



Maharaja Surajmal Institute of Technology

C4, Janakpuri, Delhi-110058


ELEKTRO 2023

DEPARTMENT OF ELECTRONICS &
COMMUNICATION ENGINEERING

Vol. 4

JAN-DEC '23





THE DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING WHICH HAS A FINE BLEND OF EXPERIENCED AS WELL AS YOUNG AND DYNAMIC PERSONALITIES AS FACULTY, IS INVOLVED IN PROVIDING QUALITY EDUCATION AT UNDERGRADUATE (UG) LEVEL. THEY HAVE AN UNCEASING COMMITMENT TOWARDS STUDENTS, HELPING THEM LEARN, GROW, AND DEVELOP AND ACHIEVE THEIR GOALS, WHETHER IT IS BECOMING A PROFESSOR, AN ENTREPRENEUR, OR JOINING INDUSTRY. THE RESEARCH INTERESTS OF THE FACULTY MEMBERS ENCOMPASS A WIDE GAMUT OF SUB-DISCIPLINES OF ELECTRONICS & COMMUNICATION ENGINEERING. COLLABORATION WITH FACULTY MEMBERS FROM OTHER DISCIPLINES, BOTH WITHIN AND OUTSIDE THE INSTITUTE, IS ENCOURAGED. THE LAB FACILITIES AND THE INFRASTRUCTURE ARE REGULARLY UPGRADED AND ARE WELL SUPPORTED BY THE INSTITUTE AND THE INDUSTRY.

FROM HOD'S DESK

Prof. Neeru Rathee

B.Tech, M.Tech, Ph.D (ECE)

Experience: 14+ years

Greetings from the Department of Electronics and Communication Engineering at Maharaja Surajmal Institute of Technology, New Delhi! It gives me immense pleasure to lead the Department of Electronics and Communication Engineering which is striving towards the goal of imparting quality education to the students to achieve academic excellence.

Since its inception in the year 2001, the department has maintained an exemplary academic record. We have been accredited by the National Board of Technical Education (NBA) and also National Accreditation Assessment Council (NAAC). We are associated with professional bodies like ISTE.



The major strength of the ECE department is a team of well qualified and dedicated faculties who are continuously inspiring the students for their academic excellence. The department has well-equipped laboratories with modern instrumental facilities. The department has arranged several industrial visits and workshops for our students in this semester.


The motto of the department is to provide quality technical education to make the students industry-ready. We promote teamwork among students through projects and co-curricular activities. The excellent infrastructure, dynamic teaching staff along with training and placement cell ensure a bright future to the students. The faculty members are involved in research and development activities and are pursuing their Ph.D., in their related domains.

We are assured that our students will rise as assets not only to the institution and to the organization they join, but to the society at large. With this, I would like to congratulate the students and staff for their brilliant achievements and wish them a great future.

"All the Best"



VISION



ECE department strives to become a centre of quality education to meet the global technological needs for the benefit of mankind.



