



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY & SCIENCE, BHOPAL

NEWS LETTER

Jan 2023 to June 2023

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING LNCTS, BHOPAL





VISION OF THE DEPARTMENT

To be world-wide recognized for adopting and keeping innovation and entrepreneurship mindset as abreast of learning to produce professionals as valuable, ethical and moral resource for industry and society.

MISSION OF THE DEPARTMENT

- To establish an ecosystem where students could grow with innovative practices followed in communication engineering.
- Adopt the global approaches to transform the young aspirant into engineering professional catering the society with ethical and patriotic zeal.
- Facilitate and felicitate the learners to have close interactions with the industry experts and researchers for keeping them updated of the current and future needs of the society.
- To develop the mindset of learners for being innovative and entrepreneurial in becoming successful professional.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

- PEO1:** The graduate will have the knowledge and skills of analog and digital communication in providing necessary solutions to the real world problems.
- PEO2:** The graduate will be able to design, develop, analyze and implement the modern tools and systems involving principles of electronics and telecommunication engineering.
- PEO3:** The graduate will be following the ethical practices of the core industry and supporting software industry in providing most acceptable solution to the society.
- PEO4:** The graduate will have the innovative mindset of learning and implementing the latest technological advancements and research outcomes in the electronic hardware and software to keep pace with the rapid developments in socio economic world.

PROGRAM SPECIFIC OUTCOME (PSO)

- **PS01:** To analyze, design and develop solutions of real time problems and industry needs.
- **PS02:** Ability of effectively communicating with the professionals and preparation of reports, documents and presentation while working in teams.
- **PS03:** Knowledge and understanding of latest developments in the field of VLSI, Embedded system, Networking, Matlab and other major tools necessary for keeping pace with the industry.
- **PS04:** Ability of solving complex engineering problems with ethical and law full approach to prevent the society and environment from adverse impacts.
- A Poster making Competition has been organized by Department of EC LNCTS on for Students of 6th Sem EC LNCTS dated on 07-01-2023 under the coordination of Dr. Soheb Munir (HOD EC LNCTS) and Prof. Sanket Choudhary (AP, EC).



•An Innovative Idea Presentation has been organized by Department of EC LNCTS dated on 16-02-2023 for EC 6th Sem Students on the occasion of Innovation Day under the guidance of Dr. Soheb Munir (HOD EC LNCTS) & under the coordination of Dr. Aparna Gupta (Professor).



LNCT GROUP OF COLLEGES
 INSTITUTIONS EDUCATIONAL COUNCIL
 IEEE
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LNCT Group, Department of Electronics & Communication Engineering IN ASSOCIATION WITH IIC Cell and IEEE Student Branch Organizing

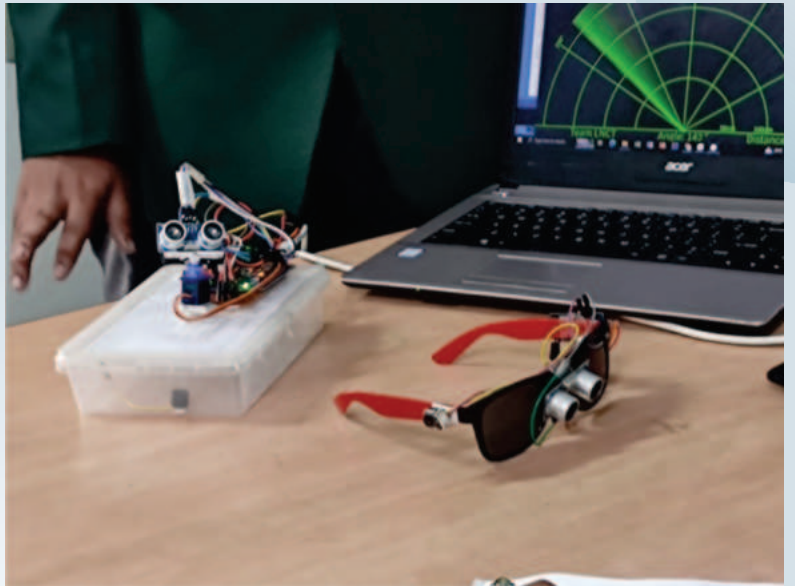
Innovative Idea Presentation

16TH FEBRUARY 2023
 On the Occasion of Innovation Day

Last Date of Registration : 10th Feb 2023 Friday till 5:00 PM
 Presentation Date : 16th Feb 2023 Thursday (Timings will be intimated later)
 Link for Registration and guidelines : <https://forms.gla/5ZSnetmJStyK8dR8>

