यह स्पष्ट है कि कोई भी व्यक्ति सर्वप्रथम अपने परिवार से ही भाषायी संस्कार प्राप्त करता है। अतः भाषा के संवर्धन एवं विकास में परिवार की अहम भूमिका है।

भाषा के संबंध में विभिन्न पक्षों पर अपने विचार साझा करते हुए अंत में वक्ता महोदय ने सभी से यह अपील की कि समाज के सभी संपन्न लोगों को गरीब के बच्चों के शिक्षा पर ध्यान देना चाहिए और इस कार्य में अपनी क्षमता से सहयोग करना चाहिए।

कार्यक्रम को अंतिम चरण में भा.प्रौ.सं. रोपड़ के हिंदी अधिकारी श्री लगवीश कुमार ने आमंत्रित वक्ता महोदय तथा सभी सहभागियों का धन्यवाद ज्ञापित किया। अपने धन्यवाद ज्ञापन में श्री लगवीश कुमार ने अपने विचार साझा करते हुए कहा कि इसमें जरा भी संदेह नहीं है कि पंजाबी भाषा अपनी एक महान विरासत और पृष्ठभूमि रखती है। मातृभाषा होने के कारण हम सभी का यह नैतिक दायित्व है कि हम इसका अधिक से अधिक प्रयोग करें इसे ओर समृद्ध बनाएं क्योंकि हिंदी का विकास तभी संभव है जब क्षेत्रीय भाषाओं को महत्व दिया जाएं क्योंकि भारत की सभी भाषाएं एक दूसरे की सहायिका के तौर पर कार्य करती है।

इस कार्यशाला में भा.प्रौ.सं. रोपड़ के तथा दिल्ली विश्वविद्यालय के सदस्यों को मिलाकर कुल 92 सदस्य उपस्थित थे। कार्यशाला का संचालन संस्थान के हिंदी अनुवादक डॉ. गिरीश प्रमोदराव कठाणे ने किया।

ऑनलाइन हिंदी कार्यशाला का आयोजन

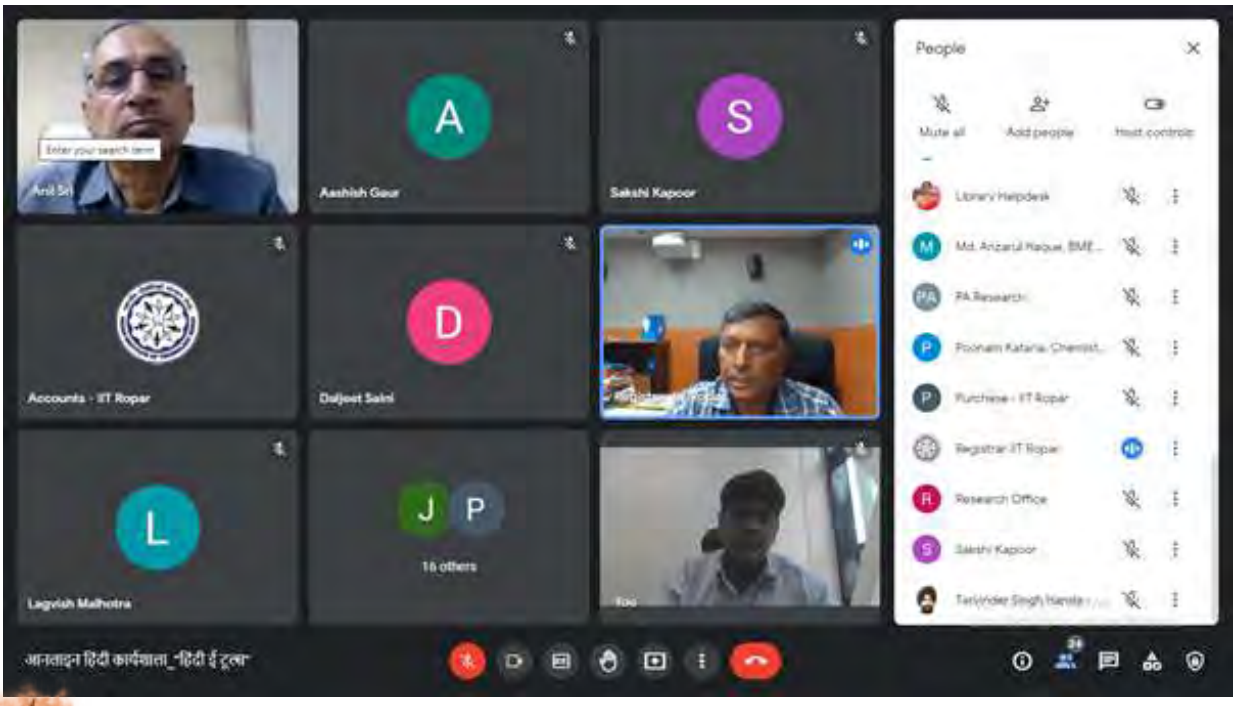
दिनांक 8 सितंबर 2021

दिनांक 8 सितंबर 2021 को संस्थान के हिंदी प्रकोष्ठ द्वारा राजभाषा हिंदी के वांछित लक्ष्यों की पूर्ति करने के उद्देश्य से आनालाइन माध्यम से हिंदी कार्यशाला का आयोजन किया गया। यह कार्यशाला "हिंदी ई-टूल्स (यूनिकोड, हिंदी की-बोर्ड, लीला, कंठस्थ, ऑनलाइन-महाशब्दकोश, ई-पुस्तकालय, हिंदी बोलकर टाइप करना)" विषय पर आयोजित की गई थी। इस कार्यशाला में संस्थान सदस्यों को मार्गदर्शन करने हेतु श्री नगेन्द्र सिंह, वरिष्ठ तकनीकी निदेशक, राष्ट्रीय सूचना केंद्र, राजभाषा विभाग, गृह मंत्रालय, भारत सरकार को विशेष रुप से आमंत्रित किया गया था।

कार्यशाला का आरंभ संस्थान के कार्यवाहक कुलसचिव श्री रविंदर कुमार द्वारा स्वागत भाषण से हुआ। श्री रविंदर कुमार ने आमंत्रित वक्ता महोदय तथा उपस्थित सभी संस्थान सदस्यों का औपचारिक स्वागत किया और अपने विचार व्यक्त करते हुए कहा कि यदि कार्यालयीन कामकाज की बात करें तो हम सभी जानते है कि बिना कंप्यूटर के हम इसकी कल्पना नहीं कर सकते। और इस परिदृश्य में यदि हिंदी को आगे बढ़ाना है तो हिंदी को टैक्नोलोजी फ्रेंडली बनाना हमारी आवश्यकता है। आज की यह कार्यशाला इसी उद्देश्य को लेकर आयोजित की जा रही है।

इस कार्यशाला का उद्देश्य संस्थान सदस्यों को हिंदी में कार्य करने के दौरान विभिन्न तकनीकी पक्षों की जानकारी देना था जिसकी सहायता से वे अपना कार्य सरलता एवं सुगमता से कर सकें। आमंत्रित वक्ता महोदय ने संस्थान सदस्यों को विस्तार से सभी तकनीकी पक्षों पर मार्गदर्शन किया। साथ ही, कंप्यूटर पर हिंदी में कार्य करने के दौरान आनेवाली समस्याओं पर भी प्रकाश ड़ालते हुए उसका समाधान भी प्रस्तुत किया।

कार्यशाला के कुछ क्षण



ऑनलाइन हिंदी कार्यशाला का आयोजन

दिनांक 20 दिसंबर 2021

दिनांक 20 दिसंबर 2021 को भारतीय प्रौद्योगिकी संस्थान रोपड़ के हिंदी प्रकोष्ठ द्वारा ऑनलाइन हिंदी कार्यशाला आयोजन किया गया। यह कार्यशाला "राजभाषा हिंदी एवं विभिन्न प्रशिक्षण कार्यक्रम" विषय पर आयोजित गई। इस कार्यशाला में संस्थान सदस्यों का मार्गदर्शन करने हेतु श्रीमती कमलेश बजाज, उपनिदेशक, मध्योत्तर कार्यालय, हिंदी शिक्षण योजना, राजभाषा विभाग, गृह मंत्रालय, भारत सरकार को आमंत्रित किया गया था।

कार्यशाला की शुरुवात में, संस्थान के हिंदी अनुवादक ने सभी सदस्यों के समक्ष कार्यशाला की पृष्ठभूमि एवं प्रासंगिकता पर प्रकाश डाला। संस्थान के हिंदी अधिकारी/संयुक्त कुलसचिव श्री लगवीश कुमार ने औपचारिक स्वागत भाषण किया। अपने औपचारिक स्वागत भाषण में हिंदी अधिकारी, भा.प्रौ.सं. रोपड़ ने आमंत्रित वक्ता महोदया तथा उपस्थित सभी सदस्यों का स्वागत किया तथा भा.प्रौ.सं. रोपड़ के सदस्यों द्वारा विभिन्न प्रशिक्षणों में की जा रही सहभागिता पर भी अपने विचार रखें।

कार्यशाला की वक्ता महोदया ने उपस्थितों को सर्वप्रथम राजभाषा नियमों, अधिनियमों की जानकारी दी। इसके पश्चात वक्ता महोदया ने सभी को हिंदी शिक्षण योजना द्वारा तथा राजभाषा विभाग, गृह मंत्रालय द्वारा समय-समय पर संचालित किए जानेवाले विभिन्न प्रशिक्षण जैसे कि हिंदी भाषा प्रशिक्षण (प्रबोध, प्रवीण, प्राज्ञ तथा पारंगत), कंप्यूटर पर पांच दिवसीय बेसिक प्रशिक्षण कार्यक्रम, हिंदी टाइपिंग प्रशिक्षण कार्यक्रम की विस्तृत जानकारी दी।

विभिन्न प्रशिक्षणों पर अपने विचार व्यक्त करते हुए वक्ता महोदया ने दैनंदिन कार्यालयीन कामकाज में आनेवाली प्रमुख समस्याओं पर भी सभी का मार्गदर्शन किया। वक्ता महोदया श्रीमती कमलेश बजाज जी ने सभी से यह आग्रह किया कि अधिक शुद्धता आग्रह न रखते हुए आप जो बोलते है वहीं हिंदी में लिखना प्रारंभ करें। समय के साथ-साथ हिंदी के शब्दों का भी ज्ञान आपको हो जाएगा।

अंत में, संस्थान के हिंदी अनुवादक डॉ. गिरीश प्रमोदराव कठाणे ने आमंत्रित वक्ता महोदया को संस्थान के सदस्यों द्वारा विभिन्न प्रशिक्षणों में जो उपलब्धियां प्राप्त की गई है फिर वे कंप्यूटर पर बेसिक प्रशिक्षण कार्यक्रम हो, हिंदी टाइपिंग प्रशिक्षण हो अथवा हिंदी भाषा प्रशिक्षण, इन सभी के संबंध में संक्षिप्त जानकारी देते हुए वक्ता महोदया तथा उपस्थित सभी सदस्यों का धन्यवाद ज्ञापित किया।

हिंदी कार्यशाला के कुछ क्षण

ऑनलाइन हिंदी कार्यशाला का आयोजन

दिनांक 24 मार्च 2022

भारतीय प्रौद्योगिकी संस्थान रोपड़ के हिंदी प्रकोष्ठ द्वारा दिनांक 24 मार्च 2022 को "हिंदी में टिप्पण लेखनः समस्या और समाधान" विषय पर ऑनलाइन हिंदी कार्यशाला का आयोजन किया गया।

इस अवसर पर संस्थान सदस्यों को उक्त विषय पर मार्गदर्शन करने हेतु केंद्रीय हिंदी प्रशिक्षण संस्थान, राजभाषा विभाग, गृह मंत्रालय, भारत सरकार की संयुक्त निदेशक महोदय श्रीमती पूनम ओसवाल को आमंत्रित किया गया था।

इस ऑनलाइन कार्यशाला की शुरुवात संस्थान के हिंदी अधिकारी श्री लगवीश कुमार द्वारा स्वागत भाषण से हुई। श्री लगवीश कुमार ने आमंत्रित वक्ता महोदया श्रीमती पूनम ओसवाल, संस्थान के कुलसचिव श्री रविंदर कुमार तथा उपस्थित सभी कर्मचारियों का स्वागत किया।

इस कार्यशाला में आमंत्रित वक्ता महोदया ने हिंदी में टिप्पण लिखते समय आम तौर पर आनेवाली समस्याओं को चिन्हित करते हुए इनके समाधान विशेष रुप से सरल समाधान पर अपने विचार रखें। साथ ही, श्रीमती पूनम ओसवाल महोदया ने सभी से हिंदी टिप्पण लेखन करने की अपील की।

अपने विचार साझा करते हुए आमंत्रित वक्ता महोदया ने सभी के साथ वार्तालाप किया, सभी की समस्याओं को सुना तथा उनक समस्याओं का समाधान भी प्रस्तुत किया।

अंत में संस्थान के कुलसचिव श्री रविंदर कुमार ने आमंत्रित वक्ता महोदया का इस महत्वपूर्ण विषय पर संस्थान सदस्यों का मार्गदर्शन करने तथा हिंदी में टिप्पण लिखने हेतु सभी को प्रेरित करने हेतु धन्यवाद ज्ञापित किया।

विभिन्न आयोजन

हिंदी पखवाड़ा 2021 का आयोजन

भारतीय प्रौद्योगिकी संस्थान रोपड़ ने हिंदी दिवस के उपलक्ष्य पर 15 दिवसीय हिंदी पखवाड़ा 2021 का आयोजन सफलतापूर्वक संपन्न किया। यह पखवाड़ा 14 सितंबर 2021 से 28 सितंबर 2021 तक आयोजित किया गया था। हिंदी पखवाड़ा के दौरान संस्थान के विद्यार्थियों के लिए कुल 05 प्रतियोगिताएं, संस्थान के संकाय सदस्य एवं कर्मचारियों के लिए कुल 11 प्रतियोगिताएं, सुरक्षा/सफाई/परिचारकों के लिए 01 प्रतियोगिता तथा संस्थान सदस्यों के बच्चों एवं परिवारजनों के लिए 01 प्रतियोगिता आयोजित की गई थी।

हिंदी पखवाड़ा 2021 का शुभारंभ संस्थान के माननीय निदेशक प्रो. राजीव आहूजा के संबोधन से हुआ।

इस अवसर पर प्रो. आहूजा महोदय ने राष्ट्रीय तथा अंतर्राष्ट्रीय स्तर पर हिंदी के महत्व पर प्रकाश डालते हुए संस्थान के सभी सदस्यों से हिंदी में अधिक से अधिक कार्य करने की अपील की।

इस पखवाड़ा के उद्घाटन समारोह के बाद अगले 15 दिनों तक विभिन्न श्रेणियो में विभिन्न प्रतियोगिताओं का दौर चलता रहा जिसमें संस्थान के विद्यार्थियों, संकाय सदस्यों एवं कर्मचारियों ने न केवल अपनी उत्साहजनक सहभागिता दिखाई अपितु अपने कलागुणों को भी सभी के समक्ष रखा जो इस पखवाड़े के आयोजन का मुख्य उद्देश्य था।

इस पखवाड़ा का समापन समारोह दिनांक 29 अक्टूबर 2021 को संपन्न हुआ जिसमें विजेताओं को संस्थान के माननीय निदेशक महोदय द्वारा पुरस्कार प्रदान किए गए। इस समापन समारोह का संचालन संस्थान के यांत्रिक अभियांत्रिकी विभाग के सह प्राध्यापक डॉ. अनुपम अग्रवाल ने किया। इस अवसर पर प्रो. राजीव आहूजा ने सभी विजेताओं का अभिनंदन किया तथा अपने संस्मरणों के माध्यम से राष्ट्रीय स्तर पर ही नहीं अपितु अंतर्राष्ट्रीय स्तर पर भी हिंदी की महत्ता पर सभी के साथ अपने विचार साझा किए।

इस अवसर पर अधिष्ठाता (संकाय मामले एवं प्रशासन) डॉ. मनोरंजन मिश्रा ने हिंदी प्रकोष्ठ की गतिविधियों पर संक्षिप्त जानकारी प्रस्तुत करते हुए सभी को इस बात से अवगत कराया कि संस्थान को राजभाषा हिंदी में श्रेष्ठ कार्य करने हेतु नराकास, रुपनगर की वित्तीय वर्ष 2019-20 और 2020-21 के लिए द्वितीय राजभाषा शील्ड हेतु चयनित किया गया है। डॉ. मिश्रा ने हिंदी प्रकोष्ठ के कार्यों की सराहना एवं प्रशंसा की।

श्री रविंदर कुमार, कार्यवाहक कुलसचिव ने इस अवसर पर सभी का धन्यवाद ज्ञापित किया। अपने धन्यवाद ज्ञापन में कुलसचिव महोदय ने संस्थान की विभिन्न हिंदी गतिविधियों एवं उत्तरोत्तर प्रगति की सराहना एवं प्रशंसा की।

प्रो. राजीव आहूजा, निदेशक, भा.प्रौ.सं. रोपड़ हिंदी पखवाड़ा समापन समारोह को संबोधित करते हुए

डॉ. मनोरंजन मिश्रा, अधिष्ठाता (संकाय मामले एवं प्रशासन) विशेष वक्तव्य देते हुए

श्री रविंदर कुमार,
कार्यवाहक कुलसचिव धन्यवाद
ज्ञापित करते हए

डॉ. अनुपम अग्रवाल, सह प्राध्यापक, यांत्रिक
अभियांत्रिकी विभाग समारोह
का संचालन करते हुए

हिंदी पखवाड़ा समापन समारोह के कुछ क्षण

संस्थान के कर्मचारी पुरस्कार प्राप्त करते हुए

संस्थान के विद्यार्थी पुरस्कार प्राप्त करते हुए

संस्थान के सफाई/सुरक्षा/बागबानी कर्मचारी पुरस्कार प्राप्त करते हुए

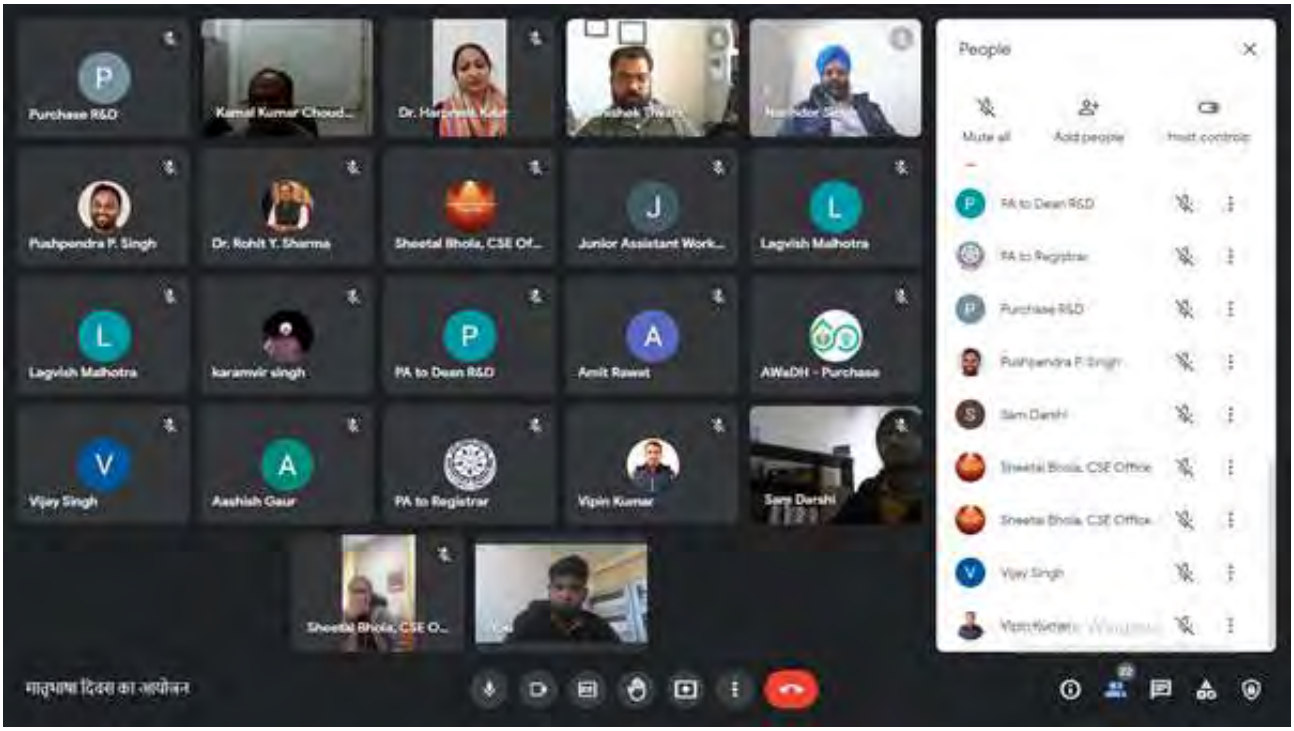
माननीय निदेशक महोदय द्वारा पुरस्कार प्राप्त करते हुए

आई.आई.टी. रोपड़ में मातृभाषा दिवस का आयोजन

भाषा प्रभाग, उच्चतर शिक्षा विभाग, शिक्षा मंत्रालय, भारत सरकार द्वारा प्राप्त दिशा-निर्देशों के अनुपालन में भारतीय प्रौद्योगिकी संस्थान रोपड़, रुपनगर, पंजाब में दिनांक 21 फरवरी, 2022 को मातृभाषा दिवस का आयोजन किया गया।

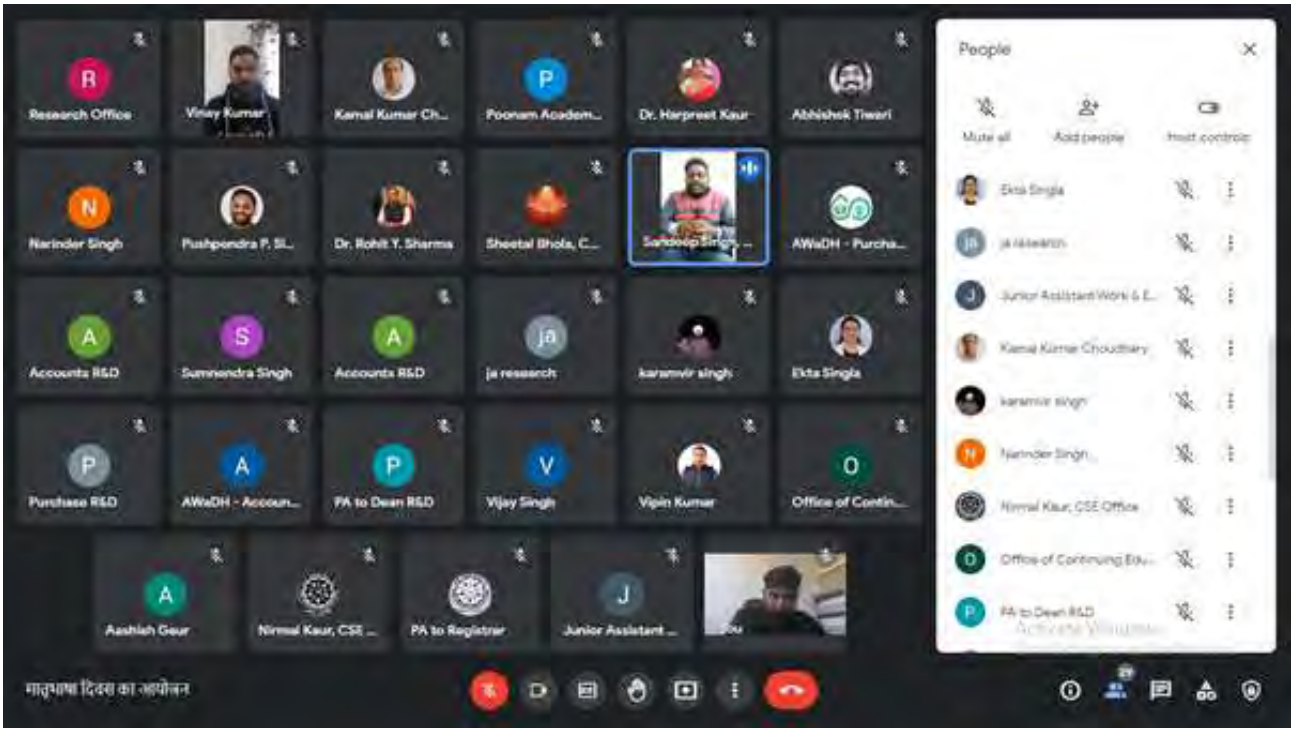
संस्थान के हिंदी प्रकोष्ठ ने इस अवसर पर संस्थान के संकाय सदस्यों एवं कर्मचारिगणों हेतु मातृभाषा में कविता एवं गीत गायन प्रतियोगिता का ऑनलाइन माध्यम से आयोजन किया। इस अवसर पर संस्थान के संकाय सदस्यों एवं कर्मचारिगणों ने बढ़-चढ़ कर हिस्सा लिया।

उक्त प्रतियोगिता में सभी प्रतिभागियों ने अपनी मातृभाषा में कविता पाठ एवं गीत गायन किया वहीं कुछ प्रतिभागियों अपने द्वारा स्वरचित एवं स्वरबद्ध कविता का पाठ कर मातृभाषा दिवस के अवसर पर अपनी प्रतिभा को सभी के सम्मुख रखा। सभी प्रतिभागियों ने अपनी-अपनी मातृभाषा में प्रस्तुति से मातृभाषा दिवस की सार्थकता को सिद्ध किया।



इस अवसर पर प्रतियोगिता के मूल्यांकन हेतु संस्थान के रसायन विभाग के प्रोफेसर नरिंदर सिंह और भौतिकी विभाग के सहायक प्राध्यापक डॉ. पुष्पेन्द्र पाल सिंह को आमंत्रित किया था। दोनों परीक्षकों ने अपनी उपस्थिति एवं मार्गदर्शन से सभी प्रतिभागियों का उत्साहवर्धन किया।

इस प्रतियोगिता में सुश्री शीतल भोला (कनि. सहायक, कंप्यूटर विज्ञान एवं अभियांत्रिकी विभाग) को प्रथम पुरस्कार, डॉ. हरप्रीत कौर (पुस्तकालय सूचना अधिकारी, केन्द्रीय पुस्तकालय) को द्वितीय पुरस्कार, डॉ. रोहित वाई. शर्मा (सह प्राध्यापक, विद्युत अभियांत्रिकी विभाग) तथा श्री रविंदर कुमार (वरि. सहायक, अनुसंधान एवं विकास अनुभाग) को संयुक्त रुप से तृतीय पुरस्कार, श्री विनय कुमार (केयरटेकर, विद्यार्थी मामले अनुभाग) तथा श्री नरिंदर कुमार (कार्यालय सहायक, कार्य एवं संपदा अनुभाग) को संयुक्त रुप से प्रथम प्रोत्साहन पुरस्कार वहीं श्री विपिन कुमार (लेखा अधिकारी, लेखा अनुभाग) और श्री समनेन्द्र सिंह (कनि. अधीक्षक, भंडार एवं क्रय अनुभाग) को संयुक्त रुप से द्वितीय प्रोत्साहन पुरस्कार से सम्मानित किया गया।



इस अवसर पर हिंदी प्रकोष्ठ के संकाय प्रभारी डॉ. अभिषेक तिवारी ने दोनों परीक्षकों का तथा सभी प्रतिभागियों का धन्यवाद ज्ञापित किया। कार्यक्रम का संचालन संस्थान के हिंदी अनुवादक डॉ. गिरीश प्रमोदराव कठाणे ने किया।

नराकास रुपनगर की गतिविधियों में आई.आई.टी. रोपड़ की सहभागिता

नराकास सदस्य कार्यालयों के लिए हिंदी पखवाड़ा के अंतर्गत हिंदी कविता प्रतियोगिता का आयोजन

हिंदी प्रकोष्ठ, भा.प्रौ.सं. रोपड़ ने प्रतिवर्ष की तरह इस वर्ष भी हिंदी पखवाड़ा के अंतर्गत नराकास रुपनगर के सभी सदस्य कार्यालयों के लिए हिंदी कविता प्रतियोगिता का आयोजन किया। हिंदी कविता प्रतियोगिता दिनांक 28 सितंबर 2021 को ऑनलाइन माध्यम से आयोजित की गई थी। इस प्रतियोगिता में नैशनल फर्टिलाइजर्स लिमिटेड नंगल इकाई, नाइलेट, यूको बैंक तथा इंडियन बैंक रुपनगर के सदस्यों ने सहभागिता ली। इस प्रतियोगिता हेतु परीक्षक के रुप में नराकास रुपनगर के अध्यक्ष श्री राजिन्द्र जसरोटिया, आई.आई.टी. रोपड़ के यांत्रिक अभियांत्रिकी विभाग के सह प्राध्यापक डॉ. अनुपम अग्रवाल तथा आई.आई.टी. रोपड़ के धातुकी एवं पदार्थ अभियांत्रिकी विभाग के सहायक प्राध्यापक डॉ. अभिषेक तिवारी को आमंत्रित किया गया था।

इस अवसर पर प्रतिभागियों ने किसी अन्य की कविता के साथ-साथ स्वरचित कविताएं प्रस्तुत की। इस प्रतियोगिता में श्री विपिन कुमार (आई.आई.टी रोपड़,) को प्रथम पुरस्कार, श्री राकेश कुमार वर्मा (एनएफएल) को द्वितीय पुरस्कार, डॉ. हेमलता (यूको बैंक) को तृतीय पुरस्कार तथा श्रीमती सुनीता चिब (नाइलिट) और श्रीमती प्रीतेंदर कौर (आई.आई.टी. रोपड़) को संयुक्त रुप से प्रोत्साहन पुरस्कार हेतु चयनित किया गया। इन विजेताओं को नराकास रुपनगर द्वारा 06 अक्टूबर 2021 को आयोजित संगोष्ठी के दौरान पुरस्कृत किया गया। इस कार्यक्रम का संचालन आई.आई.टी रोपड़ के हिंदी अनुवादक डॉ. गिरीश प्रमोदराव कठाणे ने किया।

नराकास रुपनगर द्वारा सभी सदस्य कार्यालयों के लिए आयोजित की गई विभिन्न प्रतियोगिताओं में आई.आई.टी. रोपड़ की सहभागिता

नराकास रुपनगर द्वारा हिंदी पखवाड़ा 2021 के अंतर्गत सभी सदस्य कार्यालयों के लिए विभिन्न प्रतियोगिताओं का आयोजन किया गया। जिसमें यूकों बैंक द्वारा दिनांक 14 सितंबर 2021 को आनलाइन हिंदी टिप्पण प्रतियोगिता, एनएफएल द्वारा दिनांक 18 सितंबर 2021 को चित्र लेखन प्रतियोगिता, बैंक आफ इंडिया द्वारा दिनांक 24 सितंबर 2021 को राजभाषा ज्ञान एवं सामान्य ज्ञान प्रतियोगिता, आई.आई.टी. रोपड़ द्वारा दिनांक 28 सितंबर 2021 को हिंदी कविता प्रतियोगिता तथा केनरा बैंक द्वारा दिनांक 29 सितंबर 2021 को कार्टून संवाद प्रतियोगिता का आयोजन किया गया। यह सभी प्रतियोगिताएं आनलाइन माध्यम से आयोजित की गई थी जिसमें आई.आई.टी रोपड़ के कर्मचारी सदस्यों ने सहभागिता ली।

आई.आई.टी रोपड़ के श्री विपिन कुमार को ऑनलाइन हिंदी टिप्पण प्रतियोगिता में प्रोत्साहन पुरस्कार तथा हिंदी कविता प्रतियोगिता में प्रथम पुरस्कार के लिए चयनित किया गया। राजभाषा ज्ञान एवं सामान्य ज्ञान प्रतियोगिता में आई.आई.टी रोपड़ के श्री नवीन, वरिष्ठ सहायक को प्रोत्साहन पुरस्कार हेतु चयनित किया गया। आई.आई.टी. रोपड़ की जनसंपर्क अधिकारी श्रीमती प्रीतेंदर कौर को हिंदी कविता प्रतियोगिता हेतु प्रोत्साहन पुरस्कार के लिए चयनित किया गया।

नराकास द्वारा आयोजित राजभाषा संगोष्ठी में सहभागिता

नराकास रुपनगर द्वारा आयोजित हिंदी पखवाड़ा का समापन समारोह/पुरस्कार वितरण समारोह दिनांक 06 अक्टूबर, 2021 को आनलाइन माध्यम से आयोजित किया गया। इस अवसर पर नराकास रुपनगर द्वारा आनलाइन नराकास संगोष्ठी का भी आयोजन किया गया।

नराकास संगोष्ठी का विषय आज़ादी का अमृत महोत्सवः राजभाषा का सफर यह था।

इस अवसर पर सुश्री नीना बहल, सहायक निदेशक, आकाशवाणी, चण्डीगढ़ को मुख्य वक्ता के रुप में विशेष रुप से आमंत्रित किया गया था। इस अवसर पर अन्य मान्यवर भी उपस्थित थे। इस संगोष्ठी में विशेष सम्बोधन हेतु आई.आई.टी. रोपड़ के निदेशक प्रो. राजीव आहूजा को आमंत्रित किया गया था तथा इसकी अध्यक्षता यूको बैंक, चंडीगढ़ के अंचल प्रबंधक श्री एस. के. सचदेवा ने की।

प्रो. राजीव आहूजा ने भारत और विदेश में हिंदी और राजभाषा की दशा और दिशा पर अपने विचार रखते हुए इसके प्रयोग को बढ़ावा देने पर जोर दिया।

इस अवसर पर नराकास रुपनगर के अध्यक्ष श्री राजिन्द्र कुमार जसरोटिया ने भी अपने विचार वक्त करते हुए सभी का धन्यवाद ज्ञापित किया।

दिनांक 09 मार्च को नराकास संगोष्ठी

जिला अग्रणी बैंक, यूको बैंक ने नराकास रुपनगर के संयुक्त तत्वावधान में भारत @ 75 वर्ष और उसके आगे संदर्भ समाज एवं प्रौद्योगिकी विषय पर संगोष्ठी का आयोजन किया। यह संगोष्ठी दिनांक 09 मार्च 2022 को आयोजित की गई। इस संगोष्ठी में विषय पर मार्गदर्शन करने हेतु भारतीय प्रौद्योगिकी संस्थान रोपड़ के निदेशक प्रो. राजीव आहूजा जी को आमंत्रित किया गया।

प्रो. राजीव आहूजा, निदेशक, आई.आई.टी. रोपड़ का सम्मान करते हुए

आमंत्रित वक्ता महोदय के संबोधन के पूर्व श्रीमती सीमा कौशल, एनएफएल नंगल ने प्रो. राजीव आहूजा जी के कार्यकाल पर सारांश वक्तव्य प्रस्तुत किया।

प्रो. राजीव आहूजा जी ने विषय पर अपने विचार साझा करते हुए आज के समय में समाज और समाज की उन्नति हेतु तकनीक और प्रौद्योगिकी किस प्रकार सहायिका के रुप में कार्य कर सकती है इस पर सभी का ध्यान विशेष रुप से आकृष्ट किया। साथ ही प्रो. आहूजा ने पंजाब राज्य जो कि मुख्य रुप से कृषिप्रधान राज्य है, इसकी कृषि संबंधि तमाम समस्याओं के समाधान और कृषि की उर्वरता पर संस्थान द्वारा किए जा रहे कार्य एवं अनुसंधान पर भी जानकारी साझा की।

श्रीमती सीमा कौशल प्रो. राजीव आहूजा, मुख्य वक्ता के संबंध में सभी को जानकारी देते हुए

इस कार्यक्रम की अध्यक्षता यूको बैंक के अंचल प्रबंधक श्री मनमीत एस. व्यास ने की। इस अवसर पर श्री व्यास ने भी अपने विचार साझा किए।

इसी संगोष्ठी में नराकास रुपनगर के अध्यक्ष श्री राजिन्द्र कुमार जसरोटिया को इनकी सेवानिवृत्ति पर श्रीफल, शॉल एवं स्मृतिचिन्ह प्रदान कर सम्मानित किया गया। अध्यक्ष नराकास को सम्मानित करने के पूर्व भा.प्रौ.सं. रोपड़ के हिंदी अनुवादक डॉ. गिरीश प्रमोदराव कठाणे ने श्री जसरोटिया महोदय का नराकास के अध्यक्ष के रुप में कार्य का सारांश साझा किया।

डॉ. गिरीश कठाणे, हिंदी अनुवादक, भा.प्रौ.सं. रोपड़ अध्यक्ष नराकास के कार्यकाल पर वक्तव्य देते हुए

श्री राजिन्द्र जसरोटिया का सम्मान करते हुए

श्री राजिन्द्र जसरोटिया अपने विचार साझा करते हुए

श्री जसरोटिया जी ने अपने व्यक्तव्य में नराकास रुपनगर के अध्यक्ष के रुप में कार्य करते हुए जो अनुभव प्राप्त हुए उनपर अपने विचार साझा किए। साथ ही, नराकास रुपनगर को अपने उज्जवल भविष्य के लिए शुभकामनाएं भी दी।

इस अवसर पर, विश्व हिंदी दिवस के उपलक्ष्य पर यूको बैंक द्वारा दिनांक 10 जनवरी, 2022 आयोजित हिंदी ज्ञान और पहचान प्रतियोगिता तथा एनएफएल नंगल द्वारा दिनांक 04 मार्च 2022 को आयोजित शब्द ज्ञान प्रतियोगिता के विजेताओं को पुरस्कृत किया गया।

नराकास बैठक

नगर राजभाषा कार्यान्वयन समिति रुपनगर की अर्धवार्षिक बैठक में संस्थान की सहभागिता

नगर राजभाषा कार्यान्वयन समिति वित्तीय वर्ष 2021-22 की प्रथम बैठक दिनांक 28.05.2021 को आनलाइन माध्यम से आयोजित की गई। इस बैठक में संस्थान के निदेशक एवं राजभाषा कार्यान्वयन समिति, भा.प्रौ.सं.रोपड़ के अध्यक्ष प्रो. राजीव आहूजा, संस्थान की हिंदी अधिकारी श्री लगवीश कुमार तथा हिंदी अनुवादक डॉ. गिरीश प्रमोदराव कठाणे ने सहभागिता सुनिश्चित की।

नगर राजभाषा कार्यान्वयन समिति (नराकास), रुपनगर की अर्धवार्षिक बैठक

इस अवसर पर नराकास रुपनगर की सदस्य सचिव डॉ. हेमलता और नराकास के अध्यक्ष श्री राजिन्द्र कुमार जसरोटिया ने भा.प्रौ.सं. रोपड़ ने नए निदेशक प्रो. राजीव आहूजा सर का स्वागत एवं अभिवादन किया। इस अवसर पर उत्तरी क्षेत्रीय कार्यान्वयन कार्यालय, नई दिल्ली के उपनिदेशक (कार्यान्वयन) श्री कुमार पाल शर्मा विशेष रुप से आमंत्रित थे।

प्रो. राजीव आहूजा ने प्रथमतः संस्थान के निदेशक के रुप में नराकास की बैठक में सहभागिता की और इस अवसर पर अपने विचार व्यक्त करते हुए देश विदेश में हिंदी की स्थिति और इसकी स्वीकार्यता पर प्रकाश डाला।

नगर राजभाषा कार्यान्वयन समिति (नराकास), रुपनगर की अर्धवार्षिक बैठक तथा वार्षिक राजभाषा शील्ड का पुरस्कार वितरण समारोह आई.आई.टी रोपड़ में संपन्न हुआ। इस बैठक में आई.आई.टी रोपड़ के निदेशक प्रो. राजीव आहूजा, श्री नरेन्द्र मेहरा, सहायक निदेशक, राजभाषा विभाग, भारत सरकार, श्री एस. के. सचदेवा, अंचल प्रबंधक यूको बैंक, श्री एस. के. श्रीवास्तव, एनएफएल नंगल के मुख्य महाप्रबंधक, नराकास रुपनगर के अध्यक्ष श्री राजिन्द्र कुमार जसरोटिया तथा आई.आई.टी रोपड़ के कुलसचिव श्री रविंदर कुमार विशेष रुप से उपस्थित थे।

श्रीमती अमृता प्रीतम हिंदी व्याख्यानमाला
प्रथम व्याख्यान

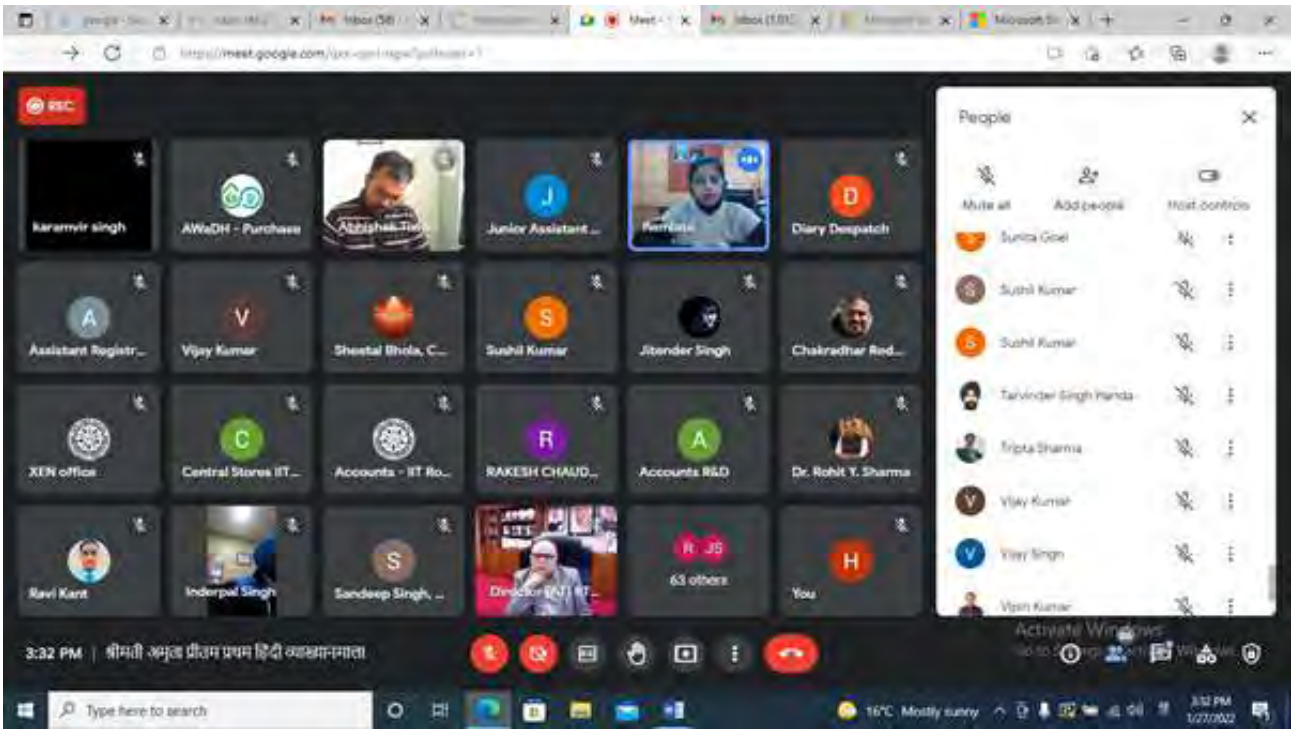
हिंदी प्रकोष्ठ, भारतीय प्रौद्योगिकी संस्थान रोपड़ ने श्रीमती अमृता प्रीतम हिंदी व्याख्यानमाला का नववर्ष 2022 के उपलक्ष्य पर शुभारंभ करते हुए माह जनवरी 2022 में एक व्याख्यान का आयोजन किया। श्रीमती अमृता प्रीतम हिंदी व्याख्यानमाला के अंतर्गत दिनांक 27 जनवरी 2022 को "नेतृत्व प्रबंधनः भगवत् गीता के संदर्भ में" विषय पर एक व्याख्यान का आयोजन किया। इस अवसर पर उक्त विषय पर व्याख्यान देने हेतु यूको बैंक की वरिष्ठ राजभाषा प्रबंधक डॉ. हेमलता को विशेष रुप से आमंत्रित किया गया था।