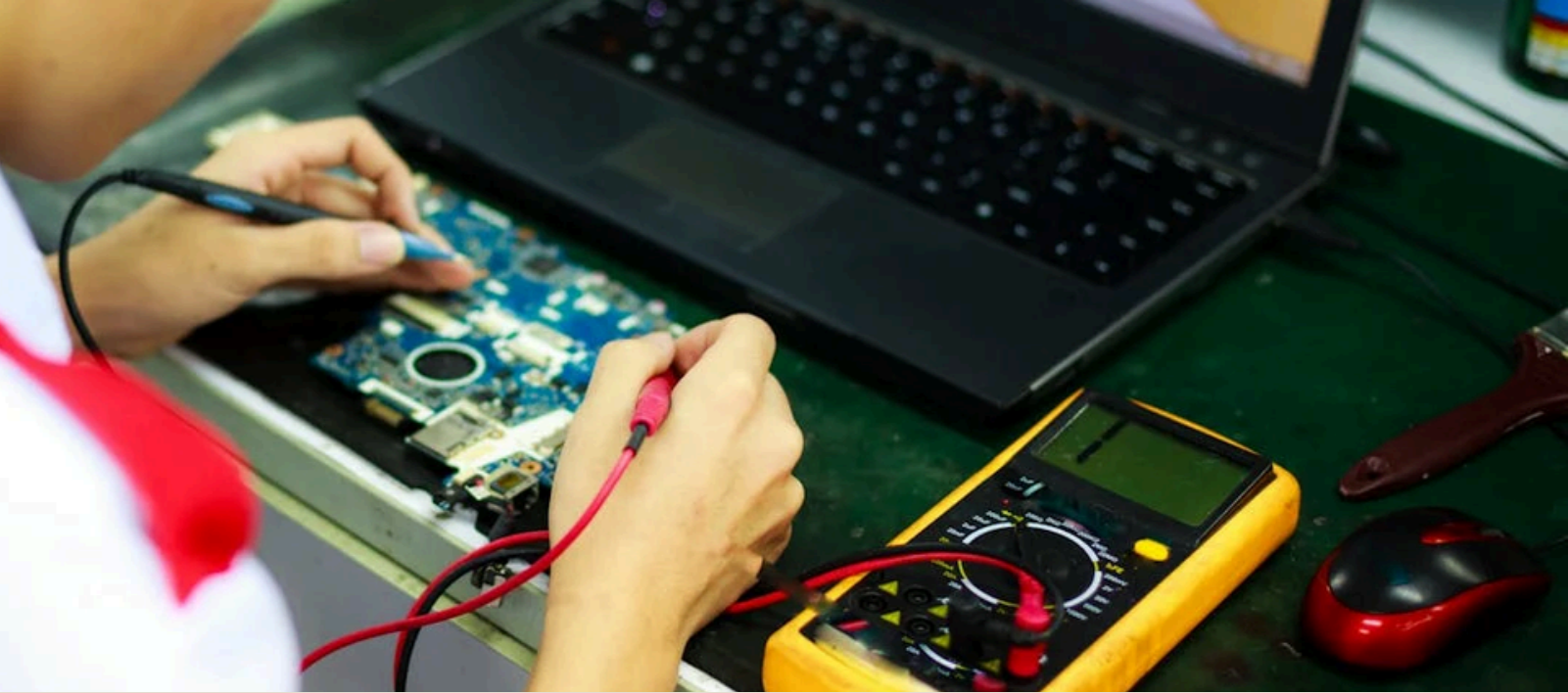
MISSION

M1: To impart high quality education in the field of electronics & communication engineering to meet the national and global challenges.

M2: To provide adequate facilities, infrastructure and environment to the students as well as faculty members thereby creating an ambience conducive for teaching-learning process.

M3: To empower the students by enhancing their soft skills and ethics to create social awareness and imbibe national values so as to become good citizen.

M4: Creating a thrust for life-long learning through interaction with outside world on contemporary issues and technological trends.



PROGRAM EDUCATIONAL OBJECTIVES (PEOS)

PEO1: To prepare ECE graduates with strong foundation in engineering and technology for personal and professional growth.

PEO2: To prepare ECE graduates with capability of serving and leading various organizations with acquired technical skills and knowledge.

PEO3: To prepare ECE graduates with professional competence to successfully attempt various competitive exams, pursue higher studies, research and other professional activities.

PEO4: To prepare ECE graduates with ability to address the challenging needs of society with ethics and integrity in global context.

PROGRAM SPECIFIC OUTCOMES (PSOS)

PSO1: Apply fundamentals of basic sciences and Electronics & Communication Engineering to develop core and multidisciplinary technology for industrial and societal needs.

PSO2: Apply the acquired technical knowledge for successful professional career in the field of Electronics & Communication Engineering and qualifying in various competitive examinations held at national and international level.



BY MISHA RANJAN

PRACTICES IN THE DEPARTMENT

Mentoring

A mentor guides a group of twenty students. The objective of mentoring is to improve the academic performance of the students. The mentors interact with students and identify if they have any learning barriers. Mentors work with students individually to help students to work through difficult issues so that they can stay focussed in the classroom and get the maximum benefit.

GUEST LECTURES

Guest speakers from industry/academics are invited to deliver lectures on emerging technologies. These lectures give students exposure to industry oriented technologies and perspective of the guest speaker's field of work or expertise. One important benefit that is derived from having a guest speaker is the enhancement of the students' educational experiences.

AWARDS

Awards for Academic excellence are given to meritorious students, Gold medallists and to Branch Toppers with Prize money for first and second position.

COURSE BASED PROJECTS

The students are driven to implement course based projects as an outcome of their laboratory course. This method intends creative imitation, leading to research and innovation. Projects are developed for laboratory courses of every semester and are presented.

ONLINE RESOURCES

Various digital platforms like Coursera at the college provides e-learning opportunities through online courses in many fields, such as Programming in C, Data Structures and Algorithms using Python Programming, Introduction to DBMS etc.

