



Dr. M.G.R. EDUCATIONAL AND RESEARCH INSTITUTE (Deemed to be University)

Maduravoyal, Chennai - 600 095. Tamilnadu, India.

(An ISO 9001-2015 Certified Institution)



MGR ASSOCIATION FOR GREAT INNOVATIVE CREATORS

Department of Electronics and Communication Engineering

Event Title	Interdisciplinary Lecture on "Application of Fourier series and Transforms"		
Objective of Event	The objective of this lecture is to introduce participants to the foundational concepts and practical applications of Fourier series and transforms across multiple disciplines. It aims to deepen understanding of how these mathematical tools are used in areas		
Chief Guest /Speaker Details	Dr. S. Ramapriya, Professor-Mathematics, Dr. M. G. R Educational and Research institute		
Date	22/10/2024	Time	02.00 PM to 04.00 PM
Venue	VLSI Lab	No. of Participants	60

REPORT

TITLE

Interdisciplinary Lecture on "Application of Fourier series and Transforms"

CONTENT

This interdisciplinary lecture provides an exploration of Fourier series and transforms, focusing on their diverse applications across various fields. The lecture begins with a foundational overview of Fourier series, a mathematical tool for representing periodic functions as sums of sine and cosine terms, and then extends to Fourier transforms, which generalize these ideas to non-periodic functions. In mathematics and engineering, Fourier series and transforms are essential for analyzing complex signals and solving differential equations. The lecture delves into how these tools decompose signals into frequencies, aiding in data compression, noise reduction, and signal processing. In electrical engineering, they allow efficient circuit analysis, filter design, and wireless communication optimization. In physics, Fourier transforms are pivotal for wave analysis, quantum mechanics, and optics, providing insight into wave-particle duality and interference patterns. In the field of medical imaging.



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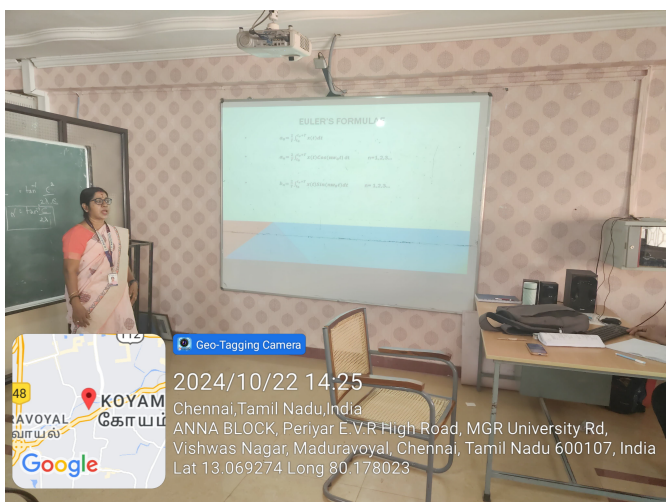
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EVENT OUTCOME

Participants gained a comprehensive understanding of Fourier series and transforms and their applications across various disciplines, including mathematics, engineering, physics, and data science. They left with practical insights into how Fourier analysis aids in signal processing, medical imaging, and data analysis.

PHOTOS





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Mr. K.Amuthantham