इस अवसर पर संस्थान के निदेशक प्रोफेसर राजीव आहूजा ने उद्घाटन संबोधन से अमृता प्रीतम हिंदी व्याख्यानमाला का शुभारंभ किया। इस अवसर पर प्रोफेसर आहूजा ने सभी उपस्थितों के साथ अपने विचार साझा करते हुए कहा कि राजभाषा हिंदी का विकास में हिंदी के साहित्य का महती भूमिका है। और यह व्याख्यानमाला हिंदी साहित्य के विभिन्न पहलूओं पर प्रकाश डालते हुए हिंदी भाषा के प्रति संस्थान तथा संस्थान से इतर सदस्यों में जागरुकता पैदा कर इनके ज्ञान में वृद्धि करने के साथ साथ हिंदी भाषा के प्रति प्रेम और निजता का भाव भी पैदा करने में एक बड़ी भूमिका का निर्वहन करेगी।

इस अवसर पर संस्थान के यांत्रिक अभियांत्रिकी विभाग के प्रोफेसर नवीन कुमार ने आमंत्रित वक्ता महोदया, संस्थान के निदेशक महोदय तथा सभी उपस्थितों का औपचारिक स्वागत किया।

इस अवसर पर संस्थान के विभिन्न विभागों/अनुभागों/प्रकोष्ठ आदि के सदस्य बड़ी संख्या में उपस्थित थे। साथ ही नगर राजभाषा कार्यान्वयन समिति रुपनगर के सदस्य कार्यालयों से भी सदस्यों ने अपनी सहभागिता दर्ज की।

आमंत्रित वक्ता महोदया ने इस अवसर पर सभी के समक्ष अपने विचारों को साझा करते हुए संबंध में भगवत् गीता में उल्लिखित नेतृत्व प्रबंधन के विभिन्न पहलूओं पर प्रकाश ड़ाला।



इस अवसर पर हिंदी प्रकोष्ठ के संकाय प्रभारी डॉ. अभिषेक तिवारी ने आमंत्रित वक्ता महोदय के द्वारा रखे विचारों पर एक समग्र एवं संक्षिप्त पुर्नव्याख्या के साथ सभी उपस्थितों का धन्यवाद ज्ञापित किया। कुल 92 सदस्यों ने इस इस व्याख्यानमाला का लाभ लिया। इस व्याखानमाला का संचालन संस्थान के हिंदी अनुवादक डॉ. गिरीश प्रमोदराव कठाणे ने किया।

श्रीमती अमृता प्रीतम हिंदी व्याख्यानमाला
द्वितीय व्याख्यान

हिंदी प्रकोष्ठ, भारतीय प्रौद्योगिकी संस्थान रोपड़ ने श्रीमती अमृता प्रीतम हिंदी व्याख्यानमाला के अंतर्गत दिनांक 24 फरवरी 2022 को पंजाब के हिंदी उपन्यास में चित्रित पंजाबी जनजीवन विषय पर एक व्याख्यान का आयोजन किया। इस अवसर पर उक्त विषय पर व्याख्यान देने हेतु गुरु नानक देव विश्वविद्यालय, अमृतसर के हिंदी विभाग की प्रोफेसर एवं विभागाध्यक्ष प्रो. सुधा जितेन्द्र को विशेष रुप से आमंत्रित किया गया था।

भारतीय प्रौद्योगिकी संस्थान रोपड़ का प्रथम स्थापना दिवस के कार्यक्रम के अंग के रुप में इस व्याख्यानमाला को आयोजित किया गया। इस अवसर पर संस्थान के निदेशक प्रोफेसर राजीव आहूजा, भा.प्रौ.सं. रोपड़ के अधिशासी मंडल के अध्यक्ष एवं पूर्व अध्यक्ष, इसरो डॉ. के. राधाकृष्णन आदि मान्यवरों के साथ अन्य गणमान्य विभूतियां भी इस व्याख्यान की साक्षी बनी।

यह व्याख्यानमाला हिंदी साहित्य के विभिन्न पहलूओं पर प्रकाश डालते हुए हिंदी भाषा के प्रति संस्थान तथा संस्थान से इतर सदस्यों में जागरुकता पैदा कर इनके ज्ञान में वृद्धि करने के साथ साथ हिंदी भाषा के प्रति प्रेम और निजता का भाव भी पैदा करने के उद्देश्य से आरंभ की गई थी।

आमंत्रित वक्ता महोदया ने हिंदी भाषा और साहित्य पर अपने विचार साझा करते हुए हिंदी साहित्य में पंजाबी साहित्यकारों के योगदान पर प्रकाश ड़ालते हुए इन साहित्यकारों की रचनाओं में चित्रित पंजाबी जनजीवन पर सभी के साथ अपने विचार साझा किए।

आमंत्रित वक्ता महोदय ने अपने वक्तव्य में कहा कि भले ही हम तमाम तकनीकी एवं प्रौद्योगिकी क्षमता प्राप्त कर लें किंतु इन हमारी इन तमाम प्रौद्योगिकी उपलब्धियों के पश्चात भी संस्कार का सॉफ्टवेयर बनाना असंभव है। साथ ही, आमंत्रित वक्ता महोदया ने कहा कि पंजाब, पंजाबी और पंजाबीयत को समझना है तो गुरु ग्रंथ साहिब की चर्चा के बगैर इसे नहीं समझा जा सकता।

इस अवसर पर संस्थान संस्थान के सभी अधिष्ठाता, सह अधिष्ठाता एवं विभागाध्यक्षों के साथ साथ सभी संकाय सदस्य, कर्मचारीगण तथा विद्यार्थी बड़ी संख्या में आनलाइन माध्यम से उपस्थित थे।

श्रीमती अमृता प्रीतम हिंदी व्याख्यानमाला
तृतीय व्याख्यान

हिंदी प्रकोष्ठ, भारतीय प्रौद्योगिकी संस्थान रोपड़ ने श्रीमती अमृता प्रीतम हिंदी व्याख्यानमाला के अंतर्गत दिनांक 23 मार्च 2022 को संत कबीर और आज का समाज विषय पर एक व्याख्यान का आयोजन किया। इस अवसर पर उक्त विषय पर व्याख्यान देने विषय विशेषज्ञ के रुप में सुरेन्द्रनाथ सांध्य कॉलेज, कोलकाता, पश्चिम बंगाल के हिंदी विभाग के पूर्व एसो. प्रोफेसर एवं विभागाध्यक्ष डॉ. प्रेमशंकर त्रिपाठी को विशेष रुप से आमंत्रित किया गया था।

भारतीय प्रौद्योगिकी संस्थान रोपड़ द्वारा आयोजित इस तृतीय व्याख्यानमाला में संस्थान के निदेशक प्रोफेसर राजीव आहूजा विशेष रुप से उपस्थित थे।

यह व्याख्यानमाला संत कबीर और उनके विचारों की प्रासंगिकता पर प्रकाश ड़ालने के उद्देश्य से आयोजित की गई थी।

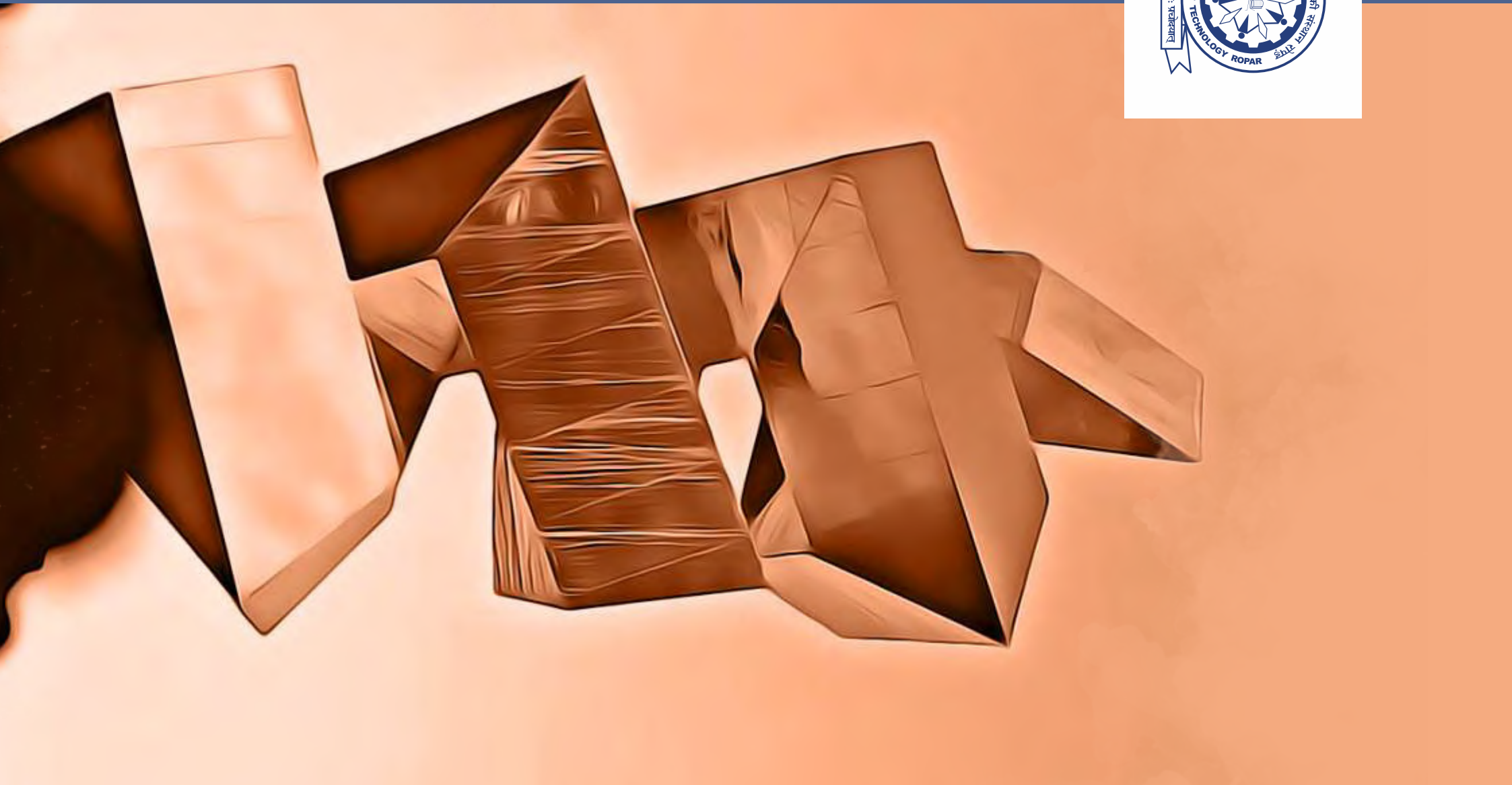
आमंत्रित वक्ता महोदय ने हिंदी साहित्य में संत कबीर के योगदान और महत्व पर सभी के समक्ष एक संक्षिप्त विवेचन प्रस्तुत किया। आमंत्रित वक्ता महोदय ने संत कबीर के विभिन्न दोहों के माध्यम से संत कबीर की वाणी और उसकी आज के समय में प्रासंगिकता को इंगित किया।

आमंत्रित वक्ता महोदय के वक्तव्य के पश्चात संस्थान के निदेशक प्रोफेसर राजीव आहूजा ने सर्वप्रथम डॉ. प्रेमशंकर त्रिपाठी का धन्यवाद ज्ञापित किया कि उन्होंने अपने व्यस्त समय में से इस कार्यक्रम में अपने संबोधन से सभी को लाभान्वित किया। प्रो. राजीव आहूजा ने अपने विचार साझा करते हुए कहा कि साहित्य केवल रसास्वादन का विषय न होकर वह समाज को बेहतर बनाने का एक माध्यम भी है और कबीर और उनकी रचनाएं इसका अप्रतिम उदाहरण है।

इस अवसर पर संस्थान के अधिष्ठाता प्रो. सी. सी. रेड्डी ने औपचारिक धन्यवाद ज्ञापित करते हुए आमंत्रित वक्ता महोदय, संस्थान के निदेशक महोदय तथा उपस्थित सभी श्रोताओं का अपनी उपस्थिति से इस व्याख्यानमाला को सफल बनाने में सहयोग देने हेतु आभार व्यक्त किया।

इस कार्यक्रम का संचालन हिंदी प्रकोष्ठ के संकाय प्रभारी डॉ. अभिषेक तिवारी ने किया।

DEPARTMENTS & CENTERS



DEPARTMENT OF BIOMEDICAL ENGINEERING

Programs offered	:	M.Tech. and PhD		
No. of Students	:	M.Tech.	:	23
		PhD	:	41
Head of the Department	:	Dr. Rajesh Kumar		
No. of faculty members	:	Core Faculty	:	7
		Associate Faculty	:	7
No. of staff members	:	2		
		Technical Staff	:	1
		Administrative Staff	:	1
Thrust Area	:	Healthcare, Cancer Diagnostics, Biomedical-Photonics, Medical Devices, Biomaterials and Tissue Engineering, Immunology		
No. of Publications	:	38		

FACULTY MEMBERS

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Diagnostic and therapeutic ultrasound, Biomedical instrumentation, and Medical signal processing

DR. DURBA PAL
Assistant Professor
Ph.D. (Visva Bharti University, Santiniketan)
Tissue engineering and Regenerative Medicine, Cell based Therapeutics in disease biology.

DR. RAJESH KUMAR
Assistant Professor
Ph.D.(Norwegian University of Science and Technology Norway)
Biomedical-Photonics, Bioimaging, Microscopy and Spectroscopy.

DR. BODHISATWA DAS
Assistant Professor
Ph.D (IIT Kharagpur)
Research Area: Biomaterials, Tissue Engineering, Nanomedicine, In Vitro Organ Models]

DR. ATHARVA POUNDARIK
Assistant Professor
Ph.D (Rensselaer Polytechnic Institute, USA)
(Joint with Dept. of Metallurgical and Materials Engg.)
3D- Bioprinting, Medical Devices- Design and Development, Orthobiologics, Wound Healing.

PROF. JAVED N. AGREWALA
Professor
Ph.D. (Agra University, Agra)
Immunology of Infectious Diseases, Vaccines, and Gut Microbiome.

DR. SRIVATSAVA NAIDU
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Ph.D. (Justus-Liebig University,Giessen, Germany)
Therapeutic targeting of basal transcriptional machinery; Non-coding RNA as cancer therapeutics.

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Ph.D. (Guru Nanak Dev University, Amritsar)
Nano-particles, calix [4] arenes, Characterization, chemo-sensor development

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Biomaterials ARCH FACILITIES

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Ph.D. (Indian Institute of Technology Madras)
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DR. NAVIN KUMAR
Associate Professor
Mechanical Engineering
Ph.D. (Indian Institute of Technology Delhi)
Biomaterials, Biological and Biomaterial and tripodal Frameworks for Biomechanics, Mechanics of Nanomaterials, Finite Element Modeling (FEM), Biomedical Engineering, Biomedical Instrumentation, and Bioimplants

DR. RAMJEE REPAKA
Associate Professor
Mechanical Engineering
Ph.D. (Indian Institute of Technology Kharagpur)
Heat Transfer; Thermal Engineering

FACILITIES

No. of Labs

PG : 5

Research : 6

Teaching Labs (Post-graduate Students):

Name of the lab	Faculty In-charge of Teaching Lab	Name of the Equipment
Advanced Biology Teaching Lab	Dr. Srivatsava Naidu	Clariostar Plate Reader, Merck Water Purification System, Nitrogen Cylinder for cryopreservation, Chemidoc Imaging System, LIECA Florescent Microscope, Fully Automated Autoclave, Refrigerated Centrifuges and freezers, Ice-flaking machine, Tissue Culture Room and Microbiology room,
Physiology Teaching Lab	Dr. Ashish Sahani Dr. Durba Pal	UHK-TA Human Physiology Teaching Kit, Fab X 3-D Printer, Human Skeleton Model for teaching, Models of human organs, Emotive Epoc 14 Channel ECG, Spirometry, Stethoscope, Zeiss Axioscope Upright microscope, Trinocular Microscopes, Refrigerator, -20 freezer

Medical Devices and Instrumentation Teaching Lab	Dr. Ashish Sahani	445 nm Blue Light Burning Power Beam Laser Pointer, Keysight EDUX1002G Oscilloscope, Soldering Station, Bench Drill Machine, Dremel 3000-15 130 watt multi toolkit, Bosch GST 700 Plastic Jigsaw Blue, Ophthalmology unit, keratometer,
Biomechanics and Medical Imaging Teaching Lab	Dr. Atharva Poundarik Dr. Rajesh Kumar	Computer Software for analysis of biomechanical parameters, Weight and Height measurement system, Ultrasonic Flow Doppler, CT Scan Machine, Earth's Magnetic Field MRI Machine
Bio-photonics Teaching Lab	Dr. Rajesh Kumar	Fiber-optics based Optical Probes, Teaching spectrometers, Near-infrared spectroscopy system.

RESEARCH LABS:

Name of the lab	Principal Investigator/ Head of the Research Lab	Name of the Equipments
Immunology Lab	Prof. Javed Agrewala	Real Time PCR, Chemidoc Imaging System CO_2 incubator, -20 and -80 C freezers, Biosafety Cabinet, Cooling Centrifuges, Electroporater, Microscope
Non Coding RNA's Lab	Dr. Srivatsava Naidu	Homogenizer Tissue Lyser, Flow Cytometer, Thermal Cycler, Quant Studio, Ultrasonic Platform, Vortex Mixer, Mini gel Tank, Biosafety Cabinet, Vacusip Aspiration System, Low temperature refrigerators and freezers, CO_2 incubator with shaker, Mini gel Tank, Electrophoresis and Blotting System, Stable Temperature utility Water Baths, Microscope.
Tissue Engineering and Regenerative Medicine Laboratory	Dr. Durba Pal	CO_2 incubator, LEICA Cryotome, 5702 Refrigerated centrifuge, LEICA Fluorescent Microscope DMI8, Water bath, Biosafety cabinet, BD Accuri C6 Plus Flow Cytometer, PCR veritti Thermo fisher Multiskan Go Spectrophotometer, - 20 and -80 C freezers and centrifuges.
Medical Devices Lab	Dr. Ashish Sahani	Palmsens 4, NI USB 6001, Desktop Workstation, Raspberry Pi-Board Module, Oscilloscope, Arduino Development Board, LOBOT 6 DOF RC Robot Arm Gripper, DIY 5DOF Robot Arm Five Fingers Metal Mechanical Paw, Emotiv Kits, Thermal Camera IR, DSLR Camera Canon 80 D, Menikin for heart and upper body, NI Labview kit, Embrace Wrist watch for medical R & D, i-works kit.
Biomedical-Photonics Lab	Dr. Rajesh Kumar	Advanced Raman spectrometer tool, Plant spectrometer, Fluorescence spectrometer, NIR spectrometer, Microscopy based Imaging Tool, Laser powermeter, Optics & Photonics Components.
Advanced Biomaterials Manufacturing Lab	Dr. Atharva Poundarik	3D Bio-printer, Tangential Flow Filtration System, Lyophilizer, Elisa Plate Reader, Polymer synthesis setup

AWARDS AND HONOURS 2020-21(STUDENT)

- **Ms. Meghna Bhandari,** a M.Tech. student, working under Dr. Yashveer Singh, won the **Best oral presentation award** at the APA Bioforum International e-Conference on Polymeric Biomaterials and Bioengineering, Asian Polymer Association, New Delhi, 27-28 August 2021.
- **Ms. Bhavya Kumari** received **"Best oral presentation award"** for presentation of research work i.e., "Oxygen Nanobubbles abolish the hypoxic effect in solid tumor by targeting HIF1 mediated EMT" at NBHH -2021 Conference (27th 28th Sep 2021) Kirori Mal College University of Delhi, India.
- **Ms. Leena Arora** selected in prestigious **Newton Bhabha PhD placement programme 2020-21** where she has been recommended by the India- UK Joint Panel for Short-Term PhD Placement (for 02-04 months) at Universities/ Institutes in UK. (Award letter received on Jan 28,2022)
- **Best Poster Award** to **Ms. Adarsha Mallick** at 3rd National Biomedical Research Competition, 2021 under Health Science Category.
- **Ms. Adarsha Mallick** Awarded **Startup Grant from BIRAC** under BIG 2021.

INVITED LECTURES BY FACULTY

Prof. Javed Agrewala

1. Lecture delivered: Recent advancement in vaccine development on 23.02.2022 Organizer: Department of Biotechnology, DAV Post Graduate College, Chandigarh.
2. Lecture delivered: "Influence of the Gut Microbiota in defenselessness to Mycobacterium tuberculosis" on 19.12.2021. Organizer: Indian Immunology Society.
3. Lecture delivered: Guidelines and requirements of BSL3 laboratory working practices and handling of M. tuberculosis on 26.10.2021. Organizer: Department of Biochemistry, University of Delhi South Campus, New Delhi.
4. Lecture delivered: A lipidated bi-epitope vaccine elicits protective immunity against Mycobacterium tuberculosis on 2.7.2021. Organizer: Lovely Professional University, Jalandhar.
5. Lecture delivered: "COVID-19: Infection and Immunity" on 28.5.2021. Organizers: SPSTI, INSA and NASI, Chandigarh Chapter.
6. Lecture delivered: "Signaling through Clec4 induces autophagy and protection from tuberculosis" on 28.4.2021. Organizer: Department of Biotechnology, AIIMS, New Delhi.
7. Lecture delivered: "History of Pandemics and Vaccines" on 19.3.2021. Organizers: SPSTI, INSA and NASI, Chandigarh Chapter.

Dr. Bodhisatwa Das

1. Nanomaterials in tissue regeneration. Fergusson College Pune on 21/11/2021.
2. Nanotechnology in Regenerative Medicine. KPR Institute of Engineering and Technology on 15/03/2022.

3. Carbon quantum dot-biopolymer nanocomposites for stem cell transplantation. [APM 2022, Central Institute of Petrochemical Research and Technology on 09/03/2022.

Dr. Rajesh Kumar

1. Faculty Development Programme/Workshop in BIOPHOTONICS funded by SERB-DST, Gov of India. 6-7th March 2021, Institute of Engineering & Technology, Devi Ahilya University, Indore.

LECTURES BY VISITING EXPERTS

Sr. No.	Name of the experts with affiliation	Topic	Date
1	Mr. Sri Vasireddy, CEO of Rean Foundation	Digital Health Entrepreneurship	23 March 2022

VISITS ABROAD BY THE STUDENTS

Sr. No.	Name of the Student	Country	Detail of visit with date
1	Leena Arora	UK	Newton Bhabha PhD placement programme 2020-21

MAJOR RESEARCH PROJECTS (ONGOING/COMPLETED)

Dr. Durba Pal

1. Antisense oligonucleotide-loaded, 3D printed, double-layered, and multifunctional wound healing matrix to target angiogenesis in chronic diabetic wounds), Department of Biotechnology (DBT)

Dr. Rajesh Kumar

1. Development of a handheld instrument for in-situ identification of “Indian Yellow Dragon”. SERB-DST, Govt. of India
2. Accurate Optical Sensing for Efficient Fertilizer Use and Increased Yield in Small Farms. Massachusetts Institute of Technology (MIT), USA
3. Ramalingaswami Fellowship, DBT, Govt. of India

Dr. Javed Agrewala

1. Enhancement of the immunogenicity and protective efficacy of lipopeptide vaccine against Mycobacterium tuberculosis using peptidomimetics and conjugation with isoniazid [co-investigator]. DST-SERB. Completed 2022
2. Generation of promiscuous peptides entrapped nanoparticles displaying TLR-2 ligand to impart protective immunity against Mycobacterium tuberculosis [Project Leader]. DST-SERB. Continued
3. Immunotherapeutic and prophylactic remedy against heroin dependency [Project Leader]. MHRD. Continued
4. A lipidated bi-epitope vaccine to elicit protective CD4 T cell and CD8 T cell immunity against Mycobacterium tuberculosis[Project Leader]. DST-JC Bose. Continued

5. Co-administration of rapamycin with MOG peptide and restricting the development of experimental autoimmune encephalomyelitis by skewing Th17 cells to Tregs [Project Leader]. DST-SPARC. Continued

Dr. Bodhisatwa Das

1. Controlled release of Anti-Inflammatory and Antioxidant Biomolecules for osteoarthritis therapy (INR 1000000, ISIRD IIT Ropar 2021-2022)
2. Dual release of Anti-Inflammatory molecules from core-shell nanofibers for chronic wound healing (INR 2900000, SERB SRG 2021-2023)

Dr. Srivastava Naidu

1. Ramalingaswami fellowship – Department of Biotechnology, Govt. of India – Ongoing
2. Early career research award – SERB – Department of Science and Technology - Completed
3. SPARC- MHRD – Ongoing
4. Development of Anti-viral and Anti-Bacterial coatings for BOPP membranes. Consultancy project with MSFL. Completed, technology transferred and Joint patent applied.

PATENTS

Sr. No.	Patent	Name	Application Number	Country	Filed/ Jointly filed
1	Method of synthesis of cellulose 2,3 diamino halamine	Sourav Chattopadhyay and Srivatsava Naidu.	202111001491	India	Filed
2	Method of synthesis of chitosan based N-halamine	Sourav Chattopadhyay and Srivatsava Naidu.	202111001480	India	Filed
3	Antimicrobial and virucidal novel modified cellulose and process for preparation thereof	MSFL, Sourav Chattopadhyay and Srivatsava Naidu.	202111017949	India	Jointly Filed

DEPARTMENT OF CHEMICAL ENGINEERING

Programs offered	:	B.Tech., M.Tech. and PhD.
No. of Students	:	B.Tech. : 91
	:	M.Tech. : 25
		PhD : 38
Head of the Department	:	Dr. Vishwajeet Mehandia
No. of faculty members	:	14
No. of staff members	:	04
		Technical Staff : 02
		Administrative Staff : 02
Thrust Area	:	1. Catalysis and Reaction Engineering
		2. Energy and Environment
		3 Multiscale modeling
		4. Soft Matter engineering
		5. Transport Phenomena and Thermodynamics
		6. Biophysics and Biomedical Engineering
No. of Publications	:	53

FACULTY MEMBERS

DR. ARGHYA BANERJEE
Assistant Professor
PhD(National University of Singapore)
Molecular Modelling, Computational Catalysis, Reaction Engineering, Heterogeneous Catalysis, Biomass conversion to chemicals, CO2 valorisation to chemicals

DR. ASAD H. SAHIR
Assistant Professor
PhD(University of Utah, Salt Lake City)
Energy and Environmental Engineering; Energy Systems Analysis (Techno-economic, infrastructure integration and life cycle aspects); Particle technology and reaction engineering; Combustion; Modeling and Simulation; Process Engineering and Design ; Process Systems Engineering

DR. CHANDI SASMAL
Assistant Professor
PhD(Monash University, Melbourne)
Soft Matter Engineering, Transport Phenomena and Thermodynamics, Multi-scale Modeling

DR. HIMANSHU PALIWAL
Assistant Professor
PhD(University of Virginia, Charlottesville)
Multi-scale Modeling, Process design, modeling and economics and Thermodynamics, Energy and Environment, Soft Matter Engineering

DR. MANIGANDAN S
Assistant Professor
PhD (IIT Madras)
Synthesis of polymeric and inorganic colloids; Synthesis of shape & functional anisotropic (Janus or Patchy) colloids; Self-assembly; Thermodynamics of interfacial systems; Pickering emulsion; Soft materials

DR. NAVIN GOPINATHAN
Assistant Professor
PhD(University of Bath, UK)
Indirect and direct porous media characterisation, controlled drug delivery, enhanced oil recovery, heavy oil upgrading and catalyst deactivation

DR. NEELKANTH NIRMALKAR
Assistant Professor
PhD(IIT Kanpur)
Transport Phenomena and Thermodynamics, Energy and Environment, Soft Matter Engineering

PROF. RAJ CHHABRA
Professor
PhD (Monash University, Melbourne)
Transport Phenomena, Multi-scale modeling , Soft Matter Engineering

DR. RAJAGOPAL VELLINGIRI
Assistant Professor
PhD (Imperial College London, UK)
Thin liquid films, Droplets dynamics, Multiphase flows, Low-dimensional modelling, Interfacial instabilities, Nonlinear waves, Asymptotic methods

DR. SAIKAT ROY
Assistant Professor
PhD(IIT Bombay)
Granular Mechanics, Complex Fluids, Soft Condensed Matter and related Solid Mechanics, Colloidal Gel Rheology, Jamming and Glass transition, Fluid Mechanics.

DR. SARANG P. GUMFEKAR
Assistant Professor
PhD(University of Alberta, Canada)
Functional polymers, cellulose nanocrystals, aerogels, hydrogels, water purification, nanofiltration membranes, advanced oxidation processes (AOPs), hydrodynamic cavitation, conductive adhesives, electrocatalysts, polymer gel electrolyte membranes.

DR. SWATI A. PATEL
Assistant Professor
PhD(IIT Kanpur)
Soft Matter Engineering, Transport Phenomena and Thermodynamics, Multi-scale Modeling

DR. TARAK MONDAL
Assistant Professor
PhD(IIT Delhi)
Catalysis and Reaction Engineering, Energy and Environment, Multi-scale modeling

DR. VISHWAJEET MEHANDIA
Assistant Professor
PhD(IISc, Bangalore)
Transport Phenomena and Thermodynamics, Multi-scale modeling, Soft Matter Engineering

FACILITIES

No. of Labs : UG Labs : 04

- Fluid Flow & Heat Mass Transfer Laboratory
- Chemical Reaction Engineering & Thermodynamics Lab
- Chemical Engineering Simulation Learning Zone (1&2)
- Process Control Lab

Research Lab : 12

Name of the lab	Name of the Head of the Research lab	Name of the Equipments
Advanced Colloid, Interface and fluid research Laboratory	Dr. Swati A. Patel & Dr. Manigandan S.	Jacketed Reactor,Chiller, Microscope, Vacuum Oven , Vacuum Filtration Unit , Sonicator, Inverted light microscope, Fluorescent Microscope, Langmuir Blodgett attached with microscope (LBXD), Dip Coater, Optical Tensiometer, Centrifuge , homogenizer.
Multiphase Flow, Catalysis & Sustainable Energy Research Lab	Dr. Tarak Mondal & Dr. Neelkhant Nirmalkar	Fixed Bed Reactor , Gas Chromatography , Rotary Evaporator Muffle Furnace , Centrifuge , Hot air Oven, Multi parameter Kit ,Nano Bubble Generator.

DRF Facilities	Dr. Neelkhant Nirmalkar,Dr. Swati A. Patel, Dr. Tarak Mondal	Nanoparticle Tracking Analysis, Zeta Sizer, Force Tensiometer , Master Sizer, Viscometer.
DRF Facilities	Dr. Tarak Mondal	Gas Chromatography Mass Spectrometry, Thermogravimetric Analyzer, Fourier Transform Infrared.
Complex Fluid Lab	Dr. Vishwajeet Mehandia	Rheometer, High Speed Monochromatic Camera.
Computational Fluid Dynamics	Dr. Neelkhant Nirmalkar	Workstations
DST-TIH water technology lab	Dr. Neelkhant Nirmalkar	Incubator , Hot air Oven , Rotary evaporator.
Soft matter & Microfluidic lab	Dr. Chandi Sasmal	Soft Lithography Station.
Computational Fluid Dynamics lab	Dr. Chandi Sasmal	HPC workstations.
Biomedical Engineering Lab	Dr. Vishwajeet Mehandia & Dr. Navin Kumar (Mechanical Dept.)	Centrifuge , Fluorescent Microscope , Cell Culture Lab.
Multiscale Modelling Lab	Dr. Himasnhu Paliwal & Dr. Navin Gopinathan	Workstations.
Applied Polymers and Nanomaterials Laboratory	Dr. Sarang P. Gumfekar	Lyophilizer, Hot air oven, Electrospinner, Crossflow membrane testing module, Probe and bath sonicator

AWARDS AND HONOURS 2021-22 (FACULTY)

- The Sunny Oberoi Excellence in Teaching Award 2021 to Dr. Chandi Sasmal
- SWE WE Local 2022 Engaged Advocate Award to Dr. Asad Sahir (The Engaged Advocate Award honors individuals who contributed to the advancement or acceptance of women in engineering: 12 awardees globally in a year across academia and corporate)

AWARDS AND HONORS 2021-22 (STUDENT)

- Mr. Anant Chauhan , Prof Ashutosh Sharma Research Award 2021 from the Indian Institute of Chemical Engineers (IIChE)
- Mr. Sahil Verma, Sunny Oberoi Leadership Award
- Mr. Mohammed Mazhar Laljee, Mitacs Globalink Research Internship - 2021
- Mr. Mohammed Mazhar Laljee, Nalin, Suryansh, Hardik Rana (Chemical Engineering-IIT Ropar) for being selected as the finalists for Solar Decathlon India 2021.
- Mr. Hari Kiran Tirumaladasu (MTech batch 2020) received the best paper presenter award at the "International Conference on Recent Advances in Bio-Energy Research (ICRABR-2022)"

INVITED LECTURES BY FACULTY

Name of the Faculty: Dr. Sarang P. Gumfekar
Lecture: Advanced Oxidation Processes for Water Treatment
Department: AquaWorks - a Manmon Water Research Center
Date: 9 April 2021

Name of the Faculty: Dr. Arghya Banerjee
Lecture: Molecular Modeling guided catalysts design
Department: Chemical Engineering
Institute: NIT Durgapur
Date: 10 April 2021

Name of the faculty: Dr. Asad Sahir
Lecture: techno-Economic Analysis for Co-Conversion of Natural Gas and Biomass to Liquid Transportation Fuels: Insights on Incorporating Fischer-Tropsch Kinetics
Department: Chemical Engineering
Institute: AICHE 3rd Natural Gas Utilization Workshop, Virtual
Date: 25 April 2021

Name of the faculty: Dr. Neelkanth Nirmalkar
Lecture: Thermal Energy Storage using PCM materials
Department: Chemical Engineering
Institute: Beant College of Engineering and Technology Gurdaspur
Date: 26 April 2021

Name of the Faculty: Dr. Sarang P. Gumfekar
Lecture: Microreactor-enabled Process Intensification of Material Syntheses
Department: Chemical Engineering
Institute: Gharda Institute of Technology, Lavel, Maharashtra (Faculty Development Program)
Date: 28 May 2021

Name of the Faculty: Dr. Sarang P. Gumfekar
Lecture: Electrically Conductive Adhesives for Microelectronic Packaging Applications
Department: Chemical Engineering
Institute: Sinhgad College of Engineering, Pune, Maharashtra (Faculty Development Program)
Date: 30 July 2021

Name of the Faculty: Dr. Manigandan Sabapathy
Expert Lecture: Nanomaterials and their characterization
Department: Applied Science Department
Institute: National Institute of Technical Teachers' Training and Research (NITTTR)
Date: 28 September 2021

Name of Faculty: Dr. Asad Sahir
Lecture: "Making the most of your student life at an academic institution" and "Preparing for your career, and developing professionally" (Professional Development Lecture)
Department: Chemical Engineering
Institute: B.S. Abdur Rahman Crescent Institute of Science & Technology (online)
Date: 27 September and 1 October 2021

Name of Faculty: Dr. Asad Sahir
Lecture: International Student Mobility: A Professional Development Educator's view-Opportunities and Challenges (online)
Department: Chemical Engineering
Institute: Connecting Germany and South Asia – The Future of Higher Education and Research Cooperation
Date: 18 October 2021

Name of the Faculty: Dr. Arghya Banerjee
Lecture: Introduction to DFT and catalyst design
Department: Chemical Engineering
Institute: IIT BHU
Date: 24 December 2021

Name of the Faculty: Dr. Sarang P. Gumfekar
Lecture: Electrically Conductive Adhesives for Microelectronic Packaging Applications
Institute: 4th International conference on Physics for Sustainable Development and Technology, Bangladesh
Date: 23 January 2022

Name of Faculty: Dr. Asad Sahir
Lecture: Hiring in the midst of pandemic (Professional Development Lecture)
Department: Chemical Engineering
Institute: In collaboration with Nanyang Technological University (SWE Singapore)
Date: 19 January 2022

Name of Faculty: Dr. Asad Sahir
Lecture: Chemical Engineering at IIT Ropar (Outreach)
Department: Chemical Engineering
Institute: BPCL R&D
Date: 28 March 2022

LECTURES BY VISITING EXPERTS

Sr. No.	Name of the experts with affiliation	Topic	Date
1	Mr. Avijit Kundu (Industry Lecture from BECHTEL India)	Tower and Tower Internal Design	03 April 2021/ Virtual Mode
2	Prof. Y. M. Joshi	Different Shades of Thixotropy	29 April 2021/Virtual Mode
3	Mr. Rustam Kakalia (Industry Lecture from Forbes Marshall)	Steam Generation and Distribution	13 April 2021/ Virtual Mode
4	Ms. Zahra Fatouraei, P. Eng.	From Engineering to Psychology: Challenges and Opportunities	17 April 2021/ Virtual Mode
5	Mr. Pratap Makwana (Industry Lecture from Forbes Marshall)	Instrumentation and Control in Steam Generation and Distribution Systems	20 April 2021/ Virtual Mode
6	Mr. S. Bharathan(HPCL)	Innovation Pathways adopted at HPCL R & D	25 May 2021
7	Prof. S Pushpavanam	Paper-based microfluidics	25 June 2021
8	Prof. Devang Khakhar	Flow and Mixing of Granular Materials	29 July 2021
9	Dr. Vijayanand S. Mohalkar	Solid waste management: Control through the utilization Case study of bioethanol synthesis from invasive weed *Parthenium hysterophorus* and process intensification with ultrasound	27 August 2021
10	Ms Maggie John (Convoy Inc)	Careers in Chemical Engineering and Management	16 September 2021
11	Prof. Sanjay Mahajani	Process Intensification through multifunctional reactors	30 September 2021
12	Naveen Shukla, Shyamangi Mitra, Julie Upper (ExxonMobil)	Journeys in the Energy Value Chain	5 October 2021

13	Ms. Rakhi Oli (Flowserve Corporation)	Global Women Leaders in energy inspiring a change	19 October 2021
14	Prof. Kirti Sahu	Dynamics of an air bubble in non-isothermal systems	27 October 2021
15	Dr. V. Ravikumar (BPCL)	Industrial R&D Seminar	18 November 2021
16	Mr. Haris Kamal (Shell)	Process Automation Control and Optimization – in Oil and Gas Industry	20 November 2021
17	Mr. Manoj Kumar Pipaliya (Coal Tar Distillation and Associated Products at Epsilon Carbon Pvt Ltd.)	Industrial R&D Seminar	22 November 2021
18	Prof. Nishith Verma	Applying Nanomaterials to Environment, Energy and Health	24 November 2021
19	Dr. Muralidhara Anandamurthy , Global Academic Team JMP	JMP in Chemical Industry	1 December 2021
20	Shashank Sharma, Senior Engineer, LLDPE-II (Operations), GAIL (INDIA) Ltd.	A review of flow diagrams	24 January 2022
21	Cecilia Hernández Soler , Julián Martin , Tiago Nicolás Abdenur , Instituto Tecnológico de Buenos Aires	Argentina-India Chemical Engineering Student Meet	19 March 2022
22	Prof. Loleen Berdahl, University of Alberta	A Workshop: Work-Life Balance for Academics	25 March 2022

MAJOR RESEARCH PROJECTS (ONGOING/COMPLETED)

1. Development of Electrically Conductive Adhesives for Microelectronic Packaging and Flexible Film Circuits, June 2021- June 2024, Ministry of Electronics and Information Technology. (Ongoing)

2. Technical support to the Department of Planning, Government of Punjab to establish SDGCC for facilitating implementation of Punjab SDG Vision 2030: Dr. Asad Sahir, United Nations Development Program. (Ongoing):

3. A combined effect of complexation behavior of biopolymers and self-assembly behavior of oppositely charged particles (OCPs) to influence the stabilization of water-in-water (W/W) Pickering emulsion, SRG scheme, Science & Engineering Research Board (SERB), Dec 2019-Dec 2021 (Completed).

4. Development of cost-effective smart manufacturing assisted prosthetic mechanical heartvalve from ultra-high molecular weight polyolefins, Funded by Indian Council of Medical Research, Dr. Chandi Sasmal (Ongoing).

5. Study and design of a cost-effective prosthetic mechanical heart valve, Funded by Science and Research Engineering Board (SERB), Dr. Chandi Sasmal (Ongoing).

DEPARTMENT OF CHEMISTRY

Programs offered	:	M.Sc. and PhD.
No. of Students	:	M.Sc. : 45
	:	PhD : 87
Head of the Department	:	Dr. C.N. Tharamani
No. of faculty members	:	14
No. of staff members	:	5
		Technical Staff : 4
		Administrative Staff : 1
Thrust Area	:	Sustainable Energy, Materials, and Drug design
No. of Publications	:	80

FACULTY MEMBERS

Dr. Anupam Bandyopadhyay
Assistant Professor
PhD (IISER-Pune)
Biomimetic Chemistry, Peptide-Based Diagnostics and Therapeutics for the Treatment of Cancer and Tropical Diseases.

Dr. Avijit Goswami
Associate Professor
PhD (Heidelberg University, Germany)
Organic Synthesis and Polymer Chemistry

Dr. C. M. Nagaraja
Associate Professor
PhD (Indian Institute of Science Bangalore)
Inorganic and Materials Chemistry

Dr. C. N.Tharamani
Associate Professor
PhD (Bangalore University)
Electrochemistry, Fuel Cells, Nanostructured Materials, Electrocatalysis, Metal Finishing

Dr. Debaprasad Mandal
Associate Professor
PhD (Indian Institute of Technology Kanpur)
Organometallics and Polymer

Dr. Indranil Chatterjee
Assistant Professor
PhD (Westfälische Wilhelms-University, Muenster, Germany)
Organic Synthesis and Methodology

Dr. Manoj Kumar Pandey
Assistant Professor
PhD (Indian Institute of Technology Madras)
Magnetic Resonance: Methods and Applications

Dr. Narinder Singh
Associate Professor
PhD (Guru Nanak Dev University Amritsar)
Supramolecular Chemistry and Material Sciences

Dr. Prabal Banerjee
Associate Professor
PhD (National Chemical Laboratory) Pune
Synthetic Organic and Medicinal Chemistry

Dr. Rajendra Srivastava
Associate Professor
PhD (National Chemical Laboratory Pune)
Catalysis and Materials Chemistry

Dr. Soumyajit Das
Assistant Professor
PhD (Indian Institute of Science Education & Research Kolkata)
Organic Chemistry, Functional π-Electron Systems, Biradicals

Dr. Sudipta Kumar Sinha
Assistant Professor
PhD (Indian Institute of Technology Kharagpur)
Theoretical and Computational Biophysical Chemistry

Dr. T. J. Dhilip Kumar
Associate Professor & Head
PhD (Indian Institute of Technology Madras)
Theoretical and Computational Chemistry

Dr. Yashveer Singh
Associate Professor
PhD (University of Allahabad)
Biomaterials and Drug Delivery

FACILITIES

No. of Labs : UG : 2

PG : 3

Research : 21

CONFERENCE ORGANIZATION: Department of chemistry hosted the conference of Indian Chemical Society.