EVENTS GALLERY

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STUDENTS' ACHIEVEMENTS

1. Mohd Sameer Hussain of 3 rd Year, ECE has been awarded Nutanix Certified Professional
-Multicloud Infrastructure 6 (NCP-MCI 6) from **Nutanix**.
2. Shivani Mishra of 2 nd Year, ECE participated in semifinals panellist at **Intertext ProAms**
debate open held online from july 22-23 2023
3. Shivani Mishra of 2 nd Year, ECE participated in open Quarterfinals Panellist at **Uhuru Worlds 2023**(Debate tournament) held online from 23/6/23 to 25/6/23.
4. Shivani Mishra of 2 nd Year, ECE participated in U-14 finals panellist at Papillon Iv World Schools 2023(Debate tournament) held online from 26/5/23 to 28/5/23.
5. Shivani Mishra of 2 nd Year, ECE participated in Intra cerebrate (debating society of MSIT)
3.0 winner,7 th best speakers and 2nd best judge, comp.



STUDENTS' ACHIEVEMENTS

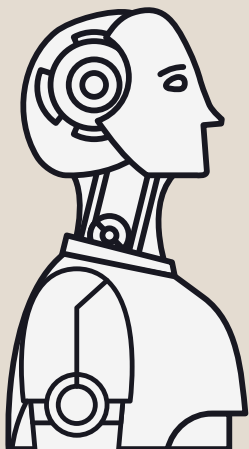
6. Shivani Mishra of 2 nd Year, ECE participated in debate tournament held offline at NSUT, Delhi from 1/4/2023 to 3/4/2023

7. Shivani Mishra of 2 nd Year participated in debate competition held offline at St.Stephens college ,Delhi from 23/4/2023- 25/4/2023

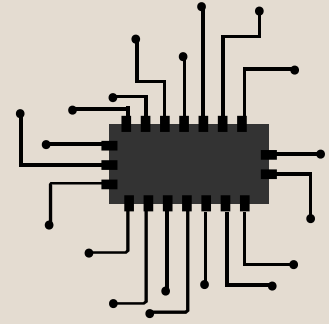
8. Harsh Goyal of 2nd year cleared **flipkart** grid level 1.

9. Kartik Tyagi of 2nd year won the open mic held by IEEE before the Love Babbar session.

10. Harshit Khandelwal 2 nd year participated in an offline ideathon - IDEATE, held at BVCOE, Delhi on 7 th June 2023



PUBLICATIONS



1. Nath, D., Azad, P., Ibrahim, S. M., & Singh, V. P. (2023). Antibacterial and photocatalytic performance of eggshell-derived CaF₂-mortar cement composites. *Journal of the Australian Ceramic Society*, 59(1), 93-103.
2. Sudesh pahal, Anjana Saroha, Distributed Denial of Services attacks on cloud servers: Detection, Analysis and Mitigation , *Mapana Journal of Sciences: Vol. 22 No. 1: Mapana Journal of Sciences*.
3. Garima, Goel, N. and Rathee, N., 2023. Modified multidimensional scaling on EEG signals for emotion classification. *Multimedia Tools and Applications*, pp.1 - 22.
4. Gupta, R., 2023. Failure Mode and Effects Analysis of PCB for Quality Control Process. *MAPAN*, pp.1 - 10.
5. Nishtha, Rajveer Singh Yaduvanshi, and Gaurav Varshney. "Isolation control for implementing the single dielectric resonator based tunable THz MIMO antenna and filter." *Optical and Quantum Electronics* 55.4 (2023): 357.
6. Nishtha, Rajveer Singh, and Gaurav Varshney. "Improving the isolation of a tunable terahertz multi-input-multi-output dielectric resonator antenna using graphene coating." *Current Applied Physics* 50 (2023): 133-139.

BOOK CHAPTER PUBLICATIONS:

Nishtha, Yaduvanshi, R.S. (2023). A Circular Graphene Patch MIMO Antenna at THz Range. In: Khosla, A., Kolhe, M. (eds) *Renewable Energy Optimization, Planning and Control. Studies in Infrastructure and Control*. Springer, Singapore.
https://doi.org/10.1007/978-981-19-8963-6_21

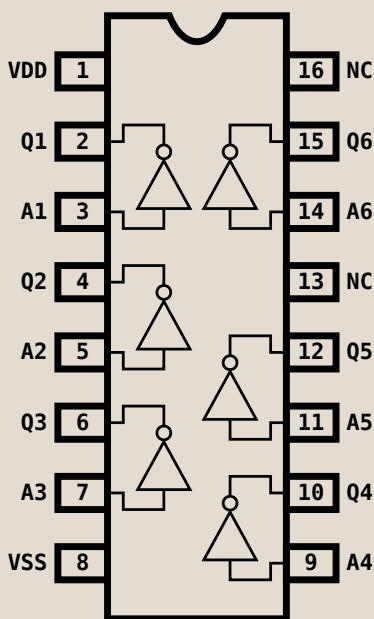
PATENTS



1. **Dr. Shaifali** et al., "Early flood detection system using internet of things (IOT)", patent published on 27th January 2023 with application number 202311004108.

