A Report
IQAC BVM, Mathematics Department &
BVM Alumni Association
Organize
an Expert Lecture on
on

"Applications of Linear Algebra & Fourier series in Engineering"

25rd February 2023

10:30am to 12.30 pm

EVENT COVENER
PROF. (DR) T. A. DESAI

EVENT COODINATOR
PROF(DR) MUKESH SHIMPI
PROF. NILESH SONARA

PATRON
BVM NDLI CLUB
PROF(DR) INDRAJIT PATEL
PRINCIPAL

EXECUTIVE MEMBER NDLI
AND
CONVENER
PROF(DR) MUKESH SHIMPI,
ASSOCIATE DEAN R & D
PROF(DR) DARSHANA BHATT
ASSOCIATE DEAN R & D

PRESIDENT
BVM NDLI CLUB
PROF (DR) VINA CHAUHAN

Birla Vishvakarma Mahavidyalaya (Engineering College)
[An Autonomous Institution]
Vallabh Vidyanagar – 388120

Event Name	Applications of Linear Algebra & Fourier series In Engineering
Date	25rd February 2023
Duration	10:30 am to 12:30 pm
Event Coordinator	Prof (Dr)Mukesh E Shimpi & Prof Nilesh Sonara
Number of Participants	201

Objective:

To make aware of applications of linear algebra & Fourier series in Engineering

About the program:

IQAC BVM & Birla Vishvakarma Mahavidyalaya organized an Expert talk on "Applications of Linear Algebra & Fourier series in Engineering" on 25rd February 2023. The event was organized for students of First year B Tech (UG). The program was coordinated by Prof (Dr) Mukesh E Shimpi & Prof. Nilesh Sonara.

Opening ceremony:

The session started with the welcoming speech of Prof. Nilesh Sonara, Department of Mathematics, Birla Vishvakarma Mahavidyalaya Autonomous Engineering College. Prof (Dr) T A Desai, Professor & Head, Department of Mathematics, Birla Vishvakarma Mahavidyalaya Autonomous Engineering College gave a brief introduction of our expert speaker Dr Brajesh Jha to the participants. He is currently working as Associate Professor at the School of Technology, Pandit Deendayal Energy University, Gandhinagar (Gujarat) since December 2013. He concentrates on research areas such as Mathematical Modelling and Simulation of Ca2+ Distribution in Astrocytes, Finite element modelling of Physiological problems, Fractional differential 3 equations and is Applications, etc. Besides, he has presented and published more than 50 research papers at national & international conferences. Sir also supervises doctoral thesis act as a guide. Currently, Sir is an active member of the Indian Society of Theoretical and Applied

Mechanics (ISTAM), Member of International Association of Engineers (IAENG), Indian Society of Technical Education (ISTE) (LM-87829), Computer Society of India (I1501602), APCBEES: (201821), Gwalior Academy of Mathematical Science, Forum for Interdisciplinary Mathematics (VICE PRESIDENT OF GUJARAT CHAPTER), FATER. (DY. SECRETARY OF GUJARAT CHAPTER).

Contents

- ➢ **Why mathematics is compulsory for Engineering?**
- ➢ **Mathematics in Computer Graphics**
- ➢ **Linear Algebra in Machine Learning**
  - ▪ **Loss Functions**
  - ▪ **Regularization**
- ➢ **Mathematical Models of Real world Problem**
- ➢ **Data Science**
- ➢ **Analytic Solution of differential equations like Laplace Transform, Fourier Transform**
- ➢ **Application of Fourier Series**

He concluded the session by thanking the programme committee and the faculty members. A question and answer session was conducted after that. The webinar concluded with a vote of thanks by Prof. Nilesh Sonara.

Program Outcomes:

Students of the first year make aware of different types of applications of linear Algebra & Fourier Series In engineering mentioned above.
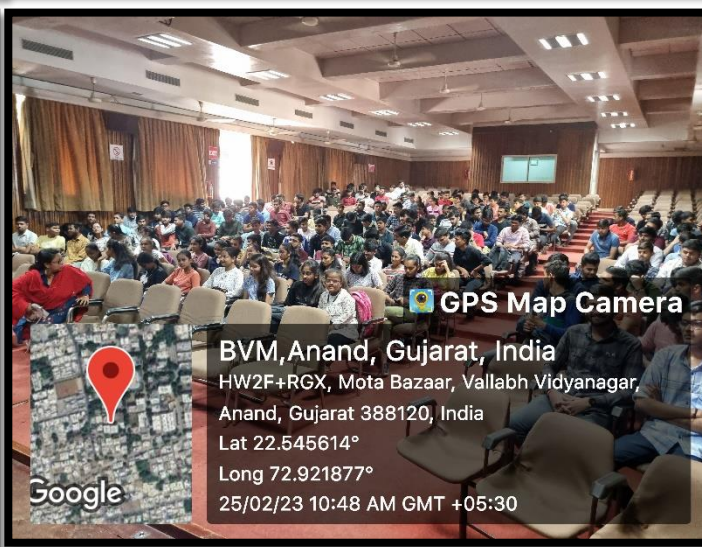
Glimpses

Convener

Coordinators

Dr T A Desai
Professor & Head
Department of Mathematics
BVM Engineering College
V V Nagar

Prof (Dr)Mukesh E Shimpi
& Prof Nilesh Sonara