AWARDS AND HONOURS 2021-22 (FACULTY)

- Dr. Debaprasad Mandal conferred with Bronze Medal of Chirantan Rasayan Sanstha (CRS) March 2022
- Dr. Tharamani C. N admitted as Fellow of Royal Society of Chemistry, December 2021, through 'Leaders in the field scheme'
- Dr. Tharamani C. N, Fellow of Indian Chemical Society, December 2021
- Dr. C. M. Nagaraja has received a certificate of appreciation from the Royal Society of Chemistry (RSC) as one of the top 5% most cited authors in RSC journals, 2020.
- Dr. Indranil Chaterjee has received the Thieme Chemistry Journal Award, 2022.
- Dr. Rajendra Srivastava, Fellows of The Indian Chemical Society - May 2021

AWARDS AND HONOURS 2021-22 (STUDENT)

S. No.	Name of presenter	Title of conference/symposium	Organised by	Title of presentation	Award
1.	Mukesh Kumar	HPCL-New Generation Ideation Contest-2021	HPCL	"H_2S" from environment pollutant to new form of energy"	Third prize with a cash prize of Rs. 25000/-
2.	Mukesh Kumar	Advanced Materials for Better Tomorrow: Impacting Energy, Heath, and Environment (AMBT-2021)	IIT BHU, SIRMB	"H_2S" from environment pollutant to new form of energy"	First position
3.	Mukesh Kumar	Recent Trends in Chemical Sciences" –(RTCS- 2021), 58th Annual Convention of Chemists (ACC) (Environment)	Indian Chemical Society	High-performance and environment benign aqueous rechargeable sodium-ion/sulfur batteries	Dr. Upadhyayulu Annapurna and Satyanarayana Memorial Award
4.	Divyani Gupta	Recent Trends in Chemical Sciences" –(RTCS- 2021), 58th Annual Convention of Chemists (ACC) (Chemical engineering and Green technology)	Indian Chemical Society	Electrochemical dinitrogen reduction at low temperature: A green technology for ammonia production	Indian Chemical Society Research excellence award
5.	Akansha Chaturvedi	Recent Trends in Chemical Sciences" –(RTCS- 2021), 58th Annual Convention of Chemists (ACC) (Physical chemistry)	Indian Chemical Society	Non-noble metal based catalyst towards electrochemical nitrogen reduction to ammonia	Association of kineticists award

6.	Sukhjot Kaur	Recent Trends in Chemical Sciences" –(RTCS- 2021), 58th Annual Convention of Chemists (ACC)	Indian Chemical Society	Reducing the impact of CO_2 emissions in environment by electrochemical reduction to value-added methanol	Indian Chemical Society Research excellence award
7.	Sukhjot Kaur	HPCL-New Generation Ideation Contest-2021	HPCL	Trifunctional electrocatalysts for CO_2 reduction, methanol and H_2O oxidation utilized in rechargeable Zn-CO_2 battery	Commendation Prize with a cash prize of Rs. 10000/-
8.	Shivangi	ecent Trends in Chemical Sciences" –(RTCS- 2021), 58th Annual Convention of Chemists (ACC)	Indian Chemical Society	Selective electrochemical production of hydrogen peroxide from oxygen on mesoporous nitrogen containing carbon composite	Professor K.R. Desai Award
9.	Rajesh Das	Main-group Molecules to Materials-II (International Conference)	NISER, BBSR	Construction of Mg-MOF for Efficient Chemical Fixation of CO2 From Direct Air Under Environment-Friendly Mild Conditions	ACS Catalysis award
10.	Rajesh Das	CRICK symposium	IISER Mohali	Construction of 3D Bifunctional Metal-Organic Frameworks (MOFs) for Selective Capture and Utilization of Carbon Dioxide at RT	Best Poster Award
11.	Diksha Sharma	Indian chemical society		Synthesis of dual-responsive self-healing polymer for self-stratified coating applications	Research Excellence Award
12.	Ananya	Biomaterials Online Conclave 2022 (Bone Biomaterials Symposium), 7-15 March 2022	National Center for Nanoscience and Nanotechnology, University of Madras, Chennai, SBAOI, and STERMI	Self-assembled peptide gels for bone tissue regeneration	Best Oral Presentation Award
13	Ganga Singh	ICS 2021 (RTCS-2021 environment)	Indian Chemical Society	Polyoxometalate based electron transfer modulation for artificial photosynthesis	Prof. G. Gopalarao centenary young scientist award

INVITED LECTURES BY FACULTY

Dr. Anupam Bandyopadhyay

- Delivered an invited talk on "9th 2-Week Online Refresher Course in Basic Science (Interdisciplinary)"on 8th Oct 2021 in The Human Resource Development Centre, Jamia Millia Islamia.

- Invited for chairing a session on Invitation in "RTCS-ENV-2021 Symposium of Indian Chemical Society" on 23rd Dec 2021.

Dr. C.N. Tharamani

- Delivered an invited talk at Indo-US SPARC virtual workshop on " India Mission for Green Hydrogen and Go Electric" on March 16-17, 2022 organized by IIT Mandi and Northeastern University, Boston.
- Delivered an invited talk at One Day Conference on "Role of Women Chemists and Technologists for sustainable future" held on 08th March 2022 organized by Dnyanprassarak Mandals College and Research Centre Assagao-Goa, affiliated to Goa university
- Delivered an invited talk at One Day National Webinar on "Recent trends in chemistry of materials" held on 08th March 2022 organized by. Tumkur University, Karnataka
- Delivered an invited talk at 58th Annual Convention of Chemists (ACC) in "Inorganic Chemistry Section", organized by Indian Chemical Society (ICS) held on 21st to 24th 2021.
- Chair of the session at "Recent Trends in Chemical Sciences – Environmental Chemistry" (RTCS-ENV 2021) 58th Annual Convention of Chemists (ACC), organized by Indian Chemical Society (ICS) held on 21st to 24th 2021.
- Delivered an expert talk on the theme "Green Energy Materials and Technology'' at Faculty Development Program organized by Applied Science Department of National Institute of Technical Teachers Training and Research Chandigarh on 01st Dec. 2021.
- Delivered a Keynote speaker talk at international conference on "Applied Chemistry: Exploring Futuristic Applications for Sustainable Development" (An Initiative to Empower Women towards Research), organized by Internal Quality Assurance Cell (IQAC) and Department of Chemistry, Isabella Thoburn College, Lucknow on 26th Oct 2021.
- Delivered an Invite to talk at RSC-IIT Desktop Seminar with JMC-A, organised by Royal Society of Chemistry and IIT Guwahati on 27th Oct 2021.
- Delivered an expert talk on the theme 'Nanosensors and Devices' at Faculty Development Program organized by Applied Science Department of National Institute of Technical Teachers Training and Research Chandigarh on 04th Aug. 2021.
- Delivered an invited talk at international conference (virtual mode) on Advanced Materials for Better Tomorrow: Impacting Energy, Heath, and Environment from 13th - 17th July 2021, Indian Institute of Technology (BHU).
- Delivered an expert talk on the theme "Energy Storage Materials & Device" at Faculty Development Program organized by Applied Science Department of National Institute of Technical Teachers Training and Research Chandigarh on 03rd June 2021.
- Delivered 'V. A. Mathew Endowment Lecture, organized by the Department of Chemistry, Newman College, Thodupuzha, Kerala on 29th May 2021.

Dr. Debaprasad Mandal

- Delivered an invited talk (online mode), Development of high energy density rechargeable Li- and Na-ion batteries on 23rd April 2021 in Chandigarh University (MET-FCS-2021).
- Delivered an invited talk in Recent Advances in Chemical Sciences on 2nd -3rd Aug 2021 in Indian Chemical Society (RACS-2021) organised by Indian Chemical Society to commemorate 160th Birth Anniversary of Acharya P. C. Ray.
- Delivered an invited talk in Symposium on 26th Sep 2021 in IISER Kolkata.
- External expert as Research Advisory Committee (RAC) for the Ph.D. evaluations at Lovely Professional University, Punjab

Dr. Manoj Kumar Pandey

- Attended a meeting "Research collaboration with Dr. Ramesh Ramachandram" on 19th Aug 2021 in IISER Mohali.

Dr. Prabal Banerjee

- Attended "21st NOST OCC Conference" on 25th -26th Nov 2021 in The Leela palace, Chennai

Dr. Rajendra Srivastava

- Delivered an invited Talk in Virtual International conference on "Recent Advances and Innovation in Solar Energy" with a title "Design of Photocatalysts for Chemicals and Fuels Production, Including CO2 and Biomass Conversion" on 2th to 4th Dec 2021 in IIT Madras.

Dr. Soumyajit Das

- Delivered an invited talk on "Toward open-shell polycyclic hydrocarbons" in the Celebration of the 160th Birth Anniversary of Acharya Prafulla Chandra Ray on 1st Aug 2021 in Indian Chemical Society, Kolkata.

Dr. Sudipta Kumar Sinha

- Delivered an invited talk on "Faculty seminar series" on 8th -10th Sep 2021 in Mulana Abul Kalam Azad University of technology, Haringhata, Nadia WB.
- Delivered an invited talk in the Department of Physics, IIEST Shibpur on 12th March 2022

Dr. T.J. Dhilip Kumar

- Acted as an external expert for JRF to SRF conversion of two PhD scholars (Ms. Anu Arora and Mr. Amal Kishore) on 12th Jan 2021 in INST Mohali (Online).
- Acted as a committee member for PDF interview under Prof. Abir De Sarkar-INST Mohali on 2nd Sep 2021 (Online).
- Invited as external examiner for the thesis defense of Ph.D. scholar Mr. Mohan Tiwari on 8th Feb 2022 in IIT Roorkee (Online).
- Invited as external examiner for the thesis defense of Ph.D. scholar Mr. S. Kamalakannan, working under Dr. Prakash, SRM University on 9th March 2022 (Online).
- Acted as an external committee member for JRF to SRF of Mr. Jaibir, PhD scholar under the supervision of Dr. Bino George, IISER Mohali on 11th March 2022 (Online)
- Acted as an external committee member for JRF to SRF of Ms. Akanksha Katoch and Ms. Lovleen Kaur scholars of Dr. Debasish Mandal, on 15th March 2022 of Thapar University (Online).
- Acted as an external expert for RA interview on 29th Mar 2022 in INST Mohali of Prof. Abir De Sarkar (Online).

Dr. Yashveer Singh

- Delivered an invited talk on "Chemistry of nanomaterials" on 6 May 2021 at NITTTR, Chandigarh.
- Delivered an invited talk on "Genetic engineering and synthetic biology- Application of engineering principles to biology" on 6 May 2021 at National Institute of Technical Teachers Training and Research, Chandigarh.
- Attended Board of Studies meeting for the Post Graduation Courses of the Department of Chemistry, Sri Guru Teg Bahadur Khalsa College, Anandpur Sahib on 8 June 2021.

- Delivered an invited talk on "Nanotechnology for diagnostics and therapy" on 22 June 2021 at NITTTR, Chandigarh.
- Delivered an invited talk on "Nanotechnology to treat bacterial infections" on 22 June 2021 at NITTTR, Chandigarh.
- Delivered an invited talk on “Nanotechnology for diagnostics and therapy” on 28 July 2021 at NITTTR, Chandigarh.
- Delivered an invited talk on “Nanotechnology to treat bacterial infections” on 28 July 2021 in NITTTR, Chandigarh.
- Delivered an invited talk on “Polymeric hydrogels and self-assembled peptide gels for antibacterial and drug delivery applications“ at APA Bioforum International e-Conference on Polymeric Biomaterials and Bioengineering” on 27 Aug 2021 organized by Asian Polymer Association, New Delhi.
- Acted as a co-chair of session on “Tissue Engineering and Bioreceptive Systems' ' at APA Bioforum International e-Conference on Polymeric Biomaterials and Bioengineering, Asian Polymer Society, India, 27-28 August 2021.
- Delivered an invited talk on “Hydrogels for the drug delivery applications“ at 12th Refresher Course in Chemistry" on 14 Sep 2021 organized by UGC-HRDC, and Department of Chemistry, Faculty of Science, DDU Gorakhpur University, Gorakhpur.
- Delivered an invited talk on “The ozone depletion and the Montreal protocol- where do we go from here? Webinar on the Montreal Protocol- Keeping Us, Our Food and Vaccines Cool (World Ozone Day),” on 16 Sep 2021 at Punjab State Council for Science and Technology and Punjab Pollution Control Board, Chandigarh.
- Delivered an invited talk “Hydrogels/gels for the drug delivery and antibacterial applications” at the “1st Annual Meeting of School of Chemical Biology” on 24 Sep 2021, Institute of Nanoscience and Nanotechnology, Mohali.
- Served as an Institute Representative for JEE (Advance) on 2 -3 Oct 2021 in Amritsar.
- Delivered an invited talk on “Design, development, and modeling for sustainable living, Children's Science Congress - 2021”, State Level Orientation Webinar on 6 Oct 2021 at Punjab State Council for Science and Technology, Chandigarh.
- Served as an external expert for PhD course work- Paper IV presentation cum Progress report-I on 10 Dec 2021 at Department of Microbiology, Tripura Central University, Agartala.
- Served as an expert for the PMRF Progress Reviewing Committee, Biomedical Engineering, 18 December 2021.
- Delivered an invited talk on “Chemistry for sustainable development”, 25 Punjab Science Congress on future endeavors of science and technology for sustainable growth, Sri Guru Teg Bahadur Khalsa College, Sri Anandpur Sahib, 8 February 2022.
- Delivered an invited talk on “Polymeric hydrogels for drug delivery and antibacterial applications”, Faculty Development Program on Polymer Matrix Based Nanostructures for Targeted Drug Delivery Applications (AICTE-ATAL), Central Institute of Petrochemicals Engineering and Technology (CIPET), Centre for Skilling and Technical Support (CSTS), Guwahati, 9 February 2022.
- Delivered an invited talk on “Nanomaterials to treat biofilms in chronic wounds”, at International e-Conference on Nanomaterials and Nanoengineering (APA Nanoforum-2022), Asian Polymer Society, New Delhi (along with CSIR- NPL, New Delhi), 25 February 2022.
- Served as a co-chair of session on “Herbal Nanotherapeutic Microsymposium”, International e-Conference on Nanomaterials and Nanoengineering (APA Nanoforum-2022), Asian Polymer Society, New Delhi (along with CSIR- NPL, New Delhi), 24-26 February 2022.

- Served as an external expert for the RA interview on 7 March 2022 at INST, Mohali.
- Delivered an invited talk on "Polymeric hydrogels, self-assembled peptide gels, and nanomaterials for drug delivery and antibacterial applications", at Biomaterials Online Conclave 2022 (Bio-nanomedicine Symposium), National Center for Nanoscience and Nanotechnology, University of Madras, Chennai (SBAOI, STERMI, and NIGIS), 10 March 2022.
- Delivered an invited talk on "Chemistry of nanomaterials", Online Workshop on Nanomaterials and their Green Applications (Faculty Development Program), Department of Applied Science, National Institute of Technical Teachers Training and Research, Chandigarh, 28 March 2022.
- Delivered an invited talk on "Genetic engineering and synthetic biology: application of engineering principles to biology", Online Workshop on Nanomaterials and their Green Applications (Faculty Development Program), Department of Applied Science, National Institute of Technical Teachers Training and Research, Chandigarh, 29 March 2022.
- Served as a reviewer for Kerala State Council for Science, Technology & Environment (KSCSTE), March 2022.

LECTURES BY VISITING EXPERTS

Sr.No.	Name of the experts with affiliation	Topic	Date
1	Dr. Brijith Thomas, Postdoc Research Associate at Leskes group, Department of Materials and Interfaces, Weizmann Institute of Science, Israel.	Expanding the dynamic nuclear polarization NMR: From order to disorder	17th Nov 2021 (Virtual Mode)
2	Prof. Swadhin K Mandal, Department of Chemical Sciences, IISER Kolkata	CO2 activation to catalytic reduction: a metal-free approach	24th Nov 2021 (Virtual Mode)

VISITS ABROAD BY THE STUDENTS

Sr. No.	Name of the Student	Country	Detail of visit with date
1.	Neha Yadav	Atlanta, GA, USA	Attended conference on virtual mode "ACS Fall 2021, Resilience of chemistry" 22-26 August 2021
2.	Pratibha	Gothenburg, Sweden, Europe	Attended symposium on virtual mode "21st tetrahedron", Organized by Astrazeneca, 21-24 June 2021
3.	Moumita Halder	United States of America	ACS Spring 2021 (Virtual), Organized by the American Chemical Society, 5-31 April 2021

MAJOR RESEARCH PROJECTS (ONGOING/COMPLETED)

Sr. No.	Funding Agency	Name of Faculty Member	Title of Project	Total Sanctioned Amount (in lacs)	Project Status
1	INDO-MEXICO-DST	Dr. Narinder Singh	Photo degradation of azo dye contaminants by new hybrid ionic liquid decorated	0.35	Completed

2	SERB-DST	Dr. Richa Rani (N-PDF) under the mentorship of Dr. Narinder Singh	Fabrication of imidazole based nanoaggregates using different surfactants	0.14	Completed
3	DST sponsored project	Dr. Ravi Mohan Prasad (PI) and Dr. Manoj Kumar Pandey (Co-PI)	Thermoresistant Polymer-Derived Microporous Ceramic Membranes for Separation of Hydrogen and Carbon Monoxide/Carbon Dioxide in Hydrogen Production	70.27	Running
4	Industrial Consultancy	Dr. Narinder Singh	Process Development and Environmental Analysis within the Premises of Chemical Industry	0.22	Completed
5	DST	Department of Chemistry	DST (FIST Program)	1.65	Running
6	SERB	Dr. C M Nagaraja	Development of Porous Metal-Organic Frameworks (MOFs) for Catalytic Conversion of Carbon dioxide to Fine chemicals	0.53	Running
7	SERB	Dr.Gurpreet Kaur, SGGS College, Sggs College, Mentor Dr. Narinder Singh	Synthesis and Characterization of Functional Carbon Quantum Dots as Chemosensors for Drug Molecules	0.18	Completed
8	SERB	Dr. Avijit Goswami	Synthesis of 2-Azido Pyridines, Triazole Substituted Pyridines and Cyano Substituted Triazoles via Transition Metal Catalyzed Chemos elective [2+2+21 Cycloaddition Reactions of Cyanogen Azide with Diynes	0.45	Running
9	SERB	Dr. Sudipta Kumar Sinha	Controlled Molecular Transportation Through Engineered Nanopores: Design and Application in Biomedical Sciences	0.27	Running
10	SERB	Dr. Indranil Chatterjee	Photo-Organocatalytic C-F Bond Activation; Asymmetric Synthesis of Difluorobenzylated Compounds	0.25	Running
11	SERB-DST	Dr. Tharamani C Nagaiah	Advanced materials towards electrocatalytic oxygen evolution reaction for sustainable energy conversion	0.58	Running

12	CSIR	Dr. Prabal Banerjee	Lewis Acid Catalyzed (3+3) Annulation of Donar - Acceptor Cyclopropane and Indonyl Alcohol : One Step Synthesis of Substituted Carbazoles	0.13	Running
13	CSIR	Dr. Rajendra Srivastava	Synthesis and Catalytic Applications of Magnetic and Non-Magnetic Spinels Based Multi-Functional Catalysts	0.06	Running
14	CSIR	Dr. Avijit Goswami	Synthesis of 2-heteroatom sudstituted pyridines via transition metal catalyzed cycloaddition reactions: An approach to biologically active molecules	0.14	Running
15	Industrial Consultancy	Dr. Asad H. Sahir and Dr N. Singh (CI-PI) Prof. Harpreet Singh Co-PI	Proposal for conducting a Scientific study towards measurement/quantification of production of extra neutral Alcohol (ENA)	0.30	Completed
16	SERB-SRG	Dr. Anupam Bandyopadhyay	Modulating peptide receptor engineering strategy for cancer biomarker detection	0.24	Running
17	SERB-SRG	Dr. Soumyajit Das	Design and Syntheses of Diradicaloid Cyclohepta [def] fluorene Derivatives: Closed-Shell or Open-Shell?	0.28	Running
18	Punjab State Council for Science & Technology (PSCST)	Dr. Narinder Singh	Green Skill Development Program of Ministry of Environment, Forest & Climate Changes, Government of India	0.30	Completed
19	Industrial Consultancy	Prof. S.K. Das, Prof. Harpreet Singh, Dr. Narinder Singh, S.S. Padheee,Dr. Puneet Goyal, Dr. Asad H. Sahir	Infrastructure and cirriculum Development for Shri Guru Gobind Singh skill Institute, Shri Chamkaur Sahib	0.56	Completed
20	Industrial Consultancy	Dr. Rajendra Sricastava	Proposal for the Evaluation of Desiccant Properties of the Materials	0.06	Running
21	Industrial Consultancy	Dr. Narinder Singh and Dr. Suman Kumar (CI) and Prof. J.S. Kanwar, IET Bhaddal, (Co-CI)	Automating the Counting of Trays USING IoT and Sensors	0.03	Completed

22	SERB-CRG	Dr. Prabal Banerjee	Asymmetric organocatalytic activation of cyclopropane carbaldehydes towards the construction of enantioenriched annulated products	0.50	Running
23	Industrial Consultancy	Dr. Narinder Singh	Design and Synthesis of Benzimidazolium and Pyridinium Based Membranes	0.04	Completed
24	Industrial Consultancy	Prof. C. R. Suri and Dr. Narinder Singh (CI), Prof. Harpreet Singh (Co-CI)	Synthesis of Organic Cation Based Copper Nanoclusters: Antigen-Antibody Based Sensor System	0.07	Completed
25	Industrial Consultancy	Dr. Narinder Singh	Development of Coatings to Resist the Microbial Attack on the Surface of Given Samples	0.03	Completed
26	Industrial Consultancy	Prof. C. R. Suri and Dr. Narinder Singh (CI), Prof. Harpreet Singh (Co-CI)	Conjugate and Coating Development for the Fabrication of Sensor Kit and Related Applications	0.04	Completed
27	DST-AGRI	Dr. Narinder Singh	Fabrication of Handheld Device for On-site Application: Pesticide Monitoring in Environment and Agriculture Products	0.58	Running
28	BRNS	Dr. Prabal Banerjee and Dr. Indranil Banerjee (IISER Mohali)	Development of a urea derivative compound (D27) as a potential drug against SARS-CoV-2	0.33	Running
29	DST-SEED	Dr. Narinder Singh	Fabrication and training for contamination free food packing	0.29	Running
30	SERB-CRG	Dr. Rajendra Srivastava	Unique mild processes based on catalytic transfer hydrogenolysis/hydrogenation and photocatalysis for lignin valorization: Eliminating the use of high temperatures and non-renewable H2	0.47	Running
31	Industrial Consultancy	Dr. Asit K Chakraborti	Expert Opinion on an Indian Patent Application	0.04	Running
32	Industrial Consultancy	Dr. Rajendra Srivastava	Synthesis of Nanocrystalline Zeolites having Inter/Intra-crystalline Mesoporosity of Different Framework Structure	0.71	Running

33	SERB-CRG	Dr. T J Dhilip Kumar	Ultracold Molecules and Controlled Chemistry by Machine Learning	0.28	Running
34	SERB	Dr. Nagaraj Anbu under the mentorship of Dr. C.M Nagaraja	Development of porous metal-organic frameworks as heterogeneous solid catalysts for chemical fixation of CO_2 into high-value chemicals	0.20	Running
35	SERB-MTR	Dr. Sudipta Kumar Sinha	On the General Phenomenon of Dynamic Disorder of Complex Enzymatic Network?	0.07	Running
36	DST-HPC Applications, National Supercomputing Mission (NSM) NSM R&D-HPC	Dr. T J Dhilip Kumar	Modeling of Atmospheric Reactions by Quantum Dynamics on the Coupled Potential Energy Surfaces	0.162	Running
37	CSIR	Dr. Indranil Chatterjee	Divergent Synthesis of Fused Polycycle and Spirocyclic Framework by Merging Photoredox and Organocatalysis: A Rapid Technique to Obtain Molecular Complexity	0.135	Running
38	CSIR	Dr. Debaprasad Mandal	Design of Rapid and Tough High Performance Self-Healing Polymers	0.155	Running
39	CSIR	Dr. T J Dhilip Kumar	Ab initio study of metal anchored graphyne and graphdiyne framework materials for energy storage	0.05	Running
40	DBT	Dr. Yashveer Singh (PI) and Dr. Durba Pal (Co-PI)	Antisense oligonucleotide-loaded, 3D printed, double-layered, and multifunctional wound healing matrix to target angiogenesis in chronic diabetic wounds	0.38	Running
41	Industrial Consultancy	Dr. Anupam Bandyopadhyay	Synthesis of Exenatide and Technology Transfer	0.14	Running
42	SERB	Dr. Vijay Kant, Lovely Professional University, Jalandhar, Mentor Prof. Narinder Singh	Teachers Associateship For Research Excellence (TARE)	0.10	Running

43	SERB-TARE	Dr. Mohit Kapoor, Chitkara University, Chandigarh Mentor Dr. Prabal Banerjee	Development and Synthesis of Antiviral Toolkit Using Nickel Catalyzed Sustainable C-H Functionalization		Running
44	Mission Tandrust Punjab	Dr. Narinder Singh (PI) and Dr. Gagandeep Singh (Young Scientist, IIT Ropar (Co-PI)	Water Analysis and Purification of Saline Ground Water of South-West Areas of Punjab State	0.18	Running
45	SERB-RJF Ramanujan Fellowship	Dr. Monika Gupta	Molecular Engineering of Azobenzene-derived Liquid Crystalline Systems for Robust and Tunable Solid-State Solar Thermal Fuels	1.19	Running
46	SERB-NPDF	Dr. Revathi A.	Development of multifunctional coating on Ti-based alloy to promote osseointegration and treat implant-related infections	0.20	Running
47	Industrial Consultancy	Dr. Narinder Singh	Guidelines, Protocols & Technical Know-How for the prepration of Formulations from given materials	0.09	Completed
48	Industrial Consultancy	Dr. Anupam Bandyopadhyay	Synthesis of Ganirelix impurity	0.048	Running
49	Industrial Consultancy	Dr. Anupam Bandyopadhyay	Synthesis of Lanreotide impurity	0.29	Running
50	SERB - VRITIKA	Dr. T. J. Dhilip Kumar	Ultracold Chemistry of CN Dimer Collision with He	0.005	

DEPARTMENT OF CIVIL ENGINEERING

Programs offered	:	B.Tech., M.Tech., PhD		
No. of Students	:	B.Tech.	:	158
	:	M. Tech.	:	27
		PhD	:	56
Head of the Department	:	Dr. Naveen James		
No. of faculty members	:	15		
No. of staff members	:	04		
		Technical Staff	:	02
		Administrative Staff	:	02
Thrust Area	:	Structures, Geotechnical, Water Resources, Geomatics, Transportation, Environment		
No. of Publications	:	24		

FACULTY MEMBERS

Dr. Aditya Singh Rajput
Assistant professor
PhD, IIT Roorkee
Study the effects of corrosion on the structural response of RC elements
Study the structural performance under fire and elevated temperatures

Dr. Ickkshaanshu Sonker
Assistant Professor
PhD IIT Roorkee
Groundwater modeling, Irrigation, Water resources engineering, Open channel flow, Hydrology.

Dr. Indramani Dhada
Assistant Professor
PhD, IIT Kanpur
Environmental Engineering Indoor and ambient air quality assessment, Source apportionment studies and modeling, Health Risk Assessment of pollutants Fate processes of organic pollutants, Solid and Hazardous waste Management, Agricultural impact on climate change Environmental Impact Assessment, Water Treatment Pollution Control Technologies

Dr. L.Vijay Anand
Assistant Professor
PhD, Auburn University, USA
Environmental Engineering, Geochemical Processes Occurring at Mineral-Water Interface, Contaminant Transport Processes: Experiments and Modeling, Eco-friendly Technologies for Contaminant Remediation, Actinide Chemistry

Dr. Mitesh Surana
Assistant Professor
PhD, IIT Roorkee
Risk-based Seismic Design of Buildings, Seismic Response Evaluation of Structures, Nonlinear Modelling and Analysis of RC Buildings, Seismic Design of Acceleration Sensitive Non-structural Components, Building Typologies and Seismic Vulnerability of Indian Housing Stock, and Seismic Risk in Hilly Regions.

Dr. Muthulingam.S
Assistant Professor
PhD, IIT Madras
Advanced design of steel and concrete structures, Reliability and risk assessment of new and existing infrastructure systems.

Dr. Naveen James
Assistant Professor
PhD, Indian Institute of Science, Bangalore
Dynamic behaviour of soils, Liquefaction, Seismic Hazard Assessment & Microzonation, Site characterization, Site response studies, Landslide Hazard Assessment, GIS applications in hazard studies

Dr. Putul Haldar
Assistant Professor
PhD, IIT Roorkee
Seismic Vulnerability and Risk Evaluation of Structures, Seismic Evaluation and Retrofitting of Structures, Performance-Based Design of Structures Nonlinear Modeling and Analysis of Structures, Structural Engineering and Dynamics

Dr. Raheena M
Assistant Professor
PhD, IIT Madras
Soil characterization, Characterization of expansive clays, Ground Improvement, Unsaturated soil mechanics

Dr. Rahul T.M
Assistant Professor
PhD, Indian Institute of Science (IISc) Bangalore
Sustainable Transportation system planning, Travel behavior analysis, Non Motorized Transport planning, Econometric Modelling

Dr. Ratan Sarmah
Assistant Professor
PhD, Indian Institute of Technology Guwahati
Subsurface Hydrology, Mathematical Modeling of Subsurface Flow

Dr. Reet Kamal Tiwari
Assistant Professor
PhD, IIT Roorkee
Geospatial technology applications in the field of Snow, Ice and Glaciers, Climate change, Natural resources management, Environmental monitoring and planetary sciences

Dr. Resmi Sebastian
Assistant Professor
PhD, Indian Institute of Science, Bangalore
Wave propagation in rocks – under low strain loading and high strain loading, Controlled ground vibrations, Stability analysis and design of underground structures, Ground vibration isolation of structures, Earthquake geotechnical engineering

Dr. Sagar Rohidas Chavan
Assistant Professor
PhD, Indian Institute of Science, Bangalore
Rainfall-runoff modeling, Regionalization of hydrological extremes, Regional frequency analysis of extreme rainfall and floods, Prediction in ungauged basins, Multi-fractal analysis of rainfall and flood, Climate change impacts on hydrological processes, Dam safety analysis and inundation studies

Dr. Sayantan Ganguly
Assistant Professor
PhD, Indian Institute of Science, Bangalore
Hydrogeology, Flow and transport through porous media, Geothermal Energy, Thermal energy storage in subsurface

FACILITIES

No. of Labs	:	UG	:	08
		PG	:	01
		Research	:	02

New Labs:

Name of the lab :

- Structural Analysis Lab
- Concrete Technology and Testing Lab
- Geotechnical Engineering Lab
- Geomatics lab
- Hydraulics Engineering Lab
- Computer Added Design Lab
- Transportation Engineering Lab
- Environment Engineering Lab
- Soil Water Plant Lab
- Computer Lab(PG)

Name of the Equipments : (Research Labs)

S.No	Name of Equipment
1	Weighing type lysimeter
2	Tilting flume 15 meter
3	Automatic weather station
4	Total station
5	Gnss receiver r10 dgps
6	3d topographic laser scanner
7	UAV
8	Trimble handheld tdc 100
9	Ion chromatography
10	Rainfall & run off simulator
11	Water hammer & surge tank
12	Remotely operated equipped eco-sounder boat
13	Inclined drainage & seepage tank
14	Pressure plate apparatus
15	Guleph permeameter
16	Automatic servo hydraulic controlled flextural testing machine
17	Automatic servo hydraulic compression testing machine
18	Ndt equipment
19	Salt spray chamber
20	Accelerated corrosion setup
21	Hydraulic cyclic triaxial apparatus
22	Resonant column apparatus
23	Plate load test apparatus
24	Split shear plates
25	Orp meter
26	Spirometer

27	Black carbon detector
28	Portable voc monitor
29	Table top centrifuge
30	Automatic mechanical compactor
31	Consolidation apparatus (heavy)
32	Constant head permeability apparatus
33	Large scale direct shear
34	Resistivity meter
35	Water level indicator apparatus - piezometer
36	Soil salinity set up with four lysimeter
37	Digital ctm (2000 kn cap.)
38	Ultrasonic pulse velocity
39	Single beam uv-v spectrophotometer
40	Auto titrator for cement analysis
41	Calorimeter for cement analysis
42	Accelerated corrosion setup
43	Corrosion analysis system (purchase under process)
44	Elevated temperature test setup for rc specimens
45	Accelerated carbonation chamber (purchase under process)
46	Microscopic analysis setup (purchase under process)
47	Closed chamber concrete curing and monitoring setup (purchase under process)
48	Hydraulic jack and load cell (purchase under process)
49	Rebar bending machine (purchase under process)
50	Profile grinder (purchase under process)
51	Hydraulic actuator (purchase under process)

AWARDS AND HONOURS 2020-21 (FACULTY)

Dr. Sayantan Ganguly

1. Guest Associate Editor. Special issue in the journal Frontiers in Water, Section: Water Resources Management.
2. Fellowship from International Geothermal Association (IGA) to attend the "World Geothermal Congress 2020" in Reykjavik, Iceland

Dr. Putul Haldar

1. Conference Review Committee (CRC) Member for 3rd International Virtual Conference on Sustainable Construction Technologies & Advancements in Civil Engineering, ScTACE 2022 on 13th, 14th & 15th October 2022 organized by Department of Civil Engineering of Shri Vishnu Engineering College for Women.
2. Member of the Technical Program Committee/Advisory Board for international Conference on "Recent Trends in Science and Technology (ICRTST-2K22)" organized by Pailan College of Management and Technology, Kolkata in association with the Springer Publication House in September 2022.

Dr. Rahul T.M.

1. Executive Board Member (2021-26). Transportation Research Group of India.
2. Session Chair: Urban Mobility India-Research Symposium (UMI-RS), Organized by Ministry of Housing and Urban Affairs, Government of India & Institute of Urban Transport (IUT), 2021.

AWARDS AND HONOURS 2020-21(STUDENT)

- Best Presentation Award for **Ms. Shreya Ganguly** at the Hydro International Conference 2021 hosted by SVNIT Surat (Online)

INVITED LECTURES BY FACULTY

Sr. No	Name of the Faculty	Lecture	Department	Institute	Date
1.	Dr. Putul Haldar	Modeling and Seismic Analysis of Reinforced Concrete Buildings	Civil Engineering	NIT, Warangal	21st March – 31st March 2022
2.	Dr. Putul Haldar	Identification of seismic failure modes of structures		National Institute of Technical Teachers' Training and Research (NITTTR), Chandigarh	07-11 March 2022
3.	Dr. Putul Haldar	Analytical Assessment of RC Structures prior Seismic Retrofitting		National Institute of Technical Teachers' Training and Research (NITTTR), Chandigarh	07-11 February 2022
4.	Dr. Putul Haldar	Earthquake-Explanation of Concepts and Remedies	Civil Engineering	Chandigarh Group of Colleges, Jhanjeri, Mohali.	02nd Dec. 2021
5.	Dr. Putul Haldar	Concept of Earthquake Resistant Design of Buildings		University Institute of Technology, Rajiv Gandhi Proudyogiki Vishwavidyalaya	29th November – 3rd December 2021
6.	Dr. Mitesh Surana	Codal Provisions for Earthquake Resistant Design of Structures	Civil and Infrastructure Engineering	Adani Institute of Infrastructure Engineering, Ahmedabad	
7.	Dr. Mitesh Surana	Promoting Traditional Building Construction: A Sustainable Way of Earthquake Risk Reduction	Civil Engineering	Assam Down Town University, Guwahati	
8.	Dr. Resmi Sebastian	DEM in Rock Mechanics (Expert lecture in the Faculty Development Programme)	Civil Engineering	National Institute of Technology Calicut	
9.	Dr. Resmi Sebastian	Seismic wave propagation in jointed rocks (Keynote lecture in International E-Conference on 'Novel Innovations and Sustainable Development in Civil Engineering - (NISDCE'22)'	Civil Engineering	Vel Tech Rangarajan Dr.Sagunthala R&D Institute of Science and Technology, Chennai.	
10.	Dr. Muthulingam. S	Numerical Modeling of Blast Waves	Civil Engineering	Gayatri Vidya Parishad College of Engineering	
11.	Dr. Indramani Dhada	Air Pollutants Mitigation Technologies	Civil Engineering	NITTTR, Chandigarh	7th April 2022

LECTURES BY VISITING EXPERTS

Sr. No.	Name of the experts with affiliation	Topic	Date
1.	Prof. GL Sivakumar Babu	Towards Best practices in Geotechnical Engineering	22-June -2021
2.	Prof. Rajib Kumar Bhattachariya	Presentation on optimization methods for Engineering Planning & Design	9-June-2021
3.	Prof. Mohan Kumar	Smart Water Systems - Enabling Sustainable Water Supply	19- August-2021

MAJOR RESEARCH PROJECTS (ONGOING/COMPLETED)

Sr. No.	Name of the Research Project	Funding Agency	Duration	Remark
1.	External Co-PI of "Earthquake Hazard and Risk Reduction on the Indian Subcontinent" with Institutional Cooperation between India and Norway(Dr. Putul Haldar)	NORSAR, Norway	2012-2015	Completed
2.	PI of "Seismic Performance of Shear Walled Reinforced Concrete Frame Structure on Rocking Foundation" (Dr. Putul Haldar)	*ISIRD* grant of IIT Ropar	2016-2019	Completed
3.	PI from IIT Ropar of "Next Generation Earthquake Loss Estimation Tool for Hilly Regions" in collaboration with IIT Roorkee (Dr. Yogendra Singh, Principal Investigator, Dr. Ravi Shankar Jakka Co-PI) (Dr. Putul Haldar)	DST IMPRINT II AND *Risk Management Solutions India*(RMSI)	2019-2022	Completed
4.	Co-PI of "Micro Green Roofing" in collaboration with IIT Kharagpur (Dr. Prabir Sarkar, Principal Investigator, IIT Ropar and Dr. Chirodeep Bakli Co-PI, IIT Kharagpur) (Dr. Putul Haldar)	DST IMPRINT II and ELT India	2019-2022	On-going
5.	Co-PI of "Compendium of Traditional Earthquake Resilient Construction for Knowledge Sharing and Disaster Risk Reduction: Promotion of Traditional Construction Practices" in collaboration with Y. Singh (IIT Roorkee), Dr. Jayanta Pathak (Assam Engineering College Guwahati) and Dr. Mitesh Surana (Principal Investigator, IIT Ropar) (Dr. Putul Haldar)	National Disaster Management Authority (NDMA), New Delhi	2019-2022	On-going
6.	Team member of " Guidelines for Performance-Based Seismic Design of Reinforced-Concrete Buildings" in collaboration with Y. Singh a nd P. C. Aswin (IIT Roorkee) (Dr. Putul Haldar)	National Disaster Management Authority and Bureau of Indian Standards	2020	On-going

7.	Socio-economic Development and Empowerment of Underprivileged Communities in Punjab (PI: Putul Haldar, Co-PI: Sagar Rohidas Chavan and Mitesh Surana, IIT Ropar)	SEED Programme or Scheme: STI Hub for SC Community	(Submitted: 20/09/2019)	Under Processing as informed by DST on 2022
8.	"Seismic Risk Assessment Tool for Punjab Considering Detailed Soil Amplification Model" [PROJ-05103] (PI: Putul Haldar, Co-PI: Shrabony Adhikary, VNIT Nagpur)	MoES	(Submitted: 26/07/2021)	Under Processing
9.	"Waste to Asset: Utilization of Rubber Waste in Brick for Low-Cost Housing" (PI: Putul Haldar, Co-PI: Indramani Dhada) [email: sso.decc@punjab.gov.in, director.decc@punjab.gov.in]	Mission Tandrust Punjab	(Submitted: 16/02/2022)	Under Processing
10.	"Integrated Green Indoor Air Purifier" (PI: Indramani Dhada, Co-PI: Putul Haldar)	Mission Tandrust Punjab	(Submitted: 17/02/2022)	Under Processing
11.	Compendium of Traditional Earthquake Resilient Construction Practices(Dr. Mitesh Surana)	National Disaster Management Agency, New Delhi	30 Months	On-going
12.	Propagation and attenuation of shear waves inducing high strains in jointed rocks (Dr. Resmi Sebastian)	Science and Engineering Research Board (SERB)	2019-2022	On-going
13.	Utilization of rice husk ash, bagasse ash and bottom ash as backfill materials for highway embankment (Dr. Resmi Sebastian)	National Highway Authority of India (NHAI)	2020 - 2023	On-going
14.	Slope Monitoring and Landslide Hazard Quantification for Hilly Roads (Dr. Naveen James and Dr. Reet Kamal Tiwari)	National Highway Authority of India (NHAI)	2020 - 2023	On-going
15.	Development Of Low-Cost Artificial Intelligence System for Early Detection Of Landslide (Dr. Naveen James and Dr. Reet Kamal Tiwari)	DST-NRDMS (now NGP)	2020 - 2023	On-going
16.	Sustainable Agricultural Planning for Small Farm Holders in Bist Doab Region of Punjab(Dr. Ickkshaanshu Sonkar)	J-WAFS	2 years	On-going
17.	Commute Travel Choices in India – Gender Perspective Solutions(PI: Dr. Rahul T.M)	Science and Engineering Research Board, Government of India	2017-2020	Completed
18.	Analysis of Evacuation Options considering Citizen Mobility Patterns and Disaster Vulnerability in a Himalayan Region Transportation Network (PI: Dr. Rahul T.M)	National Mission on Himalayan Studies	2019-2022	On-going
19.	Impact of COVID-19 pandemic on Travel behavior of people (PI: Dr. Rahul T.M)	Indian Council of Social Science Research (ICSSR)	2021-21	On-going
20.	A feasibility study on aquifer storage of water by artificial recharge in and around Punjab region, India	Science and Engineering Research Board (SERB), Department of Science and Technology (DST), Govt. of India	2 years 6 months	On-going

CONSULTANCY PROJECTS:

Sr. No	Name of the Faculty	Name of the Project as Principal Investigator	Funding Agency
1	Dr. Putul Haldar	"Vetting of Structural Drawings of ESR Standard Warehouse" (27/09/21 – 04/11/21)	Group Surya GS PEB & CIVIL WORKS PVT LTD
2	Dr. Putul Haldar	"Vetting of Hospital Building at Moga, Punjab" (27/09/21 – 23/03/22)	Ckosmic Surgical Center, Sood Hospital
3	Dr. Putul Haldar	Question paper for level of draughtsman cum tracer at the pay scale of Pay Matrix Level-8 in Rajasthan (01/11/2021-03/11/2021)	MNIT Jaipur
4	Dr. Putul Haldar	Proof Checking of Structural Drawings of "Business Square B-11,124/P Shahpur Road, Ludhiana (Punjab) for R K S Builders	Buildtech Engineers
5	Dr. Putul Haldar	Proof Checking of Structural Drawings of "Prop. Plan of Miniplex to Be Built at Green City Square Near AIIMS Hospital, Dabwali Road, Bathinda" (ongoing)	M/S Padma Developers
6	Dr. Putul Haldar	Proof Checking of Structural Drawings of "Commercial Building to be Built on Property M.C. NO.: B-XX-4066/1251/3-B (UID NO.: B020-00338) cum Plot No.:16-H, 17-H Situated at Sarabha Nagar, Taraf Sunet (Ludhiana)" (ongoing	Malhotra & Associates
7	Dr. Putul Haldar	"Vetting of Revised Structural Drawings of ESR Standard Warehouse" (20/01/22 – 24/01/22)	Group Surya, GS PEB & Civil Works Pvt Ltd
8	Dr. Putul Haldar	Proof Checking of Structural Drawings of "Commercial Site situated at Khasra No. 2506/1MIN(0-2) (0-8),MCB NO.Z2-08258, Z2-08260, Main Power House Road Bathinda" (25/02/22 – 15/03/22)	Lifetrust healthcare pvt. Ltd. Talwandi Sabo

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Programs offered	:	B.Tech., M.Tech., PhD		
No. of Students	:	B.Tech.	:	83
	:	M.Tech.	:	20
	:	PhD	:	29
Head of the Department	:	Dr. Nitin Auluck		
No. of faculty members	:	17		
No. of staff members	:	PostDoc Fellow	:	01
		Technical Staff	:	05
		Administrative Staff	:	02

Thrust Area :

- Parallel and distributed computing
- Approximation algorithms
- Image processing and pattern recognition
- Computational geometry
- Computer Vision
- Cloud computing and software architecture
- Performance modeling
- Applied Deep Learning
- Machine learning and Artificial intelligence
- Network science
- Sensor networks
- Computer Architecture
- Social Computing
- Collective Intelligence
- Spatial Computing
- Game Theory and Mechanism Design
- Wireless Networking and Internet of Things
- Human Centered Computing

No. of Publications : 68

FACULTY MEMBERS

Dr. Abhinav Dhall
PhD, Australian National University
Computer Vision, Affective Computing and Human Computer Interaction

Dr. Anil Shukla
PhD, The Institute of Mathematical Sciences, Chennai
Theoretical Computer Science, Computational Complexity, Proof Complexity

Dr. Apurva Mudgal
PhD, Georgia Tech, USA
Theoretical Computer Science, Approximation Algorithms, Theoretical Robotics, Computational Geometry

Dr. Balwinder Sodhi
PhD, IIT Kanpur, India
Research Interests : Cloud computing, Software and its Engineering, Applied Computing

Dr. Deepti R. Bathula
PhD, Yale University, USA
Medical Image Processing and Analysis, Pattern Recognition, Machine Learning and Computer Vision

Dr. Mukesh Saini
PhD, National University of Singapore
Multimedia Systems, Visual Analytics, Surveillance, Privacy

Dr. Neeraj Goel
PhD, IIT Delhi, India
Processor architecture, SoC design and modeling, Low power design, behavior synthesis, Reconfigurable computing and FPGAs, Retargatable code generation and compiler optimizations

Dr. Nitin Auluck
Head of the Department
PhD, University of Cincinnati, USA
Scheduling and Resource Allocation in Parallel and Distributed Systems, Real-Time Systems

Dr. Puneet Goyal
PhD, Purdue University , USA
Image Processing/Computer Vision, Deep Learning, Machine Learning, Security Analytics and Assistive Technologies

Dr. Shashi Shekhar Jha
PhD, IIT Guwahati, India
Artificial Intelligence, Machine Learning, Multiagent Systems, Robotics, Bioinspired Algorithms

Dr. Somitra Kumar Sanadhya
Head of Department
PhD, Indian Statistical Institute, Kolkata
Cryptology (Primary interest),Machine learning, Bioinformatics (Secondary interest)

Dr. Shirshendu Das
PhD, IIT Guwahati, India
Computer Architecture, Network on Chip

Dr. Shweta Jain
PhD:Indian Institute of Science, Bangalore
Game Theory, Mechanism Design, Machine Learning, Reinforcement Learning

Dr. Sudarshan Iyengar
PhD, Indian Institute of Science, Bangalore
Data Sciences and Analytics, Social networks, Social Computing and Collective Intelligence Dynamics

Dr. Sudeepta Mishra
PhD, Indian Institute of Technology Madras
Resource *allocation,Interference management,Heterogeneous cellular networks,5G, ad-hoc networks, and IoT*

Dr. Sujata Pal
PhD, IIT Kharagpur, India
Mobile ad-hoc networks, Delay tolerant networks, Vehicular networks, Content centric networks, Wireless sensor networks

Dr. T V Kalyan
PhD, Indian Institute of Technology, Madras
Computer Architecture: Memory subsystem, Caches, Energy-efficient design

Dr. Venkata M Viswanath Gunturi
PhD, Computer Science, University of Minnesota
Spatial and Spatio-temporal databases, Spatial data mining, Graph algorithms, Geographic Information Sciences, Transportation

Dr. Narayanan C Krishnan
PhD : Arizona State University, USA
Research Interests :Activity Recognition, Pattern Recognition, Machine Learning, Pervasive and Mobile Computing, Pervasive Health Care, Assistive and Rehabilitative Technology

ONGOING ACTIVITIES

Teaching and Research in various aspects of Computer Science and Engineering.

