



**REPORT  
ON  
FIELD TRIP TO  
IIT KHARAGPUR**

**ORGANIZED BY:**  
**MTT-S IEEE ASANSOL ENGINEERING COLLEGE**  
**STUDENT BRANCH CHAPTER**

IN ASSOCIATION WITH

**IEEE IIT KHARAGPUR SECTION**

**Branch Counselor:** *Dr. Chittajit Sarkar (SM-IEEE)*

**Branch Chair:** *Mr. Biswajit Bose (Student member-IEEE)*

**Faculty Coordinators:** *Dr. Ashmi Chakraborty (SM-IEEE)*  
*Mr. Prajit Paul (Faculty member-IEEE)*

**IEEE Student Members:**

1. **Asibur Rahman** - (Vice Chair) - **ECE**
2. **Partha Sarathi Pal** - (Vice Chair) - **ECE**
3. **Deedhiti Dey** - (Secretary) - **ECE**
4. **Swarnali Mukherjee** - (Secretary) - **ECE**
5. **Ananya Ghosh** - (Treasurer) - **ECE**
6. **Prabal Chakraborty** - (Treasurer) - **ECE**
7. **Nilanjan Dutta** - (MTT-SIEEE Vice Chair) - **ECE**
8. **Komal Kumari** - **ECE**
9. **Rachna Tanti** - **ECE**
10. **Saurav Kumar** - **ECE**

**Date:** **May 12, 2023**

**Venue:** **IIT KHARAGPUR**

## **Participants' Profile:-**

A total of 23 students along with our Branch Counselor Dr.Chittajit Sarkar and Faculty Coordinator Mr.Prajit Paul participated in this one-day Field trip to IIT Kharagpur.

## **Description about the program:-**

It was a field trip organized by MTT-S IEEE Asansol Engineering College Student Branch Chapter in association with IEEE IIT Kharagpur Section.

The field trip was organized on the 12<sup>th</sup> of May, 2023. The mode of transport from Asansol to Kharagpur was by Asansol-Haldia SF Express. The boarding time from Asansol was 5:40 a.m. in the morning and the arrival time in Kharagpur was 9:30 a.m. in the morning.

Mr. Mrinal K.Mandal, Associate Professor at the Indian Institute of Technology Kharagpur Electrical and Electronics Communication Department and Chair of IEEE IIT Kharagpur section came to pick us up. We were first escorted to the Department of Electronics and Electrical Communication Engineering in the RCC room where we were given our refreshments. We were then escorted to the Microwave Lab where Professor Mrinal K.Mandal introduced his IEEE Team members followed by the introduction of our Branch Counselor Dr.Chittajit Sarkar, who introduced us, the MTT-S IEEE AEC SBC office bearers.

The introduction was followed by Dr. Mrinal K.Mandal's presentation on **WHY MICROWAVE THEORY ? & DESIGN AND IMPLEMENTATION OF MICROWAVE CIRCUITS AND SYSTEMS.**

He presented the basics of electromagnetic theory, microwave engineering, and introduction to different topics like printed circuit boards, monolithic microwave circuits, waveguide technology, and lastly the different opportunities in the field of microwave engineering.

We were divided into 5 groups followed by the presentations, and each group was taken for the Laboratory visits. The different laboratories we visited were the GCF lab, Microwave Instruments Lab, Printed Circuit Lab and Anechoic Chamber.

We came back to the Microwave Lab where we had the Hands-on session-1 in which each group had the chance to see the different developments made by the different Ph.D. students or M.Tech students who are working under Dr. Mrinal K.Mandal. The different hands-on researches were on the topics of:

1. Lumped Components at GHz frequencies.
2. Different antennas
3. Different amplifiers
4. 3G/4G/5G signals.
5. Handheld radar.

After the first session, we had our lunch break followed by the session-2 hands-on workshop.

We then had a demonstration of different components like Antennas, RF adapters, Attenuators, and some more components.

After session 2 we had the valedictory session followed by the distribution of certificates we received for participating in this hands-on workshop.

In the end, a photo session took place with the entire team of IEEE IIT Kharagpur and IEEE SBC of Asansol Engineering College. At around 4 p.m. we left for the station for our return to Asansol.

