

**SRI VENKATESWARA COLLEGE OF ENGINEERING (SVCE)
PENNALUR, SRIPERUMBUDUR-602117**

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|  | <p>Department of Automobile Engineering</p> |  <p>INSTITUTION'S INNOVATION COUNCIL <small>(Ministry of HRD Initiative)</small></p> |  <p>ISO 9001:2015 Certified by IRQS</p> <p>MGMT. SYS. RvA C 071</p> |
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**Report on Six Day Online FDP on APPLIED THERMODYNAMICS FOR
ENGINEERS**

Date: 31.03.2022 to 07.04.2022

Objectives

The objectives of the FDP is to impart the knowledge on APPLIED THERMODYNAMICS FOR ENGINEERS to Faculty members particularly in the following topic

- Internal Combustion Engines
- Gas Power Cycles
- IC Engine Performance
- Steam Nozzles and Boilers
- Steam and Gas Turbines
- Air Compressors
- Refrigeration
- Psychrometry and Air Conditioning

About the programme

The Faculty Development Programme is targeted to the young faculty members working in engineering institutions to impart the fundamental knowledge on Thermodynamics. The target participants are those who have less than five years of teaching experience. The FDP registration received an overwhelming response with a total registration of 21 participants have attended the online FDP. The FDP was inaugurated by Dr. J. Venkatesan, Professor & Head, Automobile Engineering. Mr. A. K. Boobalasantilraj, Assistant Professor of Automobile Engineering has given the welcome address. The online FDP program has been conducted in Google Meet platform.

After the welcome address Dr. J. Venkatesan has briefed about the importance of Basic concept of Thermodynamics in all the engineering field. He has performed as guest speaker for all the 6 days and explained the following Topic.

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| 31.03.2022 Thursday (Online) | 09.00 am to 11.00 am <i>Combustion in SI and CI Engines</i> Dr. M. Senthilkumar / MIT Google Meet link: https://meet.google.com/pbz-pjvf-ain |
| | 12.30 pm to 02.30 pm <i>Fundamentals of Internal Combustion Engines</i> Mr. A.K. Boobalaseshthilraj / SVCE Google Meet link: https://meet.google.com/pbz-pjvf-ain |
| 01.04.2022 Friday (Online) | 09.00 am to 11.00 am <i>Internal Combustion Engines Present and Future Trends</i> Mr. K. Balasubramani / Simpsons & Co. Limited. Google Meet link: https://meet.google.com/pbz-pjvf-ain |
| | 11.15 am to 12.45 pm <i>Automobile – Future of Mobility</i> Mr. S. Vinothkumar / Sundram Fasteners Ltd. Google Meet link: https://meet.google.com/pbz-pjvf-ain |
| 04.04.2022 Monday (Online) | 09.00 am to 11.00 am <i>Gas Power Cycles</i> Dr. J. Venkatesan / SVCE Google Meet link: https://meet.google.com/pbz-pjvf-ain |
| | 12.30 pm to 02.00 pm <i>IC Engine Performance</i> Dr. P. Raghu / SVCE Google Meet link: https://meet.google.com/pbz-pjvf-ain |
| | 02.00 pm to 03.30 pm <i>Study of Thermodynamic Process using MATLAB</i> Dr. V. Ganesh / SVCE Google Meet link: https://meet.google.com/pbz-pjvf-ain |
| 05.04.2022 Tuesday (Online) | 09.00am to 11.00 am <i>Steam Nozzles and Boilers</i> Dr. K. Pitchandi / SVCE Google Meet link: https://meet.google.com/pbz-pjvf-ain |
| | 12.30 pm to 02.30 pm <i>Steam and Gas Turbines</i> Dr. J. Venkatesan / SVCE Google Meet link: https://meet.google.com/pbz-pjvf-ain |
| 06.04.2022 Wednesday (Online) | 09.00 am to 11.00am <i>Air Compressors & Refrigeration</i> Dr. P. Raghu / SVCE Google Meet link: https://meet.google.com/pbz-pjvf-ain |
| | 12.30 pm to 02.30 pm <i>CFD in e-Vehicle components</i> Mr. Ankit Gupta / ePROPELLED Google Meet link: https://meet.google.com/pbz-pjvf-ain |
| | 09.00 am to 11.00am <i>Psychrometry and Air Conditioning</i> Dr. J. Venkatesan / SVCE Google Meet link: https://meet.google.com/pbz-pjvf-ain |