FACILITIES

No. of Labs	:	UG	:	04
		PG	:	01
		Research	:	10
		HPC Facility (Central Facility)		

AWARDS AND HONORS 2021-22 (FACULTY)

S.No	Name	Details
1	Dr. Abhinav Dhall	NASSCOM lab2market award winner
2	Dr. Abhinav Dhall	Facebook OpenEDS 2021 2nd runner up
3	Dr. Nitin Auluck	Invited paper at IEEE World Congress of Services 2021.
4	Dr. S. R. S. Iyengar	Best paper presentation (teaser) award OPENSYM 2021
5	Dr. Shweta Jain	Best Paper Award at the RBCDSAI FCAI Conference on Deployable AI
6	Dr. Mukesh Kumar Saini	In recognition of the dedicated service to the IEEE Transactions on Multimedia, the Outstanding Reviewer Award taskforce has awarded the IEEE Transactions on Multimedia Outstanding Reviewer Award 2021.
7	Dr. T V Kalyan	2022 Qualcomm Faculty Award

AWARDS AND HONORS 2020-21 (STUDENT)

S.No	Name	Details
1	Shivam Gupta (PhD)	Prime Minister Research Fellowship (PMRF) May 2021 cycle
2	Kirandeep Kaur (M.Tech.)	Selected to attend Cornell, Maryland, Max Planck Pre-doctoral School 2022
3	Manaal Muktar Jamadar (M.Tech.)	Sunny Oberoi Best MTech Thesis Award by IIT Ropar
4	Sudershan Kumar (M.Tech.)	Institute Silver Medal

INVITED LECTURES BY FACULTY

S.No	Name	Purpose	Date
1	Dr. Abhinav Dhall	Talk on CV for social good, CSIO-IIT Ropar AI for social good workshop	7 Feburary 2022
2	Dr. Abhinav Dhall	Talk on Deep Learning for Affective Computing, 2nd Indo-Candian Conference on AI and Rehabilitative Robotics	21 March 2022
3	Dr. Abhinav Dhall	Keynote on deepfakes detection, ICIIP 2021	26 November 2021
3	Dr. Nitin Auluck	Talk on Research directions in fog and edge computing at JNU, New Delhi.	10 March 2022.
4	Dr. Nitin Auluck	Talk on Scheduling and resource allocation in fog computing at NIT Uttarakhand.	4 March 2022.
5	Dr. Nitin Auluck	Talk on Edge computing at NIT Jalandhar.	1 March 2022.
6	Dr. Nitin Auluck	Talk on Fog computing at SVNIT	7 December 2021.
7	Dr. Nitin Auluck	Talk on Research Trends in Edge computing, NITTTR Chandigarh.	16 September 2021.
8	Dr. Nitin Auluck	Talk on Applications of Fog Computing at NIT Warangal.	6 August 2021.
9	Dr. Nitin Auluck	Keynote talk at 5th International Joint Conference on Advances in Computational Intelligence (IJCACI) 2021, South Asian University.	23 October 2021.
10	Dr. Nitin Auluck	Keynote talk at International Conference on Big Data, Machine Learning and Applications (BigDML) 2021, NIT Silchar.	20 December 2021.
11	Dr. Shirshendu Das	Talk on Turing machine and Decidability Dept. of Computer Science& Engineering Shaheed Bhagat Singh State Technical Campus.	30 October 2021

12	Dr. Shirshendu Das	Talk on Query Processing and Optimization Dept. of Computer Science& Engineering Shaheed Bhagat Singh State Technical Campus	27 October 2021
13	Dr. Shirshendu Das	Talk on Row Hammer Attack on DRAM-based Main Memories Assam University Silchar, Assam, India	26 July 2021
14	Dr. Shirshendu Das	Talk on Practical Concepts in Operating Systems - Part 1 Government Engineering College Idukki, Painavu, Kerala	28 Feburary 2022
15	Dr. Shirshendu Das	Talk on Practical Concepts in Operating Systems - Part 2 Government Engineering College Idukki, Painavu, Kerala	1 March 2022
16	Dr. Shirshendu Das	Talk on Advanced Concepts In Turing Machine Government Engineering College Idukki, Painavu, Kerala	4 March 2022
17	Dr. Shirshendu Das	Talk on Row Hammer Attack Faculty Development Program at IIT Ropar	29 December 2021
18	Dr. Shirshendu Das	Talk on Cache Memory Security Faculty Development Program at IIT Ropar	31 December 2021
19	Dr. S. R. S. Iyengar	10+ FDPs 15+ Invited talks	April 2021-March 2022
20	Dr. Mukesh Kumar Saini	Talk on AI for Anomaly detection at the Department of Mechanical Engineering in collaboration with Production Engineering Department and C.O.E., Simens, PEC, Chandigarh organized Short Term Course on “Digital Manufacturing".	8 March 2022
21	Dr. Mukesh Kumar Saini	A talk at One Week Online STTP on Recent Advances and Challenges in Computer Vision, DTU	7 December 2021
22	Dr. Shweta Jain	NIELIT & IIT Ropar - Industrial Training Courses under joint certification	15th-16th April 2022
23	Dr. Mukesh Kumar Saini	Expert talk at ATAL FDP-IIIT Kottayam	9 December 2021
24	Dr. Mukesh Kumar Saini	A talk on AI for Agriculture for the beneficiary under-privileged students conducted under ICAR-1 (Part-E) by Punjab Agriculture University.	30 March 2022

25	Dr. Shweta Jain	Invited talk on fair clustering algorithm in CSIR-CSIO and IIT-Ropar joint workshop on "AI for social good"	7-9 February 2022
26	Dr. Shweta Jain	Early Career Research Talk at ACM-ARCS 2022	10 February 2022
27	Dr. Shweta Jain	FDP on “Multi-arm Bandits” in ATAL FDP organized at IIT Ropar on the topic of - “Reinforcement Learning and its applications”	8 November 2021
28	Dr. T V Kalyan	Invited talk on “Security Vulnerabilities in Memory” part of “ISEA Workshop on IoTEcosystem: Security Challenges and Opportunities"”	1 December 2021
29	Dr. T V Kalyan	Expert talk on “Security Aspects in Storage”, part of ATAL FDP hosted by IIT Ropar.	31 December 2021
30	Dr. T V Kalyan	Handled four sessions as expert in ATAL FDP hosted by IIT Tirupati	4-5 January 2022
31	Dr. T V Kalyan	Delivered lecture on "Architectures for Graph Analytics: Memory Hierarchy Redesign" as part of Academic Lectures Series Tech Talk by India Academic Council, Qualcomm, India.	25 February 2022
32	Dr. Puneet Goyal	Subject Expert Talk on September 4th, 2021 on “Deep Learning” in online mode for students and faculty of Chandigarh University.	4 September 2021
33	Dr. Puneet Goyal	Invited Expert talk on "Efficient Advanced Deep Architectures for Burns Diagnosis and Some Other Applications" during the 4th Short Term Course on Advances in Deep Architectures for Signal, Image & Vision Applications (ADASIVA), 06-10 December 2021 at IIIT Allahabad in Online mode.	8 September 2021
34	Dr. Puneet Goyal	Invited Talk/Webinar: *Preventing Phishing Attacks:Hard AI Problems based Novel and Adaptive Approach* organized by NCR&IC, BPR&D Hqrs, Ministry of Home Affairs, New Delhi	18 January 2022
35	Dr. Puneet Goyal	Invited Lecture in AICTE (QIP) sponsored Online Short-Term Course on “*Computer Vision-the Artificial Intelligence for an Eye*”, organized by the Pattern Analysis and Machine Intelligence Lab, Department of Computer Sc. & Engineering, IIT Indore during February 21-26, 2022.	25 February 2022

LECTURES BY VISITING EXPERTS

Sr. No.	Name of the experts with affiliation	Topic	Date
1	Dr. Hanumant Singh Shekhawat, IIT Guwahati	Mathematical foundation of deep neural networks.	Jan 25 to Feb 2., 2022
2	Dr. Dwarikanath Mahapatraa, Inception Institute of Artificial Intelligence	Image Segmentation	Feb 23 to March 8, 2022
3	Dr. John Jose, IIT Guwahati	Doctoral Research - Essentials and Desirables	2nd Dec 2021
4	Dr. Divesh Aggarwal, National University of Singapore	Foundations of lattice-based cryptography	9th Dec 2021

VISITS ABROAD BY THE STUDENTS

Sr. No.	Name of the Student	Country	Detail of visit with date
1	Kartikeya Rajnish Pise (UG)	Willings,Inc, Tokyo	Internship from 18 May to 31 July 2021

MAJOR RESEARCH PROJECTS (ONGOING/COMPLETED)

Sr. No.	Funding Agency	Name of Faculty Member	Title of Project	Fund (in Crores)
1	Yamaha India	Dr. Abhinav Dhall	Lidar based tree species classification	0.127
2	British Council India	Dr. Nitin Auluck	Edge Computing and Analytics	0.20
3	DST-CSRI	Dr. Puneet Goyal	Computationally intelligent methods to provide visually impaired cognitive support for better learning	0.58
4	DBT	Dr. Mukesh Kumar Saini	Center for Depression Diagnosis and Medical Adherence" under Indo-Korea Bilateral Collaboration (DBT)	0.0459
5	SERB	Dr. Shirshendu Das	*Efficient Utilization and Refresh Overhead Minimization of eDRAM based Last Level Cache*	0.36
6	SERB	Dr. Shirshendu Das	*Reducing Energy Consumption and Operating Temperature of Last Level DRAM Cache in Multicore Systems [Completed]*	0.15
7	DST-ECRA	Dr. Puneet Goyal	Design and Evaluation of Demosaicking Techniques for Low Cost and Efficient Multispectral Imaging Systems	0.31

DEPARTMENT OF ELECTRICAL ENGINEERING

Programs offered	:	B. Tech, M. Tech and PhD		
No. of Students	:	B.Tech.	:	80
		M.Tech.	:	29
		PhD	:	23
Head of the Department	:	Dr. Subrahmanyam Murala		
No. of faculty members	:	21 + one faculty is on Lien		
No. of staff members	:	11		
		Technical Staff	:	07 + one staff in on Lien
		Administrative Staff	:	03
Thrust Area	:	Power Engineering, Microelectronics and VLSI, Signal		
No. of Publications	:	108		

FACULTY MEMBERS

Dr. A. V. Ravi Teja
Assistant Professor
Indian Institute of Technology Kharagpur
Converter Topologies and Control Techniques for Renewable Energy Systems, Electric Vehicles

Dr. Abhishek Sharma
Assistant Professor
IIT-Bombay
Design and simulations of nanoelectronic devices of upcoming the "Beyond Moore" era. Our work is based on Boltzmann transport, non-equilibrium Green's function (NEGF) and micromagnetic simulations to address a diverse class of device simulation problems encompassing Spintronics devices, Thermoelectric devices, Magnetic Skyrmion devices, Topological Quantum computing devices, Neuromorphic computing devices, etc.

Dr. Ashwani Sharma
Assistant Professor
University of Deusto, Bilbao, Spain
Antenna Engineering and Communication Systems.

Dr. Bibhu Prasad Padhy
Assistant Professor
Electrical Engineering, Indian Institute of Technology Kanpur
Power system dynamics & stability studies, synchrophasor technology & its applications, state estimation in power systems.

Dr. Brajesh Rawat
Assistant Professor
Indian Institute of Technology Guwahati
Nanoscale Devices Modeling and Simulation, 2-D Material based Devices, Simulation and Fabrication of Biosensors.

Dr. Brijesh Kumbhani
Assistant Professor
PhD(Indian Institute of Technology Guwahati)
MIMO wireless communication systems and UWB systems. Current research interests lies in the domains of energy efficient wireless technologies with high spectral efficiency

Dr. C. C. Reddy
Associate Professor
PhD(Electrical Engineering, Indian Institute of Science, Bangalore)
Mechanism of Conduction and Breakdown in Dielectrics, Space Charges in Dielectrics, HVDC Cables and accessories, High Voltage Engineering, Nano Dielectrics.

Dr. Devarshi Das
Assistant Professor
Indian Institute of Technology Bombay
CMOS Analog IC Design, ASICs for bio-signal measurement, Neuromorphic electronics, Low-power and low-noise IC design, Instrumentation, Sensors and transducers

Prof. J. S. Sahambi
Professor
Indian Institute of Technology Delhi
Signal/image processing, Wavelets, Graph signal processing, Medical image processing, DSP and Embedded systems.

Dr. Kalaiselvi J.
Assistant professor
Indian Institute of Technology Madras
Attenuation of Conduction mode EMI in converters and drives, Solid State Transformer

Dr. Mahendra Sakare
Assistant Professor
Indian Institute of Technology Bombay
Analog integrated circuit design, Broadband circuit and system design

Dr. Pardeep Duhan
Assistant Professor
Indian Institute of Technology Bombay
Semiconductor Devices, Electrical characterization, gate oxide reliability, and simulation of Nanodevices, Ferroelectric Memory Devices

Dr. Ramachandra Sekhar
Assistant professor
IIT Hyderabad
Design of high energy density Power converters for renewable and drive applications. Non linear control algorithms for distributed energy sources, EMC/EMI analysis of power converters

Dr. Ranjana Sodhi
Associate Professor
Indian Institute of Technology Kanpur
Wide area monitoring and control systems, Smart Grids, Microgrid studies, application of optimization techniques to power systems

Dr. Ravibabu Mulaveesala
Head of the Department
IIT Delhi
Infrared vision and video processing, Signal and image processing techniques for non-invasive imaging methods, Photo-thermal diagnostics of solids

Dr. Rohit Y. Sharma
Associate Professor
Jaypee University of Information Technology
Design of high-speed chip-chip and 3D interconnects, technology development for high-performance electrical connectivity, communication schemes for multi-core architecture.

Dr. Saifullah Payami
Assistant professor
IIT Patna
Multiphase (more than three phase) machines and its control, design and fault diagnosis of electric machines, Electric drives control

Prof. Sanjoy Roy
Professor
University of Calgary, Canada
Renewable energy systems: planning and economics, Decision making in power network management

Dr. Sam Darshi
Assistant professor
Indian Institute of Technology Guwahati
Communication, Ad-hoc networks, Wireless sensor networks, Infrastructure less multihop and relay networks, Co-operative communication, Next generation wireless networks

Dr. Satyam Agarwal
Assistant Professor
Indian Institute of Technology Delhi
Wireless communication and networks, MAC protocols, Wireless network modelling and performance analysis.

Dr. Subrahmanyam Murala
Associate Professor
Indian Institute of Technology Roorkee
Computer Vision, Image Retrieval, Object Detection and Medical Image Analysis .

Dr. Suman Kumar
Assistant Professor
Indian Institute of Technology Madras
Performance analysis of mobile broadband wireless networks including Frequency reuse, HetNets, Hypergeometric functions, Generalized fading models, Spectrum sharing.

FACILITIES

No. of Labs : UG + PG : 22

Research : 23

S.No.	Name of the lab	Name of the Head of the Research lab	Name of the Equipment (Research Labs)
1	Electric Machines (UG)	Dr. Saifullah Payami	
2	HV (UG+PG)	Prof. C.C. Reddy	1. High Voltage AC Source 100 kV & 150 kV 2. High Voltage DC Source 140 kV 3. High Voltage Impulse Source 420 kV 4. Partial Discharge Measurement System 100 kV 5. Cascaded Transformers 100 kV 6. Capacitance and Tan Delta Measuring System (12 kV) 7. Oil purifier 8. Cable testing system 9. Leakage current measurement system
3	Power Electronics (UG+ PG)	Dr. R Sekhar	DSOs, Transformers, Function generators, DSP boards, FPGA boards
4	Electric Drives Lab	Dr. A. V. Raviteja & Dr. Saifullah Payami	JMag Software, DSO
5	Analog + Digital (UG)	Dr. Devarshi Das	Function Generators DSO DC Power supply
6	Control Engineering Lab (UG)	Dr. Sanjoy Roy	
7	Power Systems (UG + PG)	Dr. Ranjana Sodhi, Dr. Bibhu	PSCAD, PowerWorld Software
8	Synchrophasor Measurement & Research Lab	Dr. Ranjana Sodhi	Real-Time Digital Simulator, SEL Relays, Phasor Measurement Units, GPS Clock, Eurostag Software, dSpace1104 Kits, Smart Home appliances
9	Embedded System Lab	Prof. J.S. Sahambi	Embedded systems kits Zigbee kits Digital storage scopes Function generators

10	InfraRed Imaging Lab	Dr. K. Ramachandra Sekhar	InfraRed Imaging System
11	Communication Engg. Lab (UG + PG)	Dr. Suman Kumar	DSO: Digital Storage Oscilloscope FG: Function Generator PS: Power supply
12	VLSI Design Lab	Dr. Rohit Sharma, Dr. Devarshi Das, Dr. Mahendra Sakare, Dr. Brajesh Rawat	Dell Power edge Rack Server: Intel Xeon Platinum 8160(2.10GHz/24-core/33MB/150W)
13	Electromagnetics Lab (UG)	Dr. Ashwani Sharma	PCB milling machine
14	Antenna/ MW Lab	Dr. Ashwani Sharma	Vector network analyzer, Anechoic chamber, chip binding machine, field measurement scara robotic setup
15	Computational Lab		
16	VLSI Wet Lab	Dr. Brajesh Rawat	Muffle Furnace Spin Coater Ultrasonic cleaning bath Gas sensor testing system D-C probe station
17	VLSI Characterization Lab	Dr. Pardeep Duhan, Dr. Abhishek Sharma	DC Probe Station, Keithley 4200
18	Nanoelectronic Lab	Dr. Rohit Sharma	
19	Product Eng. Lab (For Loan)	Dr. Khusboo Rakha	
20	Computer Vision and Pattern Recognition Lab	Dr. S Murala	DGX Station Thermal Camera Quadcopter with thermal and visual camera
21	Dielectric Measurement Lab	Prof. C.C. Reddy	1. Dielectric Spectroscopy 2. Electrometer 3. Pulsed Electro-acoustic System 4. Solid Nano Dielectric Hydraulic Press 5. Solid Nano dielectric Roll Mixer 6. Solid Nano Dielectric High Speed Mixer 7. Cable Extruder 8. Thermal Imaging Camera 9. Microscopes 10.Needle plane treeing test system 11.Water treeing test system
22	Communication Research Lab	Dr. Suman Kumar, Dr. Sam Darshi, Dr. Brijesh Kumbhani, Dr. Satyam Agarwal	1. EXata Network Emulator Software 2. NI USRP software defined radio
23	BEL Lab (UG)	Dr. Mahendra Sakare	DSO: Digital Storage Oscilloscope FG: Function Generator PS: Power supply
24	GEL Lab	Dr. Saifullah Payami	
25	Control Eng. Lab	Dr. S. Roy	
26	Circuits and Devices Simulation Lab	Dr. Devarshi Das , Dr. Brajesh Rawat	

1	Power Engineering Labs	Dr. Saifullah Payami	Electric Machines (UG) Ground Floor, Room no:101
		Prof. C.C. Reddy	High Voltage (PG) Ground Floor, Room no:102
		Dr. R Sekhar & Dr.J.Kalaiselvi	Power Electronics (UG+ PG) Ground Floor, Room no:104
		Dr. A.V. Raviteja & Dr. Saifullah Payami	Electric Drives Lab Room no:106 & 308
		Dr. Ranjana Sodhi, Dr. Bibhu	Power Systems (UG + PG) First Floor, Room No:203
		Dr. Ranjana Sodhi	Synchrophasor Measurement& Research Lab (Power Quality Research Lab) First Floor, Room no: (205)
		Prof. C.C. Reddy	Dielectric Measurement Lab Third Floor, Room no:406
		Dr. Saifullah Payami	Basic Electrical Engineering Lab Third Floor, Room no:409 & 408
2	Signal Processing and Communication Labs	Prof. J.S. Sahambi	Embedded System Lab First Floor, Room no:206
		Dr. K. Ramachandra Sekhar	Infra Red Imaging Lab First Floor, Room no:207
		Dr. Suman Kumar	Communication Engg. Lab (UG + PG) Second Floor, Room no:301
		Dr. Ashwani Sharma	Electromagnetics Lab (UG) Second Floor, Room no:303
		Dr. Ashwani Sharma	Antenna/ MW Lab Second Floor, Room no:304
		Dr. S Murala	Computer Vision and Pattern Recognition Lab Third Floor, Room no:404
		Dr. Suman Kumar, Dr. Sam Darshi, Dr. Brijesh Kumbhani, Dr. Satyam Aggarwal	Communication Research Lab Third Floor, Room no:407
3	Microelectronics and VLSI Design Labs	Dr. Devarshi Das, Dr. Rohit Sharma	Analog + Digital (UG) First Floor, Room no:201
		Dr. Rohit Sharma	Nanoelectronics Lab, 402
		Dr. Devarshi Das, Dr. Mahendra Sakare	VLSI Design Lab Second Floor, Room no:302
		Dr. Brajesh Rawat	Nanoelectronic Device and Sensor lab Third Floor, Room no:401
		Dr. Pardeep Duhan, Dr. Abhishek Sharma	VLSI Characterization Lab Third Floor, Room no:403
		Dr. Mahendra Sakare	BEL Lab Third Floor, Room no: 313
		Dr. Devarshi Das, Dr. Brajesh Rawat	Circuits and Devices Simulation Lab Third Floor, Room no: 315
4	Institute general course UG lab	Dr. Khusboo Rakha, Mechanical Department	Product Eng. Lab Third Floor, Room no:403

AWARDS AND HONOURS 2021-22 (STUDENT)

S.no.	Name of the Student	Award/ Achievement
1	Mr. Ashwani Kumar Rana	IEEE IES Young Professionals & Students Paper Assistance (IES-SYPA) for work presented at the 47th Annual Conference of the IEEE Industrial Electronics Society (IECON 2021) held virtually from 13-16 October 2021 at Toronto, Canada.

2	Mr. Muddasani Satyanarayana	IEEE IES Young Professionals & Students Paper Assistance (IES-SYPA) for work presented at the 47th Annual Conference of the IEEE Industrial Electronics Society (IECON 2021) held virtually from 13-16 October 2021 at Toronto, Canada.
3	Ms. Bellamkonda Dwiza	Sunny Oberoi Student Leadership Award 2021

INVITED LECTURES BY FACULTY

Sr. No.	Name	Lecture Topic	Host Institute	Date
1	Prof. C. C. Reddy	"Application of AI for Power Engineering" Chandigarh University, Punjab (Expert Lecture)	Chandigarh University, Punjab (Expert Lecture)	29 April 2021
2	Dr. Sam Darshi	Invited speaker in FDP at IIT Goa (Virtual)	IIT Goa	15 November 2021
3	Dr. Saifullah Payami	Session Co-Chair (Virtual) (Two sessions) ECCE- Asia 2021	ECCE-Asia 2021 Singapore	24th-27th May, 2021
4	Dr. A. V. Ravi Teja	Invited speaker on topic "Techniques to Mitigate harmonics due to power electronics circuits" in an STC on "Power quality and Harmonics" (Virtual)	NITTTR Chandigarh	29 November 2021
5	Dr. A. V. Ravi Teja	Invited speaker on topic "Magnetless Motors and their Control for Electric Vehicles" in an STC on "Development of Smart Electric Vehicles as per Indian Scenario (with Typhoon HIL)" (Virtual)	NITTTR Chandigarh	19 November 2021
6	Dr. A. V. Ravi Teja	Invited speaker on topic "Energy harvesting in buildings using hybrid renewables connected to grid" in an STP on "Energy Efficient and Innovative Building Construction Practices" (Virtual)	NITTTR Chandigarh	28 August 2021
7	Dr. A. V. Ravi Teja	Invited speaker on topic "Bladeless turbines for Wind Power Extraction" in an STC on "Distributed Generation and Micro-Grid" (Virtual)	NITTTR Chandigarh	12 August 2021
8	Dr. A. V. Ravi Teja	Invited speaker on topic "Hybrid renewable energy integration to grid" and "Motor selection and its control for electric vehicles" in an STC on "Renewable and Clean Energy" (Virtual)	NITTTR Chandigarh	9-10 August 2021

9	Dr. A. V. Ravi Teja	Invited speaker on topic “Motor selection and it’s control for Electric Vehicle” in an FDP on “Opportunity and Challenges for Electric Vehicles in the Automotive” (Virtual)	NIT Srinagar	29 July 2021
10	Dr. A. V. Ravi Teja	Invited speaker on topic “Motor selection and it’s control for Electric Vehicle” in IEEE PES Student Branch Chapter (Virtual)	Gayatri Vidya Parishad College of Engineering (Autonomous), Visakhapatnam	17 July 2021
11	Dr. Mahendra Sakare	Invited speaker on topic “Emerging Nanoscale Devices, Circuits and Its Applications” (Virtual)	Department of Electronics and Communication Engineering, Delhi Technological University.	12 May 2021
12	Dr. Devarshi Das	Invited speaker for a short-term course on Analog and Digital VLSI Design (Virtual)	National Institute of Technical Teacher Training and Research (NITTTR), Chandigarh	14 September 2021
13	Dr. Brijesh Kumbhani	Invited speaker for course on "IoT and Sensor Networks" (Virtual) on topics "Multiple Access Techniques for Sensor Networks" and "Future Generations Sensor Networks"	National Institute of Technical Teacher Training and Research (NITTTR), Chandigarh	20-24 September 2021
14	Dr. Brijesh Kumbhani	Invited talks for the course on "Applications of Embedded Systems" on topic "Future Generations Embedded networks"	National Institute of Technical Teacher Training and Research (NITTTR), Chandigarh	22-26 November 2021
15	Dr. Brijesh Kumbhani	Invited talks for the faculty development programme on "5G and Beyond" on topics “Multiple Access Technique for 5G and beyond technologies” and “Intelligent Reflecting Surfaces for Future Generation Wireless Communications”	National Institute of Technical Teacher Training and Research (NITTTR), Chandigarh	13-17 September 2021
16	Dr. Brijesh Kumbhani	Invited talk for AICTE_QIP Faculty Development Programme on “Embedded Artificial Intelligence” on topic “Regression algorithms for Machine Learning”	National Institute of Technical Teacher Training and Research (NITTTR), Chandigarh	21-26 March 2022

17	Dr. J. Kalaiselvi	Conducted mode EMI issues in EV applications	National Institute of Technical Teacher Training and Research (NITTTR), Chandigarh	19 March 2022
18	Dr. Ranjana Sodhi	Wide Area Monitoring and Control of Smart Grids	NIT Durgapur	6 October 2022
19	Dr. Ranjana Sodhi	Synchrophasor-Assisted Power System Monitoring Application with Real Time Digital Simulation based Validation	IIT Indore	22 Feburary 2022
20	Dr. Ranjana Sodhi	Phasor Measurement Units - Needs, Applications and Prototyping	CSIR-National Physical Laboratory, New Delhi	29 March 2022
21	Dr. Ashwani Sharma	Antenna Technology To Wirelessly Power the Next-Generation Communication Devices	Guru Jambheshwar University of Science and Technology, Hisar (Haryana)	24 August 2021

PATENTS

1. M. Alam, S. Payami,"System and Method of identifying and locating faults in Switched Reluctance Machine", Indian Patent Application No: 202111040046, Filing Date: 03/09/2021
2. V. K. Srivastava and A. Sharma, "Title: Power Transfer System and method for Optimizing Misalignment Factors in thereof. (Patent filed with Indian patent office on 03-04-2022: Application No. 202211020100)
3. A. Bharadwaj, A. Sharma and C. C. Reddy, "Title: Switched Modular multi-coil array antenna arrangement for wireless charging transmitter pad. (Patent filed with Indian patent office on 16-09-2021: Application No. 202111041922)
4. Shitikantha Dash, Ranjana Sodhi and Balwinder Sodhi, A Method and a System for Load Monitoring, Indian Patent, Filed on: 18-03-2020

MAJOR RESEARCH PROJECTS (ONGOING/COMPLETED)

Sr. No.	Funding Agency	Name of Faculty Member	Title of Project	Total Sanctioned Amount (in cr.)	Project Status
1	DST	Dr. Ranjana Sodhi	Enhancement of Power system monitoring and stability assessment using synchrophasor technology	0.17	Completed
2	DST	Dr. J.S. Sahambi	Smart phone based real time remote monitoring of cardiac patients from hospital CCU's	0.32	Completed
3	DST	Dr. Rohit Sharma	Design and optimization of an ultra low-loss interconnect link on silicon interposer	0.22	Completed
4	DST	Prof. C. C. Reddy	Experimental Investigations on Breakdown Phenomenon In power Cable	0.55	Completed
5	DST	Dr. Ravibabu Mulaveesala	Matched Filter Approach for Chirp Excited Infrared Imaging for Non-destructive Characterization"	0.45	Completed
6	DRDO-ARDB	Dr. Ravi Babu	Non-Destructive Testing of Carbon Fiber Reinforced Polymers (CFRP) Using Non-Stationary Thermal Technique	0.22	Completed
7	DRDO-CARS	Dr. Rohit Y Sharma	Design verification and analysis of electronic impact cum time delay sensing module	0.1	Completed
8	DRDO	Prof. C. C. Reddy	Design and Development of Compact Firing Circuit	0.09	Completed
9	Industrial Consultancy	Dr. Subrahmanyam Murala	Development of Image Recognition Technology, Android Application to collect image and data and online reports/dashborad for Retail Store Tracking	0.12	Completed

10	CPRI	Prof. C. C. Reddy	Investigations on new nano-composite materials for electrical insulation	0.65	Completed
11	DeitY	Dr. Rohit Y Sharma	Special Manpower Development Programme for Chips to System Design	0.6	Completed
12	DeitY (Media Lab Asia)	Dr. Rohit Y Sharma	Visvesvaraya PhD Scheme for Electronics and IT	2.46	Completed
13	Industrial Consultancy	Prof. C. C. Reddy	Evaluation of 11Kv Earthed HT Xlpe Cable Conductor Resistance and High Voltage Performance as per IS7098 part-II	0	Completed
14	India-UK Collaborative Industrial R&D Programme-GITA	Dr. Rohit Y Sharma & Dr. Ekta Singla	A PATH: Affordable Preventative And Assistive Technology For Healthcare	0.15	Completed
15	Industrial Consultancy	Dr. Rohit Y. Sharma	Bridging the Innovation Gap	0.03	Completed
16	Industrial Consultancy	Prof. C. C. Reddy	Transition Joint : Material, Interfacial and Design Investigations	0.05	Completed
17	DST	Department of Electrical Engineering	FIST Program	2.42	Running
18	Digital India Corporation (Formaly Media Lab Asia)	Dr. Rohit Y. Sharma	Award of Young Faculty Research Fellowship	0.37	Completed

19	Industrial Consultancy	Dr. Rohit Y. Sharma	Technical Reviews of MCM layout & SI-PI analysis and guidance for Package performance optimization	0.01	Completed
20	SERB-DST	Dr. Suman Kumar	FFR based Non-orthogonal Spectrum Sharing among Licensed Operators	0.37	Completed
21	Industrial Consultancy	Prof. C. C. Reddy	HT Cable Test	0.02	Completed
22	SERB	Dr. J. Kalaiselvi	Mitigation of common mode issues in SiC converter fed induction motor drive	0.33	Completed
23	DST-Inspire Faculty Award	Dr. Satyam Agarwal	Wireless Networking for Sustainable Rural Connectivity	0.35	Running
24	DRDO-TBRL-CARS	Prof. C. C. Reddy	Design and Development of Flux Compression Generator (FCG) Simulator	0.1	Completed
25	India-UK Collaborative Industrial R&D Programme-GITA	Dr. Ravibabu Mulaveesala	The Development of a Portable THERMOgraphy-Based Health DeTECTion System (THERMOTECT) in Breast Cancer Screening	0.25	Completed
26	SERB	Dr. Subrahmanyam Murala	Automatic Driver Assistance Technology: Fog Removal in Videos	0.28	Completed
27	SERB	Dr. Ashwani Sharma	Design and development of miniaturized cost-effective antennas for Internet of Things and 5G technology	0.5	Running
28	SERB	Dr. Saifullah Payami	Development of a Five-Phase SRM for In-Wheel Drive Application with Fault-Tolerant Features for Plug-In Electric Vehicles Suitable for Indian Roads	0.53	Running
29	SERB-DST	Dr. Ranjana Sodhi (PI) Dr. Balwinder Singh Sodhi (Co-PI)	Efficient Energy Management System for Smart Residential Networks via Intelligent Mobile Web Services	0.31	Running

30	Industrial Consultancy	Dr. Suman Kumar	Design and development of low-cost rfid system	0.04	Completed
31	Industrial Consultancy	Dr. Subrahmanyam Murala	Piston quality detection	0.02	Completed
32	Industrial Consultancy	Dr. Devarshi Mrinal Das CI & Dr. Rohit Y. Sharma Co -CI	To improve the DC rating and switching characteristies of a 3-speed blower switch	0	Completed
33	Indo-Taiwan Joint Research Centre	Dr. Rohit Y. Sharma	Indo-Taiwan Joint Research Centre on Artificial Intelligence and Machine Learning	2.16	Completed
34	Indo-Canadian IMPACTS	Dr. Rohit Y. Sharma-PI, Dr. Mrinal Devarshi Das -Co-PI	Development of Portable Spine MEG Scanner for Real Time Spinal Functional Evaluation and Data Acquisition	0.27	Completed
35	Industrial Consultancy	Dr. Ravibabu Mulaveesala	Design and Development of Active Thermographic data Analysis Software & Optics Relevant to IR & CT Imaging	0.25	Completed
36	Industrial Consultancy	Prof. C. C. Reddy	Surface Voltage Measurement and Simulation on Covered Conductor	0.02	Completed
37	SERB-CRG	Dr. A. V. Ravi Teja	Sensorless Control of Switched Reluctance Motor Drives for Electric Vehicle Applications	0.26	Completed
38	Industrial Consultancy	Dr. Suman Kumar and Dr. Narinder Singh	Development of Sensor based system for online monitoring of river water quality of Punjab	0.42	Completed

39	Industrial Consultancy	Dr. Rohit Y Sharma	Design and development an AI-enabled hybrid Intrusion Detection, Prevention and Offensive System (IDPOS)	0.06	Completed
40	Industrial Consultancy	Prof. C. C. Reddy	Investigations on Transition joint dielectrics of three different Manufactures	0.17	Completed
41	Industrial Consultancy	Dr. K. Ramachandra Sekhar	Design and development of voltage regulators of fixed and variable type	0.01	Completed
42	Industrial Consultancy	Prof. C. C. Reddy	Investigating the effect of Simulated 25KV AC Power line transients on BEL Product	0.01	Completed
43	Industrial Consultancy	Prof. C. C. Reddy (CI) Dr. Bibhu P Padhy and Dr. R. Sekhar (Co-CI)	HV Test and Assessment of Coupling Capacitor of Stator Winding at 39.1kv DC and Tan Delta Assessment	0.01	Completed
44	Industrial Consultancy	Dr. K. Ramachandra Sekhar	Proposal on Design And Development of Smart Voltage Regulators of Fixed and Variable Type	0.01	Completed
45	Industrial Consultancy	Prof. C. C. Reddy	Greater Mohali Area Development Authority Document Vetting (Described in Scope of Project)	0.05	Completed
46	Industrial Consultancy	Dr. Saifullah Payami	Development and Integration of LED Driver for Airfield Lighting System	0.07	Running
47	SERB-SRG	Dr. Brajesh Rawat	Design and Development of Single Chip Gas Sensor Arrays based on Two-Dimensional MoS_2, and Metal Oxide Hybrid Nanomaterials for Air Pollutants Monitoring at Near Room Temperature	0.24	Completed
48	Industrial Consultancy	Prof. C. C. Reddy	Motorization of Main and Sluice Gates of Sirhind Canal System at Ropar Headworks	0.12	Completed

49	Industrial Consultancy	Dr.Subrahmanyam Murala	Deep Image Matting	0.45	Completed
50	Industrial Consultancy	Dr. Rohit Y. Sharma (CI) Dr. Satyam Agarwal (Co-CI)	Artificial Intelligence and Data Science Upskilling	1.24	Running
51	Industrial Consultancy	Prof. C. C. Reddy	Investigations on HV Power Cable Technology	0.23	Completed
52	Industrial Consultancy	Dr. Subrahmanyam Murala	Under Screen Camera Project	0.62	Completed
53	Industrial Consultancy	Dr. Brajesh Rawat	Impact on emission reduction through replacement of coal by Renewable Energy Source, Paddy Straw, for industrial application	0.28	Completed
54	Industrial Consultancy	Prof. C. C. Reddy	Testing of HT Cables for High Voltage Performance	0.01	Completed
55	SERB-CRG	Dr. Satyam Agarwal (PI) and Dr. Sam Darshi	Enabling Distributed Beamforming via Machine Learning for Energy Efficient Communications	0.46	Running
56	SERB-CRG	Dr. K. Ramachandra Sekhar (PI) and Dr. Bibhu Prasad Padhy	Implementation of Adaptive Reactive Power Compensation Mechanism for Enhance Power Quality in Weak Grid Connected Solar Inverter under Varying Solar Irradiance	0.32	Running
57	Central Power Research Institute (CPRI)	Dr. Bibhu Prasad	Study on Detection of False Data Injection (FDI) Attacks in Smart Grid Cyber-Physical Systems: A Machine Learning Approach	0.14	Running
58	Industrial Consultancy	Dr. Suman Kumar	Development of Lora end-node system for parking application	0.04	Running
59	SERB-CRG	Dr. Devarshi Mrinal Das	Design and development of an IoT enabled Pulse-Oximeter system for integrating with oxygen concentrators	0.34	Running

60	SERB	Dr. Mahendra Sakare	Low power programmable multiple uncorrelated output PRBS generator integrated circuit	0.26	Running
61	SERB	Dr. Sam Darshi	Reliability Enhancement for Vehicle-2-Pedestrian (V2P) Communication Scenario using Peer Conscious Opportunistic Network Coded Cooperation	0.39	Running
62	MeitY	Dr. K. Ramachandra Sekhar	The AI Enabled Solar baed Multi-port High Gain Electric Vehicle AC Charging Station for Domestic and Commercial Use	0.66	Running
63	Nidhi-Prayas	Dr. K. Ramachandra Sekhar	Implementation of IoT Based Energy Management Tool for Grid integrated Solar Irrigation System	0.1	Running

DEPARTMENT OF HUMANITIES & SOCIAL SCIENCE

Programs offered : PhD

No. of Students: PhD : Total 51 (PhD-Regular: 43, PhD- Part Time: 7, PhD - External: 1)

Head of the Department : Dr. Kamal Kumar Choudhary

No. of faculty members : 13

No. of staff members : 02 (Technical Staff: 01, Administrative Staff: 01)

Thrust Area

Banking and Finance, Development Economics, Energy and Environmental Economics, International Economics and Finance, North American Literatures, Gender Studies, Visual Culture Studies, Language and cognition, Theoretical Linguistics, Natural Language Processing, Philosophy of Science, Western Epistemology and Metaphysics. Brand Management, Consumer Behavior, Services marketing, transformative service research, digital marketing strategy. Depression, Aggression, Social Cognition, Cognitive Biases, Emotion Regulation. Sociology of Science and technology, Innovation studies., Urban studies, Film studies, Continental Aesthetics.

