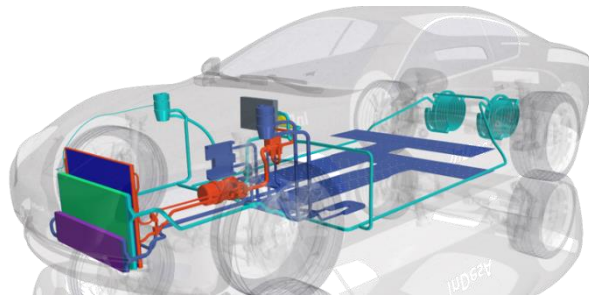


24 Hours **ADVANCED** Training on

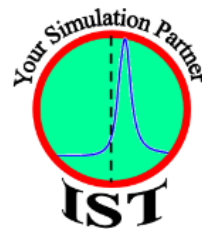
EV & HEV Thermal Management Simulation in GT-COOL

Case Study



Practice

Access to Live Videos



IST Pvt Ltd

EV, HEV & Engine Development
Staff Augmentation
Corporate Training

Training Fees

Category	Training Fees per participant (Rs.)
Company Sponsored	20,000.00
Individual Sponsored	17,000.00

For registration, please contact us:

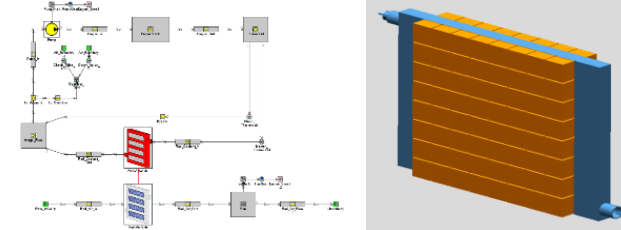
- E-Mail ID: subir.mandal@integratedsimtech.com
- Contact No.: +91-9763909935

Agenda Overview

This comprehensive advanced module deals with various aspects of thermal management of HEV and EV using 1D simulation GT-COOL, COOL-3D and GEM-3D software. Detailed training agenda is mentioned below.

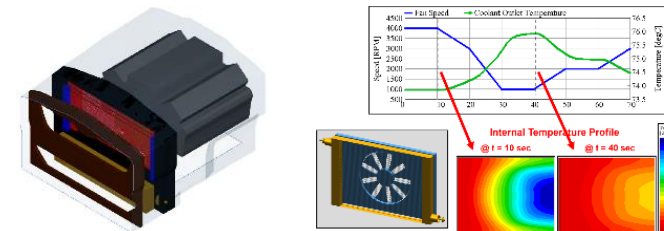
□ Engine cooling system modeling & simulation

- ✓ Modeling engine cooling system which includes coolant flow circuit, block, pump, fan, thermostat, heat exchanger (aftercooler, intercooler, radiator, and EGR cooler) components
- ✓ Solver basic of fluid flow and heat transfer
- ✓ Engine cooling system calibration
- ✓ Investigate with change in cooling system design & boundary variables



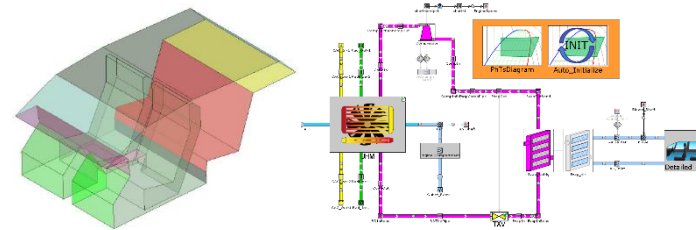
□ Underhood cooling system modeling & simulation

- ✓ Modeling vehicle underhood cooling (UHC) system which includes grills, radiator, condenser, CAC, fan, shroud, and blockage in COOL-3D
- ✓ UHC system calibration
- ✓ Investigate with change in UHC system design & boundary variables
- ✓ Optimization of UHC system components (sizing & positions of radiator, CAC, condenser, fan; number of fans; HEX scaling, etc) for desired heat load requirement



□ HVAC system modeling & simulation

- ✓ Modeling refrigerant flow network and A/C system components such as compressor, evaporator, TXV, drier/receiver, condenser, pump, cabin, HVAC door, heater, blower
- ✓ HVAC system calibration
- ✓ Investigate with change in HVAC system design & boundary variables

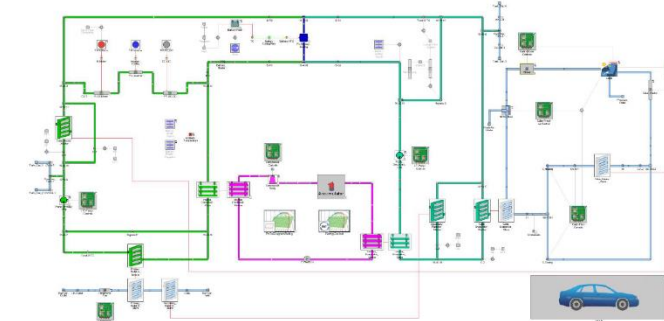


Who Should Attend?

- Working professionals/ planning to work in HEV, EV or conventional vehicle cooling and thermal management systems
- OEMs/ Consulting Companies/ Start-ups
- Engineering Students/ Professors/ Scholars

□ EV thermal management modeling & simulation

- ✓ Modeling cooling of battery, motor, power electronic components
- ✓ Modeling control system
- ✓ Integration of different sub-systems which include UHC, HVAC, battery, motor, power electronic components, vehicle drivetrain
- ✓ Investigate energy management, cabin pull down characteristics, battery and motor behavior with different driving cycles



Trainer

- Over 19 years of industrial experience in diesel, gasoline, gas engines; HEV & EV; and aircraft engines
- 1D simulation domain – engine performance, cooling, HVAC, HEV & EV drivetrain, battery, lubrication, acoustics, hydraulics, cranktrain, and valvetrain
- Worked with GE, Cummins, ESI, MTU (Rolls-Royce), IST
- Conducting training for 10 years
- GT-SUITE user for 14 years
- M.Tech. from IIT Kharagpur