# FLYER



**MTT-S IEEE  
ASANSOL ENGINEERING COLLEGE SBC**  
In association with IEEE KHARAGPUR SECTION

Organises ----

## **Field Trip To IIT KHARAGPUR**

*"Education is a lifelong journey whose  
destination expands as you travel."*

*JIM STOVALL*

 : 12/05/2023

 : IIT KHARAGPUR



# **FIELD TRIP TO IIT KHARAGPUR**

## **Introductory session**

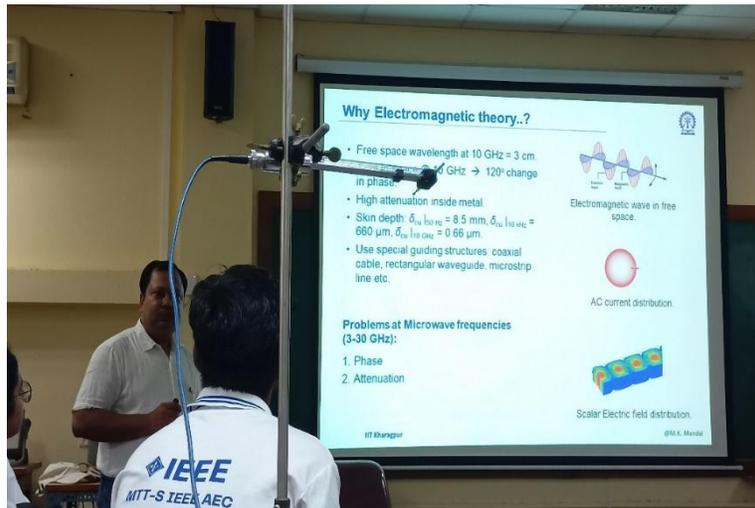


***Pic 1-Welcome speech by Dr.Mrinal K. Mandal Pic 2-Introductory speech by MTT-S IEEEAEC Branch Counselor Dr.Chittajit Sarkar***



***Pic 3-Introductory speech by the Chair of IIT KGP AP MTT SBC Mr.Satya Prakash .***

***Pic 4-Introductory speech by the Chair of IEEE MTT-S AEC SBC Mr. Biswajit Bose***



*Pic 5-Presentation by Professor Mrinal K.Mandal on Why Electromagnetic theory?*



*Pic 6- Opportunities in this field of Microwave Engineering*

## SESSION – 1&2

The Hands-on workshop on the following topics:

1. Lumped Components at GHz frequencies.
2. Different antennas
3. Different amplifiers
4. 3G/4G/5G signals.
5. Handheld radar

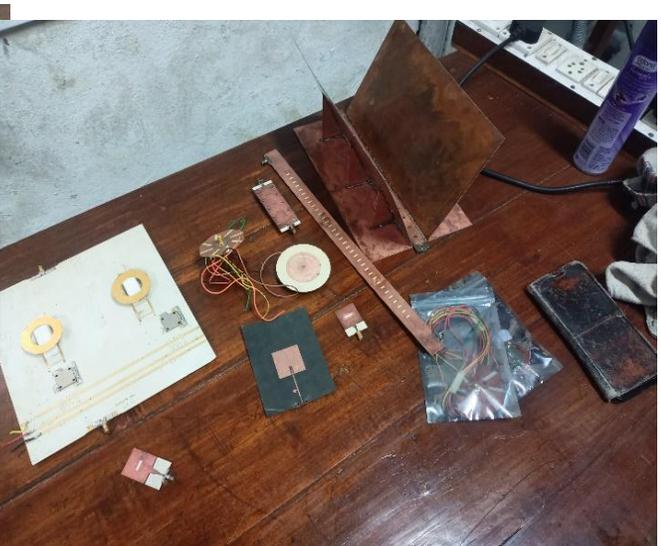
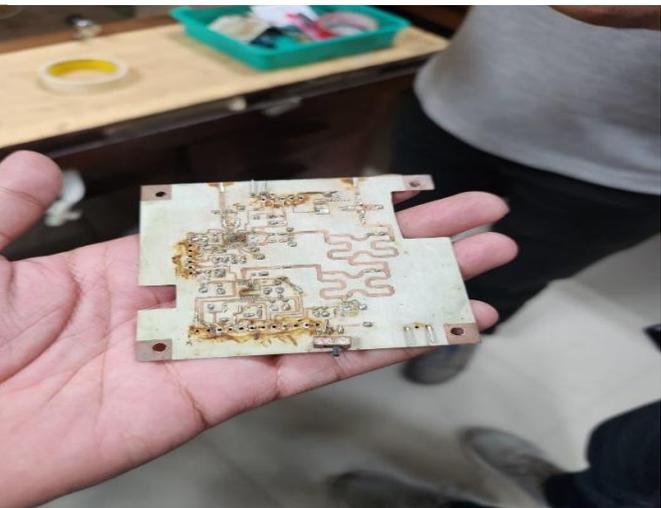
The 5 different groups were allotted different topics.

