

# WORKSHOP REPORT

## Students Development Program On Fundamentals of Digital Signal Processing and Its Application



Organized By

Department of Instrumentation Engineering  
Jorhat Engineering College, Jorhat-785007 (Assam)

Sponsored by

TEQIP III

6<sup>th</sup> and 7<sup>th</sup> March , 2020

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## **INTRODUCTION**

The Department of Instrumentation Engineering of Jorhat Engineering College organized a two days student development program sponsored by TEQIP III on 6<sup>th</sup> and 7<sup>th</sup> March, 2020. The aim of the workshop was to introduce the fundamental concepts of digital signal processing and its application. It was spread over two days with special emphasis on hands on session and practical aspects of the concepts taught in the session.

Students from different branches participated in the programme. Feedback from the workshop was very positive. The session was very interactive, participating students showed their great interest regarding the topic and during the hands on session. . The resource person was very involved in clearing the inquisitiveness and the questions put forward by the students.

This report provides an overview of the workshop, background information, summary, importance and discussion.

## **WORKSHOP SCHEDULE AND SUMMARY**

The Resource person of the program was Dr Debasish Deb, Senior Scientist from DRDO Bangalore. The schedule and summary of the programme are brought out below.

### **DAY 1**

Friday, 6<sup>th</sup> March,

8:45AM Registration of participants

9:15AM INAUGURATION

- Introduction to the dignitaries and the resource person  
*Dr.Sonali Biswas , Assistant prof, JEC*
- Welcome address and utility of programme  
*Dr. Neelanjana Baruah, HOD of Instrumentation Engineering Department*
- Welcome speech by the Principal of the college,  
*Dr.Reeta Sarmah*

9:35AM Conclusion of the Inauguration

9.40AM REFRESHMENT

10:00AM Commencement of the Student Development Programme (SDP)

The following topics were covered in the forenoon session of the programme.

- Introduction to signals and systems
- Sinusoids and complex numbers
- Spectrum representation
- Sampled Systems
- Sampling and Aliasing

The session was very interactive with lot of questions from the participating students and explanation from the resource person.

**1:00 PM – 2:00PM LUNCH BREAK**

**2:00PM Afternoon Session**

Theoretical aspects of the examples to be taken up was discussed followed by the hands on. Hands on activities were carried out during this session.

3.15PM Tea

3:30PM Overview and Practical application using **MATLAB**,

**5:00PM Closure of the days session.**

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**DAY 2**

**Saturday, 7<sup>th</sup> March,**

9.30:AM Review of yesterday's Session

**10:30AM REFRESHMENT**

10:45AM Discussion on the following:

- Z Transform

- ADC and DAC
- Interpolation and Decimation
- Convolution
- Filter Design
- Noise
- Various application

1:00 PM to 2:00PM Lunch Break

2:00PM Afternoon session

Hands on with MATLAB and examples

4:00 PM MCQ Test conducted

4:30PM Results were declared and Feedback forms collected from participants.

4:45PM Speech of Vote of thanks to TEQIP and the resource person by the Faculty CO-ORDINATOR

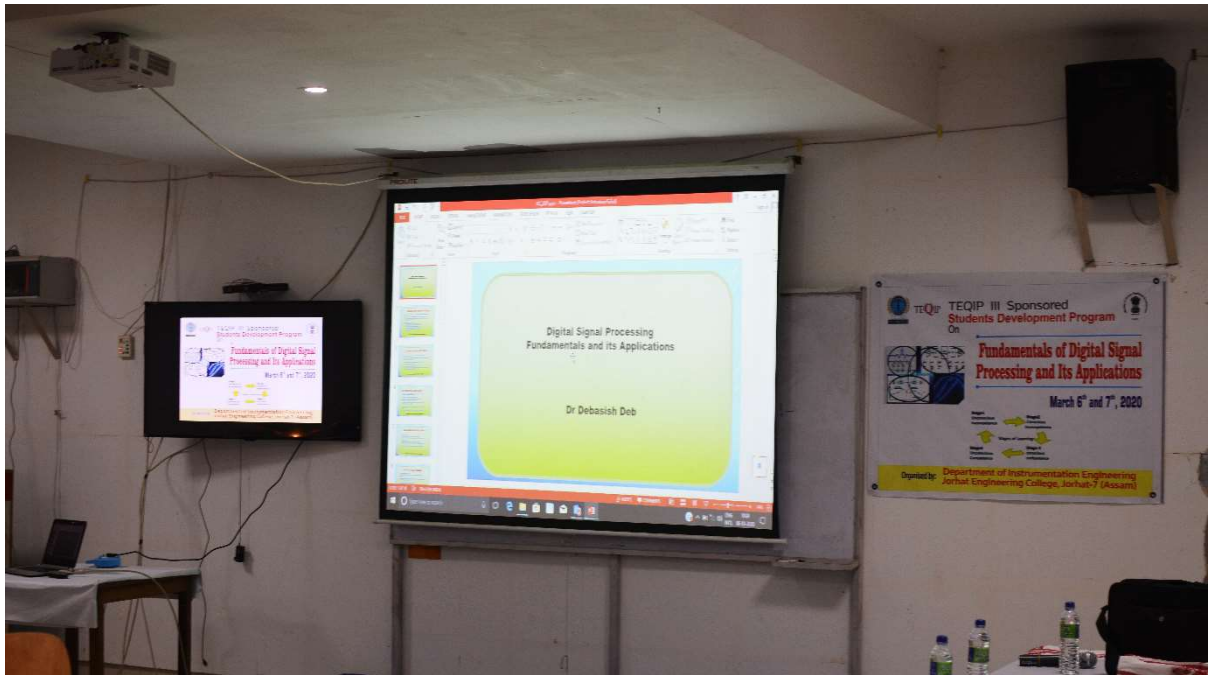
5:00 PM Speech by HOD of INSTRUMENTATION ENGINEERING DEPARTMENT

5:00PM Closure of the 2<sup>nd</sup> Day session

## **CONCLUSION**

We are thankful to TEQIP III for sponsoring the event which has helped the students from different branches and different semesters understanding the fundamentals concepts of digital signal processing which in today's world assumes a very high importance. We would also like to thanks everyone who helped us, make this event came together smoothly (Dignitaries, Co-ordinator, the participating students, Principal, the Faculty members of our Department and TEQIP III). The very objective of the workshop was to encourage the students to learn the fundamentals of Digital Signal Processing and its application. The success of the programme was very clear from the feedback provided by the students. We once again thank everyone.

## Photographs of the event



## Seminar hall



**Students at Registration desk**

## Inauguration on 6th March 2020



**Co-ordinator of the event**  
**Dr Sonali Biswas, Asst prof, Instrumentation Engg.**



**Inauguration, Felicitation of Resource person**  
***Dr Debasish Deb, Scientist DRDO Bangalore***





Dr Neelanjana Baruah,  
HOD of Instrumentation Engineering Dept.



**Principal JEC Welcome Address to Resource Person and all participants**



***Dr Debasish Deb, Senior Scientist DRDO Bangalore***

***Session starts at 10.00am***



Participants with resource person and faculties of Instrumentation Engg.

## Day 2



Participants with resource person and faculties of Instrumentation Engg



Photo with student volunteers



Valediction session(Winner of the students contest) ~~during Valediction session~~