No. of Publications : 31

FACULTY MEMBERS

Dr. Amritesh
Assistant Professor
PhD, IIT Kanpur
Transformative Services, Consumer Research, Online Marketing

Dr. Ansu Louis
Assistant Professor
PhD, IIT Kanpur
American Literature, Philosophy and Literature, Literary and Critical Theory, Greek Tragedy, and Visual Culture

Dr. Aparna Nandha
Assistant Professor
PhD, IIT Madras
Literary Historiography Studies, Political Fiction, Postmodern Literature, War Literature, Memory Studies

Dr. Bhavesh Garg
Assistant Professor
PhD, IIT Hyderabad
Open economy macroeconomics, Time series econometrics

Dr. Dibyakusum Ray
Assistant Professor
PhD, English and Foreign Languages University
English Literature, Continental Aesthetics, Hard Sci-fi, Fantasy/Horror Literature, Cultural Politics, Literature in Translation, 'Genre Film'

Dr. Kamal Kumar Choudhary
Assistant Professor
PhD, University of Leipzig, Germany
Psycho/Neurolinguistics, Language and Cognition, Neurocognition/ Neuroscience of Language comprehension

Dr. Parwinder Singh
Assistant Professor
PhD, PGDCP
Counselling, Clinical, Social & Personality Psychology

Dr. Rano Ringo
Associate Professor
PhD, IIT Roorkee
Gender studies, Postcolonial studies, Science Fiction and Fantasy, Canadian Literature

Dr. Samaresh Bardhan
Associate Professor and Head
PhD, Jadavpur University, Kolkata
Financial Markets, Credit Related Issues, Industrial Finance, Development Economics, Applied Econometrics, Climate Economics

Dr. Smruti Ranjan Behera
Associate Professor
PhD, Delhi School of Economics, University of Delhi
Applied Econometrics, Panel Data Econometrics, Industrial Economics, Macroeconomics, and International Economics.

Dr. Somdev Kar
Associate Professor
PhD, University of Tübingen, Germany
Phonetics, Computational Phonology, Optimality Theory, Speech Processing, Natural Language Processing, Morphology

Dr. Sreekumar Jayadevan
Assistant Professor
PhD, University of Hyderabad
Philosophy of Science, Formal Logic, Aesthetics and Philosophy of Design

Dr. Swathi Krishna S.
Assistant Professor
PhD, IIT Hyderabad
Contemporary American Literature, Women's Literature, Road Narratives, Feminist Theory, Gender Studies.

ONGOING ACTIVITIES

Teaching and research activities in the areas of Economics, English Literature, Linguistics, Philosophy, Management, Psychology, and Sociology.

FACILITIES

No. of Labs : 02

RESEARCH LABS

Name of the lab : **Cognitive Lab**
Name of the Faculty In-Charge : **Dr. Kamal Kumar Choudhary**

AWARDS AND HONOURS 2021-22 (FACULTY)

Dr. Dibyakusum Ray. Shastri Conference and Lecture Series Grant (SCLSG). Grant for organizing a lecture/seminar/workshop on 'Mapping transnational Urbanism: Culture, Ethnicity, Heritage and Public Response in an Indian/Canadian Context'. Feb. 2022.

INVITED LECTURES BY FACULTY

1. **Dr. Dibyakusum Ray**
   Lecture: The Atavist Urban: Ray's Filmic Chronology and the Humanist City. National Webinar on Satyajit, Cinema and Modernity.
   Department: Department of English, CMEV and IQAC, Gokhale Memorial Girls' College, Kolkata.
   Date: July 1, 2021.

2. **Dr. Dibyakusum Ray**
   Lecture: Our Brand is Crises: Disreputable Politics and the 80s Popular Films.
   Department: Webinar. Department of English. Deshabandhu Mahavidyalaya, Chittaranjan.
   Date: June 25, 2021.

3. **Dr. Dibyakusum Ray**
   Lecture: The City and the City: Ideology, Modernism, and Urbanity in Indian Literature. Series of Talk.
   Department: School of Languages. KIIT, Bhuwansehwar.
   Date: June 05, 2021.

4. **Dr. Dibyakusum Ray**
   Lecture: Indian Urban Studies: an Evolution. Web Symposium.
   Department: Department of Humanities and Social Sciences, IIT Jodhpur.
   Date: May 31, 2021.

5. **Dr. Dibyakusum Ray**
   Lecture: Film and Urban Politics. Webinar.
   Department: Department of English and Foreign Languages, Sri Sri University, Bhuwaneshwar.
   Date: May 5, 2021.

6. **Dr. Kamal Kumar Choudhary**
   Lecture: Case marking and dialectal variation modulate agreement processing: Evidence from Hindi, Continuing Education Programme On Forensic Linguistics: Language, Law and Society,
   Department: Department of HSS
   Institute: Indian Institute of Technology Patna
   Date: January 22- 28, 2022.

7. **Dr. Kamal Kumar Choudhary**
   Lecture: Language Comprehension: Electrophysiological insights from Indian Languages
   Department: Department of Liberal Art
   Institute: IIT Hyderabad
   Date: October 20, 2021.

8. **Dr. Kamal Kumar Choudhary**
   Lecture: Neurophysiological variation in the processing of gender agreement, The Second South Asian Forum on the Acquisition and Processing of Language (SAFAL)
   Institute: University of Potsdam, Germany (Online Talk, Webinar)
   Date: August 30-31, 2021

9. **Dr. Kamal Kumar Choudhary**
   Lecture: Major challenges for developing a cognitive science programme, Workshop on Innovations in Cognitive Science Curriculum
   Institute: University of Hyderabad
   Date: August 26-27, 2021

10. **Dr. Somdev Kar**
    Lecture: Computational approaches to forensic Linguistics
    Department: Department of HSS
    Institute: Indian Institute of Technology Patna
    Date: January 22-28, 2022

11. **Dr. Somdev Kar**
    Lecture: Research methodology for Language and Linguistics
    Department: Eastern Regional Language Centre, Bhubaneswar
    Institute: Central Institute of Indian Languages (CIIL), Mysuru
    Date: March 21, 2022

12. **Dr. Bhavesh Garg**
    Lecture: Unit root and structural breaks in time series
    Department: Department of Economic Sciences
    Institute: IIT Kanpur
    Date: February 18, 2021

13. **Dr. Bhavesh Garg**
Lecture: Do capital inflows lead to expansionary or contractionary effects? Evidence from Emerging countries
Institute: Institute of Economic Growth, New Delhi
Date: April 8, 2021

14. **Dr. Smruti Ranjan Behera**
Lecture: Invited for a Resource Person in an FDP organized by Venkateswara College (Delhi University) in collaboration with Hansraj College (Delhi University) between 11-18 October. The theme is 'Panel Data and its Application.'
Date: 11- 13 October 2021

15. **Dr. Smruti Ranjan Behera**
Lecture: Invited for a Resource Person to deliver a talk on Panel Data Modelling and Its Application to Empirical Research in Economics in a workshop titled "One Week Workshop on Research Methodology"
Institute: Maulana Azad National Urdu University (MANU)
Date: March 21-27, 2022

16. **Dr. Parwinder Singh**
Lecture: Emotion Regulation and Mental Health
Institute: Guru Kashi University, Talwandi Sabo (Bathinda)
Date: 19-07-2021

17. **Dr. Parwinder Singh**
Lecture: Reinventing Classroom Management: A Psychological Perspective
Institute: Central Institute of Indian Languages, Mysore
Date: 19-08-2021

18. **Dr. Parwinder Singh**
Lecture: Personal Effectiveness
Institute: IIIT Jabalpur
Date: 27-08-2021

19. **Dr. Parwinder Singh**
Lecture: Self-discipline & why do we fail in it
Institute: Shaheed Bhagat Singh State Technical Campus Firozpur (Punjab)
Date: 08-10-2021

20. **Dr. Parwinder Singh**
Lecture: Job insecurity and work engagement in post-COVID-19 lockdown: A Moderated Mediation Model of affective wellbeing, resilience and emotion regulation difficulties: Web Symposium
Institute: Organized by the Department of HSS, IIT Bombay
Date: 05-03-2022

LECTURES BY VISITING EXPERTS

Sr. No.	Name of the experts with affiliation	Topic	Date
1.	Dr. Paroma Sanyal (Indian Institute of Technology Delhi)	"Recent Developments in Optimality Theory: Harmonic Grammar and Harmonic Serialism"	October 5, 2021
2.	Dr. Manish Kumar Asthana (Indian Institute of Technology Roorkee)	"Memory Reconsolidation: Malleable Nature of Memory"	October 12, 2021
3	Dr. Ritesh Jain (Institute of Economics, Academia Sinica	"A Systematic Test of the Independence Axiom Near Certainty"	November 02, 2021
4	Prof. Rukmini Bhaya Nair (Indian Institute of Technology Delhi)	"A Narrative Toolkit for Inquiry into the Human Sciences in the 21st Century"	December 8, 2021
5	Dr. Nishikant Kolge (Centre for the Study of Developing Societies, Delhi)	"Gandhi-Ambedkar Debate: Two Methods of Annihilation of Caste"	February 22, 2022
6	Prof. Narayanan Srinivasan (IIT Kanpur)	"Time Perception and Timing: Hierarchy and Context Effects"	March 8, 2022

ONLINE/OFFLINE PARTICIPATION IN THE CONFERENCES/WORKSHOPS/SEMINARS ABROAD BY THE FACULTY

Sr. No.	Name of the faculty member	Country	Details of Event with date
1.	Dr. Bhavesh Garg	Australia (Online mode)	Journal of Asian Economics Special Issue conference, 16-17 December, 2021
2.	Dr. Bhavesh Garg	Japan (Online mode)	ADBI-APAEA Central Bank Conference, 24-26 November, 2021
3.	Dr. Bhavesh Garg	Indonesia (Online mode)	15th BMEB International Conference
4.	Dr. Amritesh	Seattle, USA (Online)	ACR Conference 2021 - Association for Consumer Research, Oct. 28-30, 2021
5.	Dr. Samaresh Bardhan	Regensburg,Germany (online)	16th European Association for comparative Economic Studies Conference, September 13-17, 2021
6.	Dr. Samaresh Bardhan	Berlin, Germany (online)	26th Annual Conference of the European Association of Environmental and Resource Economists (EAERE), June 23-25, 2021.

ONLINE/OFFLINE PARTICIPATION IN THE CONFERENCES/WORKSHOPS/SEMINARS ABROAD BY THE STUDENTS

Sr. No.	Name of the Student	Country	Details of Event with date
1.	Panika Jain	Technische Universität and Humboldt-Universität Berlin,Germany (online mode)	June 23-25,2021 26th Annual Conference of the European Association of Environmental and Resource Economist
2.	Panika Jain	Leibniz Institute for East and Southeast European Studies, Germany (online mode)	September 13-17,2021 16th European Association for comparative Economic Studies Conference
3	Sanra R	London (Online Mode)	International Conference on Childhood Studies conducted by London Centre for Interdisciplinary Research. March 5-6, 2022
4.	Rasleen Kour	France (Online Mode)	Society for Philosophy and Technology 2021 - Technological Imaginaries, June 28-30, 2021
5.	Rasleen Kour	Germany (Online Mode)	IAPh 2021 Defining the Future – Rethinking the Past, organized by Center for the History of Women Philosophers and Scientists at Paderborn University, Germany. July 18-21, 2021
6.	Pooja R	Jointly organised by Ryerson University (Canada), The Glasgow School of Art (Scotland), University of Sao Paulo (Brazil), The University of Texas at Dallas (USA) (virtual)	August 5-7, 2021 Interactive Film and Media Conference 2021: New Narratives, Racialization, Global Crises, and Social Engagement
7.	Nagendra S M	USA (online)	29th July – 4th August 2021 Is Sustainability a Journey or a Destination and Why It Matters for Theory and Practice - PDW -81st Annual Meeting of the Academy of Management 2021: Bringing the Manager Back in the Management.
8.	Nagendra S M	Scotland, UK(online)	5th – 7th July 2021 Academy of Marketing 2021 Annual Conference: Reframing Marketing Priorities.
9.	Nagendra S M	USA(online)	4-6 August 2021 AMA Summer Academic Conference, virtual, American Marketing Association.
10.	Nagendra S M	Australia(online)	27th – 28th November 2021 (Poster Presentation) ANZMAC 2021: Something Different.
11.	Rakesh Kumar Pankaj	Indiana University, USA	April 16-17, 2021, 18th Annual Interdisciplinary Conference Program on "How To Do Things with Worlds".
12.	Sharmistha Sarkar	Central Institute of Indian Languages (CIIL), Mysuru (Online mode)	December 21-23, 2021 43rd International Conference of the Linguistic Society of India (ICOLSI-43)
13.	Sumit Saxena	Online Mode	July, 5-7' 2021; Academy of Marketing 2021 Annual Conference: Reframing Marketing Priorities
14.	Sumit Saxena	USA, Seattle (Online)	Oct. 28-30, 2021 ACR Conference 2021 - Association for Consumer Research ACR (virtual)

MAJOR RESEARCH PROJECTS (ONGOING/COMPLETED)

Sr. No.	Funding Agency	Name of Faculty Member	Title of Project	Total Sanctioned Amount	Project Status
1	ICSSR, New Delhi	Dr. Samaresh Bardhan	Growth and Convergence in Indian States: Implications for Credit Spillovers and Social Banking" (Under the scheme of Impactful Research on Social Sciences (IMPRESS)	Rs. 8,40000	Completed (July 2021)
2	Swedish Research Council, Sweden	Dr. Samaresh Bardhan (Indian PI)	Stubble Burning: Health impacts (Quality of Life), cost and social perception - an explorative study for prevention" under the scheme of 'Network Grant' of the Swedish Research Council (SRC)	746 000 SEK (= 63,00, 000 INR, approximately)	Ongoing (started in January 2022)
3	ICSSR, New Delhi	Dr. Smruti Ranjan Behera (PI)	Foreign Direct Investment and Innovative Performance of Local Firms: Evidence across Indian Manufacturing Industries	Rs. 7,50,000/-	Completed
4.	ICMR, New Delhi	Dr. Parwinder Singh (PI)	Health-Risk Behaviours among adolescents: Role of difficulties in emotion regulation, parenting style and personality characteristics	Rs. 14,58,300/-)	Report Submitted in Feb 2022
5.	MISTI (MIT International Science and Technology Initiative) Global Seed Funds	Dr. Parwinder Singh (Indian PI)	A Checklist-based Advisory to Minimize the Cost and Duration of Worse-before-better in Transitioning from Chemical to Organic Smallholder Farming	$14,475	Ongoing
6.	Swedish Research Council, Sweden	Dr. Parwinder Singh (Indian co - investigator)	Stubble Burning: Health impacts (Quality of Life), cost and social perception - an explorative study for prevention" under the scheme of 'Network Grant' of the Swedish Research Council (SRC)	746 000 SEK (= 63,00, 000 INR, approximately)	Ongoing (started in January 2022)
7.	Indian National Emergency through Digital Humanities 2.0. SPARC Project.	Dr. Dibyakusum Ray (Indian PI)	"Offering Provocations, Surfacing Evidence": The Archiving of Cine-Politics	[Rs. 55,00,465.00]	Ongoing

DEPARTMENT OF MATHEMATICS

Programs offered	:	B.Tech., M.Sc. and PhD
No. of Students	:	B.Tech.: 88 [23 (2019 Batch) +33 (2020 Batch) + 32 (2021 Batch)]
		M. Sc.: 43 [20 (2020 Batch) + 23 (2021 Batch)]
		PhD: 49 [47 (Regular) + 02 (Part-time)]
Head of the Department	:	Dr. Arvind Kumar Gupta
No. of faculty members	:	16
No. of staff members	:	02
		Technical Staff : 01
		Administrative Staff : 01
Thrust Area	:	Analysis and Algebra, Probability and Statistics, Modeling and Simulation, Theoretical Computer Science
No. of Publications	:	51

FACULTY MEMBERS

Dr. Arti Pandey
Assistant Professor
PhD: Indian Institute of Technology Delhi
Graph Theory, Algorithms, Optimization.

Dr. Arun Kumar
Assistant Professor
PhD: Indian Institute of Technology Bombay
Subordinated Stochastic Processes, Financial Mathematics, Statistics, and Financial Time-Series Modeling

Dr. Arvind Kumar Gupta
Associate Professor
PhD: Indian Institute of Technology, Roorkee
Mathematical modelling of traffic flow, Cellular Automata

Dr. Balesh Kumar
Assistant Professor
PhD: Harish-Chandra Research Institute, Allahabad
Number Theory, Analytic and Arithmetic aspects of Automorphic forms

Dr. Bidhan Chandra Sardar
Assistant Professor
PhD: Indian Institute of Science, Bangalore
Homogenization and Optimal control of PDE

Dr. G Sankara Raju Kosuru
Assistant Professor
PhD: Indian Institute of Technology, Madras
Functional analysis, Operator theory, Matrix Analysis

Prof. Jitendra Kumar
Professor
PhD: Otto-von-Guericke University Magdeburg, Germany
Research Interest: Modelling and simulation of population balances in particle technology, Mathematical analysis of solutions of population balances, Inverse problems in population balances, Discrete element method simulations

Dr. Kaushik Mondal
Assistant Professor
PhD: Indian Institute of Technology Guwahati
Networks Algorithms, Distributed Algorithms for Swarm Robots, Graph Algorithms

Dr. Manju Khan
Associate Professor
PhD: Indian Institute of Technology Delhi
Algebra

Prof. Manoranjan Mishra
Associate Professor
PhD: Indian Institute of Science, Bangalore
Fluid dynamics, Scientific computing

Dr. M. Prabhakar
Associate Professor
PhD: Indian Institute of Technology Delhi
Low-dimensional Topology

Dr. Partha Sharathi Dutta
Associate Professor
PhD: Indian Institute of Technology Kharagpur
Nonlinear Dynamics, Mathematical Biology, Theoretical Ecology

Dr. A. Sairam Kaliraj
Assistant Professor
PhD: Indian Institute of Technology Madras
Harmonic mappings in the plane, Function spaces on the unit ball in C

Dr. Santanu Sarkar
Assistant Professor
PhD: Indian Institute of Science, Bangalores
Operator Theory, Functional Analysis

Dr. S. C. Martha
Associate Professor
PhD: Indian Institute of Technology Guwahati
Mathematical modelling on water waves phenomenon, integral equations

Dr. Tapas Chatterjee
Assistant Professor
PhD: The Institute of Mathematical Sciences, Chennai
Number Theory, Transcendence Theory, Special values of L-functions

ONGOING ACTIVITIES

- Department seminars by Experts
- Department Research Day: Cynosure (Annual)
- Conferences and workshops
- Students seminar series
- Alumni Talks
- Student Internship
- Faculty Internship

FACILITIES

No. of Labs : PG : 0.5
Research : 3.5

Sr. No.	Type of Lab	Name of Lab	Head/ Faculty Incharge of Lab	Name of Equipments (Research Lab)
1.	Research	Math Lab-1	Dr. Sairam Kaliraj	Desktops & MF Printer
2.	Research	Fluid Dynamics Research Lab	Prof. Manoranjan Mishra	Desktops & High Performance Workstation
3.	Research	Math Lab-2	Dr. Sairam Kaliraj	Desktops
4.	Research & M.Sc. Lab	Math Lab-3	Dr. Sairam Kaliraj	Desktops & MF Printer
High End Computational System (Server)				

AWARDS AND HONORS 2021-22 (FACULTY)

S. No.	Name of the faculty member	Details of awards and honors
1.	Dr. Tapas Chatterjee	Chebyshev Grant
2.	Prof. Manoranjan Mishra	Elected Fellow of the National Academy of Science, India (2021) Frontier Award of The Division of Fluid-Particle Processing of the Society of Chemical Engineers of Japan (2021)

AWARDS AND HONORS 2021-22 (STUDENT)

S.No.	Name of the scholar	Details of awards and honors
1.	Swati Garg (PhD Scholar)	Selected for Prime Minister Research Fellowship (December 2020 Cycle)
2.	Mohd Ashraf Bhat (PhD Scholar)	Selected for Prime Minister Research Fellowship (May 2021 Cycle)
3.	Ashiya Kandhway 2020MCB1231 (B. Tech Math & Computing)	Selected for DE SHAW DESIS Ascend Educare Program for a six month mentorship and training Program in DE SHAW India.

CONFERENCES ORGANIZED BY FACULTY MEMBERS

1. An "International Workshop on Domination in Graphs" was organized jointly in online mode by Dr. Arti Pandey and Dr. Shweta Jain during November 14-16, 2021.

2. Dr. Arvind Kumar Gupta has chaired a session in the 2nd International Conference on Functional Materials and Simulation Techniques (ICFMST-2022) on January 10, 2022 at Chandigarh University in an online mode.

INVITED LECTURES BY FACULTY

1) Name of the Faculty: Dr. Tapas Chatterjee
Lecture: Life and Mathematical Legacy of Srinivasa Ramanujan on National Mathematics Day
Department of Mathematics and Statistics
Institute: Central University of Punjab
Date: November 22, 2021

2) Name of the Faculty: Dr. Tapas Chatterjee
Lecture: Some generalizations of Euler constant and their applications in Symposium on Number Theory
Department of Mathematics
Institute: IISER Pune
Date: July 14, 2021

3) Name of the Faculty: Dr. Bidhan Chandra Sardar
Lecture: Homogenization of optimal control problem governed by Stokes system
Departament of Matematics
Institute: Universidad de Concepción, Chile
Date: March 30, 2022

4) Name of the Faculty: Dr. Bidhan Chandra Sardar
Lecture: Asymptotic analysis of optimal control problem governed by Stokes system
Department of Mathematics
Institute: Jointly by: Central University of Tamil Nadu, Central University of Kerala & Periyar University
Date: February 26, 2022

5) Name of the Faculty: Dr. Bidhan Chandra Sardar
Lecture: Differential Equations and Multivariable Calculus
Department of Mathematics
Institute: Bankura Christian College, Bankura
Date: March 3-5, 2022

6) Name of the Faculty: Dr. G. S. Raju
Lecture: A Geometric View of Hahn-Banach Extension Theorem, Workshop on Functional Analysis and Applications (WFAA-22)
Institute: IIIT Allahabad
Date: January 2022

7) Name of the Faculty: Dr. G. S. Raju
Lecture: Decreasing Rearrangements on Certain Spaces with Applications, at International conference on recent advances in mathematics and applications
Institute: Andhra University
Date: December 2021

8) Name of the Faculty: Dr. G. S. Raju
Lecture: On the Existence of Best Proximity Points with Applications, E-Sttp on Algebra and Analysis 2021
Department of Mathematics
Institute: SRM Institute of Science & Technology, Kattankulathur, Tamil Nadu
Date: December 2021

9) Name of the Faculty: Prof. Manoranjan Mishra
Lecture: Chemo-Hydrodynamic Instability of Miscible Fluids in Porous Media Flows
Department/conference: Mathematics (in conference Recent Development in Mathematical Modeling in Engineering Sciences during December 27-31, 2021)
Institute: NIT Uttarakhand
Date: December 30, 2021

10) Name of the Faculty: Prof. Manoranjan Mishra
Lecture: Reaction induced instability patterns in a porous media flow
Department/conference: 48th Annual Conference of Odisha Mathematical Society
Institute: Institute of Mathematics and Application, Bhubaneswar
Date: April 10-11, 2021

11) Name of the Faculty: Dr. Balesh Kumar
Lecture: Modular functions on the complex upper half plane and 3-dimensional hyperbolic spaces
Department of Mathematics
Institute: SRM University, Andhra Pradesh, India.
Date: July 31, 2021.

12) Name of the Faculty: Dr. Balesh Kumar
Lecture: Series of 8 lectures on Algebra.
Programme: Annual Foundation Schools sponsored by National Center for Mathematics.
Department of Mathematics.
Institute: Shiv Nadar University, Delhi NCR, India.
Date: December 13-25, 2021.

13) Name of the Faculty: Dr. Arti Pandey
Lecture: On the Complexity of Paired Domination in Graphs
Programme: National Conference on Emerging Trends in Discrete Mathematics
Department of Mathematics
Institute: Hemchandracharya North Gujarat University, Gujarat
Date: 18th February, 2022

14) Name of the Faculty: Dr. Sairam Kaliraj
Lecture: Complex Analysis
Programme: Refresher Course in Mathematics & Statistics
Department of Mathematics
Institute: Bharathiar University, Coimbatore
Date: September 20, 2021

15) Name of the Faculty: Dr. Sairam Kaliraj
Lectures: (1) Complex Line Integrals (2) Cauchy's Theorem & its homotopic version
Programme: Faculty Development Programme in 'Mathematical Analysis'
Department of Mathematics
Institute: Panjab University, Chandigarh
Date: January 06-07, 2022

16) Name of the Faculty: Dr. Arvind Kumar Gupta
Lecture: Modeling of Non-equilibrium Stochastic Transport
Department/Conference: 25th Punjab Science Congress-22 on Future Endeavors of Science & Technology for Sustainable Growth
Institute: Shri Guru Teg Bahadur Khalsa College, Sri Anandpur Sahib, Punjab
Date: February 08, 2022

17) Name of the Faculty: Dr. Arvind Kumar Gupta
Lecture: Recent Developments in Mathematical Sciences and Engineering
Department/programme: Faculty Development Program
Institute: Maharshi Dayanand University, Rohtak
Date: December 22-26, 2021

18) Name of the Faculty: Dr. Arvind Kumar Gupta
Department/programme: 2nd International Conference on Functional Materials and Simulation Techniques (ICFMST-2022)
Institute: Chandigarh University, Punjab
Date: January 11, 2022

19) Name of the Faculty: Dr. Arun Kumar
Lecture: Two sessions on "Machine Learning and Optimization Techniques: Applications to Financial Markets"
Department of Mathematics
Institute: IIT Mandi.
Date: July 12-13, 2021

20) Name of the Faculty: Dr. Arun Kumar
Lecture: Two sessions on Introduction to Data Science and Introductory Statistics
Institute: NIELIT
Date: September 23-24, 2021

21) Name of the Faculty: Dr. Arun Kumar
Lecture: Two Sessions namely Stochastic Calculus I and Stochastic Calculus II
Department of Mathematics
Institute: Panjab University, Chandigarh
Date: January 05, 2022

22) Name of the Faculty: Dr. Arun Kumar
Lecture: Introductory Statistics for Social Scientists
Department of Statistics
Institute: Panjab University, Chandigarh
Date: Mar 30, 2022

23) Name of the Faculty: Dr. M. Prabhakar
Lecture: The Gordian Complex of Theta Curves
Department/Conference: Groups and Quandles in Low-Dimensional Topology Conference
Institute: Tomsk State University, Russia
Date: July 05-08, 2021

24) Name of the Faculty: Dr. M. Prabhakar
Lecture: Brief History of Knot Theory and some of its basic concepts
Department/Programme: NASI-TMC Summer School
Institute: Central University Punjab, Bathinda
Date: July 05-24, 2021

25) Name of the Faculty: Dr. M. Prabhakar
Lecture: Hardest Math Problems That Remain Unsolved: The Unknotting Problem
Institute: Lovely Professional University, Jalandhar, Punjab
Date: December 06, 2021

26) Name of the Faculty: Dr. M. Prabhakar
Lecture: History of Knot Theory
Department/Conference: 4th International Conference on Recent Advances in Mathematical Sciences and Applications (RAMSA-21)
Date: December 21-24, 2021

27) Name of the Faculty: Dr. S. C. Martha
Lecture: Mathematical Techniques for Solving Some Linear and Nonlinear Problems of Fluid Dynamics
Conference Name: International Webinar on Contemporary Problems on Mechanics and Vibrations (CPMV-2021)
Department of Mathematics
Institute: BITS-Pilani, Hyderabad Campus
Date: May 20-22, 2021

28) Name of the Faculty: Dr. S. C. Martha
Lecture: Modelling, Differential Equations and its Engineering Application
Conference Name: Two Days Workshop on Applications of Mathematics.
Department of Mathematics
Institute: J.C. Bose University of Science and Technology, YMCA, Faridabad
Date: August 09-10, 2021

29) Name of the Faculty: Dr. S. C. Martha
Lecture: Modelling, Differential Equations and Applications
Conference Name: Induction/Orientation Program
Department of Mathematics
Institute: University Institute of Sciences, Chandigarh University, Mohali
Date: August 20, 2021- September 02, 2021

30) Name of the Faculty: Dr. S. C. Martha
Lecture: Integral Equation Techniques for solving Fluid Dynamics Problems
Conference Name: International Workshop on Numerical and Analytical Techniques in Engineering Problems (IWNATEP - 2022)
Department of Mathematics
Institute: SRM IST, Chennai campus
Date: January 19-21, 2022

LECTURES BY VISITING EXPERTS

Sr. No.	Name of the experts with affiliation	Topic	Date
1.	Dr. Prashant Singh, Postdoc fellow at the Department of Mathematics and Statistics, UiT: The Arctic University of Norway.	Point-line incidence on Grassmannians and majority logic decoding of Grassmann codes	04 June 2021
2.	Prof. B. V. Rajarama Bhat, ISI Bangalore.	Invariants in Mathematics.	21 December 2021
3.	Prof. Saket Saurabh, IMSc Chennai.	Two Families Theorem in Graph Theory and Combinatorics.	21 December 2021
4.	Prof. Eknath Ghate, TIFR Mumbai.	The Tau of Ramanujan.	22 December 2021
5.	Prof. G. Ramesh, Professor, Department of Mathematics, IIT Hyderabad	On Operators Attaining Norm on Every Reducing Subspace	24 February 2022
6.	Dr. Muslim Malik, School of Basic Sciences, IIT Mandi.	Differential Equations on Time Scales	24 March 2022

VISITS ABROAD BY THE STUDENTS (CONFERENCES/ WORKSHOPS ATTENDED VIRTUALLY)

Sr. No.	Name of the Student	Country	Detail of visit with date
1.	Priya Verma	Belgium	Oral presentation at Solvay Workshop on 'Nonlinear Phenomena and Complex Systems' in memory of Prof. Grégoire Nicolis, June 14-16, 2021.
2.	Priya Verma	Japan	Oral presentation at ICFD, Sendai, Miyagi, October 27-29, 2021.
3.	Priya Verma	United States	Oral presentation at 74th Annual Meeting of the APS Division of Fluid Dynamics' held at Phoenix Convention Center - Phoenix, Arizona on November 21-23, 2021.
4.	Priya Verma	United States	Oral presentation at AGU Fall Meeting 2021' held at New - Orleans, LA on December 13-17, 2021.
5.	Sada Nand	Italy	Oral presentation at ICTAM 2020+1 Milan conference, from August 22- 27, 2021.
6.	Sada Nand	United States	Oral presentation at 74th Annual Meeting of the APS Division of Fluid Dynamics' held at Phoenix Convention Center - Phoenix, Arizona on November 21-23, 2021.
7.	Sada Nand	United States	Poster presentation at AGU Fall Meeting 2021' held at New - Orleans, LA on December 13-17, 2021.
8.	Surya Narayan Maharana	Belgium	Contributed talk at Solvay Workshop on 'Nonlinear Phenomena and Complex Systems' in memory of Prof. Grégoire Nicolis, June 14-16, 2021.
9.	Surya Narayan Maharana	Japan	Contributed talk at ICFD, Sendai, Miyagi, October 27-29, 2021.
10.	Surya Narayan Maharana	United States	Contributed talk at 74th Annual Meeting of the APS Division of Fluid Dynamics' held at Phoenix Convention Center - Phoenix, Arizona on November 21-23, 2021.

11.	Bipasha Pal	France	Presented a poster titled “Effect of interactions in a system with quenched hopping rates and periodic boundaries” in the Conference “NSCCT20 International joint meeting on Recent Advances in Non - Linear Physics” during May 25-27, 2021 in Marseille, France.
12.	Bipasha Pal	Switzerland	Presented a poster titled “Effect of reservoir crowds on a totally asymmetric exclusion process with langmuir kinetics” in the conference “XX International Congress on Mathematical Physics” during August 02-07, 2021 in Geneva, Switzerland.

MAJOR RESEARCH PROJECTS
ONGOING RESEARCH PROJECTS:

S. No.	Name of the faculty member	Title of the Project	Funding Agency	Sanctioned amount	Duration Period (for eg. 2021-24)
1.	Dr. Tapas Chatterjee	A study on generalizations of Euler's constant, gamma function and their p-adic counterparts	CRG-SERB	20,09,766	2020-2023
2.	Dr. Tapas Chatterjee	Bounded Gaps between primes over number fields	MATRICS-SERB	6,60,000	2019-2022
3.	Dr. Tapas Chatterjee	Study of non-vanishing and transcendence result of some L-functions	NBHM-DAE	15,06,566	2019-2022
4.	Dr. Kaushik Mondal	Efficient Distributed Computation of Independent Sets and Dominating Sets in Geometric Graphs	SERB-CRG	21,49,312	2021-2024
5.	Prof. Manoranjan Mishra	Computational study of miscible chemo-hydrodynamic instability in a channel and porous medium	SERB-CRG	16,16,032	2021-2024
6.	Prof. Manoranjan Mishra	Linear and non-linear bulk rheology of cell monolayer. (PI: Dr. V. Mehendia)	SERB-CRG	31,53,620	2021-2024
7.	Dr. Balesh Kumar	On the behavior of Fourier coefficients of automorphic forms and Diophantine approximations	SERB-SRG	12,68,872	2022-2024
8.	Dr. Sairam Kaliraj	GeometricFunction theory and its applications to operator valued functions	ISIRD	19,97,480	2019-2022
9.	Dr. Arvind Kumar Gupta	Investigation of Mechanisms of Biological Transport Phenomena on Cellular Network Utilizing Analytical and Computational Tools	SERB-CRG	22,00,000	2020-2023

10.	Dr. Arvind Kumar Gupta	Understanding disordered traffic dynamics on Indian roads: Modeling & simulation	SERB-MTR	6,60,000	2020-2023
11.	Dr. Santanu Sarkar	Nearly Invariant Subspaces and unconditional basis in de Branges spaces of vector valued functions and an Invariant of finite dimensional operator spaces	SERB-SRG	3,74,000	2020-2022
12.	Dr. Santanu Sarkar	Some Problems in Multivariable Operator Theory	DST-INSPIRE	35,00,000	2016-2022
13.	Dr. Arun Kumar	Potential Theory, Ergodicity and Infinite Divisibility for Subordinated Stochastic processes"	SERB-MTR	6,60,000	2020-2023
14.	Dr. M. Prabhakar	Polynomial and Numerical Invariants of Spatial Theta curves	SERB-MTR	6,60,000	2022-2025
15.	Dr. Partha S Dutta	Abrupt Transitions and its Indicators in Living Systems	SERB-CRG	7,15,000	2019-2022
16.	Dr. Partha S Dutta	Collective Dynamics in Adaptive Ecological Networks	SERB-MTR	6,60,000	2022-2025

COMPLETED RESEARCH PROJECTS:

Name of Faculty Member	Title of Project	Funding Agency	Sanctioned Amount	Starting Year	Closing Year
Dr. M. Khan	Normal complement in the unit group and its structure	NBHM	Rs. 9,89,500	2014	2017
Dr. P. S. Dutta	Non-equilibrium Dynamics & Predictability of Plankton Communities in a Seasonal Environment	DST & DAAD	Rs. 7,00,000	2014	2017
Dr.Tapas Chatterjee	Transcendental Numbers and special Values of Dirichlet series	GIAN project Funded by MHRD	Rs.5,44,000	2017	2017
Dr. Arvind. K. Gupta	Mathematical modeling of two-channel exclusion processes relevant to real world: Analysis and Simulation	SERB-DST	Rs.10,92,000	2014	2017

Dr. S. C. Martha	Surface wave interaction with irregular bottom topography and barriers	SERB-DST	Rs.13,32,000	2014	2017
Dr. P. S. Dutta	Dispersal Synchrony and Stability in Population Dynamics	DST-SERB	Rs. 16,00,000	2015	2018
Dr. Manoranjan Mishra	Study of the Transient Flow of Hydrogen-Natural Gas Mixture in Pipeline Networks	NAM S&T Centre Research Training Fellowship	Rs. 3,00,000	2015	2018
Dr. Tapas Chatterjee	ISIRD Research Grant	IIT Ropar	Rs 2,30,000	2015	2018
Dr. G. S. Raju	On the existence of best proximity pairs and generalized equilibrium for constrained games	DST (SERB)	Rs 15,07,000	2016	2019
Dr. Arvind K.Gupta	Motor Proteins and Molecular Motors" under Global Initiative of Academic Networks (GIAN) scheme of MHRD (Foreign Expert: Anatoly B. Kolomeisky, Rice University USA).	GIAN project	Rs 5,44,000	2019	2019
Dr. Arun Kumar (International Team Member)	Anomalous Diffusion Processes and Their Applications to Real Data Modelling	National Science Center Poland	PLN 4,85,000 (INR 77 Lakh)	2017	2020
Prof. Manoranjan Mishra	Modeling and simulation of hydrodynamic instability with chemical reaction	SERB-MTR	7,00,000	2018	2021
Dr. Bidhan Chandra Sardar	SRG Research Grant	SERB-SRG	2,31,000	2019	2021

DEPARTMENT OF MECHANICAL ENGINEERING

Programs offered :

1. B.Tech.
2. M.Tech.
   in following three specializations:
   a). Mechanics & Design
   b). Manufacturing Engineering
   c). Thermal & Fluids Engineering.
3. PhD
   in following three specializations:
   a). Mechanics & Design
   b). Manufacturing Engineering
   c). Thermal & Fluids Engineering.

No. of Students :

B.Tech.	:	309
M.Tech.	:	86
PhD	:	136

Head of the Department : Dr. Prabhat K Agnihotri

No. of faculty members : 24

No. of staff members : 10

Thrust Areas :

1. Intelligent Mechanical Systems
2. Additive Manufacturing
3. BioMechanical Engineering
4. Energy Efficiency and Sustainability
5. Micro/Nano Engineered Systems

No. of Publications : 114

FACULTY MEMBERS

Dr. Anshu Dhar Jayal
PhD (University of Utah)
Sustainable manufacturing technologies

Dr. Anupam Agrawal
PhD (Indian Institute of Technology Kanpur)
Analysis of Metal Forming Processes, Dieless forming, Micro-Nano Machining, Additive Manufacturing

Dr. Chandrakant Kumar Nirala
Ph.D (IIT Patna)
Conventional and non-conventional micro-machining, sensors based tool condition monitoring, data acquisition and virtual instrumentation, ultrasonic vibration-assisted machining, fusion and solid-state joining

Dr. Chander Shekhar Sharma
Ph.D (ETH Zurich)
Phase Change Fluid Dynamics and Thermal Transport, Surface Micro and Nano Engineering for Optimal Phase Change, Robust and Scalable interfaces, Exergetically Efficient Systems, Electronic Thermal Management, Single and Multiphase Convective Cooling, Computational Fluid Dynamics, Experimental Techniques for Heat Transfer and Fluid Phenomena.

Dr. Devranjan Samanta
PhD (Saarbrucken University and Max Planck Institute for dynamics and self Organisation, Goettingen, Germany)
Transition to turbulence, Non-Newtonian flows, Biological flows, heat transfer

Dr. Dhiraj K. Mahajan
PhD (Indian Institute of Technology Kanpur)
Simulation and experiment assisted development of high performance elastomeric and polymeric materials, mechanics and physics of polymers, adhesion at polymer-solid interfaces, fatigue failure of polycrystalline metals under aggressive environment with immediate focus on hydrogen based degradation of steels

Dr. Ekta Singla
(Head of the Department)
PhD (Indian Institute of Technology Kanpur)
Robotics, redundant manipulators, robot path planning,collision detection, obstacle avoidance, applied optimization methods - classical and evolutionary, optimal mechanical design

Prof. Harpreet Singh
PhD (Indian Institute of Technology Roorkee)
Surface Engineering-Degradation of Materials, High Temperature Corrosion and its Protection, Slurry Erosion of Hydraulic Turbines and its Control, Biomedical Coatings

Dr. Himanshu Tyagi
PhD (Arizona State University, USA)
Thermo-fluids, Bio-heat Transfer, Nanofluids, Nanoscale heat transfer, Clean and Sustainable Energy, Solar Energy, Water Desalination & Purification, Energy Storage, Ignition Properties of Fuels Containing Nano-Particles, Thermal Management and Packaging of Micro-Electronic Devices.

Dr. Jitendra Prasad
PhD (Michigan State University, USA)
Biomechanics, Bone Fracture Healing, Mechanotransduction, Structural and Multidisciplinary Design Optimization, Computational Mechanics, and Agent Based Modelling.

Dr. Lipika Kabiraj
PhD (Indian Institute of Technology Madras)
Thermoacoustics, applied nonlinear dynamics, gas turbine engines (combustion instability, flame blowout and flashback), combustion dynamics, combustion noise, Chaos

Dr. Manish Agrawal
PhD (Indian Institute of Science Bangalore, India)
Finite Element Analysis, Continuum Mechanics, Topology Optimization, Contact mechanics, Multiphysics Simulations

Dr. Navin Kumar
PhD (Indian Institute of Technology Delhi)
Biomechanics, Biological and Bio materials characterization, Finite element modeling (FEM), Biomedical Instrumentation and Bio-implants, Active and passive vibration and Noise control, Fault diagnostics and condition-monitoring.

Dr. Navaneeth K Marath
PhD in Engineering Mechanics, JNCASR Bangalore, 2010-2017
Postdoctoral Research Associate, NORDITA Stockholm, 2017-2020
Microhydrodynamics, Geophysical Fluid Dynamics, Particles in Turbulent Flows.

Dr. Prabir Sarkar
PhD (Indian Institute of Science, Bangalore)
Product design, Sustainability and eco design, Creativity and innovation, Engineering design and industrial design, Manufacturing

Dr. Prabhat K. Agnihotri
PhDIndian Institute of Technology Kanpur
Processing, characterization and modelling of nanomaterials, multiscale hybrid composites, fracture mechanics, discrete dislocation plasticity, and molecular dynamics simulations.

Dr. Rakesh K Maurya
PhD (Indian Institute of Technology Kanpur)
HCCI and Low Temperature Combustion for IC Engines, Alternative fuels, Engine Emission Control, Engine management systems

Dr. Ramjee Repaka
PhD (Indian Institute of Technology Kharagpur)
Bioheat Transfer, Cancer Diagnosis and Therapy, Heat Transfer, Thermal Engineering, High performance Buildings, Refrigeration, Air Conditioning and Ventilation.

