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Hope Foundation's  
Finolex Academy of Management & Technology, Ratnagiri  
Department of Mechanical Engineering

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**A Virtual Expert Session on NVH: Noise, Vibration & Harshness**

The department of Mechanical Engineering organized a Virtual Expert Session **on NVH: Noise, Vibration & Harshness** under the guidance of **Dr M. S. Kirkire** (Dean Academics and Head of Mechanical Engg. Dept.) on 25<sup>th</sup> September 2021 for the students of Mechanical Engineering. Around 80 students attended the expert session.

The webinar began with an introductory speech by **Prof. J. S. Anavkar** (Assistant Professor, Mechanical Engg. Dept.) **Mr Anil Jadhav** (Senior CAE specialist at Whirlpool Corporation, Pune) was invited to conduct the expert session. During the 02 hours session, Mr Anil Jadhav presented an Overview of Whirlpool and market demand for NVH. He further briefed the students about the field of NVH, the importance of NVH in Home Appliances and day to day life experiences of NVH. After the initial introduction, the students were made aware of the NVH Simulation Process, NVH Control Categories, Use of the Six Sigma tool in NVH. Further, the expert also showcased challenges, future trends and skillsets needed to pursue a career in the field of NVH. The students interacted with the expert at the end of a session in the Question-Answer segment.

The senior faculty members from the department with a keen interest in the subject also attended the expert session. Prof. V Murali Mohan and Prof. S. S. Malusare who teach Mechanical Vibration and Dr M S Yadav with his area of interest in Automobile Engineering attended and interacted with the expert. Mr Anil Jadhav is one of the esteemed Alumni of the department. It facilitated the interaction between students with the alumnus. **Prof. S. S. Mestry** (Assistant Professor, Mechanical Engg. Dept.) concluded a session with a vote of thanks.

anil jadhav is presenting

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### Agenda

- Whirlpool Overview
- Market Demand
- Introduction to NVH
- Real Experiences of NVH
- Importance of NVH in Home appliances
- Introduction to SBD
- NVH Simulation Process
- NVH Simulation Capabilities @ Whirlpool
- NVH Control Strategies
- Case Studies of NVH Simulations
- Use of Six Sigma tool in NVH
- Challenges
- Future Trends
- Skill set needed for career in NVH

Source: <https://depositphotos.com/52713157/stock-illustration-agenda-word-written-by-3d.html>

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Whirlpool

anil jadhav

Ganesh Desai

shailesh rawool

Sachin Mestry

Vivek Nevgi

40 Swarupa Nama...

73 others

You

A Virtual Expert Session on NVH

Mr Anil Jadhav talking about the outline of the session

anil jadhav is presenting

### Sound Terminology

- **Sound Pressure (Pa)**: Sound pressure or acoustic pressure is the local pressure deviation from the ambient atmospheric pressure, caused by a sound wave. It is dependent on the distance from source
- **Sound Power (W [watt])**: It is a fundamental property of a sound source, i.e., the amount of acoustic power radiated into the environment. It is independent of the distance from the Source and the room environment.
- **Sound Intensity (watt/m<sup>2</sup>)**: It is defined as the amount of sound power passing through a given surface.
- **decibel (dB)**: The decibel denotes the magnitude of quantity with respect to reference value of quantity, in terms of logarithm (to the base 10) of the ratio of quantity. Any quantity to be represented in decibel can be obtained by using following equation.

Sound Power Level,  
 $L_w = 10 \log (W/W_{ref})$ ,  $W_{ref} = 1e-12 W$

Sound Intensity Level,  
 $L_i = 10 \log (I/I_{ref})$ ,  $I_{ref} = 1e-12 W/m^2$

Sound Pressure Level,  
 $L_p = 10 \log (P^2/P_{ref}^2)$ ,  $P_{ref} = 20e-6 N/m^2$

- 2e-5 Pa (0 dB) = Threshold of Hearing
- +3 dB = Easily noticeable change in Sound
- 63.2 Pa (130 dB) = Threshold of Pain