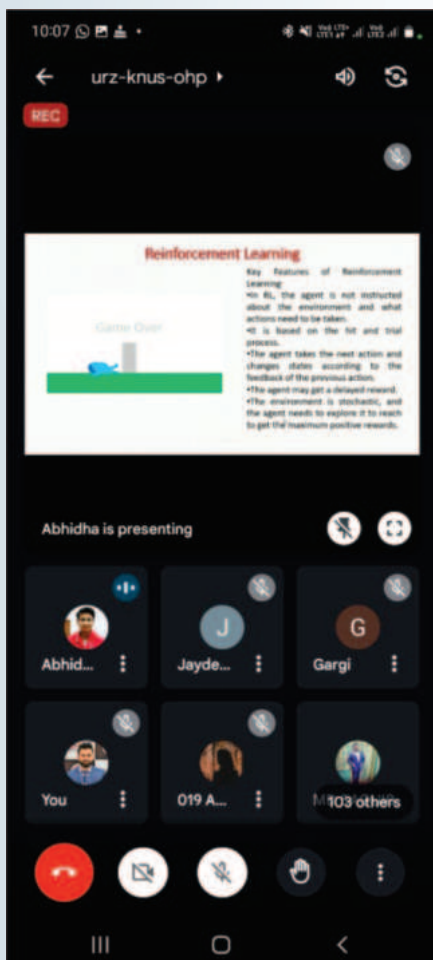
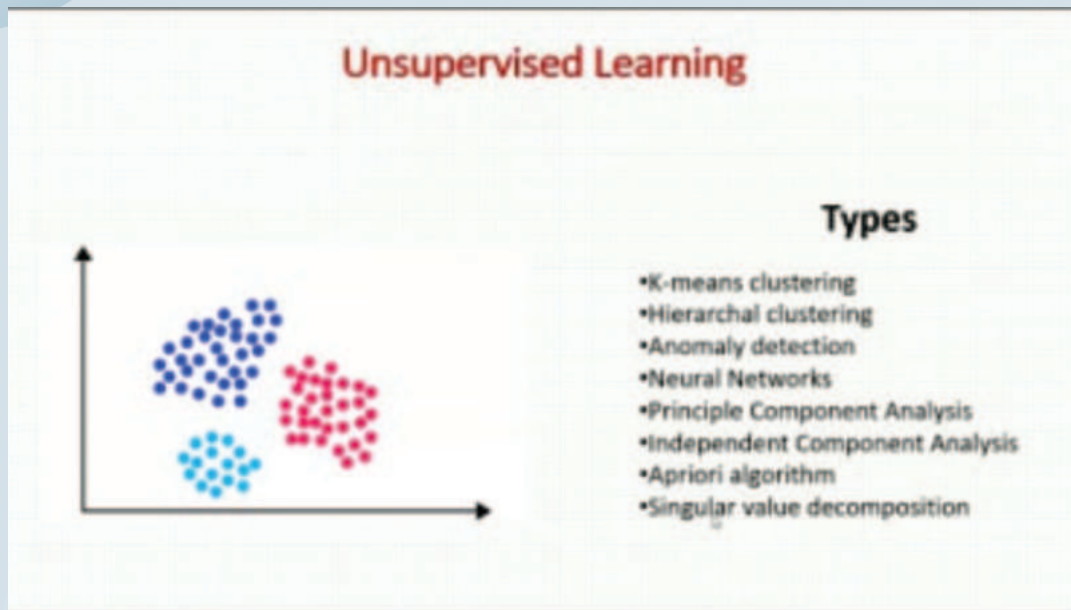
Coordinators : Dr. Aparna Gupta
 Head of Department : Dr. Soheb Munir (LNCTS)

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•Students of Electronics and Communication Engineering department LNCTS are presenting their Models/ Innovative Ideas in 38th MP Young Scientist Congress & Science Exhibition held at SATI, Vidisha on 17-03-2023. The event was hosted by SATI in collaboration With MPCST Bhopal.