Dr. Ranjan Das
PhD(Indian Institute of Technology Guwahati)
Heat and Mass Transfer, Optimization of Thermal Systems, Renewable Energy

Dr. Ravi Kant
PhD (Indian Institute of Technology Guwahati)
Laser Forming, Laser Transmission Welding, Laser Machining, Laser Assisted Manufacturing, Adhesive Joining, Ultra-high Speed Machining, Ultrasonic Vibration Assisted Machining, Process Modeling and Optimization of Manufacturing Processes, Finite Element Simulations

Dr. Sachin Kumar
PhD(Indian Institute of Technology Roorkee)
Research Interests: Finite Element Method, Extended Finite Element Method, Meshfree Methods, Fracture and Damage Mechanics

Dr. Samir Chandra Roy
PhD(University Grenoble Alpes, France)
Experimental and Numerical studies of deformation and damage of materials at elevated temperature, Mechanical and microstructural characterization of material, Fatigue-Creep-Fracture.Experimental and numerical studies of cavitation pitting/erosion,Instrumented Indentation Testing (IIT) and materials evaluation, High rate deformation of material and characterization, Finite Element Analysis.

Dr. Satwinder Jit Singh
PhD (Indian Institute of Science, Bangalore)
Research Interests: Applied Mechanics, Numerical Methods

Dr. Srikant Sekhar Padhee
PhD (Department of Aerospace Engineering, IISc, Bangalore)
Variational Asymptotic Method, Multifunctional and Functionally Graded Composites

ACTIVITIES

1. The ME Department has organized an online lecture series in which eminent researchers were invited to deliver lecture during August 13 to September 20, 2021.

INVITED LECTURES BY FACULTY

S/N	Name	Lecture topic	Host Institute	Date
1	Dr. Anupam Agrawal	Development, Synthesis and Fabrication of Advanced Materials and Design for Biomedical Applications	IIT Tirupati	14 December 2021
		Powder Bed Fusion Based Additive Manufacturing Processes: Materials, Mechanism, And Parameters	SLIET Longowal	14 December 2021
		Evolution of Additive Manufacturing with Emphasis on Powder Bed Fusion Based Processes	PEC Chandigarh	28 Feburary 2022

2	Dr. Chander S Sharma	Water condensation at small length scales Department: Department of Mechanical Engineering	NITK Surathkal	30 December 2021
3	Prof. Harpreet Singh	Perspectives on Cold Spray: Introduction, Evolution and Future at “Thermal Spray Week”.	Digitalised Surface Manufacturing Network, UK	22 March 2022
4	Prof. Harpreet Singh	Milestones in Science and Technology: Major Achievements at Science Week Festival-Vigyan Sarvatra Pujyate.	Punjabi University Patiala, India	24 February 2022
5	Prof. Harpreet Singh	Cold Spray and its Applications for Additive Manufacturing at Two-day Seminar on “Additive and Subtractive Manufacturing for Advanced Engineering Applications: Challenges and Future Aspects	IIT Roorkee, India	24 February 2022
6	Prof. Harpreet Singh	Cold Spray and its Applications at AICTE-ISTE sponsored FDP program "Advancements in Materials & Manufacturing Technologies".	MIMT Malout, India	12 January 2022
7	Prof. Harpreet Singh	Cold Spray and its Applications at AICTE-ISTE Sponsored Induction/Refresher program on “Advances in Materials Processes and Characterization”.	DAVIET Jalandhar, India	10 January 2022
8	Prof. Harpreet Singh	Cold Spray and its Applications for Additive Manufacturing at AICTE/ATAL-FDP on “Manufacturing and Characterization of 3D Printed Materials (MC3DPM-2021)”.	SLIET Longowal, India	16 December 2021
9	Prof. Harpreet Singh	Cold Spray and its Applications for Additive Manufacturing at One-Day National Seminar on “Additive Manufacturing: Trends and Opportunities”.	PEC Chandigarh, India	16 December 2021
10	Prof. Harpreet Singh	Development of Innovative Waste Utilization Methodologies for Material Removal Processes at 9th International Conference on “Advancements & Futuristic Trends in Mechanical & Materials Engineering (AFTMME-20)”	Online Conference (IIT Ropar, India)	9-11 December 2021
11	Prof. Harpreet Singh	Surface Degradation Resistant Coatings for Boilers and Hydro Turbines	TSI Technical Education Webinar series, Tribology Society of India (TSI)	27 October 2021
12	Prof. Harpreet Singh	Strategies to Control Erosion Losses in Hydraulic Machineries at Functional Development Program for SJVN Limited	IIT Ropar, India	29 September 2021
13	Prof. Harpreet Singh	Development of Innovative Waste Utilization Methodologies for Material Removal Processes at AICTE/ATAL-FDP on "Novel Materials" during.	AKGEC, Ghaziabad, India	04 October 2021
14	Prof. Harpreet Singh	Writing a Research Proposal and Executing the Project at AICTE/ATAL FDP on “Research Methodology”.	Online Lecture (MRSPTU Bathinda, India)	24 August 2021
15	Prof. Harpreet Singh	EPR & Policy Instruments for E-Waste Management at Program IMC on “Transition from Single Use Plastic”.	Online Lecture (MSME DI Ludhiana, India)	29 July 2021

16	Prof. Harpreet Singh	EPR & Policy Instruments for E-Waste Management at Program IMC on “Transition from Single Use Plastic”.	Online Lecture (MSME DI Ludhiana, India)	27 July 2021
17	Prof. Harpreet Singh	Use of Scanning Electron Microscopy to Characterize Thick Copper Coatings Deposited on SS316L Steel at STC on “4D Printing for Smart Manufacturing”.	Online Lecture (NITTTR Chandigarh, India)	02 July 2021
18	Prof. Harpreet Singh	The Industry 4.0 Revolution Paradigm and Additive Manufacturing at FDP on “Advanced Materials & Manufacturing for Industry 4.0”.	Online Lecture (GNA University Phagwara, India)	26 June 2021
19	Prof. Harpreet Singh	Development of Innovative Waste Utilization Methodologies for Material Removal Processes at AICTE/ISTE STC on “Advance Materials and Processes for Sustainable intelligent Manufacturing (Phase - III)”.	Online Lecture (DAVIET Jalandar, India)	09 June 2021
20	Prof. Harpreet Singh	Development of Innovative Waste Utilization Methodologies for Material Removal Processes at Hands-on Workshop on “Sophisticated Research Equipment-2021”.	Online Lecture (Chandigarh University Mohali, India)	10 June 2021
21	Dr. Manish Agrawal	Invited talk at for a QIP course on Computational Fracture Mechanics	IIT, Bhubaneswar	June 2021
22	Dr. Himanshu Tyagi	Applications of Heat Transfer: Solar Energy and Water Purification', during the department seminar series	Indian Institute of Technology Kanpur	24 January 2021
		Radiative Heat Transfer Applications: Solar Thermal Collector', during the International e-Workshop on Radiation Transport and Applications	Indian Institute of Technology Bhubaneswar	21 January 2022
		Role of Thermal Engineering in Improving Efficiencies of Solar Energy and Water Purification Processes', during the department seminar series	University of Texas at Arlington, Arlington, Texas, USA	10 September 2021
		The Use of Technology in Education: Present Roles and Future Prospects	IIT Ropar	10 August 2021
		Developments in Solar Thermal Engineering', during the Short Term Training Programme (STTP) on Recent Developments in Renewable Energy	Government Engineering College, Bharuch, Gujarat	07 April 2021

23	Dr. Prabir Sarkar	Guest of Speaker: Country's biggest Free Legal Classes for Startup by Smart City Jabalpur, “Legal Pathshala 2022”,.	Smart City Jabalpur	March 2022
		Presented a talk on "Stubble burning issue in India and the development of the SRM machine" in Indo-Taiwan Joint Workshop on Agriculture and Water Resource Management,.	Indo-Taiwan Joint Workshop on Agriculture and Water Resource Management	19 January 2022
		Prime panelists, round table discussion about Intellectual Property Rights and Patents on the occasion of World Intellectual Property Day on.	National Research Development Corporation (NRDC), an enterprise of DSIR, Ministry of Science & Technology, Gov. of India.	26 April 2021

LECTURES BY EXPERTS

S/N	Name	Affiliated Institute/Organization	Purpose/Topic of Talk	Date
1.	Prof. Saptarshi Basu	IISc Bangalore	Multiphase systems: An account of transport processes across multiple spatio-temporal scales	13 August 2021
2	Dr. Rishi Raj	IIT Patna	Decoding the Sound of Boiling for Advance Prediction of Boiling Crisis	2 Feburary 2022
3	Dr. Manjesh K. Singh	IIT Kanpur	Polymers	20 September 2021

MAJOR RESEARCH PROJECTS (ONGOING)

Sr. No.	Funding Agency	Name of the PI	Title of Project	Amount (In Crore Rs.)
1	Industrial Consultancy	Dr. Ramjee Repaka	Structural Audit of Manufacturing Units and Technical Audit of flow meters installed in the manufacturing units in the state of Punjab	0.13
2	Industrial Consultancy	Prof. Harpreet Singh	Cold Spray Coating Service	0.07
3	DRDO-ARMREB	Dr. Prabhat K. Agnihotri	Development of Non-destructive test methodologies to sense and quantify environmental and operational damage in the composite armour panels	0.52

4	DST/TMD/HFC	Dr. Dhiraj Kumar Mahajan	Additive Manufacturing & Machine Learning based Development of Indigenous Hydrogen Fuel Cell Stack	0.74
5	DRDO-ARMREB	Dr. Navin Kumar (Co-PI) and Dr. Nitin Rameshrao (PI from BITS PILANI	Investigation on Dynamic Deformation Behavior of Tungsten Heavy Alloys (WHAs) for Defence Applications	0.25
6	Industrial Consultancy	Dr. Dhiraj Kumar Mahajan	Development of Gas Driven Mini-Turbine for Automotive Applications	0.05
7	Industrial Consultancy (Corporate Social Responsibility Funds (CSR)	Dr. Dhiraj Kumar Mahajan	Negative Pressure Chamber for Isolating Covid 19 Patients	0.08
8	SERB-TARE	Dr. Sahaj Saxena, Thapar Institute of Engineering & Technology, Patiala, Mentor Prof. Navin Kumar	Cyber Security Analysis of Artificial Pancreas Control System	0.10
9	ARDB-DRDO	Dr. Sachin Kumar (PI) and dr. Manish Agrawal (Co-PI)	Development of a Localized Gradient Damage based Extended-FE Model for Fatigue Analysis of Aircraft Components	0.23
10	Industrial Consultancy	Dr. Dhiraj K. Mahajan	Testing and analysis of corrosion testing of stainless-steel medical implants as per ASTM standard F21229-19a	0.01
11	SERB-CRG	Dr. Ekta Singla	Unconventional Architecture Design and Development of Modular Library for Non-Repetitive Robotic Applications	0.36
12	SERB-CRG	Dr. Manish Agrawal	Functionally graded materials: Thermoelastic analysis along with design framework using hybrid elements and deep learning	0.27
		Total		2.82

DEPARTMENT OF METALLURGICAL AND MATERIAL ENGINEERING

Programs offered	:	B.Tech. and PhD
No. of Students	:	B.Tech. : 78
		PhD : 32
Head of the Department	:	Dr. Ravi Mohan Prasad
No. of faculty members	:	07
No. of staff members	:	03
		Technical Staff : 01
		Administrative Staff : 02
Thrust Area	:	Physical Metallurgy, Extractive Metallurgy, Mechanical Metallurgy, Energy and Nanomaterials, and related areas
No. of Publications	:	12

FACULTY MEMBERS

Dr. Abhishek Tiwari
Assistant Professor
PhD, Bhabha Atomic Research Centre
Fracture mechanics, configurational forces, ductile brittle transition, time dependent and large scale plasticity, finite element modelling

Dr. Atharva Poundarik
Assistant Professor
(Joint faculty in Metallurgical and Materials Engineering)
PhD, Rensselaer Polytechnic Institute
Biomaterials, medical devices – design and development; regenerative medicine

Dr. Khushboo Rakha
Assistant Professor
PhD, Deakin University Australia
Advanced High Strength Steels (Nano-structured Bainitic Steels, Ultra Low Alloyed Steels, TWIP Steels and Dual Phase Steels)

Dr. Neha Sardana
Assistant Professor
PhD, IMPRS-MLU, Halle, Germany
Size-Property (electrical, mechanical and optical) relationship of Nanomaterials, Optical Materials (Plasmonic /meta-materials) for sensing applications

Dr. Prince K Singh
Assistant Professor
PhD, IIT Kanpur
Process Metallurgy; Physical and mathematical modelling of steel making processes; Recycling of steel plant's waste material, Ferrous Extractive metallurgy

Dr. Pratik K. Ray
Assistant Professor
PhD, Iowa State University
Interface Dynamics and Energetics of Alloys; High Temperature Materials, High Entropy Alloys, Metallic Glasses; Materials Informatics, Mathematical Modeling

Dr. Ravi Mohan Prasad
Assistant Professor
PhD, Technische Universität Darmstadt, Germany
Polymer-derived Porous Ceramics, Metal Matrix composite, Corrosion and High Temperature Oxidation Resistance Materials, Membranes for Hydrogen Purification, Chemiresistor Gas sensors, Hydrogen Storage Materials, Photocatalysts for Wastewater Decontamination

FACILITIES

No. of Labs	:	UG	:	02
		Research	:	07

AWARDS AND HONOURS 2021-22 (FACULTY)

1. Dr. Neha Sardana has been Awarded the IEI Young Engineers Award 2021-22 under the Metallurgical & Materials Engineering Division, The Institution of Engineers (India), 2022.
2. Dr. Prince kumar Singh has been awarded the Best technical paper award in conference: DuraBL2021.
3. Dr. Pratik Kumar Ray has been honored with the Reviewer appreciation certificate - Transactions of Indian Institute of Metals (June 2021).
4. Dr. Ravi Mohan Prasad has been honored with the Reviewer appreciation certificate in recognition of the valuable contributors as a Reviewer for Journal of Alloys and Compounds in 2021.

AWARDS AND HONOURS 2021-22 (STUDENT)

1. Ms. Jhalak 2020MMZ0010, PhD Scholar has been awarded with the Prime Minister's Research Fellowship (May 2021 cycle).
2. आयुष प्रताप, 2020MMZ0008, PhD Scholar को स्वरचित हिंदी कविता प्रत्योगिता "हिंदी पखवाडा" 2021 , भारतीय प्रोद्योगिकी संस्थान में प्रथम पुरुस्कार मिला।
3. Ayush Pratap, 2020MMZ0008, PhD Scholar won 1st prize (Gold) in IYSC 2022 Weightlifting (83-93 kg category).

INVITED LECTURES BY FACULTY

Name of the Faculty : Dr. Abhishek Tiwari
Lecture: Effect of Material Inhomogeneity on Crack Driving Force under Creep Deformation
Department: School of Advanced Research in Petrochemicals (SARP) - Advanced Research School of Technology & Product Simulation (ARSTPS), Chennai, R&D wing of CIPET
Institute: Central Institute of Petrochemicals Engineering & Technology (CIPET)
Date: 10th March, 2022

Name of the Faculty: Dr. Khushboo Rakha
Lecture: Faculty Development program on “Artificial Intelligence in Industry 4.0”
Department: Department of Mechanical Engineering
Institute: Institute of Engineering and Management (IEM), Kolkata
Date: 18th February, 2022

Name of the Faculty: Dr. Khushboo Rakha
Lecture: DBT Sponsored 2 day Webinar on Dream Dare Do
Department: P.G. Department of Mathematics
Institute: D.A.V. College Jalandhar, Punjab
Date: 29th April, 2021

Name of the Faculty: Dr. Neha Sardana
Lecture: Plasmonics and Metamaterials: Towards futuristic applications
Department: Technical symposium INYAS 7th annual general body meeting
Institute: INYAS
Date: 19th February, 2022

Name of the Faculty: Dr. Neha Sardana
Lecture Nanotechnology: Nature to Applications
Department: Let's Talk Science 2.0, Jigyas
Institute: CSIO-CSIR and INYAS
Date: 21st Jan, 2022

Name of the Faculty: Dr. Neha Sardana
Lecture Metamaterials: Fabrication, Characterization and applications
Department: AICTE-ISTE Sponsored Induction/Refresher program on Advances in Materials Processes and Characterization
Institute: DAV Jalandhar
Date: 07th January, 2022

Name of the Faculty: Dr. Neha Sardana
Lecture: Computational Modeling of Materials
Department: Advancements and Futuristic Trends in Mechanical and Materials Engineering
Institute: IIT Ropar and SOMME
Date: 9th December, 2021

Name of the Faculty: Dr. Neha Sardana
Lecture: Electromagnetic tunable substrates and their applications
Department: 2-Days Online Workshop on Thin Film Technologies for Sensors and Opto-electronic Applications
Institute: Optical Society of America Indian Institute of Information Technology, Allahabad
Date: 18th July, 2021

Name of the Faculty: Dr. Neha Sardana
Lecture: The Raman Effect: Nobel prize to sensing
Institute: DST Rajasthan and INYAS
Date: 19th June, 2021

Name of the Faculty: Dr. Prince Kumar Singh
Lecture: Cracking in strand casting-causes and Remedies
Department: STTP on Aspects of Continuous casting of steel (ACCS-21),
Institute: VNIT Nagpur Maharashtra INDIA
Date: 26th Nov, 2021

Name of the Faculty: Dr. Prince Kumar Singh
Lecture: Role of Modelling in steelmaking: Current insights & Limitations
Department: Materials Science & Metallurgical Engineering
Institute: IIT Bombay
Date: 11th Jan, 2022

Name of the Faculty: Dr. Ravi Mohan Prasad
Lecture: Keynote talk at AFTMME 2021 on "Polymer-Derived Ceramics for Energy and Environmental Applications"
Department: Mechanical Engineering, Metallurgical and Materials Engineering
Institute: Indian Institute of Technology Ropar
Date: 10th December, 2021

Name of the Faculty: Dr. Ravi Mohan Prasad
Lecture: Lecture at QIP short-term course on "Advanced Materials for Environmental Sensors"
Department: Department of Metallurgy Engineering and Materials Science
Institute: Indian Institute of Technology Indore
Date: 11th March, 2022

Name of the Faculty - Dr. Pratik K Ray
Lecture - Disordered Metallic Cocktails
Department - AFTMME 2021
Institute - IIT Ropar
Date - 11th December, 2021

LECTURES BY VISITING EXPERTS

Sr. No.	Name of the experts with affiliation	Topic	Date
1	Dr. K. Radhakrishnan, Chairman ISRO	Advancements and Futuristic Trends in Mechanical and Materials Engineering' AFTMME – 2021	9th December, 2021
2	Prof. Mahesh Somani, Oulu University, Finland	Advancements and Futuristic Trends in Mechanical and Materials Engineering' AFTMME – 2021	9th December, 2021
3	Prof. Rajeev Ahuja, Director, IIT Ropar	Advancements and Futuristic Trends in Mechanical and Materials Engineering' AFTMME – 2021	11th December, 2021
4	Prof. Buta Singh, Vice Chancellor, MRSPTU	Advancements and Futuristic Trends in Mechanical and Materials Engineering' AFTMME – 2021	11th December, 2021

VISITS ABROAD BY THE FACULTY

Sr. No.	Name of the faculty member	Country	Detail of visit with date
1	Dr. Khushboo Rakha	Bangladesh	Department of Materials & Metallurgical Engineering, Bangladesh University of Engineering & Technology, Dhaka Date: December 22, 2021

MAJOR RESEARCH PROJECTS (ONGOING/COMPLETED)

S. No.	NAME OF THE FACULTY	PROJECT TITLE	Funding Agency	(ONGOING/ COMPLETED)
1	Dr. Abhishek Tiwari (PI)	Application of configurational force based concept of material inhomogeneity to enhance crack resistance of materials	DST-SERB-SRG	Ongoing
2	Dr. Atharva Poundarik (PI)	Development and characterization of medical polyurethane materials and dressings	Industry sponsored	Ongoing
3	Dr. Neha Sardana (Co-PI)	Exploring the Shell Proteins of BMCPs as Potential Substrates for Fabrication of Organic-Inorganic Hybrid Nanomaterials	NANOMISSION DST	Completed
4	Dr. Pratik K. Ray (PI)	Designing improved bond coat materials through codoping of reactive elements	DST-SERB-CRG	Ongoing

5	Dr. Ravi Mohan Prasad (PI)	Thermoresistant Polymer-Derived Microporous Ceramic Membranes for Separation of Hydrogen and Carbon Monoxide/Carbon Dioxide in Hydrogen Production,	DST HFC-2018	Ongoing
6	Dr. Ravi Mohan Prasad (PI)	Polymer-Derived Ceramic Membranes for High Temperature Hydrogen Purification	BRNS-DAE YSRA	Ongoing
7	Dr. Ravi Mohan Prasad (Co-PI)	Development of Compressed Hydrogen-Fuel Cell Integrated System Suitable for Light-Duty Vehicles,	DST HFC-2018	Ongoing
8	Dr. Ravi Mohan Prasad (Co-PI)	Design, Development, and Demonstration of Indigenous Hydrogen Storage and Fuel Cell System for Mobile and Stationary Applications of 5 kW Capacity,	IMPRINT (MHRD-MNRE)	Completed
9	Dr. Ravi Mohan Prasad (PI)	Simultaneous Separation and Sensing of Hydrogen and Carbon Monoxide/Carbon Dioxide using Polymer-Derived Ceramics Membranes for Hydrogen Purification	DST-SERB-CRG	Ongoing

SPONSORED BY IIT ROPAR

S. No.	NAME OF THE FACULTY	PROJECT TITLE	Funding Agency	(ONGOING/ COMPLETED)
1	Dr. Abhishek Tiwari	Improved creep-fatigue crack resistant material design using configurational force approach,	ISIRD Phase I, IIT Ropar	Ongoing
2	Dr. Neha Sardana	Optical device prototype for sensing water contamination using mobile phones,	ISIRD Phase I, IIT Ropar	Ongoing
3	Dr. Prince Kumar Singh	Role of ladle shroud designs on hydrodynamic performance of steelmaking tundish system – A numerical study	ISIRD Phase I, IIT Ropar	Ongoing
4	Dr. Pratik K. Ray	Design and Development of Novel High-Temperature Compositionally Complex Alloys	ISIRD Phase II, IIT Ropar	Ongoing

DEPARTMENT OF PHYSICS

Programs offered	:	M.Sc. & PhD.
No. of Students	:	M.Sc. : 48
	:	PhD : 74
Head of the Department	:	Dr. Rakesh Kumar
No. of faculty members	:	18
No. of staff members	:	04
		Technical Staff : 03
		Administrative Staff : 01
Thrust Area	:	

- Condensed Matter
- Gravity and String (Theory)
- Light-Matter Interaction and Quantum Information
- Nuclear Physics

No. of Publications	:	22

FACULTY MEMBERS

Prof. Rajeev Ahuja
Professor & Director of IIT Ropar
Ph.D (Indian Institute of Technology Roorkee)
Research Area : Computational materials science, Energy storage, Sensors & High pressure physics

Dr. Asoka Biswas
Associate Professor
Ph.D (Physical Research Laboratory,Ahmedabad)
Quantum Computation and Information, Quantum Thermodynamics, Cavity,Optomechanics

Dr. Rakesh Kumar
Associate Professor
Ph.D (Indian Institute of Technology Bombay)
Theoretical and Experimental Condensed Matter Physics

Dr. Deepika Choudhury
Assistant Professor
Ph.D (Indian Institute of Technology Roorkee)
Experimental Nuclear Physics

Prof. R. G. Pillay
Visiting Professor / DAE – Raja Ramanna Fellow
Ph.D (TIFR, Mumbai University)
Nuclear Physics, Accelerator Physics and Technology, Condensed Matter and Low temperature Physics

Dr. Debangsu Roy
Assistant Professor
Ph.D (Indian Institute of Science, Bangalore)
Insulating spintronis, Spin transfer torque & Spin orbit torque in magnetic heterostructures

Dr. Rajesh Kumar Gupta
Assistant Professor
Ph.D(Harish Chandra Research Institute, Allahabad)
Quantum field theory, Black holes and Modular forms

Dr. Rajesh V. Nair
Associate Professor
Ph.D (Indian Institute of Technology Bombay)
Nano-Optics and Meta-Materials, Quantum Photonics and Plasmonics, bio-inspired photonics

Dr. Subhendu Sarkar
Associate Professor
Ph.D (Saha Institute of Nuclear Physics, Kolkata)
Low energy ion beam physics, fabrication of nanostructures on semiconductor surfaces using ion beams, and secondary ion mass spectroscopy

Dr. Kailash Chandra Jena
Assistant Professor
Ph.D (Indian Institute of Technology Madras)
Nonlinear Laser Vibrational Spectroscopy, Interfacial Water Structure, Binding of Ions to Amino Acids, Lipids and Proteins, Radiation Induced Effects and Deformation at Interfaces

Dr. Shubhrangshu Dasgupta
Associate Professor
Ph.D (Physical Research Laboratory,Ahmedabad)
Quantum Optics, Quantum Plasmonics, Quantum Biology

Dr. Mukesh Kumar
Associate Professor
Ph.D (Indian Institute of Technology Delhi)
Functional and Renewable energy materials, Thin Film photovoltaics, sensors and photodetectors

Dr. Shankhadeep Chakrabortty
Assistant Professor
PhD(Institute of Physics, Bhubaneswar)
String Theory, AdS/CFT, Gauge/Gravity duality, Quantum Field Theory.

Prof. P. K. Raina
Professor
Ph.D (Indian Institute of Technology Kanpur)
Nuclear structure, Neutrino Physics and Astrophysics

Dr. Sourav Bhattacharya
Assistant Professor
Ph.D (S. N. Bose National Centre for Basic Sciences, Kolkata)
General Relativity, Cosmology; Dark Energy and the Early Universe, Quantum Field Theory in Curved Spacetime

Dr. Pushpendra P. Singh
Assistant Professor
Ph.D (Inter-University Accelerator Center, New Delhi /Aligarh Muslim University)
Experimental Nuclear Physics & Applications

Dr. Sandeep Gautam
Assistant Professor
Ph.D (Physical Research Laboratory Ahmedabad)
Ultracold quantum gases at zero and finite temperatures(Theory)

Dr. Vishwa Pal
Assistant Professor
Ph.D (Jawaharlal Nehru University, New Delhi)
Phase locking of lasers, Coherent optical computing, Diffractive optics, Diffractive optics, Topological photonics, Fiber lasers

AWARDS AND HONOURS 2021-22 (FACULTY):

Dr. Vishwa Pal: **S. R. Seshadri JOSA Publication Grant 2021** by **OPTICA**, USA.

AWARDS AND HONOURS 2021-22 (STUDENT):

Mr. Vasu Dev (2018PHZ0007) received the 2021 Jean Bennett Student Waived Registration Grant for presenting research work "Propagation invariant features in a turbulent media," in FiO+Laser Science 2021 Conference, USA.

INVITED LECTURES BY FACULTY

Dr. Mukesh Kumar

- Mukesh Kumar, "Ultra-wide band gap semiconductor materials for Solar-Blind Photon detection", July 21, 2021, ATAL series, IIT Bhilai

- Mukesh Kumar, "Secondary phases, defects and interface engineering in earth abundant CZTS Solar Cells" 7th International Conference on Advanced Nanomaterials and Nanotechnology, IIT Guwahati, 14-17, Dec 2021
- Mukesh Kumar, "Solar-Blind Photodetectors", IIT Hyderabad, July 24, 2021
- Mukesh Kumar, "Thin Film Solar cells: Sun light to Electricity", Madhya Pradesh Vigyan Sammelan and Exo-2021, IIT Indore, Oct 18, 2021
- Mukesh Kumar, "Interface engineering, secondary phases and defects in earth abundant CZTS Solar cells" Energy Materials and Device Physics, IIT Jammu, 20-21 Dec 2021
- Mukesh Kumar, "Solar-Blind Photodetectors: Charge dynamics, flexibility and stability" Diving Deep into Physics, IIT Jodhpur, 24 Sept 2021
- Mukesh Kumar, "Solar-Blind Photodetectors: Charge dynamics, flexibility and stability" ATAL program, IIT Jodhpur, 5-7 July, 2021
- Mukesh Kumar, "Cost Effective Thin Film Solar Cells: Current Status, Challenges and Future prospects", Binghamton University-IIT Ropar combined talk, Webinar on Smart Energy and Systems IIT Ropar, Nov 09, Nov, 2021
- Mukesh Kumar, "2D materials and heterostructures for hazardous gas sensors and broadband photodetectors" IWPSD 2021, 14-17 Dec 2021
- Mukesh Kumar, “Cost-effective thin film solar cells: Current status, challenges and future prospects” National Frontiers of Science (NaTFoS-2022) meeting, HP, March 13-15, 2022.

Dr. Vishwa Pal

- Coherent optical computing with coupled lasers, Centre for Quantum Information, Communication and Computing, Indian Institue of Technology Madras, Chennai, India, 11 February 2022. [Online]
- Optical sources and their applications II, School of Forensic Science, National Forensic Science University, Gandhinagar, Gujrat, 24 January 2022. [Online]
- Optical sources and their applications I, School of Forensic Science, National Forensic Science University, Gandhinagar, Gujrat, 17 January 2022. [Online]
- Coherent optical computing with phase locked lasers, Department of Physics, Babasaheb Ambedkar University, Lucknow, Uttar Pradesh 226025, 22 November 2021.
- Coherent optical computing with phase locked lasers, A. P. J. Abdul Kalam Faculty Lecture Series, Indian Institute of Technology Ropar, Rupnagar, Punjab, India, 19 May 2021. [Online]

Dr. Rajesh Kumar Gupta

- Some aspects of non-relativistic conformal field theory, Indian String Meeting (2021), Dec. 2021, IIT Roorkee [online]

Dr. Rakesh Kumar

- National Webinar on "Two dimensional Materials: Graphene and Beyond" on 28th March 2022

Dr. Shankhadeep Chakrabortty

- String Theory: A Road to Quantum Gravity, Chandigarh University, 11th May, 2021
- Tensionless string theory: A fairy tale on the worldsheet, Emerging Trends in Physical

Sciences, Department of Physics, ICFAI University Tripura, 1st October, 2021.

Dr. Sourav Bhattacharya

- Massless minimal quantum scalar field with an asymmetric self interaction in de Sitter spacetime, Future trends in Gravitational Physics, SNBNCBS, Kolkata (February, 2022)

LECTURES BY VISITING EXPERTS

Sr. No.	Name of the experts with affiliation	Topic	Date
1	Dr. Vivekanand Shukla , Chalmers University of Technology Sweden	Density functional theory (DFT)	18-2-2022 (Via Online Mode)
2	Dr. Suvadeep Das, George Mason University, Fairfax, USA	Topology and Optics in Two-Dimensional Oxides and Tellurides from First principles	23-3-2022 (Via Online Mode)

VISITS ABROAD BY THE FACULTY

Sr. No.	Name of the faculty member	Country	Detail of visit with date
1	Dr. Mukesh Kumar	USA	Mach 29 - Jul 29, 2022 Received Fulbright-Nehru Academic and Research Excellence Fellowship from US-India Education Foundation. Visiting Syracuse University, NY, USA

MAJOR RESEARCH PROJECTS (COMPLETED)

Sr. No.	Title of Project	Funding Agency	Amount Sanctioned
1	Process optimization and development of thermally stable solar blind b-gallium oxide photodetector	Defence Research and Development Organization (DRDO)	53.00 lakhs

RUNNING PROJECTS:

Sr. No.	Title of Project	Funding Agency	Amount Sanctioned
1	Charge transport and interfacial studies of PtSe2/MoS2 van der Waals heterostructures and its applications for near infrared photodetector	CRG SERB	38.72 Lakhs
2	Next generation of high power ultrafast fiber lasers based on controlled space-time dynamics in amplifying nonlinear multimode fiber	SERB-CRG	47.54 Lakhs

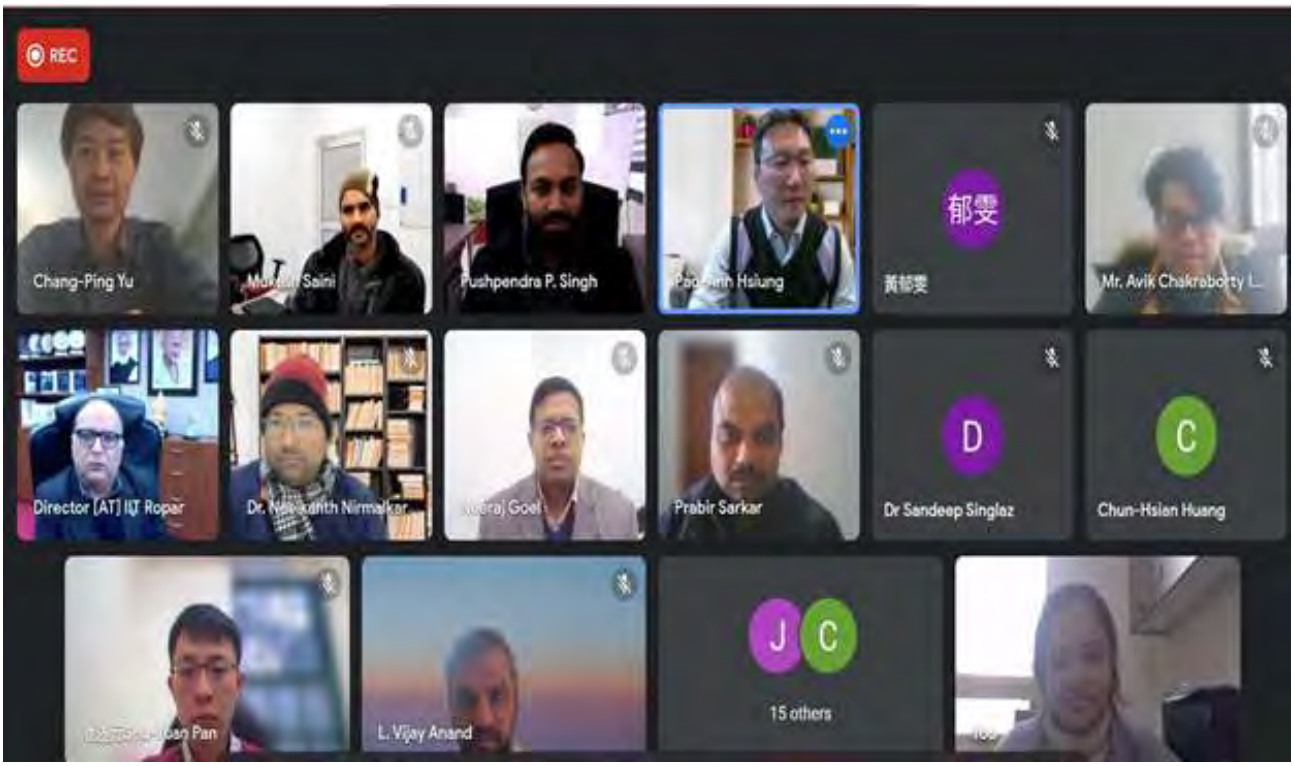
INDO-TAIWAN JOINT RESEARCH CENTRE ON ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING (ITJRC)

Investigator of the Centre : **Prof. Shi-Ming Huang,**
Department of Accounting and Information Engineering,
National Chung Cheng University, Taiwan.

Co-ordinator of the Centre : **1. Prof. Pao -Ann Hsiung,**
National Chung Cheng University, Taiwan.
2. Dr. Shweta Jain, Assistant Professor,
Computer Science Engineering, IIT Ropar

Indo-Taiwan Joint Workshop on Agriculture and Water Resource Management

The Indo-Taiwan Joint Workshop was conducted on Agriculture and Water Resource Management on 19 January 2022 jointly hosted by ITJRC, AWaDH center, IIT Ropar, and CCU, Taiwan. The workshop started with a Welcome Address by Dr. C. T. Wang, Director of Science &Technology, Ministry of Science Technology, Taiwan, Taipei Economic Cultural Centre, Delhi, India and Prof. Rajeev Ahuja, Director – Indian Institute of Technology Ropar followed by presentation sessions on different topics. Some topics include Plant microbial fuel cells for soil remediation, urban greening and waste valorization, Nanobubbles offer to improve agriculture and water technology, Arsenic in Environment, Digital technologies for Agriculture 4.0.



Received funding of 15500 USD$ for the center

The project on Indo-taiwan Joint Research Center in AI and ML has been approved by MOST, taiwan for a second term of three years. In this new phase, the AI center will be working in collaboration with Awadh Center. For the first year, the Indo-Taiwan Research center received 15500 USD$ to facilitate the joint collaboration amongst the two institutes. Various activities such as Publications, Joint Projects, Startup collaborations, Joint PhD Programme, Smart City Government collaboration and Webinars are expected to be conducted in upcoming years as the major activities for the execution of the center.

There were three joint proposals submitted to the Indo-Taiwan Programme of Cooperation in Science and Technology 2022. The details for these projects are given as follows:

1. Project title: Improving Reliability & Lifetime in IoT Based Next Generation Vehicular Communication Networks using Coded Cooperation.

Area: IoT (Internet of Things)

Project Leads contact details

Dr. Sam Darshi :

+91-9678554318

sam@iitrpr.ac.in

Dr. Jen-Yi Pan

+8860916581986

jypan@ccu.edu.tw

Total Fund: 3826000.00

TAIPEI Application: 111WFA1010549

Indian (GITA): 2022TW0201047

2) Project Title: Early detection of sepsis by analyzing blood flow velocity at fingertip using artificial intelligence

Project Lead: Dr. Deepti R. Bathula

bathula@iitrpr.ac.in

Project Lead: Dr. Wei-Min Liu

Total Fund 2906760.00

Indian (GITA) 2022TW0201094

3) Project Title: Towards Designing Fair, Transparent and Accountable Human-AI Teams

Project Lead: Dr. Shweta Jain

shwetajain@iitrpr.ac.in

Project Lead: Dr. Pao-Ann Hsiung

pahsiung@csie.io

Total Fund 5256800.00

Indian (GITA) 2022TW0201003

Other members: Dr. Shashi Shekhar Jha, Dr. Wei-Min Liu, Dr. Ming-Hung Wang, Dr. J. J. Hseih from GSU, USA.

Inauguration of Taiwan Education Center

An MoU signing ceremony between IIT Ropar and Taiwan Economic and Cultural Center (TECC) and inauguration of Taiwan Education Center was conducted on 27, September, 2021. The MoU was signed by Prof. Rajeev Ahuja, Director, IIT Ropar and Mr. Peters Chen, Director of Education Division, TECC. Recently, a Mandarin teacher Mr. Xiao has joined IIT Ropar through Taiwan Education Center who is teaching Mandarin language to students, staff and faculty members who are interested in getting skills related to Mandarin.

The delegation from TECC comprised of following dignitaries:

1. Hon'ble Ambassador of Taiwan
2. Director of Education Division, TECC
3. Director of Science and Technology Division, TECC

4. Assistant Director of Science and Technology Division, TECC

5. Secretary of Taipei Economic and Cultural Centre




Online Webinars:

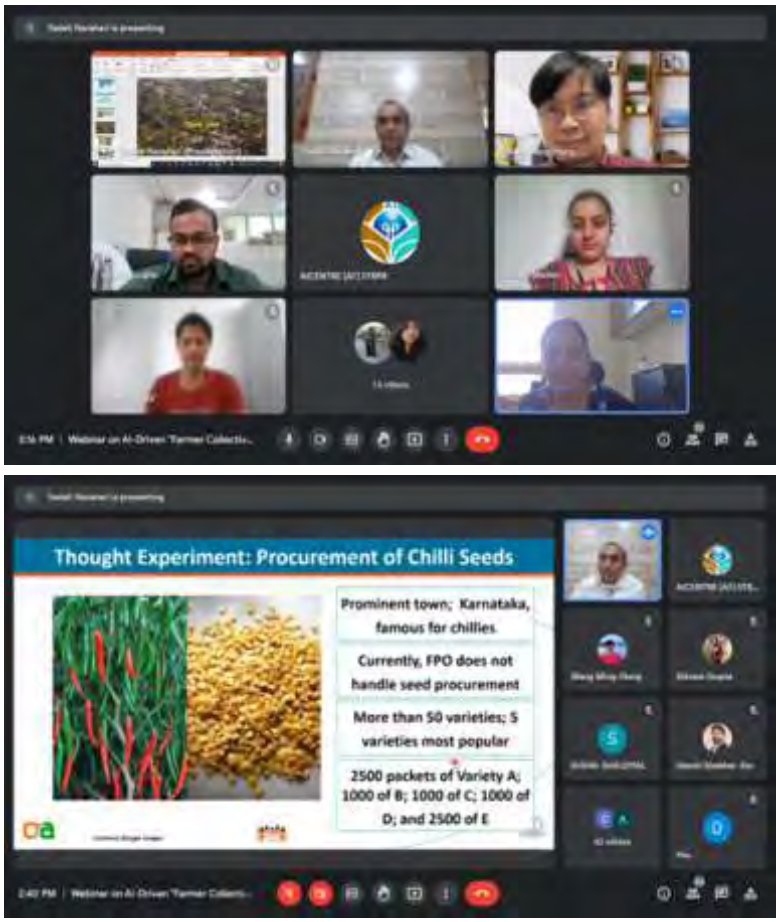
ITJRC organizes monthly online webinars for the students of different regions of the country. List of the seminars are as follows:

Title: AI-Driven "Farmer Collectives" for Sustained Prosperity of Small and Marginal Farmers

Name of the Speaker : Prof. Y. Narahari

Institute : IISc, Bangalore

Date : 7th April 2022



Webinar: Recurrent Learning on PM {2.5) Prediction Based on Clustered Airbox Dataset

Name of the Speaker : Prof. Min- TE Sun

Institute : National Taiwan University

Date : April 28, 2021

The Speaker: **Prof. Min-Te (Peter) Sun**

Prof. Min-Te Sun received his B.S. degree in mathematics from National Taiwan University in 1991, the M.S. degree in computer science from Indiana University in 1995, and the Ph.D. degree in computer and information science from the Ohio State University in 2002. Since 2008, he has been with the Department of Computer Science and Information Engineering at National Central University, Taiwan. His research interests include distributed algorithm design and data mining.

For Details: https://wasn.csie.ncu.edu.tw/advisor

WEBINAR:

RECURRENT LEARNING ON PM {2.5} PREDICTION BASED ON CLUSTERED AIRBOX DATASET

Date: **April 28, 2021 (Wednesday)** | Time: **12.30 am IST** | **3.00 pm (Taiwan's Time)**

Abstract :

The progress of industrial development naturally leads to the demand for more electrical power. Unfortunately, due to the fear of the safety of nuclear power plants, many countries have relied on thermal power plants, which will cause more air pollutants during the process of coal burning. This phenomenon as well as increased vehicle emissions around us, have constituted the primary factors of serious air pollution. Inhaling too much particulate air pollution may lead to respiratory diseases and even death, especially PM2.5. By predicting the air pollutant concentration, people can take precautions to avoid overexposure to air pollutants. Consequently, accurate PM2.5 prediction becomes more important. In this thesis, we propose a PM2.5 prediction system, which utilizes the dataset from EdiGreen Airbox and Taiwan EPA. Autoencoder and Linear interpolation are adopted for solving the missing value problem. Spearman's correlation coefficient is used to identify the most relevant features for PM2.5. Two prediction models (i.e., LSTM and LSTM based on K-means) are implemented which predict PM2.5 value for each Airbox device. To assess the performance of the model prediction, the daily average error and the hourly average accuracy for the duration of a week are calculated. The experimental results show that LSTM based on K-means has the best performance among all methods. Therefore, LSTM based on K-means is chosen to provide real-time PM2.5 prediction through the Linebot.