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Whirlpool

anil jadhav

Sachin Mestry

shailesh rawool

Vivek Nevgi

Girish Parab

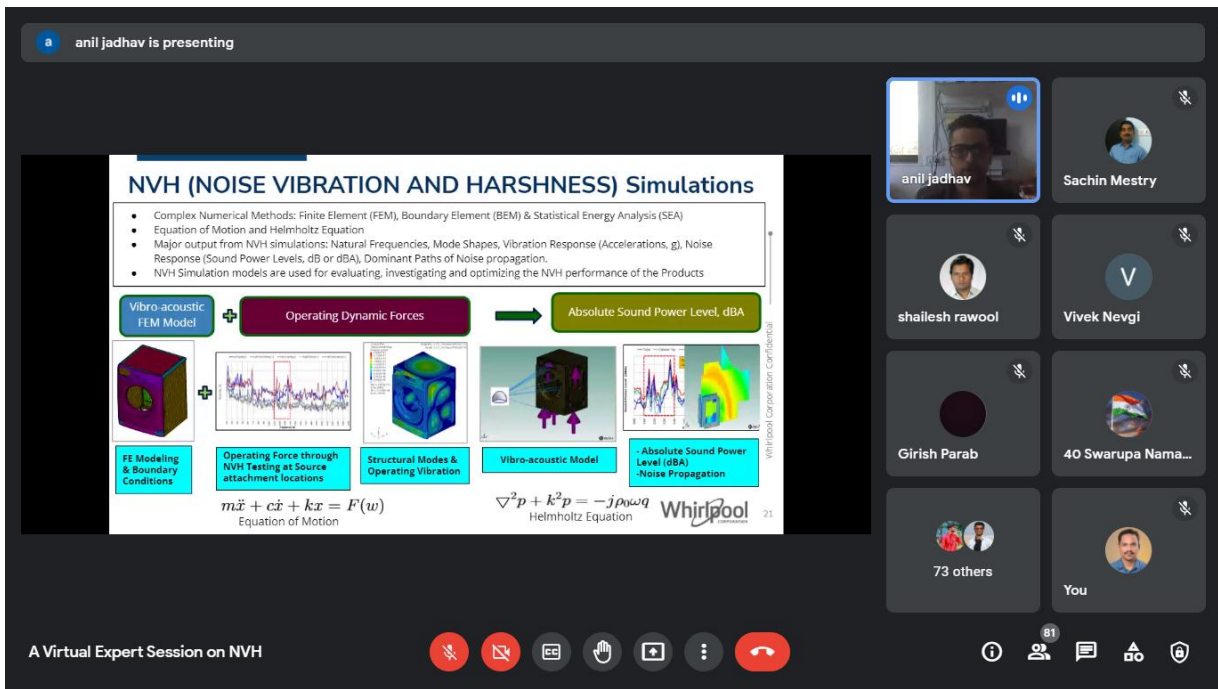
40 Swarupa Nama...

66 others

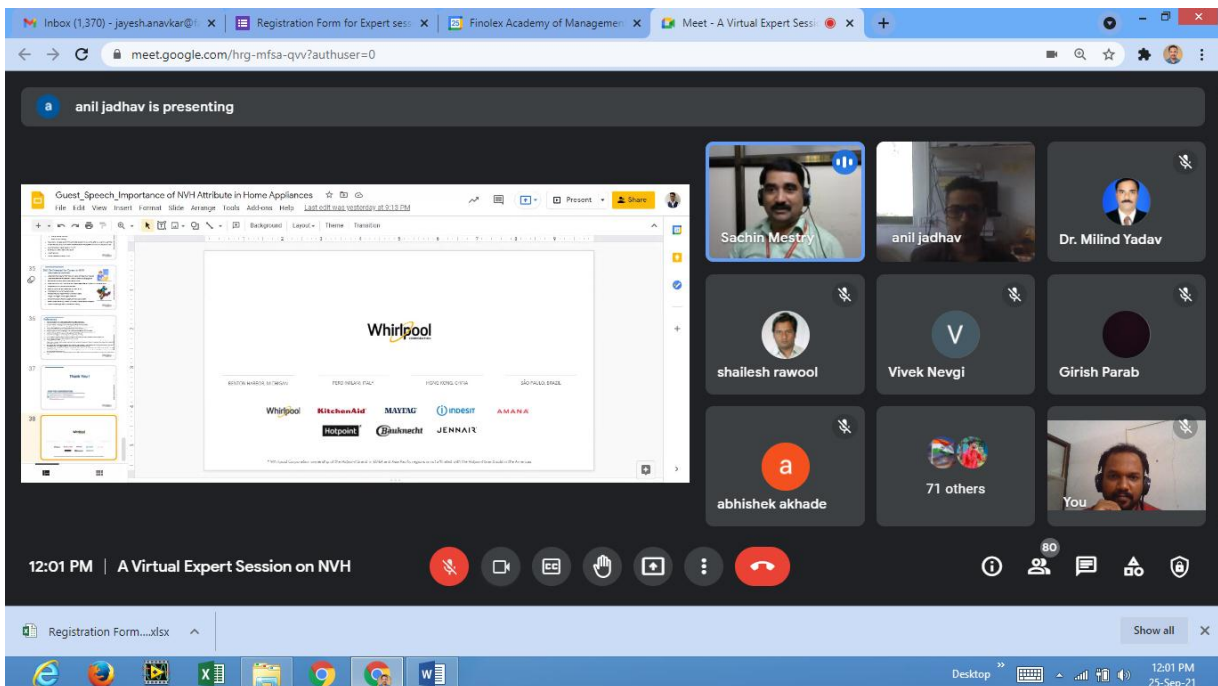
You

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Mr Anil Jadhav making students aware of the Basics of NVH



Introduction to NVH simulation by expert



Prof S Mestry giving a vote of thanks to Mr Anil Jadhav.



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( Approved by AICTE, Recognized by DTE Maharashtra, Affiliated to University of Mumbai )

## *A Virtual Expert Session on* **“NVH : Noise, Vibration & Harshness”**

### **Key Features:**

- Introduction to NVH
- Importance of NVH in Home Appliances
- Case studies of NVH simulation
- Challenges and skill sets for career in NVH

Date: **25.09.2021**

Time: **10.15 AM to 12:15 PM**



**Mr. Anil Jadhav**  
**Senior CAE Specialist**  
Whirpool Corporation, Pune

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register

Organized by  
**Mechanical Engineering Department**

Co-ordinated by

**Mr. Jayesh S Anavkar**  
Assistant Professor, MED

**Mr. Sachin S Mestry**  
Assistant Professor, MED

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Event flyer for students