2. **Dr. Upma Singh** et. al, "Wireless electric road for charging future EV vehicles" patent published on 27th January 2023 with application number 202321001634.

3. **Dr. Upma Singh** et. al, "Common-path Digital Holographic Configuration for "Quantitative Imaging" patent published on 13th January 2023 with application number 202311000321.



FACULTY DEVELOPMENT PROGRAM

1. Prof. Archana Balyan, Dr. Sudesh Pahal, Dr. Meena Rao, Dr. Shaifali M. Arora, Prof. Neeru Rathee, Dr. Deepti Deshwal, Dr. Aman Dahiya, Ms. Neelam Nehra, Dr. Gitanjali Sharma, Ms. Himani, Ms. Sumanlata, Ms. Sonia and Ms. Neha attended one week faculty development program on "Recent Advancement in Machine Learning and Artificial Intelligence (RAMLAI'23) " from 6 -10 February, 2023 organized by MSIT.

2. Ms. Himani attended one week faculty development program on "Applications of AI in Electronics design", from 20 -24 February, 2023 organized by NITTTR -Chandigarh.

3. Ms. Garima and Ms. Jasmine Chikkara attended one week faculty development program on "Recent Advancements in Science and Technology", from 6 -10 February, 2023 organized by Alliance University.



EVENTS ORGANISED



Industrial Visit to the Indian Institute of Technology Delhi (IITD), conducted by ECE Dept.

A one-day industrial visit to the Indian Institute of Technology Delhi (IITD), was organised by ECE Dept. on 28th November 2023. The students attended the "Indigenous 5G Test Bed-Training Workshop" training program on "IoT, 5G PHY Layer, and LiFi" in the SIT building at IITD. The workshop was conducted by Abhishek Ranakoti, under the supervision of Prof. Monika Aggarwal, Department of Material Sciences and Engineering, Centre for Applied Research in Electronics, IITD. In total, 22 students of the 5th semester of ECE-1, ECE-2, and ECE-2nd shift and 2 faculty members, Ms. Jasmine Chhikara and Ms. Swati Malik attended the workshop.

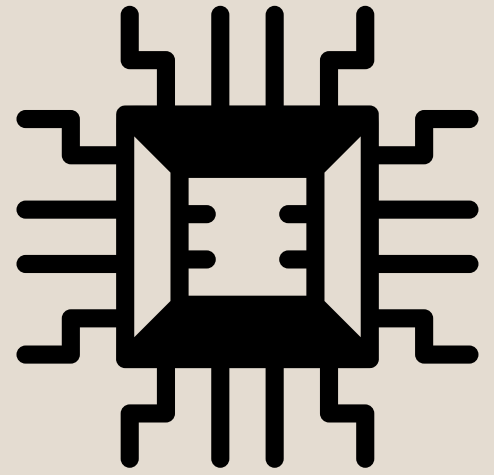


Expert Lecture on, "Mental Health and Emotional Intelligence of Students" :

An expert lecture on "Mental Health and Emotional Intelligence of Students and Substance Abuse among Students." was organized by department of ECE for 2nd & 3rd year ECE students on 29th November, 2023 in seminar hall.

The talk was organized by Dr Shialali M. Arora, Associate Prof., ECE department, in association with Dr Rajneesh Varma, Director Lions Club Solitaire. Lecture was delivered by Mr Kapil Gupta, an accomplished entrepreneur, serves as the Founder and CEO of Solh Wellness which is a comprehensive tech-enabled and AI-driven mental wellness platform.





Video Shoot on "Educational Software Embedded System for Teaching Stem to Visually Impaired People":

A video shoot on "Educational Software Embedded System for Teaching Stem to Visually Impaired People" developed by Adarsh Goyal (ECE 3rd year Student) was conducted by team from ID8NXT on September 23,2023 (Saturday) from 8:15am - 4:30pm on the behalf of Microsoft India. Dr. Archana Balyan , Dr. Neeru Rathee, Dr. Puneet Azad and Dr. Richa Gupta welcomed the team. The shoot was done to showcase the project that was built using Azure cloud computing.