All of these experiments were made by Ph.D. and M.Tech students who are a part of IEEE IIT KGP AP MTT SBC.

Visit to different laboratories in the Department of Electronics and Electrical Communication Engineering.

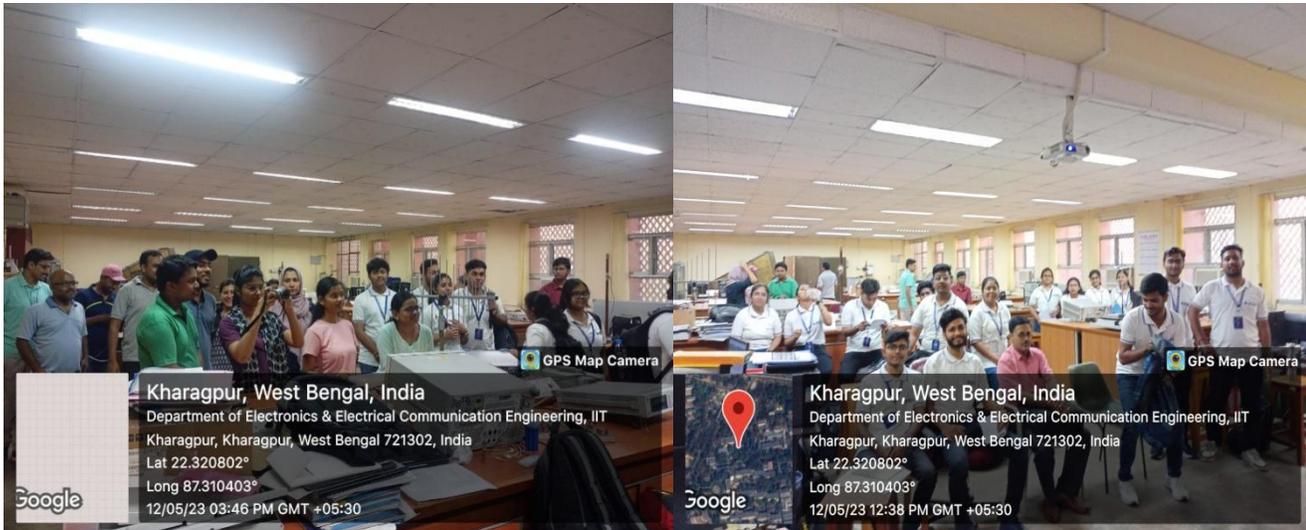


*Pic 7- Different hands-on workshop topic presentation*



***Pic 8- Visit to Different Laboratories(Anechoic Chamber, Circuit Design Lab, Antenna measurement lab, Design Lab, etc. and introduction to different componenets).***

## PHOTO SESSION



*Pic 10- Pictures of the IIT IEEE AP MTT-S SBC Members and IEEE MTT-S AEC SBC Members*

## **VALEDICTORY SESSION**

A vote of thanks was given by Professor Mrinal K.Mandal followed by him talking about different internship opportunities they have in IIT Kharagpur and then IEEE MTT-S AEC SBC, Chair Mr.Biswajit Bose conveyed a vote of thanks and shared the news of IEEE AEC SBC getting the approval for the AP-S student branch chapter and expressed his gratitude towards IEEE IIT KGP Section for this successful and knowledgeable trip.



*Pic 10- Vote of Thanks*



*Pic 11- Certificate of Participation handed to Dr.Chittajit Sarkar and Mr.Prajit Paul*

**Dr. Chittajit Sarkar**  
**(IEEE Student Branch Counselor)**