•An Online Expert Talk is organized in ECE LNCTS on 24-03-2023 from 09:00 to 10:30 AM for all the students of ECE 8th Sem under the coordination of Dr. Soheb Munir (HOD, ECE LNCTS).



•Department of Electronics and Communications Engineering LNCTS, in association with NITK surathkal ,IEEE student branch and IIC cell LNCT organized an In house workshop on VIRTUAL LABS, for second year students of EC branch on 8/04/23. In this workshop, the students learned about the Virtual labs, they acquired the knowledge of available virtual labs for various subjects and fields; they also performed experiments related to the different applications of Analog circuits, Analog Communication and control systems.





•Yash Shrivastava, A student of EC LNCTS 8th Sem has published a book on “The Secret Victim” on 11/04/2023.



स्वदेश

यश ने कम उम्र में पुस्तक लिखकर अपना नाम उभरते हुए लेखकों में शामिल किया

स्वदेश संवाददाता, नर्मदापुरम

शहरवासियों के लिए यह एक गर्व का विषय है कि नर्मदापुरम के 22 साल के छात्र यश श्रीवास्तव पिता संजय प्रकाश श्रीवास्तव ने बड़े ही कम उम्र में एक पुस्तक लिख कर अपना नाम उभरते हुए लेखकों में शामिल किया है। उनकी इस उपलब्धि से पूरे नर्मदापुरम ने अपना सिर ऊंचा किया है। यश ने अपनी पुस्तक को अमेजन डॉटकॉम पर और भोपाल, जबलपुर, और इंदौर के स्थानीय बुक स्टोर में उपलब्ध कराया है। यश ने अपनी उम्र के अनुसार एक बहुत ही उच्च स्तर की पुस्तक लिखी है। यश की पुस्तक ने उन सभी को अपनी ओर खींचा है जो एक बच्चे से उपद्रव तक पुस्तकों के दीवाने हैं। यश की पुस्तक उन लोगों के लिए एक अच्छा विकल्प है, जो नए लेखकों के द्वारा लिखी गई किताबों के दीवाने होते हैं। उनकी पुस्तक एक मर्डर मिस्ट्री के उपर आधारित है, इस पुस्तक में अनेक थ्रिल, सस्पेंस और ड्रामा के दृश्य हैं जो आपको पृष्ठभूमि से जुड़े रखते हुए एक बार फिर से पृष्ठों को फ्लिप करने के लिए उत्तेजित करेंगे। इसके अलावा यश ने बताया है की उनके आने वाले समाने में कई और रोमांचक पुस्तक जैसा - अथवा आने वाली है। यश श्रीवास्तव को नर्मदापुरम के लोगों की तरफ से बधाई दी जाती है कि उन्होंने इस उम्र में इतनी उच्च स्तर की पुस्तक लिखी है। नर्मदापुरम के लोगों को उनके प्रयासों का सम्मान करना चाहिए और उन्हें उनके भविष्य के लिए उनकी उपलब्धियों से प्रेरित होना चाहिए।

•On the occasion of annual event “Srishti”, LNCT Group organized “Theme Day” from 10/04/2023 to 15/04/2023. All the Faculties & Students of ECE LNCTS participated in this event and wear different colour dresses specified in theme day



•On the occasion of annual event “Srishti”, EC LNCTS has organized an event “Comedy Day with LNCT”. All the students of LNCT group & outside it were invited to participate in this event. Event was successfully organized under the guidance of Dr. Soheb Munir (HOD EC LNCTS) and coordinated by Dr. Aparna Gupta (Professor, EC LNCTS).

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Comedy!
COMEDY DAY WITH LNCT
ECO-SOCIO-TECHNO CULTURAL FEST

14th & 15th April 2023
Venue - LNCT Campus Raisen Road, Bhopal

LNCT Campus -
Kalchuri Nagar, Raisen Road,
Bhopal (MP)