Invited Talk on VLSI and Embedded Systems by ST Microelectronics experts:

An expert talk was conducted by ECE department of MSIT on 11th December 2023 in Seminar Room 206 from 11 am onwards, The talk was organized by Dr. Meena Rao, Associate Prof. and commenced at 11 am. The event featured industry stalwarts, Mr. Atul Bhargava and Mr. Alok Kumar Mittal, both from ST Microelectronics, who shared invaluable insights on key industry skills and ways for students to enhance their capabilities.



DEPARTMENT OF ECE

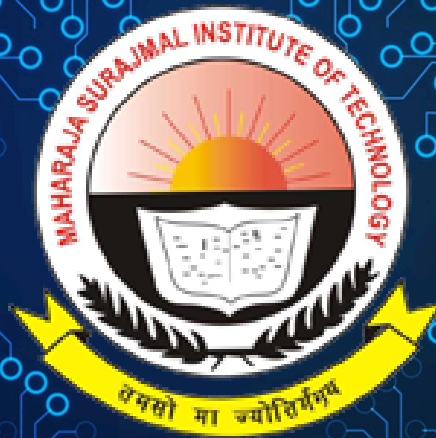
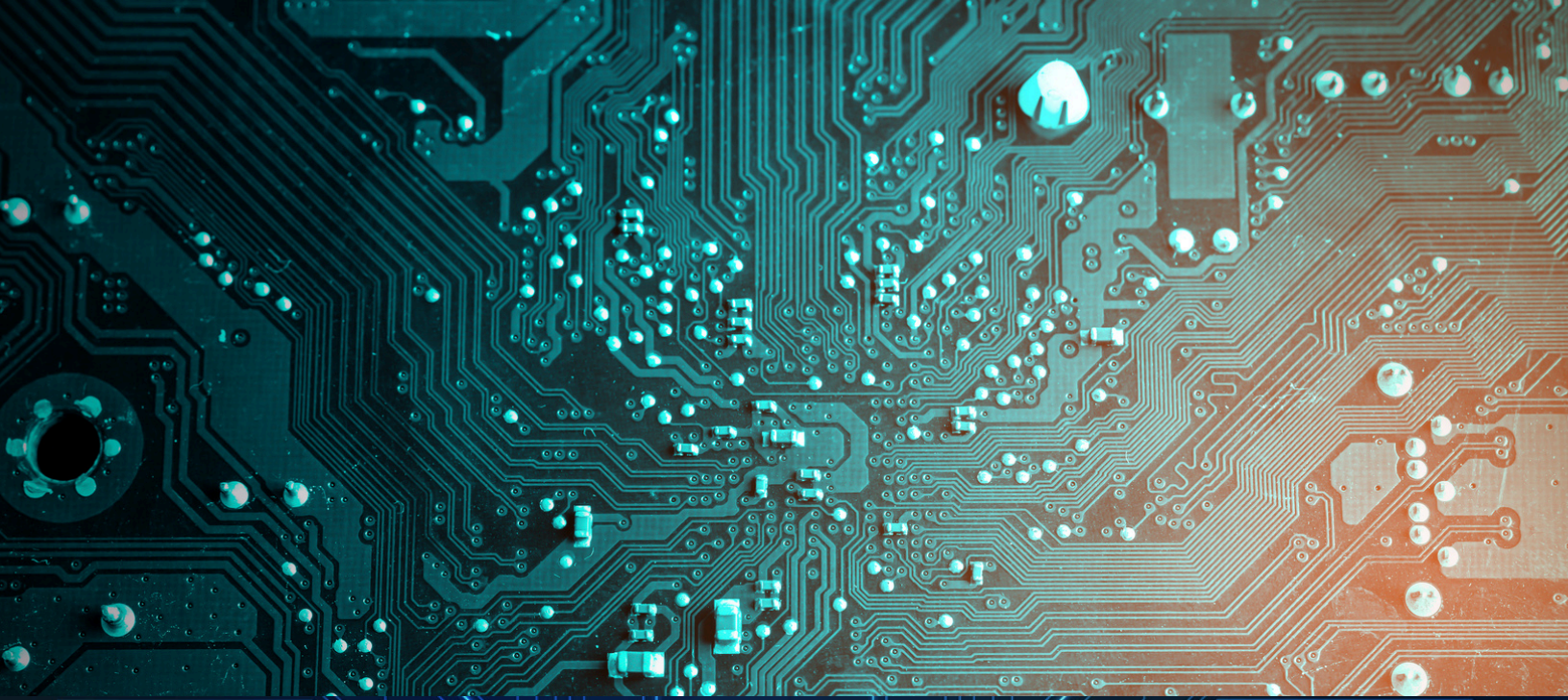


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MSIT DELHI