



**DEPARTMENT OF MECHANICAL ENGINEERING**  
THRUST AREA RESEARCH GROUP CAD / CAM &  
ENGINEERING DESIGN AND COLLEGIATE CLUB (EDCC)

**WEBINAR ON “VARIATIONAL METHODS FOR FINITE ELEMENT FORMULATIONS” – 23.10.2020**  
*Mr. Manigandan. R, Engineer - Business support, CADD Centre*

Department of Mechanical Engineering in association with Engineering Design Collegiate Club (EDCC) - Thrust Area Research Group - CAD / CAM organised a webinar on “VARIATIONAL METHODS FOR FINITE ELEMENT FORMULATIONS” on 23.10.2020. Around 42 students from Department of Mechanical Engineering had participated in the webinar. The Expert speaker *Mr. Manigandan. R, Engineer - Business support, CADD Centre*, The chief guest was welcomed and welcome address was given by **Prof. L. Prabhu, HOD / Mech.** The vote of thanks was proposed by **Mr. Praveen. R, Asst. Prof – II / Mech.**

The chief guest explained about the fundamentals of Dynamic analysis, Vibration, Factors related to Dynamic analysis, Noise analysis, were explained by the chief guest. The students also interacted and learned the basics of dynamics analysis and the importance of Dynamic analysis from Industrial perspective.

**Outcome:**

The students understood the concepts of Dynamic analysis, Vibration, Frequency, amplitude of the vibration, Frequency, signal to noise etc. The guest also assured that he would extend his support in helping our students related to Projects.

**Invitation:**

The poster features logos for AVIT, Vinayaka Mission's Research Foundation, and accreditation bodies NAAC and AICTE. The text reads: 'Department of Mechanical Engineering & Engineering Design Collegiate Club Organizes Webinar on Variational Methods for Finite Element Formulations Date : 23.10.2020 | Time : 10:00 am to 11:00 am'. It includes a circular portrait of Mr. Manigandan R. and lists his details: 'Resource Person: Mr. Manigandan R, Engineer - Business Support, CADD Centre Training Services Pvt. Ltd., Chennai'. At the bottom, it states 'FREE REGISTRATION @ https://forms.gle/CLQyJvoYWd4DHUSr9' and 'e - CERTIFICATE WILL BE PROVIDED TO ALL THE PARTICIPANTS'. A contact bar at the very bottom provides phone numbers: 'FOR ADMISSION CONTACT @ (+91) 8754 552 018, (+91) 9789 481 724, (+91) 8754 541 024'.

# Event Photos:

The screenshot shows a Microsoft Teams meeting interface. The main slide is titled "Brief Intro About Different Numerical Methods" in red. Below the title, it lists "1. FEM: (FINITE ELEMENT METHOD)" and includes two bullet points: "FEM is the Most Popular Numerical Method" and "Applications-----linear, Non Linear, Buckling, thermal, dynamic And Fatigue Analysis". A red question "Are FEA and FEM same are different???" is followed by another bullet point: "Finite element method and finite element analysis both are same FEA is used in industries FEM is used in colleges and universities." The slide footer features the "CADD CENTRE" logo. The right sidebar shows a list of 65 participants, including KUMARAN P, Abhijith sukesan, sathyajeevi, and others. The bottom of the screen shows a Windows taskbar with various application icons and the time 10:28 AM.

The screenshot shows a Microsoft Teams meeting interface. The main slide is titled "Non linear analysis" in red. Below the title, a flowchart titled "Non-linearity" branches into three categories: "Geometrical" (with sub-point "Large Deformation"), "Material" (with sub-points "Beyond Elastic Limit 'E' 'metals'" and "Within Elastic Limit 'E' 'Non metals'"), and "Contact" (with sub-point "Gap elements & Contact simulation"). A note under "Creep" states "(Progressive) deformation of material at constant stress, - Long time process". The slide footer features the "CADD CENTRE" logo. The right sidebar shows a list of 77 participants, including KUMARAN P, Abhijith sukesan, sathyajeevi, and others. The bottom of the screen shows a Windows taskbar with various application icons and the time 10:49 AM.