



## ANTENNA RESEARCH GROUP

Electronics & Telecommunication Engineering Department

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Editor: Prof. Mohini Naik

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### OBJECTIVES

The explosive growth in the demand for wireless communication and information transfer using handsets and devices has created the need for major advancements of antenna designs as a fundamental part of any wireless system.

The main objective of the Antenna research Group is to encourage students to study and design antennas such as Millimetre wave antennas, Micro strip antennas, PIFA antennas etc. for different wireless applications and to get hands-on experience in developing and analysing different antenna parameters. This will not only help to reduce the gap between industry and academia but also it will develop the antenna designing skills among the students.

Established in 2018, the Antenna Research Group conducts workshops and hands-on training for the students to make them industry ready. It also encourages students to publish the valuable research work in reputed journals and conferences.

### Installation & Orientation Program

The Don Bosco College of Engineering, Fatorda, Goa established an Antenna Research Group under the guidance of Prof. Mohini Naik as Coordinator from July 2018 onwards.

To create the interest and encourage students in doing research in antenna domain, Prof. Mohini Naik conducted an orientation session on research in antenna's and its industry prospective for the students of final year and third year Electronics and Telecommunication Engineering on 20<sup>th</sup> July 2018. The objective of the orientation was creating awareness and interest among the students and bridging the gap between RF antenna industry and academia.



## Welcome to the Members

### Faculty Coordinator:

**Prof. Mohini Naik**, Assistant Professor ETC, Don Bosco College of Engineering

Congratulations to all the following students for getting selected under Antenna Research Group.  
All the best!!!

### BE ETC

### TE ETC

SR. NO	NAME OF THE STUDENT	SR. NO	NAME OF THE STUDENT
1.	Rajat Metry	1.	Shivam Bale
2.	Siddhesh Nayak	2.	Pooja Gaonkar
3.	Shreyas Aigal	3.	Bharati Warak
4.	Sahil Dsouza	4.	Siddhi Desai
5.	Ganaraj Borkar	5.	Mohini Phadate
6.	Pramesh Budkuley	6.	Shriya Nayak
7.	Shreya Naik	7.	Vaishakh Sanjeevan
8.	Nikisha Thanekar	8.	Saif Ahmed Sayed
9.	Gautam Jalmi	9.	Kowshik Kolvekar
10.	Rahul Padwalkar	10.	Vallabh Sawant
11.	Komal Kutre	11.	Omkar Karapurkar
12.	Shreya Usgaonkar	12.	Sahil Lotlikar
13.	Priyanka Arsekar	13.	Sahil Naik
14.	Rasika Patil	14.	Mohit Naik
15.	Richa Kapileshwar	15.	Neha Shanbhag
16.	Rakshata Naik	16.	Akshata Naik
17.	Jahnvi Pola	17.	Vishant Gaonkar
18.	Meenu Manoj	18.	Sairaj
19.	Parul Chaturvedi	19.	Silvester Vaj
20.	Omkar Tamboskar	20.	Rochelle Pereira
21.	Duane Dsilva	21.	Reecha Mahale
22.	Swizell Pereira	22.	Prajakta Naik
		23.	Sampada Nagvekar
		24.	Vrunda Asolkar

# STUDENT'S CORNER

## Workshops/Seminars/ Trainings

### 2 Days Hands-on Workshop on Antenna Design

Prof. Mohini Naik conducted a two days hands-on workshop on research in antenna's for the students of final year and third year Electronics and Telecommunication Engineering on 21/06/18 & 22/06/2018.

The topics covered in duration includes basics of Antenna principles, parameters, design of micro strip patch antenna, literature review on the types of antenna used for different applications, antennas used for wireless applications, Roadmap to 5G, Antenna design for 5G. Hands on session in designing antenna also was done in the workshop





### Workshop on “Design of Microstrip Patch Antenna ”

Antenna Research Group organized a one day workshop on Design of Microstrip Patch Antenna for the students of second year of Electronics and Telecommunication Engineering on 8/10/2018.

Group coordinator Prof. Mohini Naik started the session with basic concepts of antenna and its parameters, types of antennas, micro strip patch antenna etc. Students got the opportunity to learn something new beyond the syllabus. In the next session, students were allotted with the projects on antenna design.





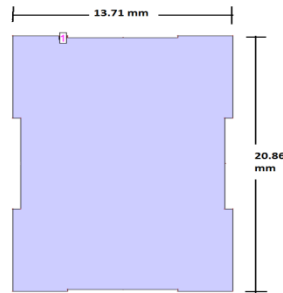
## Projects

### Design, and simulation of Rectangular slotted patch antenna for WLAN

Group Members: Gautam Jalmi  
Rahul Padwalkar  
Komal Kutre

Project Titled: Design, and simulation of Rectangular slotted patch antenna for WLAN

Description: The proposed antenna is designed using FR-4 substrate with a thickness of 1.5 mm, dielectric constant of 4.4 and a loss tangent of 0.004. Ground size = 22.71 mm x 29.86 mm, Substrate size = 22.71 mm x 29.86 mm, Patch size = 13.71mm x 20.86mm. The material of the substrate used is FR-4 with the thickness of the substrate along the z-axis of 1.5 mm. The proposed antenna has a frequency range of 4.96 GHz which comes under WLAN. The feed point for the proposed antenna is found to be at (-3.925, 10.325). The proposed antenna has a gain of 5.09 dB which is suitable for good operation of communication system.

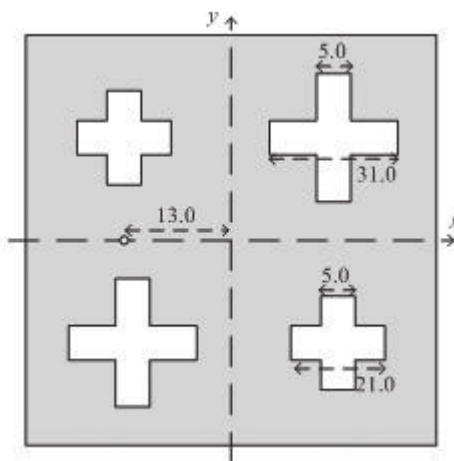


### Design and simulation of Cross Shaped Microstrip Patch Antenna for Bluetooth Applications

Group Members: Duane D'silva  
Swizell Pereira  
Shreya Naik

Project Titled: Design and simulation of Cross Shaped Microstrip Patch Antenna for Bluetooth Applications

Description: The proposed antenna is designed using FR-4 substrate with a thickness of 0.5 mm, dielectric constant of 4.4 and a loss tangent of 0.004. The material of the substrate used is FR-4 with the thickness of the substrate along the z-axis of 0.5 mm. It is energized using coaxial feed point. The proposed antenna has a gain of 4.6 dB.



## Design of slotted square Microstrip Patch Antenna for Wireless Applications

Group Members: Kawshik kovlekar  
 Mohit Naik  
 Sahil Naik

Project Titled: Design of slotted square Microstrip Patch Antenna for Wireless Applications

Description: The proposed antenna is designed using FR-4 substrate with a thickness of 0.6 mm, dielectric constant of 4.4 and a loss tangent of 0.004. The material of the substrate used is FR-4 with the thickness of the substrate along the z-axis of 06 mm. It is energized using coaxial feed point. The proposed antenna has a gain of 6.2 dB.

