**VILASRAO DESHMUKH FOUNDATION GROUP OF INSTITUTIONS, LATUR**
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**Date:-23/10/2023**

# 1 Day Workshop

| Name of program | 1 Day Workshop on "IR Filter Design" |
|---|---|
| Date: | 21 Oct. 2023 |
| Venue/address | Class room and Computer Centre |
| Guest | Mr. AndharePrakash , JSPM Gropu of Institute Pune, BIT |
| Audience | All Students of E&TC department |

**Aim:** To organize 1 Day workshop on "**IR Filter Design**"

**Introduction &Objectives of program:**

The inaugural of the workshop witnessed the presence of **Dr. M. V.BukePrincipal**, along with the Prof. **Honrao S. B. HOD**and all faculty members of Department.A one-day workshop on IR filter design would have the following objectives:

**Introduction to IIR Filters:** Begin the workshop with a clear explanation of what IIR filters are, how they differ from Finite Impulse Response (FIR) filters, and their applications in signal processing.

**Basic Principles of IIR Filters:** Teach the fundamental concepts, such as pole-zero analysis, transfer functions, and difference equations, that underlie the design of IIR filters.

**Filter Design Specifications:** Explain the importance of defining filter specifications, such as passband and stopband frequencies, filter order, and filter type (e.g., low-pass, high-pass, band-pass). Participants should understand how these specifications affect the filter design.

**Design Methods:** Introduce various design methods for IIR filters, including Butterworth, Chebyshev, and elliptic filter designs. Explain the pros and cons of each method and when to use them based on design requirements.

**Pole-Zero Plot Analysis:** Teach participants how to analyze and manipulate pole-zero plots for IIR filters. This knowledge is essential for understanding the filter's behavior and making design adjustments.

**Filter Design Tools:** Familiarize participants with software tools or programming languages commonly used for IIR filter design, such as MATLAB, Python, or specialized filter design software. Provide hands-on experience if possible.

**Frequency Transformation:** Explain frequency transformation techniques that allow participants to convert filter designs from normalized frequency to the desired real-world frequency.

The goal of this one-day workshop is to equip participants with a solid understanding of IIR filter design principles, hands-on experience in designing IIR filters, and the ability to apply this knowledge to practical applications. Participants should also leave with resources for further exploration and learning in this field.

**Participants:**

The Third and Final year students of E&TC department actively participated in the bothsessions of workshop .

**Conclusion:**

The student of E&TC departmenthasparticipated and successfully completed 1 day workshop on "IR Filter Deign". **All the participants are awarded by Participation Certificate**

**Workshop Coordinator**                                                                                     **HOD**

**PHOTOS**



Harangul Bk., Maharashtra, India
413531, Additional Latur MIDC, Harangul Bk., Maharashtra
413531, India
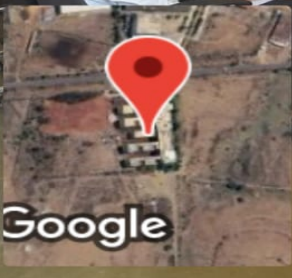Lat 18.388502°
Long 76.47619°
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Harangul Bk., Maharashtra, India
413531, Additional Latur MIDC, Harangul Bk., Maharashtra
413531, India
Lat 18.388138°
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GPS Map Camera

Harangul Bk., Maharashtra, India
413531, Additional Latur MIDC, Harangul Bk., Maharashtra 413531, India
Lat 18.387869°
Long 76.473841°
21/10/23 10:47 AM GMT +05:30



GPS Map Camera

Harangul Bk., Maharashtra, India
Unnamed Road, Additional Latur MIDC, Harangul Bk.,
Maharashtra 413531, India
Lat 18.388506°
Long 76.477532°
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