DON BOSCO INSTITUTE OF TECHNOLOGY

DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION

IEEE-DBIT MTT-S STUDENT BRANCH

Report on

"Recent Advancements on High Frequency Communications"

Topic: "Recent Advancements on High Frequency Communications" and applications in real life

Date: 13th July, 2023

Time: 11:00 am to 1:00 pm

Venue: Mini Theater, D-wing 5th Don Bosco Institute of Technology, Kurla, Mumbai 400070

Speaker: Prof. Dr. Somak Bhattacharyya

Participants: 30 IEEE members 43 Non-IEEE members

Objective: Informative session on High Frequency Communication and Recent Advancements.

- Students will get to learn about High Frequency Communication and its Recent Advancements.

Description:

- IEEE-DBIT MTT-S Student Chapter organised a workshop of "*Recent Advancements on High Frequency Communications*" for the department of EXTC DBIT on 13th July 2023.
- The talk commenced on 13th July at 11:00 am with an expert talk by Prof. Dr. Somak Bhattacharyya
- Dr. Somak provided an Introduction about himself to the students and also introduced the students about his campus.
- Examples of Earlier Day communication and also Types of Communication were provided to the students.

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- Recent Communication like Digital Devices were also explored.discussed. He also discussed about the components are contained in a Basic Communication System which include- Source, Transmitter, Transmission Medium, Receiver, Destination. The audience was introduced to concepts of figure of merits: SNR, Noise Figure.
- Ranges of spectrum of communication were discussed like Microwave Communication(300MHz-300GHz), Optical Communication(30-3000THz).
- History and contribution of Heinrich Hertz, Guglielmo Marconi, Satyendra Nath Bose, contributions of Sir C.V. Raman were introduced by Prof. Dr. Somak Bhattacharyya. Contributions of renowned Indian scientists like Silicon Raman Laser was also mentioned by him, contributions and achievements of Prof N.C. Vaidya were talked of.
- The work of India's biggest contributor of Radio Astronomy Prof. Govind Swarup were also discussed in the talk.
- Dr. Somak also discussed about different types of Vision present on the optical and microwave spectrum.
- Towards the end of his talk he introduced Tera-Hertz frequency and what it's benefits and Limitations of it.
- Dr. Somak also took up multiple questions.
- The talk ended on 13th July at 12:45pm.

Summary of session analysis:

From the analysis we can determine, that the majority of the attendees were students. Most of the participants have responded that the session was relevant and well organized. The questions asked during the workshop were answered in appropriate and satisfactory manner. The attendees agree that the overall session was valuable and informative. As reflected by the feedback, 56.3% of attendees felt that they can now better understand the

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fundamentals of High Frequency Communication. Significant number of people are interested in participating in future talks.

Picture from the session:

The talk was commenced by Secretary of IEEE-DBIT

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A welcoming boque from the HOD of EXTC-DBIT

Mr. Aditya Sawant providing students with the measurements of the antenna

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Dr Somak Bhattacharyya explaining students concepts of Communication

Dr Somak Bhattacharyya clearing doubts of the students

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A parting gift for Prof. Dr. Somak Bhattacharyya

IEEE DBIT MTTS Chair giving a vote of thanks to Prof. Dr. Somak Bhattacharyya

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A commemorative with all of the students present in the talk

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Reporting Head , IEEE-DBIT Student Branch.

Report Approved by: Freda Carvalho

IEEE DBIT SB Counselor