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| 07.04.2022 Thursday (Online) | 12.30 pm to 01.45 pm Engine Exhaust After treatment Mr. G. Suresh / L & T Google Meet link: https://meet.google.com/pbz-pjvf-ain |
| | 02.00 pm to 03.30 pm Dynamics in Electric Vehicles Dr. S. G. Bharathi Dasan Google Meet link: https://meet.google.com/pbz-pjvf-ain |

Participants have cleared their doubts during question and answer sessions at the end of each session. Further key concepts to be taught to the students in each topic were discussed.

Mr. R. Sakthivel, Assistant Professor, Department of Automobile Engineering gave the vote of thanks for the FDP on 07.04.2022. Participants have received their e-certificate upon submitting the feedback form for the FDP.

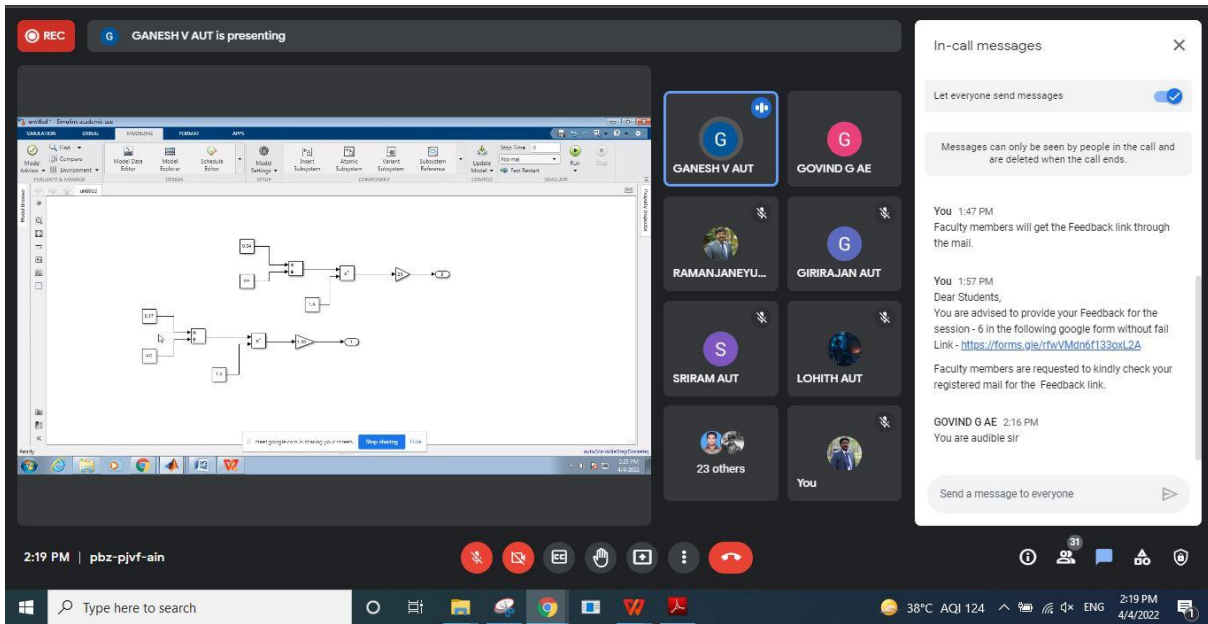
Benefits

Young teachers had a quick recap on all the fundamentals of Automotive Engines.