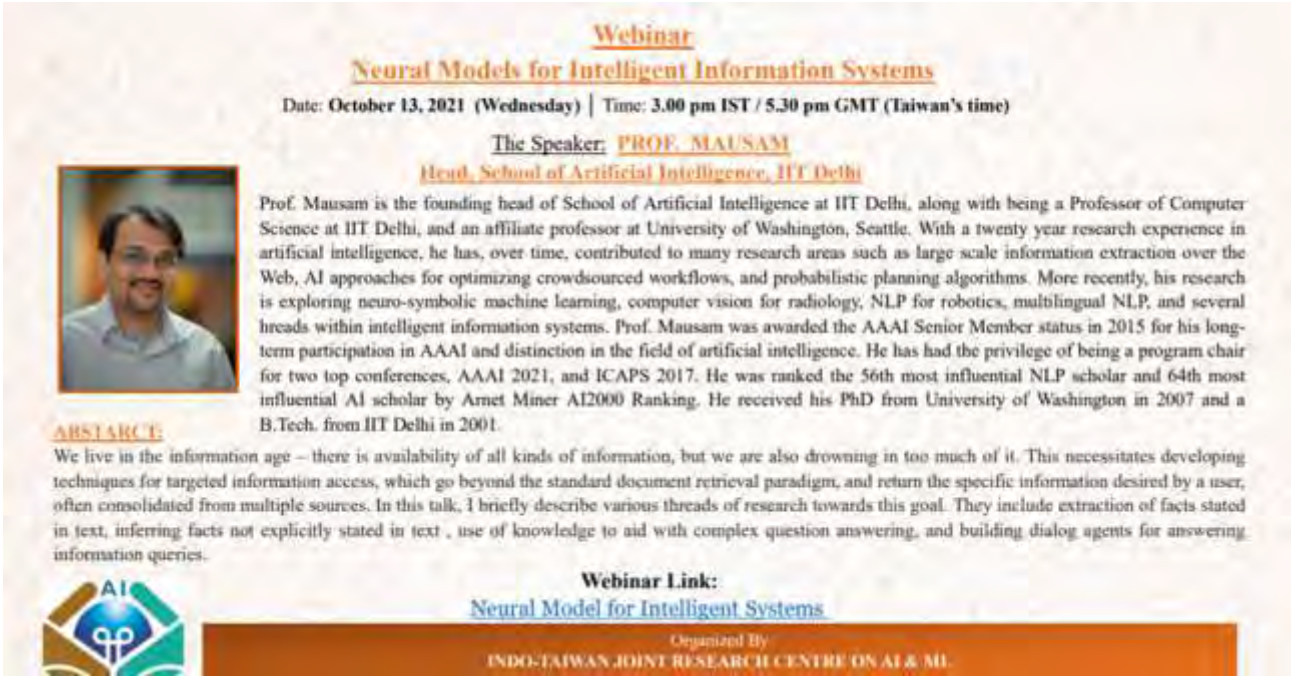
Registration Link: https://forms.gle/QscACbCpM2ekgWmm7

Webinar: Neural Models for Intelligent Information Systems

Name of the Speaker: Prof. Mausam

Institute: School of Artificial Intelligence, IIT Delhi

Date: October 13, 2021



Webinar: Self supervised learning for Speech Processing

Name of the Speaker: Dr. Hung Yi Lee

Institute: National Taiwan University

Date: November 30, 2021

PUBLICATIONS

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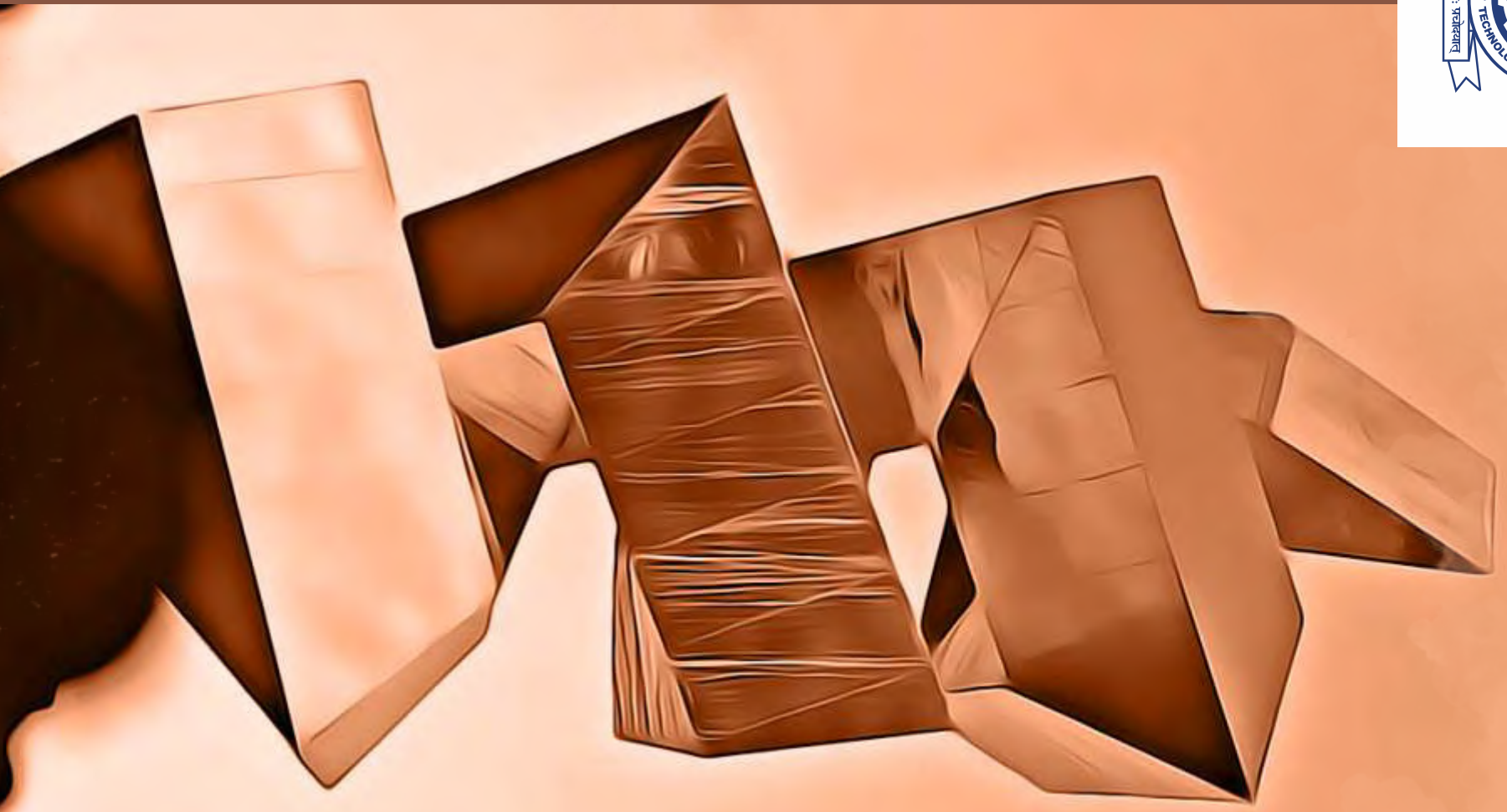

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2. L. Arora and D. Pal, "Remodeling of stromal cells and immune landscape in microenvironment during tumor progression," Front. Oncol., vol. 11, p. 596798, 2021.
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5. D. J. Klionsky et al., "Guidelines for the use and interpretation of assays for monitoring autophagy (4th edition)1," Autophagy, vol. 17, no. 1, pp. 1–382, 2021.
6. K. Bansal et al., "Protein transduction domain functionalized gold nanoparticles for effective delivery of potent cytotoxic agent in cancer cells," J. Mol. Liq., vol. 328, no. 115385, p. 115385, 2021
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9. S. C. Bollepalli et al., "An optimized machine learning model accurately predicts in-hospital outcomes at admission to a cardiac unit," Diagnostics (Basel), vol. 12, no. 2, p. 241, 2022
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14. R. Nadda, A. K. Sahani, and R. Repaka, "A systematic review of real-time fine-needle aspiration biopsy methods for soft tissues," IETE Tech. Rev., pp. 1–16, 2021.
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1. V. Kumar and A. K. Balendra, A Brute Force Methodology for Automated Data Extraction and Analysis for Finite Element Analysis.

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1. A. Mukherjee and B. Das, “Mesenchymal stem cells: Novel avenues in combating COVID-19,” in Stem Cells and COVID-19, Elsevier, 2022, pp. 71–94.
2. R. Kumar, H. Singh, A. K. Sahani, and P. Sarkar, 3D printing with biomaterials: a prospective view for biomedical applications” Innovative Processes and Materials in Additive Manufacturing. Elsevier.
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DEPARTMENT OF CHEMICAL ENGINEERING

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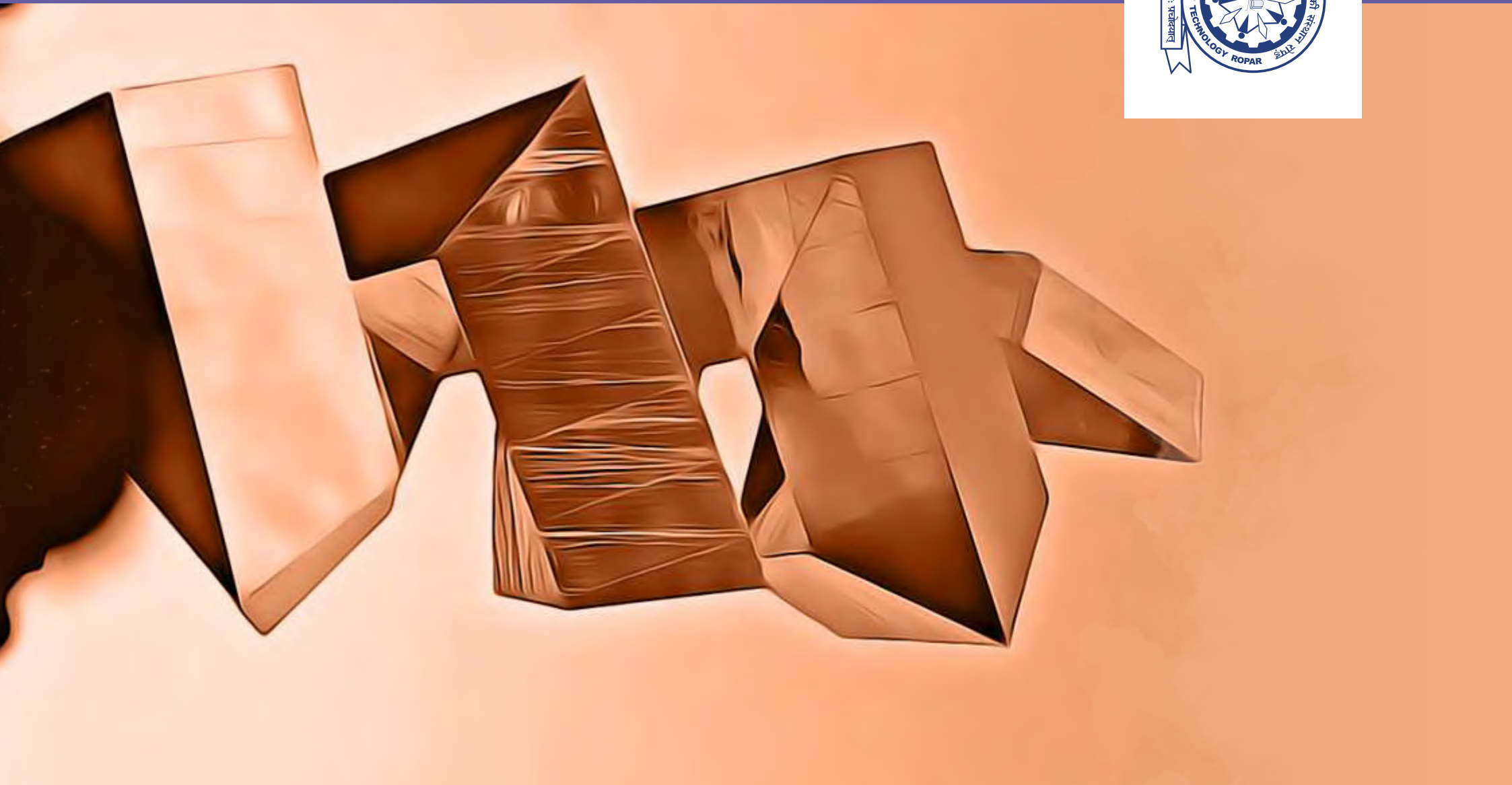
STUDENT AFFAIRS



STUDENT RESIDENCY STATUS

Undergraduate Boys		
First Year (2021)	289	Main Campus
Preparatory course	29	Main Campus
Second Year (2020)	276	Main Campus
Third Year (2019)	274	Main Campus
Fourth Year (2018)	246	Main Campus
Undergraduate Girls		
First Year (2021)	72	Main Campus
Preparatory course	26	Main Campus
Second Year (2020)	72	Main Campus
Third Year (2019)	54	Main Campus
Fourth Year (2018)	44	Main Campus
Undergraduate Back-Loggers		
2015	02	Main Campus
2016	01	Main Campus
2017	04	Main Campus
Research Scholar		
Boys	396	
Girls	211	
M.Tech/M.Sc./M.S.		
Boys	332	
Girls	84	
Transit Campus Hostels (Mercury, Venus, Neptune & Jupiter)		
Main Campus Hostels (Satluj, Beas, Chenab & Raavi)		
Total Hostel Residents = 2413 (Boys = 1850, Girls = 563)		

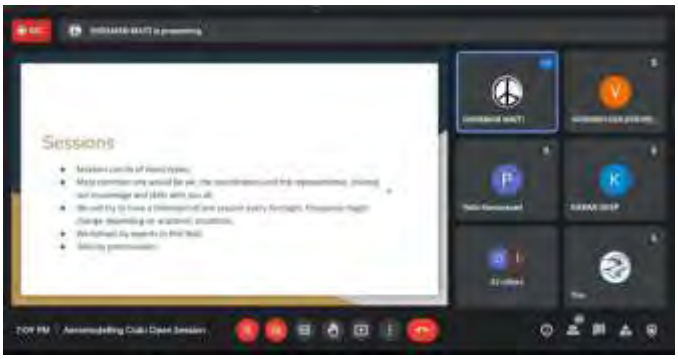
BOARD OF SCIENCE & TECHNOLOGY (BOST)

1.1 Zenith Club

Many events like AstroPhotography, Quiz Competition, sky watching, open sessions and workshops were organized by the Zenith Club.

1.2 Aeromodelling Club

Starting from ISMP activities, the Aeromodelling club started its session on the basics of aerodynamics in online mode. In collaboration with Sapientury, one online session on the basics of Arduino was also arranged where students got the knowledge about the Arduino and its applications.



A session on Gliders was also organized at IIT Ropar. During this session, the students got the knowledge about the uses and applications of Gliders. On completion of the session, students were able to make their own Gliders.

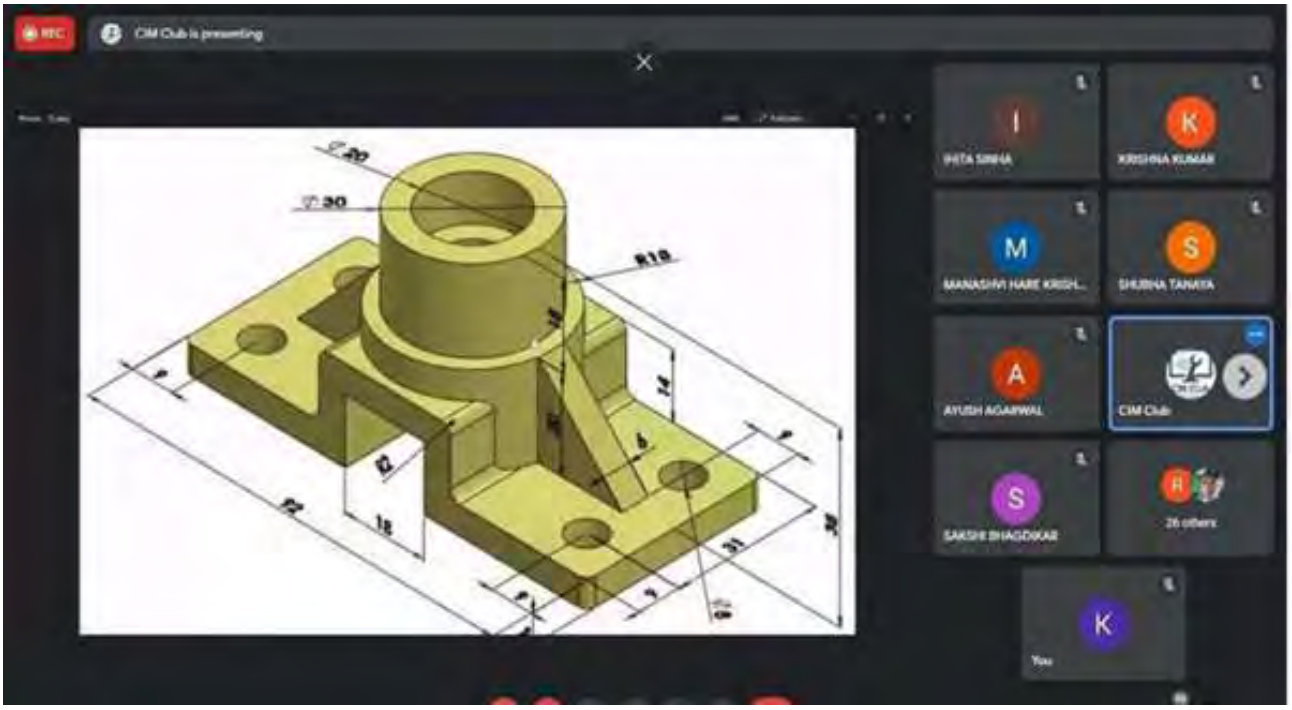
During the General Championship, the Aeromodelling Club had two events. One was a drone arena and the other was an aqua rocket.

1.3 Automotive Club

The Automotive Club participated in E Baja 2022. Sessions and quizzes on IC Engines and MATLAB were organized. Automotive Club in collaboration with “Pehchaan Ek Safar " taught IOT devices and helped the Senior Secondary School Boys Ropar in the project works.

1.4 CIM Club

CIM Club conducted 6 regular sessions in online as well as offline mode on 2-D Sketches, Extruded Boss, Extruded cuts, Swept, Loft, Revolved, Rib, Reference planes, curves, Linear and Circular patterns and much more. The CIM Club organized a session on “Basics of Solid Works”.



CIM club also conducted various other competitions during the ISMP events for the newly joined 1st Year students to give them a glimpse of the club. During the General Championship 2022, the club conducted a Speed Design Competition.

1.5 Coding Club

The Coding Club divided the students into six tracks based on their prior knowledge of competitive programming and successfully conducted various discussion and doubt-clearing sessions for all six tracks in preparation for contests that are held on a regular basis on popular websites such as Codeforces, ChodeChef, and others. To teach and involve the students, the club has also planned various self-prepared contests.

(i)Online doubt clearing session Game

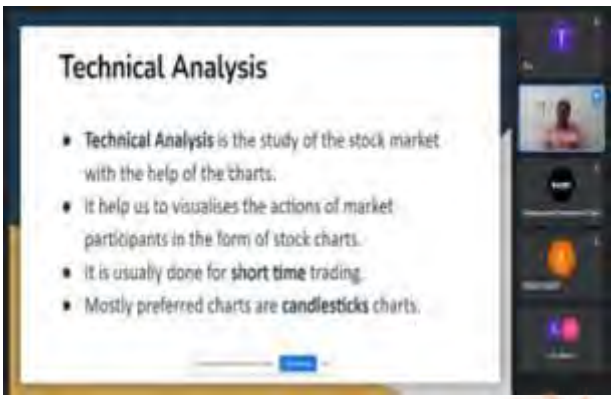
(ii) Theory Event

In partnership with Algo University, the Coding Club has also hosted an occasional inter-college programming competition. Top performers received cash prizes as well as scholarships to Algo University-sponsored courses.

(iii)Code Rush Event

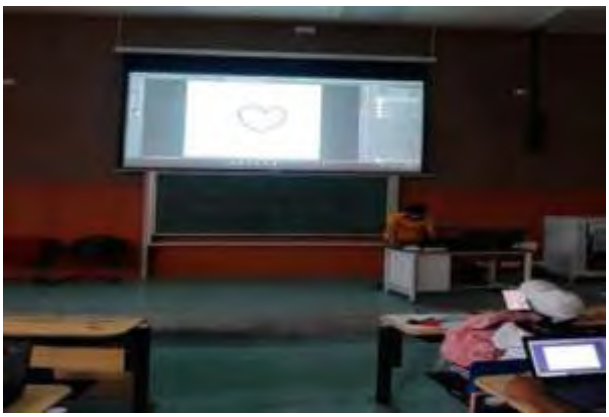
1.6 FinCOM

FinCOM club is dedicated to get the knowledge of technical aspects of Financial Matters. FinCOM club arranged the many seminars and case study discussions on Financial Wellness, Basics of Stock market, Mastering Investing Decisions in the Capital Markets.



1.7 Monochrome Club

Monochrome Club organized 5 regular sessions on the learning of fundamental concepts of Image Editing and Photoshop. In the General Championship 2022, Monochrome Club conducted a Digital Art Competition.

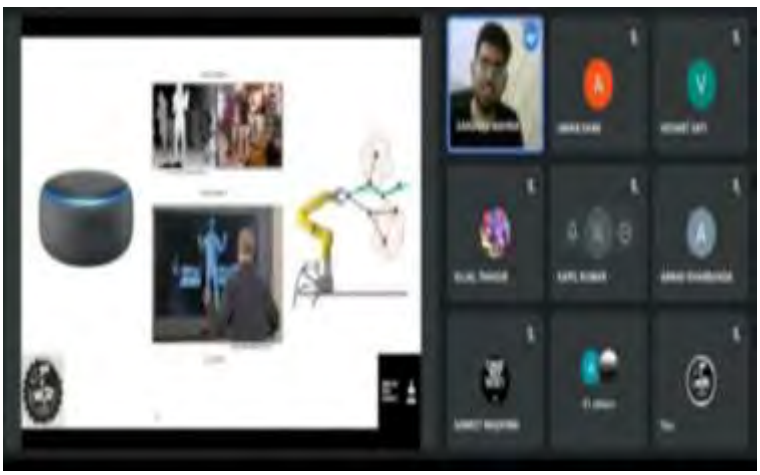


1.8 Robotics Club

Robotics Club has organized various sessions and competitions in the academic year 2021-2022 that kept students from all departments and programs engaged in brainstorming and fun-filled activities.

TinkerCAD Series: Robotics Club organized to teach Arduino programming to over 200 students in the Institute. Over 10 sessions to teach students about various aspects like motors, servos, and communication protocols and basics of signal processing of Arduino programming were organized.

Robot Operating System Learning Series: In ROS Learning series, around 270+ enrollments from 20 + universities from over 5 countries were witnessed. The sessions had active participation from all the members and got a lot of positive reviews on LinkedIn. Robotics Club covered ROS simulation and also taught how to simulate bots using ROS and test boat movements. Robotics Club taught how one can use computer vision and machine learning with ROS.

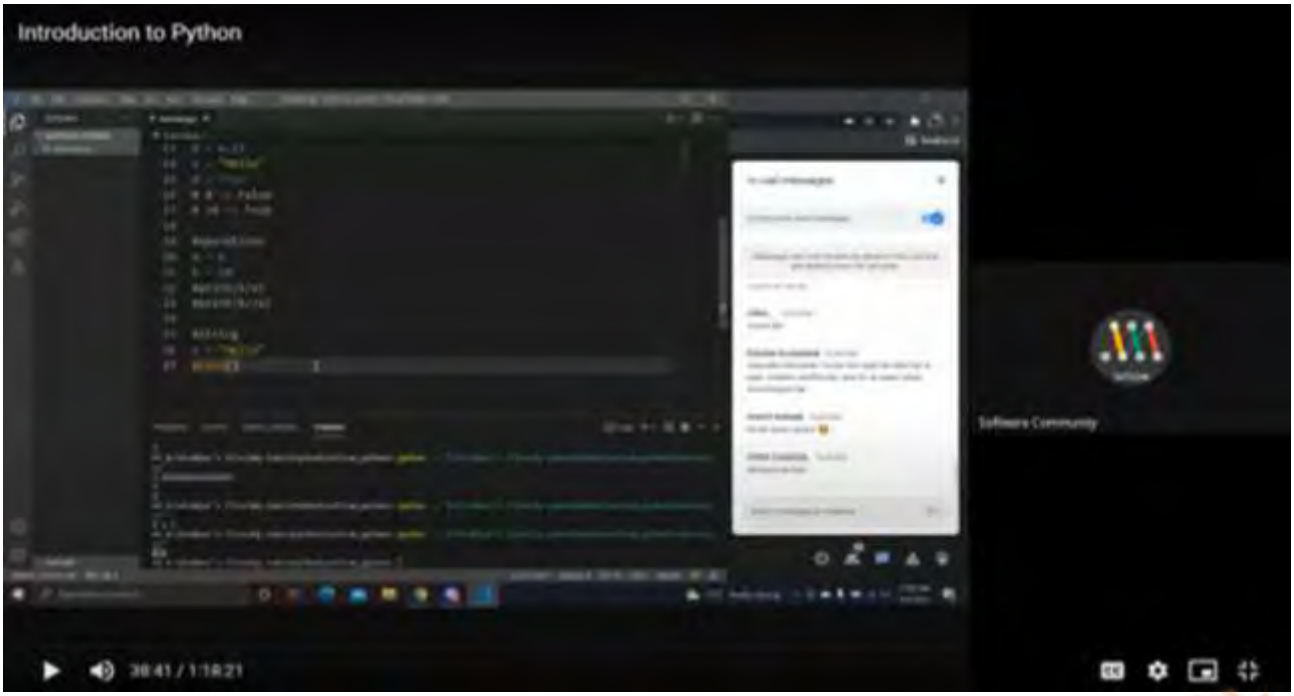


TinkerCode Competition: Robotics Club organized an intra-college TinkerCode competition where students in the first and second years presented innovative ideas and designed modules and simulations using TinkerCAD and python. The ideas were presented to the club members so as to motivate them to work further in the field of robotics.

ROBOCON: IIT Ropar participated in the national-level prestigious robotics competition ROBOCON. Robotics Club brainstormed and designed two bots according to competition tasks. These designs were very thoughtfully designed on CAD software (Solidworks). The Robotics Club also made the electronics connections and circuit designs on Circuit.io, TinkerCAD, and Proteus software.

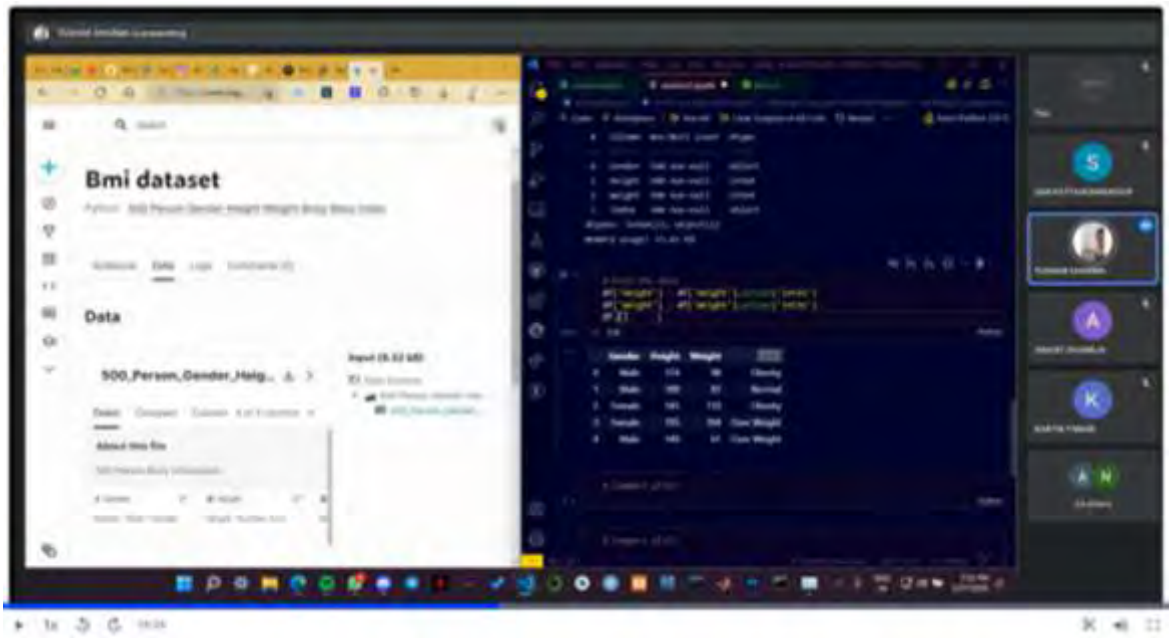
1.9 SoftCom

Softcom conducted 3 sessions till now which included API development, Introduction to Python and Data Science. The sessions were taken by the representative and the coordinators. Regular assignments were given to the members to hone their development skills.



First session on Introduction to Python

API Development



Session on DataScience using pandas, numpy: Softcom also conducted its first offline Hackathon event as part of the General Championship. The event witnessed considerable participation from first and second year students.

BOARD OF CULTURAL AFFAIRS

2.1 Alankar (Music Club)

At IIT Ropar, Music Club has a vast range of musical instruments. Various learning sessions/events in online as well as offline mode were organized on video screening, learning of Guitar, Vocal Sessions and Keyboard Sessions.

2.2 Arturo (Photography Club)

Photography Club is dedicated to learn and organize the photography events in the Institute. A total of 6 online as well as offline sessions were organized on Photoshop, lightroom. The Photography Club also organized many photography competitions / events on Republic Day.

2.3 Dcypher (Dance Club)

Under a large variety of Extracurricular activities at IIT Ropar, Dance Club is dedicated to carve the dance art of the students of Institute. More than 15 sessions of dance learning were organized. Many competitions on various festivals/occasions were organized.

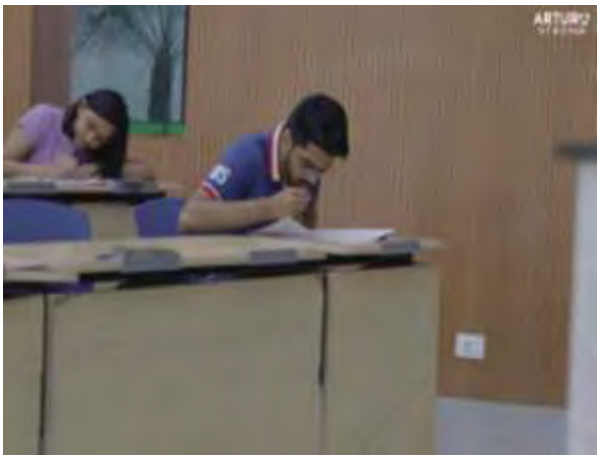
Western Workshop:

2.4 Undekha (Dramatics Club)

Around 5 sessions of learning of Drama were arranged by the Dramatic Club under Board of Cultural Activities (BOCA). Online as well offline events and training sessions and competitions on Mono Acting, Group Video and Stage Play were witnessed.

2.5 Vibgyor (Finearts Club)

Vibgyor the Fine Arts Club organized many sessions/events on Live Sketching, Doodling, Painting, Portrait Sketching, Water Color Painting, Pen Hatching and Hair Sketching were conducted during this year.



BOARD OF LITERARY AFFAIRS

Open Events conducted by the Board of Literary Affairs:

Essay Writing Competition: On the occasion of National Education Day to celebrate the birth anniversary of Maulana Abul Kalam Azad, the First Education Minister of Independent India, Essay writing compition was organized.

International Mother Language Day or "Matribhasha Diwas" Celebrated to promote multilingualism around the world.

Poetry Club-Alohaz: The Poetry Club-Alohaz of IIT Ropar was officially formed under the Board of Literary Affairs.

Alpha Productions (Movie Making and Editing Club)

The Alpha Production club arranged various sessions on the installation & setup of Adobe Premiere Pro, Editing tools, Text Editing and Masking, how to work with a green screen and basics of the use of the Camera.

Debsoc (Debating Society)

Sessions

- Online knowledge sessions on criminal law and moral theories by IIT Ropar's alumni Hersh Dhillon
- Online session on Fundamentals of Debating and APD format by the team of Debsoc
- Offline session on Indian's Foreign relations after Independence by Parth Joshi, a senior student of IIT Ropar
- Mock parliamentary debates twice each week (3 hrs each week)
- Knowledge and brainstorming sessions biweekly

Events Organized by Club

- A 2-day Freshers Debating Tournament (April '21)
- Just-a-minute (JAM) speaking competition
- Intra College Group Discussion

External Competitions

- 2 teams participated in IIT Delhi's Annual Debate and the representative was the judge (panelist adjudicator)
- A junior team won 1st prize in NSUT's (previously known as NSIT) NSMPD Debating Competition.
- Participated in DU's Gargi Debate
- Preparing teams for upcoming competitions in PEC,BITS Pilani and IIT.

Enarrators (Oratory Club)

Sessions:

- Successfully conducted 15+ sessions with 2 offline sessions during the entire course of last semester.
- Successfully conducted sessions on English Speaking and Confidence Development with the activities such as turncoat, group discussions, debate, anchoring, advertisement making, story completion, act making, and many more.

Enigma (Quizzing Club)

- **Movie Quiz -** Conducted a movie quiz covering a wide range of questions from the regional ones to the critically acclaimed Hollywood movies.
- Zeitgeist General Quiz - A 40 question General quiz was prepared for a mass audience of 140.
- Open General Quiz - Intra club quiz event.
- Freshers ISMP Quiz (Dec '21) - 4 sets of quizzes having 30 questions each to acquaint juniors with quizzing culture.
- Republic day Quiz - A questionnaire commemorating the freedom struggle.
- General Quiz (GC)

  (Quality questions were being shared regularly within the group)

Filmski (Movie Screening Club)

- Screening of movies, web series and documentaries every Friday and Saturday.
- Screening of Cricket and Football tournaments
- Screenings on special occasions like Independence Day, Gandhi Jayanti etc.

MUN (Model United Nations)

Inter collegiate: The MUN Club sent a delegation of 7 people to VIT MUN- 2021. Two Delegate members Akshat Toolaj Sinha (Committee: All India Political Party Meet) & Janmeet Singh Makkar (Committee: Crisis Committee) got a verbal mention at the event.

A club member Tanmay Potdar got a Verbal Mention at IIT- BHU MUN. He was the delegate of Portugal to DISEC.

Intra Collegiate: MUN club conducted a session and inducted new members into the club from the Batch of 2021-25. New students showed their keen interest to join the club.

Successfully conducted a GC event, Press Release on “Ongoing Russia-Ukraine War”. In addition to these, Regular sessions were conducted to make the student interact and grow the culture of MUN in the College.

BOARD OF SPORTS ACTIVITIES

Cricket Club: ISMP which introduces freshers to the IIT Ropar and its different clubs. The Cricket club was also introduced to them by the Club representatives. The details about the facilities, arrangements, equipment and inter/intra college competitions were shared with them through a presentation.

Volleyball Club: ISMP introduces to the freshers of IIT Ropar by different clubs. The volleyball club was also introduced to them by the Club representatives. The details about the facilities, arrangements, equipment and inter/intra college competitions were shared with them through a presentation

Smash IT: The students are divided into 8 teams. Each team will be provided with 10 tasks (maximum 2 for one member). And these tasks will be the same for each team. Each team has to make their captain by deciding mutually with their team players. Teams decide on their own that which task will be performed by which team member on the basis of their capabilities. If a team completes all the tasks properly then we will provide the team with the bonus task.

The drills of smash were shared with them along with the demo videos. The importance of these exercises and the point distribution was explained. The team with the highest points was the winner.

Badminton Club: ISMP which introduces freshers to the IIT Ropar and its different clubs. The badminton club was also introduced to them by the Club representatives. The details about the facilities, arrangements, equipment, and inter/intra college competitions were shared with them through a presentation. The basic to advance rules of badminton was shared with them along with the warm-up exercises and the equipment information required before playing. The importance of these exercises was explained. Two offline sessions were organized with around 30-40 students. The students were informed about the different playing techniques to be kept in mind and gave everyone a chance to show his/her game. Students were also informed of the different practice techniques, strategies building and taught some good shots in badminton.

Inter Year Sports Championship 2021-22

The Inter Year Sports Championship began on March 19th with a cricket match and

concluded 26 days later with a football final. There were 28 events in ten different sports with almost more than 800 students participating in these events. There were some incredible nail-biting matches and finishes, some magical game-changing moments, and some painful losses, but at the end of the day, we are a team that has worked hard and with tremendous enthusiasm. PhD team with 98 points is the overall champions of the IYSC 2021-22.

Glimpses of Inter Year Sports Championship 2021-22

BOARD OF HOSTEL AFFAIRS

Dandiya Night

The first major event after the campus reopening was Dandiya night, which was enjoyed by all the students. The Dandiya night was celebrated on the last Navratri and students played Dandiya with each other to celebrate the Gujarati culture on the campus.


Diwali Celebration

Diwali was celebrated with great enthusiasm on the campus. Hostels and Messes were well decorated by the students with full precaution and beautiful rangolis were made by the students. Sky lanterns were lit by all students to celebrate the firecracker-free Diwali. There was a special dinner prepared for the students in the mess on the occasion of the Diwali.



General Championship 2022

This is the second edition of the General Championship, IIT Ropar. All hostels compete for several titles. The event started in Hybrid mode in the march and all the events had been completed till April.

Holi Celebration (March 18th, 2022)

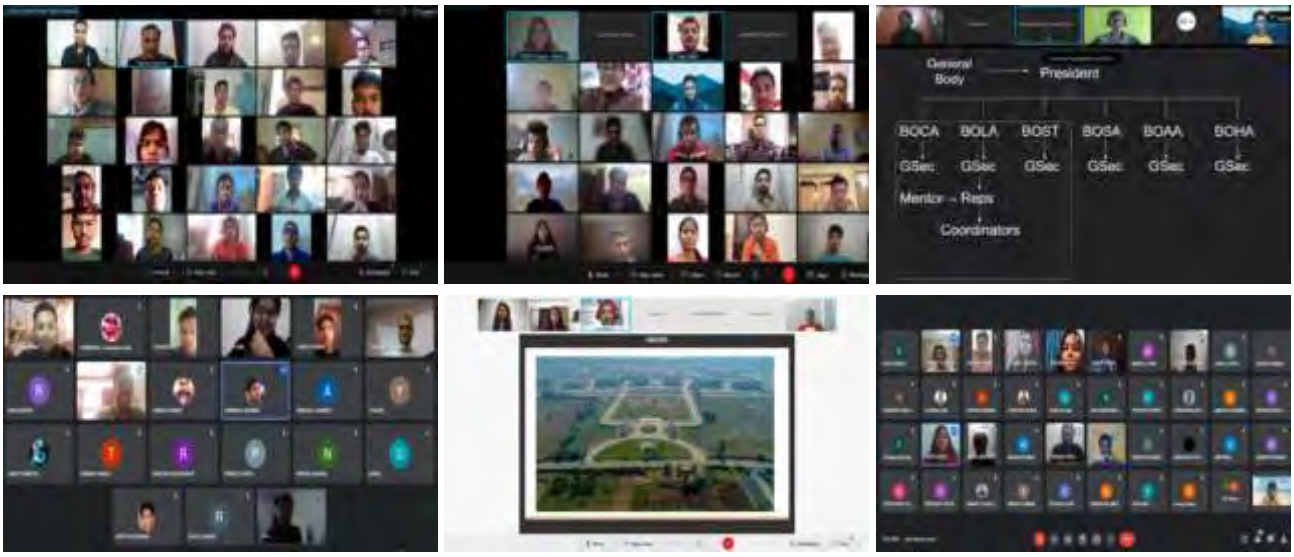
Holi was celebrated on the campus with music and color. There was a bonfire organized on the day of Holika Dahan which was accompanied by the open mic poetry event and music jamming session.

INSTITUTE STUDENT MENTORSHIP PROGRAM

Institute Student Mentorship Program (ISMP) is a student initiative of IIT Ropar, which aims to provide a comprehensive and in-depth knowledge to freshmen on critical issues like academics, co and extracurricular activities and how to bring about an optimum balance among them, contributing in the individual's contentment levels in the institute. To ensure this, every fresher is allotted a mentor who is a senior student with substantial experience in a plethora of matters to guide the freshmen through the transition process. The mentors are selected through a rigorous process to make sure they can guide mentees to take informed decisions in all spheres.

During ISMP 2021-22, various expert talks were delivered by the various eminent personalities and motivational speakers. A Yoga session was also arranged by Acharya Kriyaban Himmat of Yoga teacher Samvit Yoga, Kriyayoga Ashram Rishikesh, Uttrakhand. ISMP 2021 witnessed the various other events/activities like Virtual Campus Tour, Competitions, Fun Games and guest lectures.

Images of various activities club events organized in online mode:



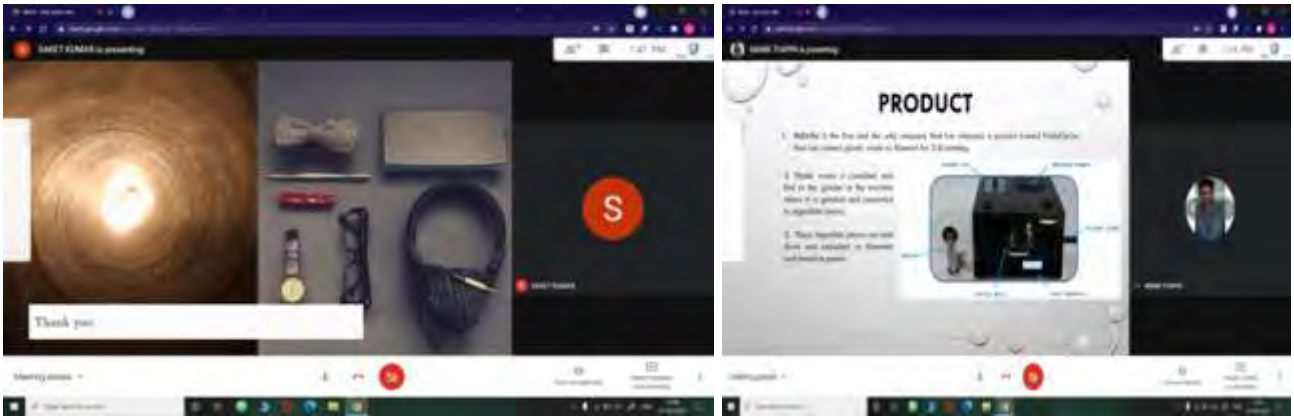
NSS ACTIVITIES

The following activities are done throughout the year under NSS IIT Ropar. Due to pandemic and unavailability of students in the campus, most of the activities were done online.

1. Online quiz competition on "Elimination of Single Use Plastic" awareness on 7th April 2021.

(A) Essay Writing competition on "Elimination of single use plastic"

Student Council IIT Ropar conducted an essay writing competition with the theme: **"Elimination of single use plastic"**. Students participated with full enthusiasm. This competition created a sense of awareness regarding the topic among everyone. **Best entries were awarded with a certificate.**



NSS wing IIT Ropar has also celebrated the International Day of Yoga. Students of IIT Ropar learned Yoga, Jumba, Aerobics and other physical activities under the banner of NSS IIT Ropar. Two quizzes on "Pollutions, its causes and solutions" and "Indians in Social Causes" were arranged.

