Faculty Development Program

Title : Fundamentals of Artificial Neural Networks (ANN) and their Practical Application for Predicting Spray Behavior and Emission Characteristics of Low-Carbon Fuels

Date : 2025-04-08 - 2025-04-08
Time : 16:00 - 17:30
Venue : GDN 19A

Event Outcome

- The participants will gain knowledge in ANN to optimize the spray and emission characteristics of LOW carbon fuels

Resource Person 1 - Details
Name : Thangaraja J
Designation : Professor Grade 1, Automotive Research Centre
University/ Company : VIT, Vellore
Address : India, 632014.

Resource Person's Profile :

1. Profile of Thangaraja J

Dr. Thangaraja earned his PhD from IIT Madras under the mentorship of Prof. Pramod S. Mehta, with one of his doctoral papers being awarded the Best Research Paper by the Institution of Engineers (India). He is currently a research faculty member at the Automotive Research Centre, VIT, Vellore. His international research experiences include participating in the SERB International Research Excellence Programme 2022 at the University of the Federal Armed Forces, Germany.

The increasing demand for sustainable energy sources has driven research into low-carbon fuels, particularly their performance in combustion engines. This talk delivers the application of Artificial Neural Networks (ANN) to predict the spray behavior and emission characteristics of low-carbon fuels. ANN models are trained using experimental data to analyze key factors such as spray penetration, and pollutant emissions. The results demonstrate the potential of ANN to provide accurate predictions for optimizing engine design and fuel injection systems, while also contributing to reducing harmful emissions.

ANN Tools, not mandatory for participants

Coordinator's: **Prof. THANGARAJA J 14463 - Professor Grade 1 - ARC**
Prof. MOHAMED IBRAHIM M 14465 - Professor Grade 1 - ARC