0755-6185300
0755-6185301
0755-6685400

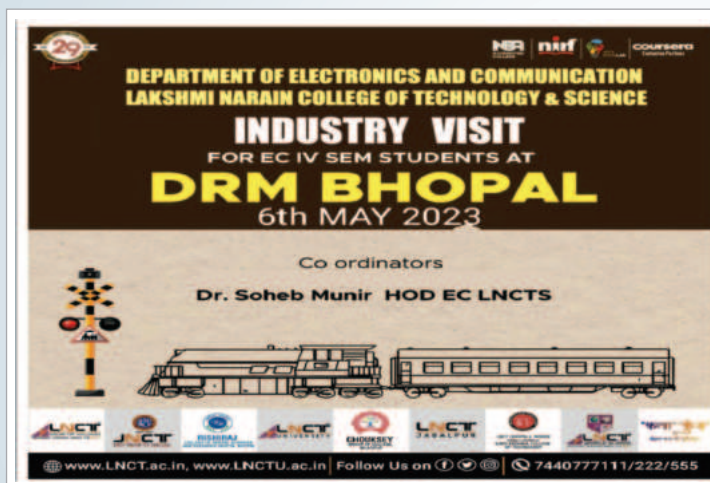
Faculty Coordinator
Dr. Aparna Gupta 9630371294

Student Coordinators
Shruti Shukla 9752489088
Harsh Kumar Singh 9098829029





•An Industrial visit has been organized by ECE Department LNCTS for DRM on 06/05/2023 for EC IV Sem students under the coordination of Dr. SohebMunir (HOD, ECE LNCTS).



•A Workshop is organized in ECE LNCTS on "CIRCUIT DESIGNING WITH BREADBOARD" at 06-05-2023 from 12:00 to 02:30 PM by Mr. AbhigyanamGiri, Indeyes Infotech Pvt. Ltd. for all the students of EC 4thSem students under the coordination of Dr. Soheb Munir (HOD, ECE LNCTS) and Prof. Sanket Choudhary (Assistant Professor).





•A Seminar is organized in ECE LNCTS on "Industry 4.0" at 13-05-2023 from 12:10 to 01:30 PM for all the students of ECE 4th Sem by Mr. Chetan Chouhan, Regional Manager, Institute of Advance skill Training under the coordination of Dr. Soheb Munir (HOD, ECE LNCTS) & Dr. Aparna Gupta(Professor ECE LNCTS).





Technical Quiz Competition has been organized by ECE Department LNCTS on the occasion of "World Telecommunication Day" on 17/05/2023 for EC IV Sem students under the guidance of Dr. Soheb Munir (HOD, ECE LNCTS) coordinated by Prof. Rajendra Singh (Assistant Professor) and Prof. Shashilata Rawat (Assistant Professor).

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Technical Quiz Competition
On the Occasion of
World Telecommunication Day

SCHEDULE
17 May 2023

Only for 4th semester EC Branch Students

Coordinators
Prof. Rajendra Singh
Prof. Shashilata Rawat

Head Of Department
Dr. Soheb Munir EC LNCTS

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LNCTS signed MOU with Institute of Advance Skill Training for providing workshops, Industrial training, Visits & and Internship to students of EC/EE/EX/ ME. The MOU was signed with the objective of bridging the gap between the education and industries. Institute of Advance Skill Training works in the field of PLC Scada, industry IOT, Panel Design, Full stack development, embedded system, Java development, and web development.

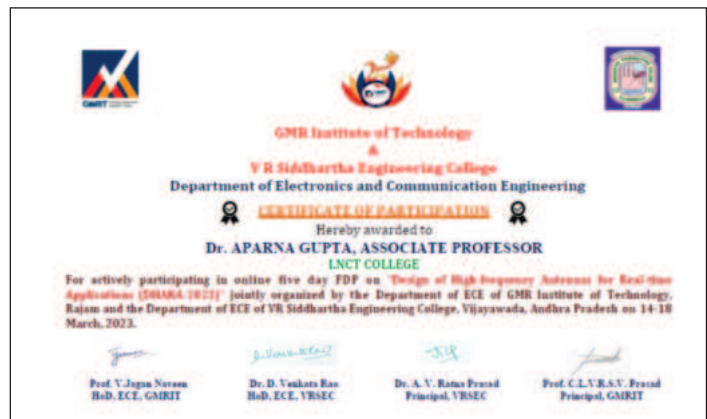
•LNCTS signed MOU with DRMZ System Innovations Pvt. Ltd. on 10/05/2023 for providing workshops, Industrial training, Visits & expert lectures to students of ECE.