NCC ACTIVITIES

NAME OF UNIT: - 23PB BN NCC ROPAR

1. Online Sessions of NCC were conducted due to the Pandemic. 10 sessions of each semester were conducted along with NSO and NSS and 4 sessions were taken as lectures with additional quizzes and interactive tutorials.
2. International Day of Yoga was celebrated online on 21 June 2021.
3. A team from NCC Headquarters visited the Institute on 28th July 2021 regarding the Audit of the NCC office and activities.
4. 16 cadets joined the annual training camp for a week from 8th to 15th NOV 2021.
5. Selection of new cadets was made though written and physical tests in December 2021
6. B Certificate examination was held on 13th March 2022 at Ropar Headquarters.
7. Online Quiz on Pollution Types, Causes and Solutions was conducted on 23rd March 2022.

OTHER ACTIVITIES

Annual Techno-Cultural Fest of IIT Ropar ZEITGEIST'21

IIT Ropar organized the 11th edition of ZEITGEIST along with the 5th edition of ADVITIYA of its Annual Techno-Cultural Festival from 23rd to 25th April 2021, with its inauguration on 22nd April. The complete festival was hosted in online mode. The Festival witnessed a footfall of more than 10,000 with more than 4000 participants registered in multiple Technical and Cultural events with Talks and exhibitions being attended by more than 1450 and 800 participants respectively. And the total viewership in the various Entertainment nights and exhibitions exceeded 2700.

1. Lecture Series

Multiple esteemed speakers including Nobel Laureates had shared their experience during Zeitgeist 2021,. The Institute wishes to arrange a very superior Lecture series and after the completion of all 5 talks, the task is found accomplished. The speakers included:

A. Dr. Praveer Sinha (Managing Director and CEO of Tata Power)

He is presently **Managing Director and CEO of Tata Power** which is one of the biggest companies in INDIA. He has over three decades of experience in the power sector and has been credited with transforming the power distribution sector and developing and setting up Greenfield and brownfield power plants in India and abroad. Dr. Sinha holds a Master's Degree in Business Law from National Law School, Bengaluru and is also professionally trained as an Electrical Engineer. He is also a member of the Faculty Board at the Faculty of Management Studies and a member of the Board of Governors at the Indraprastha Institute of Information Technology, Delhi.

B. Dr. Mohammad Ansari (Head IT and Data Analytics at Boeing). He is in charge of diverse multibillion-dollar programs, with complex and multi-location and highly disciplined business. As a great leader, with large teams, articulating the purpose, enabling and empowering them to have a high value in society. He worked as senior program director at ASCON Working Group and he also worked as Senior Vice President Operations at Zonal Communications.

C. Dr. Archana Sharma is a senior staff scientist at the CERN Laboratory in Geneva, Switzerland. She has been active in the field since 1989 mainly working on instrumentation, especially gaseous detectors. She is the pioneer of simulations and experimentation on wire chambers, resistive plate chambers, and micro-pattern gaseous detectors over the last three decades. She is an internationally recognized expert for her experimental work on gaseous detectors for research in High Energy Physics. Also, as an aside, Archana also runs an NGO called Life Lab Education and Research Foundation with the main objective to create partnerships with educational institutions for the benefit of the underprivileged.

D. Dr. Rachna Khana Singh is HoD for Holistic Medicine, Artemis Hospital, Gurgaon, and the Founder Director of The Mind and Wellness Studio. Dr. Rachna Khanna Singh

holds expertise in Mental Wellness, Lifestyle and Relationships, and has been practicing for over 20 years.

E. **Dr. Shashi Bala Singh (Director NIPER Hyderabad):** It was a moment of honor for us to host such an inspirational personality. She is a Distinguished Scientist and was Director-General, Life Sciences (DGLS) in Defence Research and Development Organisation till 31th May 2018. Before DGLS she was Scientist 'H'/Outstanding Scientist and Director of Defence Institute of Physiology and Allied Sciences (DIPAS), Delhi since 2010. She has the distinction of serving as the Director of Defence Institute of High Altitude Research (DIHAR), Leh, from 2007 to 2010. Dr. Shashi Bala Singh has worked extensively in High Altitude physiology and has made remarkable contributions in improving the quality of life of the soldiers deployed at high altitudes.

2. Workshops

5 different workshops were organized mentioned below:

- Machine Learning
- Android Development
- Competitive Programming
- Ethical Hacking
- Competitive Programming

These were 7 days Bootcamp-type workshops with hands-on experience and there were internship opportunities for top performers. More than 80 participated from all over the country in these workshops. The workshops were also held in online mode.

3. Cultural Events

Around 2200 participants participated in cultural events during Zeitgeist 2021. This is the highest number achieved till now in any festival. There were more than 34 events organized with a prize pool with a total worth of Rs. 4.20 Lakhs. The different clubs that organized the events included:

- Music club
- Photography
- Fine Arts
- Dance
- Dramatics
- Quizzing
- Cooking
- Debating
- Oratory club
- Film Making club
- Filmski
- MUN club

4. Technical Events

The technical events witnessed more than 1800 participants from all around the country including multiple top-tier colleges. More than 34 technical events were organized with a

combined prize worth of Rs. 4 lakhs. The various clubs that organized the events included:

- Robotics
- Aeromodelling
- Astronomy
- Automotive
- CAD Designing
- Coding
- Software Hackathons
- Quizzing
- Entrepreneurship
- Photography
- Finance/Economics

Mechanical, Electrical, Civil and Chemical departments also organized multiple department-specific events under Technical events.

5. Exhibitions

Although it was a virtual event the Institute managed to give an excellent experience to the participants of these events. The exhibitions included:

- AEROMEGH workshop: Demonstrated the various up and coming Drone technologies.
- Mitra Robotics: Robotics exhibitions with state-of-the-art technology.
- 3D Printing: 3D printing exhibition by a Delhi based startup
- Furhat Robotics

6. Alumni Talks

The various alumni who have been successful in their respective fields were contacted to share their expertise with the participants.

7. Entertainment Nights

- Stand-Up Comedy Night by Gaurav Kapoor
- SUNBURN EDM Night by Bass Jackers
- Stand-up Comedy Night by Harsh Gujral
- Music Night by Vivek Singh
- Stand-Up Comedy night by Vijay Yadhav

INAUGURATION

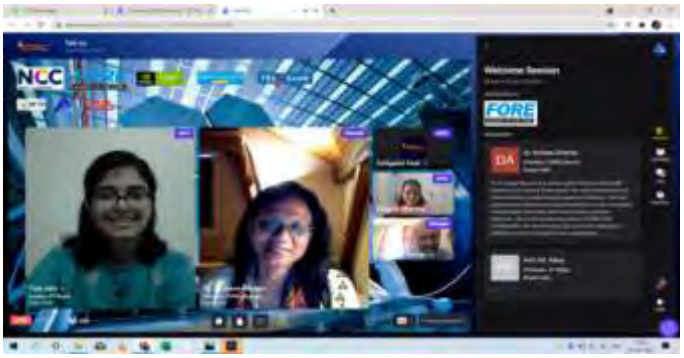
FURHAT ROBOTICS EXHIBITION

COMEDY NIGHT WITH GAURAV KAPOOR

INTERACTION WITH HELLY SHAH

DANCE EVENTS

MUSIC EVENTS



TALKS

Apart from above, the students of IIT Ropar organized and participated in various technical, cultural and sports activities during last year.

9.2 Activities by Girls Up Club

The Girl Up club observed the Menstrual Awareness Week. During this week, an awareness camp about “Gender equality and Women Empowerment” and a session on period poverty in “India and Menstrual Awareness” were organized. A Talk By Dr. Madhavi Makam, Senior Resident at JIPMER, Puducherry, on menstrual hygiene awareness was also arranged.

9.3 Celebration of “Matribhasha Diwas”

On the directions of the Language Department, Ministry of Education, GoI, Students Affairs Section in association with Hindi cell of IIT Ropar celebrated “International Mother Language Day” or "Matribhasha Diwas" on 21 February. The significance of this day is to promote

multilingualism around the world and create awareness of linguistic and cultural traditions and diversity, and inspire solidarity amongst people of different cultures, speaking different languages.

1. Activities organized for the Students

In the honor of Matribhasha Diwas, the Board of Literary Affairs(BOLA) under the Student Affairs Section conducted an online event on 20th February. There were 12 performances by 15 participants, followed by an Open Mic. The event witnessed poetries, speeches, music, and dance performances by the students of IIT Ropar. There were around 150+ audience members to celebrate the day.

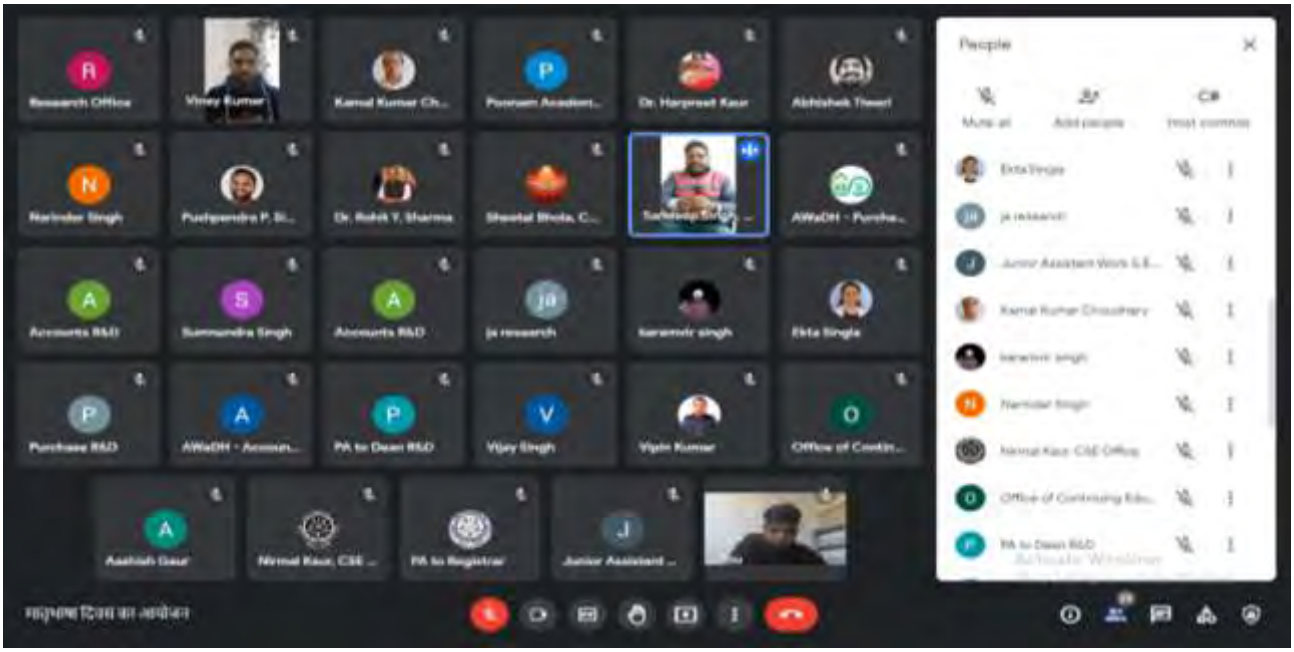
Mother Language Day Online Event Poster

2. Events organized for the staff

The Hindi cell of the institute organized poetry and song singing competitions in mother tongue through an online medium for the faculty members and staff of the Institute. The faculty members and staff of the Institute enthusiastically participated in this occasion.

In the said competition, all the participants recited poetry and sang songs in their mother tongue, while some participants kept their talent in front of everyone on the occasion of Mother Language Day by reciting poetry composed and voiced by them. All the participants proved the significance of Mother Language Day by presenting in their respective mother tongue.

On this occasion, Professor Narinder Singh of the Department of Chemistry and Dr. Pushpendra Pal Singh, Assistant Professor, Department of Physics was invited to evaluate the competition. Both the examiners encouraged all the participants with their presence and guidance.



On this occasion, Dr. Abhishek Tiwari, Faculty in-charge of Hindi cell, thanked both the examiners and all the participants. The program was conducted by the Hindi translator of the Institute, Dr. Girish Pramodrao Kathane.

9.4 Ek Bharat Shreshtha Bharat (EBSB)

In pursuance of the directives of the Ministry of Education, Government of India (GoI), the IIT Ropar (Punjab) established Ek Bharat Shreshtha Bharat (EBSB) Club.

Objective of EBSB

The broad objectives of this initiative of GOI are as follows

1. **To CELEBRATE** the Unity in Diversity of our Nation and to maintain and strengthen the fabric of traditionally existing emotional bonds between the people of our Country.
2. **To PROMOTE** the spirit of national integration through a deep and structured engagement between all Indian States and Union Territories through a year-long planned engagement between States.
3. **To SHOWCASE** the rich heritage and culture, customs and traditions of either State for enabling people to understand and appreciate the diversity that is India, thus fostering a sense of common identity.
4. **TO ESTABLISH** long-term engagements.
5. **TO CREATE** an environment which promotes learning between States by sharing of rich culture, best practices and experiences.

Constitution of EBSB Club at IIT Ropar

S No.	Name of Member	Designation
1.	Dr. S.C. Martha	Associate Dean, Student Affairs
2.	Dr. Neelkanth Nirmalkar	AP & Faculty Advisor, Board of Cultural Affairs
3.	Dr. Anupam Bandyopadhyay	AP & Associate Faculty Advisor, Board of Cultural Affairs
4.	Mr. Vishwajeet Kumar	Student Coordinator
5.	Mr. Sathwik Reddy	Student Coordinator
6	Assistant Registrar	ARSA

List of Activities held

IIT Ropar (Punjab) has its paired state with Andhra Pradesh and sharing activities with IIT Tirupati (AP)

S No.	Date	Event Details
1.	04-04-2021	Essay Competition on the event of 9th Sikh Guru Sh. Guru Teg Bahadur Ji
2.	12-07-2021	An event was organized under the banner of "Jal ShaktiAbhiyan: Catch the Rain". The campus residents were made aware of the store and use of rainwater.
3.	01-09-2021 to 15-09-2021	Swachhta Pakhwada, 2021

Glimpse of activities held at IIT Ropar

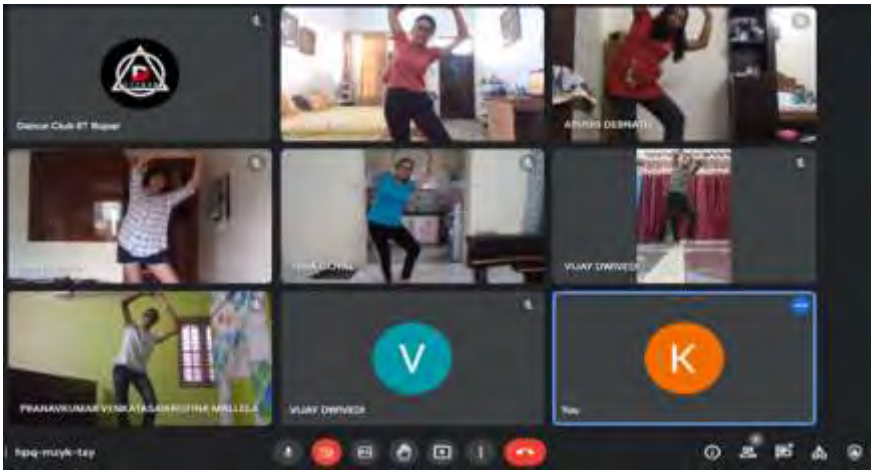
1. Ek Bharat Shreshtha Bharat(EBSB)

Pairing state: Andhra Pradesh

- Online movie screening of Kancharaplem on 16th June, 2021

- Carnatic Music Session on 16th June, 2021 in online mode

- Kuchipudi Dance Workshop on 16th June, 2021 in online mode



9.5 Swachta Abhiyaan

On directions of MoE, IIT Ropar observed the second week of September, 2021 as "Swachta Abhiyaan Week" at IIT Ropar. In the campaign of Swachta abhiyaan we conducted two drives for hostels and area around buildings. Following the covid protocols, all students starting from their respective rooms cleaned their hostels, grounds and cut the extra grasses in the courts. These drives were conducted on 5th September and 12th September in the campus. These drives were successful in making the campus clean and green. Following are some exclusive images of the drive by students.

9.6 SPIC MACAY

An online classical performance was performed by Pt. Mohan Bhatt (An inventor of Mohan Veena) on Foundation Day. The event will be organized under the banner of SPIC MACAY.

10. Elections of New Council for AY 2021-22

Following team was elected to act as Student Executive Council for AY 2021-22:

S No.	Post	Name of Student	Entry No.
1	President	Raghav Verma	2019MEB1284
2	GS BOHA	Tanmay Gambhir	2019meb1300
3	GS BOCA	Ninad Sutrave	2019med1010
4	GS BOSA	Manik Thappa	2019meb1275
5	GS BOLA	Sanyukta Marandi	2019meb1332
6	GS BOST	Additional charge with President SC	
7	GS BOAA	Diksha	2019meb1216

11. Sunny Oberoi Student Leadership Award 2021

First Prize: The First prize of "Sunny Oberoi Student Leadership Award-2021" was given to following students:

S No	Name	Entry No	Department	Year of Registration
1.	Bellamkonda Dwiza	2018EEZ0006	Electrical Engineering	2018
2.	Sanyukta Marandi	2019MEB1332	Mechanical Engineering	2019

Second Prize: The Second Prize of "Sunny Oberoi Student Leadership Award-2021"was given to following students:

S No	Name	Entry No	Department	Year of Registration
1.	Sahil Verma	2018CHB1057	Chemical Engineering	2018
2.	Bhumika	2019CSB1152	Computer Science Engineering	2019

12. Formation of New Clubs

- Poetry Club under Board of Literary Affairs
- Epicure – the Cooking Club under Board of Cultural Affairs

13. Awards won by the Students

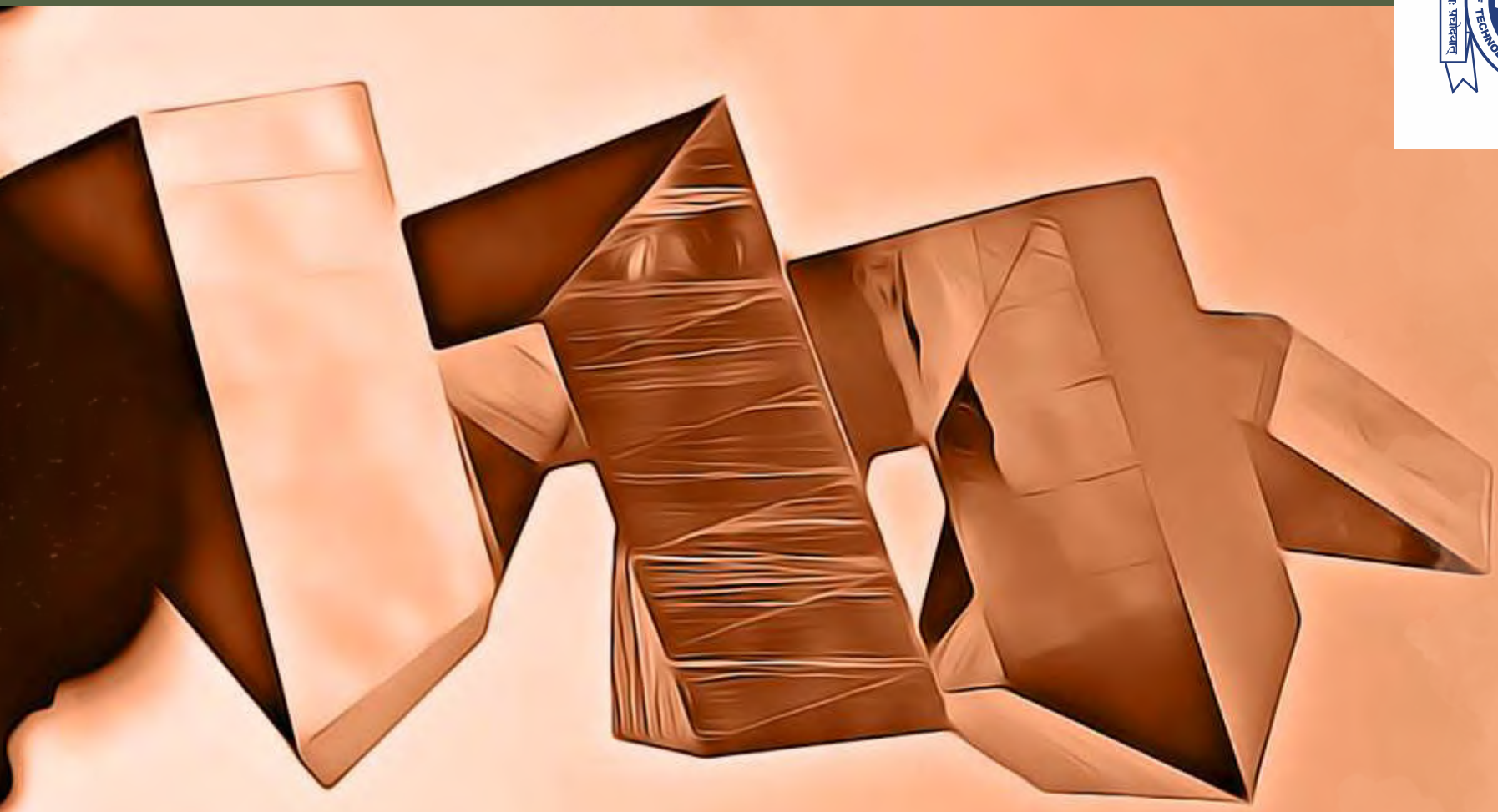
- A team of following 5 students of IIT Ropar won 1st Prize in Aeonea Event Organized by IIT Roorkee.

Name	Entry No.
Janmeet Singh Makkar	2020CSB1175
Vasu Bansal	2020EEB1217
Ankita Sharma	2020MEB1266
Debjit Bhowal	2020MEB1280
Akash Garg	2020MEB1262

- **Mr. Arnav Kharbanda** - 2021CSB1072 has competed in the competition and has secured a place in the top 10 teams in Tech Fest at IIT Bombay.

FACILITIES

@IIT ROPAR



LIBRARY

1. INTRODUCTION

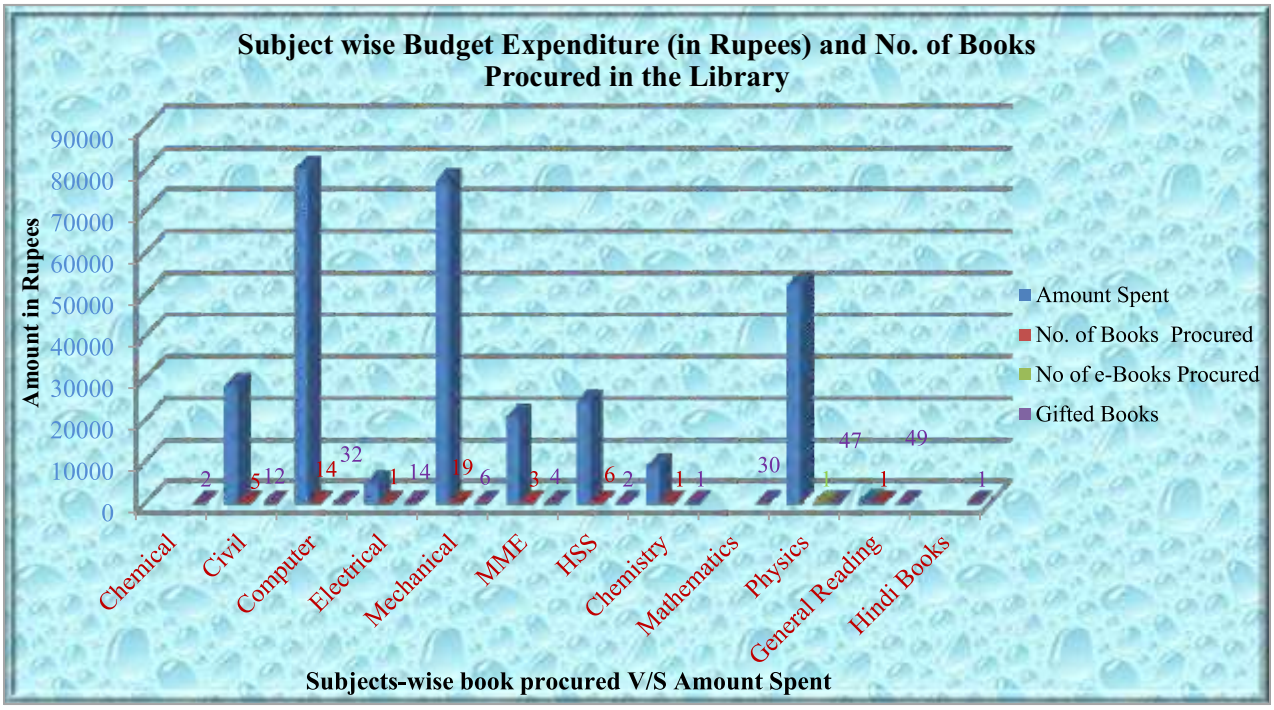
Library of IIT Ropar is an invaluable storehouse of knowledge and learning resources, which plays a vital role in support of academic and research activities at the institute. The objective of the library is to provide users with the required information resources and support by offering latest services which are integrated with teaching, learning and research activities. The main functions of the library include selecting, acquiring, processing, preserving and dissemination of print and electronic information resources. The services include providing access to quality print and electronic resources with appropriate delivery systems, tools and services in order to support the institute to achieve its vision and mission.

2. COLLECTION DEVELOPMENT

Collection building is one of the important functions of IIT Ropar library, which involves careful selection of standard learning resources required by the academic and research community at the institute.

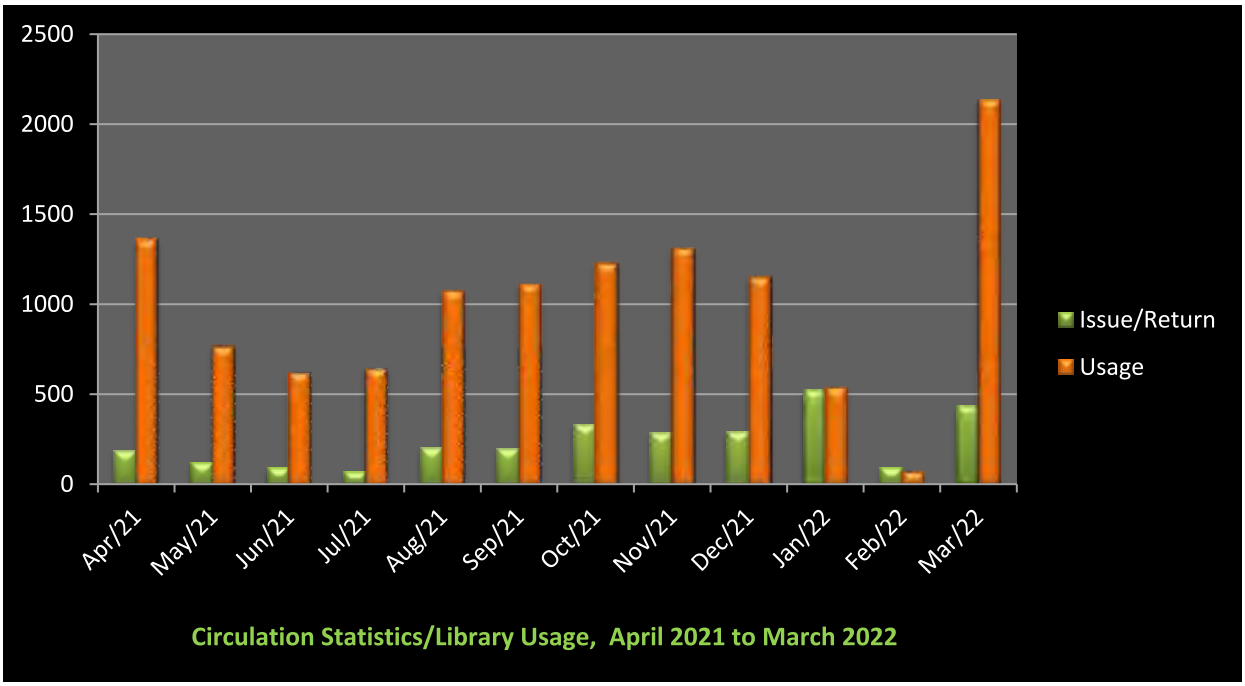
The Library has established collection development policy for acquiring latest books, journals, reports and other reference and information resources in science, engineering, technology, humanities and social sciences, as well as resources on general reading and same has been followed during the FY 2021-22. The Library maintains an impressive print collection of 22,700 documents that includes dictionaries, manuals, encyclopedias, reports of research monographs, multi-volume reference sources and other books on thought process. Apart from this, the library collection also includes Theses, Dissertations, Annual Reports, Standards, and CDs/DVDs etc. in the fields of science, engineering, technology, humanities and social sciences.

During the financial year 2021-22, the library added 251 new books to its collection, which include 50 print books and an e-book through purchase and 200 books received as gratis. A brief summary of the books procured in the 2021-22 financial year is shown in the below figure:



3. Circulation and Consultation Service

The library circulation operations have been automated using RFID based LIBSYS-7 software. During the academic year 2021-22 total 2807 documents were issued/renewed at self-service Kiosk/staff station to all categories of users. 11,995 visits have been made by users to consult the library resources physically during the year. The graph below well depicts the circulation/consultation history of books/users during financial year 2021-22.



4. Subscription of Journals/ Magazines/Databases/ Standards/ Software Tools in Electronic & Print Versions

Journals/Databases/Standards/Grammar and Anti-plagiarism tools plays an important role in research work at the institute. IIT Ropar library facilitates online access to thousands of e-journals through participation in E-Shodh Sindu (eSS) consortium and library also subscribes to several journals directly from the publishers as well as through the empanelled subscription agencies. The library subscribes to the following electronic and print resources. The below table depicts the usage statistics (number of full-text downloads/views/reports usage etc.) of subscribed electronic resources:

Electronic Journals/Databases Subscribed during 2021

Sr. No.	List of Electronic Resources (Electronic Journals/Databases/Tools)	Usage Statistics (No. of full-text downloads/Views/ Reports)
1.	Acta Arithmetica	NA
2.	American Chemical Society (ACS) Journals	170802
3.	American Institute of Physics (AIP) Journals	13501
4.	American Mathematical Society (AMS) Journals	319
5.	Annals of Mathematics (Princeton University)	135
6.	Annual Reviews	2111
7.	American Physical Society (APS) Journals	12683
8.	American Society of Civil Engineers (ASCE) Library	1523
9.	American Society of Mechanical Engineers (ASME) Journals	2602
10.	Association for Computing Machinery (ACM) Digital Library	3468
11.	Canadian Journal of Mathematics (Canadian Mathematical Society)	56

12.	Cambridge University Press (CUP) selected Journals	3350
13.	Elsevier ScienceDirect Journals	374586
14.	Economic & Political Weekly	NA
15.	Emerald CFTI Collection	6109
16.	IEL Online (IEEE Journals)	152021
17.	Institute of Physics Science (IoP) Journals	25992
18.	JSTOR	7630
19.	Optical Society of America (OSA) Journals	4328
20.	Oxford University Press (OUP) Journals	1835
21.	Proceedings of the National Academy of Sciences (PNAS)	4376
22.	Project Muse	204
23.	Revue francaise de geotechnique from Geotechnic World	NA
24.	Royal Society of Chemistry (RSC) Journals	107181
25.	Royal Society Proceedings A: Mathematical, Physical and Engineering Sciences	809
26.	Science Online	1372
27.	SpringerNature Journals	5357
28.	Taylor & Francis Journals	15839
29.	Technopress selected Journals	131
30.	Thieme Chemistry Package	1291
31.	Wiley selected Journals	43235
32.	International Journal of Number Theory from World Scientific	NA
Databases/Software Tools		
1.	Economic and Political Weekly Research Foundation (EPWRF)	NA
2.	Grammarly Tool	3635
3.	Institute for Studies in Industrial Development (ISID)	NA
4.	MathSciNet	29729
5.	Prowess IQ	533
6.	SciFinder Scholar	45950
7.	Scopus Database	238753
8.	States of India	1585
9.	Turnitin - Antiplagarism Tool	6350
10.	Web of Science	7777

NA-Not Available

Print Periodicals Subscribed during 2021

Sl. No.	Title
1.	American Scientist
2.	Modern Fiction Studies
3.	National Geographic
4.	New Scientist
5.	Reader's Digest
6.	Time

5. PUBLICATIONS (Journal Articles/ Conference Papers/ Book Chapters)

5.1 Dr. Tarvinder Singh Handa

1. Handa, T. S., & Singh, J. (2021). Ascertaining users' attitude towards information technology application: A comparative study of Himachal Pradesh University, Shimla and Punjabi University, Patiala. Library Philosophy and Practice, https://digitalcommons.unl.edu/ libphilprac/6646
2. Singh, T., & Singh, J. (2021). Mapping patron's attitude towards information technology application in university libraries. An analytical study of two university libraries of north India region. In S.K. Ashok Kumar & P. Rajendran (Eds.), Transition or transformation of libraries due to Covid pandemic: Lessons learnt (pp. 339-350). International Library and Information Society: Chennai, TN.

3. Rapporteur in Technical Session 9 of XXXVII Conference (International) of IATLIS and Platinum Jubilee Celebration Seminar of CU-DLIS on the theme of "LIS Education and LI Services during and beyond the COVID-19 Pandemic", Jointly organized in blended mode by Indian Association of Teachers of Library and Information Science (IATLIS) and Department of Library and Information Science, University of Calcutta, Kolkata, held from 25th to 27th November, 2021.

5.2 Mr. Vineet Jamwal

1. Jamwal, V., & Kaur S. (2021) A non-traditional open source solution for altmetrics. Library Hi Tech News, 38(5), pp. 13-15. https://doi.org/10.1108/lhtn-08-2021-0049
2. Jamwal, V., & Kaur, S. (2021). Global presence of open-source research data management platform for libraries: the Dataverse project. Library Hi Tech News, 38(9), pp. 8-12. https://doi.org/10.1108/lhtn-10-2021-0066
3. Jamwal, V., & Kumar, H. (2022). An overview of dimensions and dimensions badge. In Library Hi Tech News. https://doi.org/10.1108/lhtn-01-2022-0010

SUMMARY OF ACCOUNTS

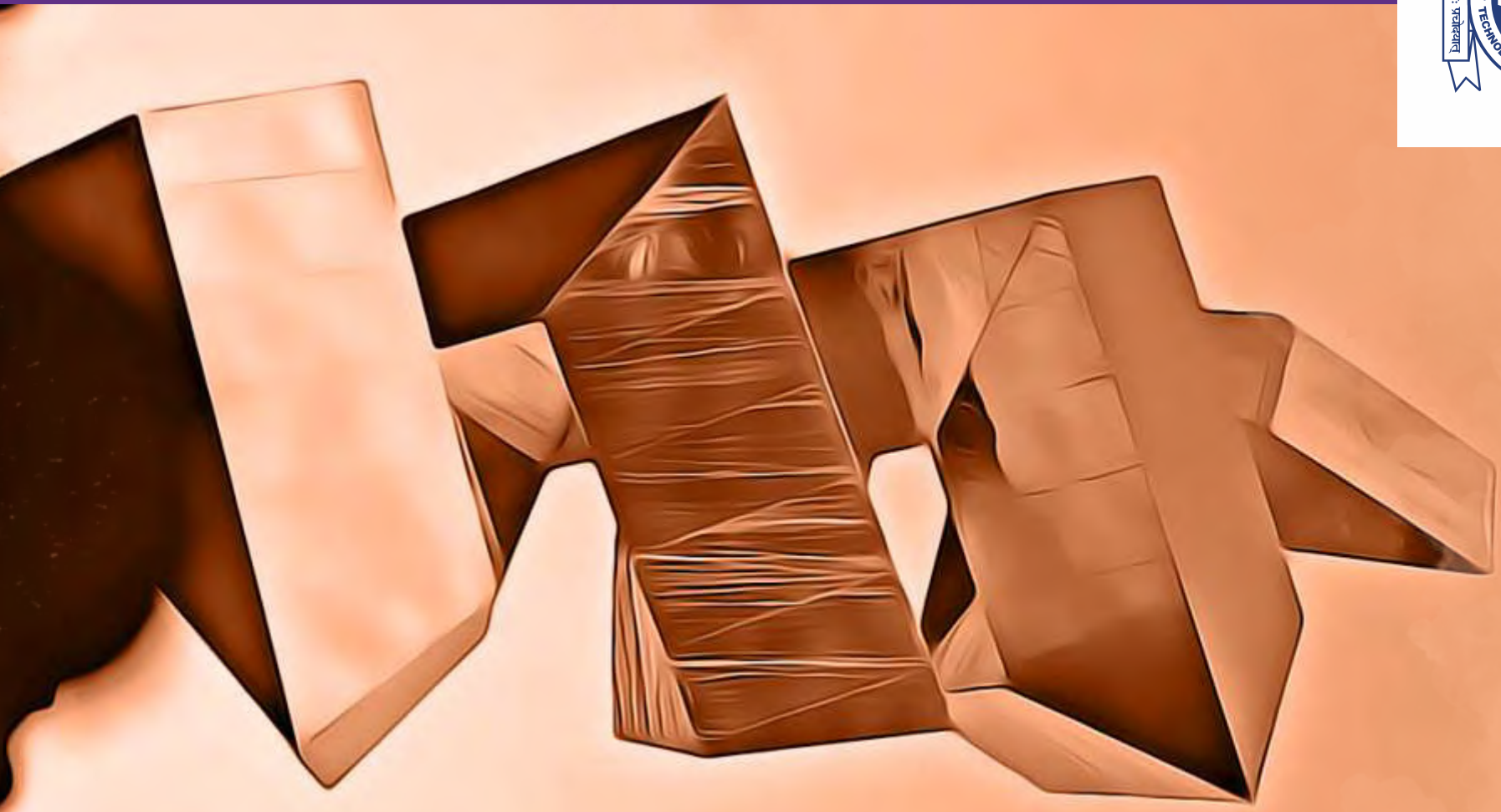
SUMMARY OF ACCOUNTS

RECEIPT AND PAYMENT ACCOUNT OF INDIAN INSTITUTE OF TECHNOLOGY ROPAR FOR THE FINANCIAL YEAR 2021-22

RECEIPT	Amount (in Rs.) 31.03.2022	PAYMENT	Amount (in Rs.) 31.03.2022
I. Opening Balances		I. Expenses	
a) Cash Balance	0	a) Establishment Expenses	516328208
b) Bank Balance		b) Academic Expenses	252776574
i) In Current accounts	8719261	c) Administrartive Expenses	185918608
ii) In deposit accounts (FDR)	0	d) Transportation Expenses	3234446
iii) Savings accounts (Institute)	183799737	e) Repair & Maintenance	73031325
iv) Savings accounts (R & D)	76493469	f) Prior Period Expenses	0
		g) Finance Cost	166843584
II. Grant-in-Aid		II. Payment against Earmarked/Endowmnet Funds	0
- on Revenue Account	1416863482		
- on Capital Account	140000000		
- Adjustment	0		
III. Academic Receipts	192144396	III. Payment against Sponsored Projects/Schemes	158654951
IV. Receipt against Earmarked/Endowmnet Funds		IV. Payment against Sponsored Fellowships and Scholarships	9940168
V. Receipt against Sponsored Projects/Schemes	168507497	V. Investment and Deposits made	
		(a) Out of Earmarked/Endowmnet Funds	0
VI. Receipt against Sponsored Fellowships and Scholarships	20033766	(a) Out of Own Funds (Investments - Others)	0
VII. Income on Investments from		VI. Term Deposits with Scheduled Banks	
a) Earmaked/Endowmnet Funds		FDR (Institute)	1247071925
b) Other Investments		FDR (R&D)	241188565
		VII. Expenditure on Fixed Assets and Capital Works in Progress	
VIII. Interest received on		a) Fixed Assets	64894840
a) FDR	49247269	b) Capital Work in Progress	61109650
b) Loans and Advances	16920		
c) Savings Bank Accounts	4576779	VIII. Other Payments including statutory payments	671338568
d) Saving & FDR (R&D)	552355		

		IX. Refunds of Grants (Projects)	13803481
IX. Investments Encashed		X. Deposits and Advances	27513396
Endowment Fund	0		
		XI. Other Payments	0
X. Term Deposits with Scheduled Banks Encashed			
FDR (Institute)	1320675364	XII. Closing Balances	
FDR (R&D)	195787297	a) Cash Balance	0
XI. Other Income (including Prior Period Income)	8245153	b) Bank Balance	
		i) In Current accounts	10866485
XII. Deposits and Advances	342598	ii) In deposit accounts (FDR)	0
- HEFA TERM LOAN	53990497	iii) Savings accounts (Institute)	142734221
XIII. Miscellaneous Receipts including Statutory Receipts	48750257	iv) Savings accounts (R & D)	41497102
TOTAL	**3888746096**	**TOTAL**	**3888746096**

GOVERNING BODIES



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Chief Secretary to Government of Punjab,
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Sh. Ravinder Kumar
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Rupnagar – 140001, Punjab.

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Prof. Javed Agrewala
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Prof. Manoranjan Mishra
Dean, Faculty Affairs & Administration
Indian Institute of Technology Ropar

Prof. C.C. Reddy
Dean
International Relations and Alumni Affairs
Indian Institute of Technology Ropar

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Professor and Chairman, GATE
Department of Chemistry
Indian Institute of Technology Ropar

Prof. Rajendra Srivastava
Professor
Department of Chemistry
Indian Institute of Technology Ropar

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and Outreach Activities)
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Head, Department of Civil Engineering
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Head, Department of Mechanical
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Head, Department of Computer Science
& Engineering
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Dr. Rajesh Kumar
Head, Department of Bio Medical
Engineering
Indian Institute of Technology Ropar

Dr. Rakesh Kumar
Head, Department of Physics
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Department of Civil Engineering
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Dr. Neha Sardana
Assistant Professor
Department of MME
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Head, Central Workshop
Indian Institute of Technology Ropar

Dr. Avijit Goswami
Chairman, Central Research Facility
Indian Institute of Technology Ropar

Dr. Dinesh K.S.
Librarian
Indian Institute of Technology Ropar

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CTO/Director
Pilot Technology Development Ltd.,
Hong Kong

Sh. H.S. Cheema
Managing Director
Cheema Boilers Pvt. Ltd., Ropar

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Visiting Professor
Department of Chemical Engineering
Indian Institute of Technology Ropar

Prof. R. G. Pillay
Visiting Professor
Department of Physics
Indian Institute of Technology Ropar

Dr. G Sankara Raju Kosuru
Assistant Professor and Chairman, JAM
Department of Mathematics
Indian Institute of Technology Ropar

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Department of Physics
Indian Institute of Technology Ropar

Dr. J. Kalaiselvi
Assistant Professor and Warden
Raavi Hostel
Indian Institute of Technology Ropar

President, Student Council
Indian Institute of Technology Ropar

General Secretary, Academics Affairs
Indian Institute of Technology Ropar

Ph.D Representative
Indian Institute of Technology Ropar

General Secretary, Hostel Affairs
Indian Institute of Technology Ropar

Secretary
Sh. Ravinder Kumar
Officiating Registrar
Indian Institute of Technology Ropar

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