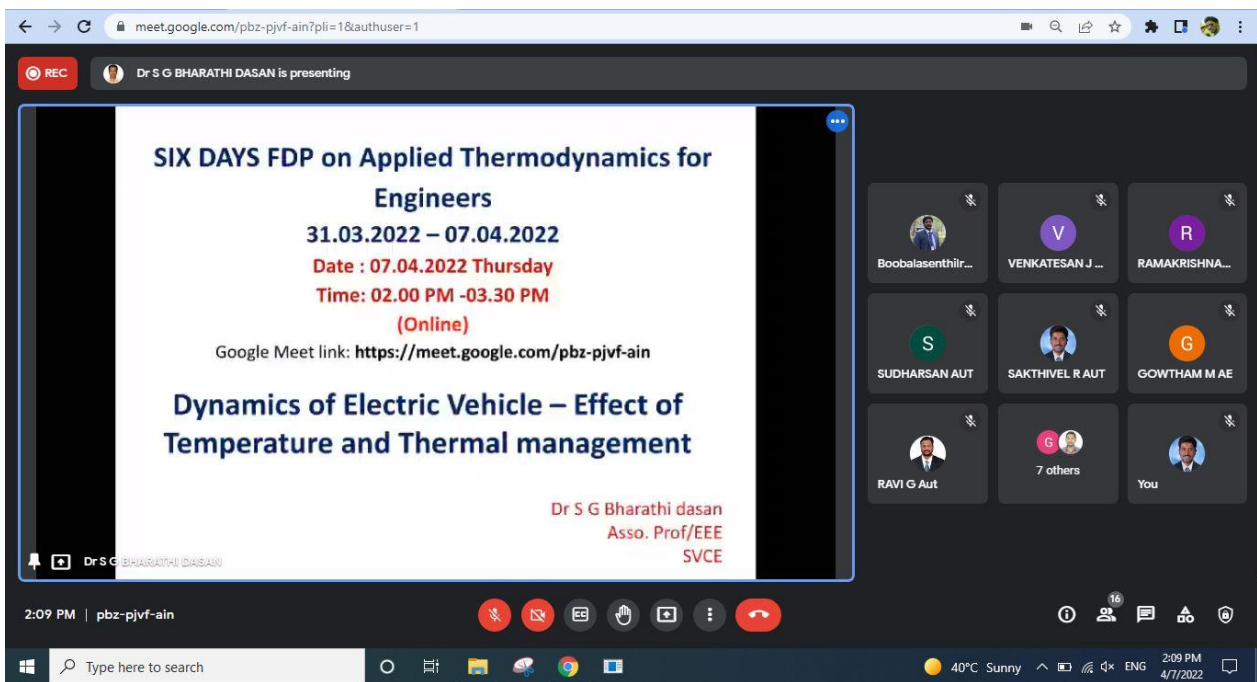
- Fundamental concepts on Present and Future Trends were discussed.
- Fundamentals of Heat and Reversed Heat Engines were discussed.
- Methods on solving the fundamental problems were discussed on Gas Power Cycles.
- Methods on solving the problems on Steam Power cycle
- Fundamental concepts on Vapour Compression Refrigeration Cycle and Participants have explored the utilization of Steam tables, Psychrometry charts.

The screenshot shows a Google Meet interface with a presentation slide. The slide is titled "Psychrometric processes" and "Sensible cooling". The text on the slide reads: "The cooling of air without change in its specific humidity is known as 'Sensible cooling'." Below the text, there is a psychrometric chart and a schematic diagram of a cooling coil. The chart shows a horizontal line from state 1 to state 2, indicating constant humidity ratio ($W_1 = W_2$). The temperature of the air decreases from 40°C to 20°C. The refrigerant temperature is shown as 10°C. The chart also shows the saturation curve and the wet-bulb temperature line. The schematic diagram shows refrigerant entering at 40°C and exiting at 10°C, with air entering at 40°C and exiting at 20°C.

Dr. J. Venkatesan - Psychrometry and Air Conditioning



Dr. V. Ganesh - Study of Thermodynamic Process using MATLAB



Dr. S. G. Bharathi Dasan - Dynamics in Electric Vehicles

REC S Suresh G is presenting

Diesel Engine & Exhaust After Treatment System

Suresh G
Team Lead
L&T Technology Services Ltd
Mysore




12:48 PM | pbz-pjvf-ain

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38°C Haze 12:48 PM 4/7/2022

Participants: SAKTHIVEL R AUT, VENKATESAN J..., Suresh G, GOKULAKRISH..., ANITHA R Cse, GOKULAN R AE, RAMAKRISHNA..., 4 others, You

Mr. G. Suresh / L & T - Engine Exhaust After treatment


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