Faculty Awards & Recognition

Dr. Aparna Gupta (Professor)

1. Dr. Aparna Gupta has been participated in a 5 Days FDP on "Design of High-frequency Antennas for Real time Applications" organized by GMRIT, Rajam.
2. Dr. Aparna Gupta has mentored the project in 12th CSI-InApp International Student Project Awards 2023 organized by Inn-App.



Prof. Niketan Mishra (Assistant Professor)

1. Prof. Niketan Mishra has Published a research paper on "Design Microstrip Notch Antenna for RF Energy Harvesting in S-band Applications" in ICETET.



DESIGN MICROSTRIP NOTCH ANTENNA FOR RF ENERGY HARVESTING IN S-BAND APPLICATIONS

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Abstract—This research investigates the design and simulation of a microstrip notch with an inset feed antenna. This antenna is suitable for S-band applications (cellular, ship radar, radar for traffic control etc.) and also shows the notches of notch in the MPA has been analyzed in this work. The tiny size, cost-effectiveness, simplicity of production, and clear directional radiation pattern make this antenna appealing. Design and simulation of the proposed antenna are done using the CST software.

Keywords—Microstrip Patch antenna, Notch, S-band, Power Harvesting and CST studio etc.

I. INTRODUCTION

Today is the demand for wireless communication is increasing day by day and along with it power harvesting has to be studied so that we can get maximum service utilized [1]-[7]. We have designed a microstrip notch antenna which can work in S-band. This antenna 2.2 GHz to 3.75 GHz have resonant so it can be used as dual band [8]. This antenna can also be used as a power harvest antenna because we can harvest maximum energy through this antenna because the highest power density in S-band [9]. The tiny size, cost-effectiveness, simplicity of production, and clear directional antenna pattern make this antenna appealing [20] [21].

The article demonstrated in parts. Section 2 presented the work, whereas Section 3 described the MPA's structure. Section 4 technically discusses the Notch antenna and inset feed, while Section 5 illustrates its simulation and results. Finally, section 6 brings the work to a close.

II. MICROSTRIP ANTENNA

The invention of MPAs is the finest antenna antennas. It is the most widespread and least expensive. This is owing to all of the advantages, including the ease of manufacture, low weight and low cost of production. This dielectric substrate and patch are made from metal and a portion of the radiation is caused by the metalization layer. The MPA was invented in the 1950s, which patch antennas were actively researched in the 1970s, yielding several useful design combinations [1]. Decades of study have revealed that the contour of the ground patch and the material properties of the substrate on which the antenna is printed substantially influence the performance and functioning of a MPA [2].

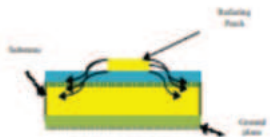


Fig. 1. Microstrip Patch antenna

III. PROPOSED ANTENNA

A. Microstrip-antenna

The conventional MPA is composed of a radiating patch and a buffer layer. The specific experience and height of the radiating patch define it [3]. The microstrip patch radiates at a single resonant frequency as a consequence of the fringing-field phenomenon between both the ground plane and the buffer layer [4]. To allow the radiating patch to resonate at numerous frequencies, slots and slots can be included into the design, altering the patch's current course [5]. The low-cost FR4 substrate is used here with height (dielectric constant (ϵ_r) and low tangent (δ)) of 1.6 mm, 4.6 and 0.019, respectively. Figure 2 depicts the intended antenna. The total dimensions of the antenna's system is 17mm x 16mm, and the MPA is 17mm x 20mm, shown in Figure 2. The FR4 antenna is powered by a 1 mm x 15mm capacitor.

TL with inset feed methodology. This approach is useful because it is simple to build and prevents an impedance control method with a pinhole feed setup [6]. The antenna's was modeled and simulated using CST software [7], successfully.

Dimensions of patch are

- Wp – Substrate Width
- La – Substrate Length
- Wp – Width of patch
- Lp – Length of patch

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Student Awards & Recognition
Student Manjeet Singh Sirohi from EC 5th Sem LNCTS got certified by CISCO, CCSKby completing courses on Cyber security and Cloud Security.



Student Vikhyat Gupta from EC 5th Sem LNCTS has been participated in Coursera Course on "HTML,CSS & Java scripts for Web Developers".