



5th Edition

SAENIS TTTMS CONFERENCE-2022

Future Thermal Systems - A Disruptive & Sustainable Approach

In Association With

TATA MOTORS **Subros**



EVENT GUIDE



 Nov 16-19, 2022

 Hotel Basant Vihar Palace, Bikaner (Rajasthan) 334001

#TTTMS2022

EVENT-AT-A-GLANCE

DAY-1

16th November, 2022 - WEDNESDAY

Note: Organizers reserves the right to change presentation schedule and speakers without any prior notice.

12:30 - 02:00 PM

Registration

02:00 PM - 03:15 PM : (Inaugural Session)

Lamp illumination by Chief Guests & Opening Speech.

Inaugural Speech by Chief Guest

Key Note by SAEINDIA / SAENIS GB Members, Sponsors
Representatives, TTTMS Mentors & EC Members

04:00 PM - 05:00 PM (Panel Discussion)

Topic: India Cooling Action Plan - Emerging Challenges for
Mobility Sector

Panelists: Representatives from OEM's, MOEFCC, Civil
Society, ACMA, Industry Experts

03:15 PM - 04:00 PM

Theme: Future Thermal Systems-Disruptive & Sustainable
Approach

Theme Speaker/s: Industry Experts / Technology Leaders

05:00 - 06:00 PM

Networking & Tea Break

9 PM : Gala Dinner

DAY-2

17th November, 2022 - THURSDAY

Note: Organizers reserves the right to change presentation schedule and speakers without any prior notice.

08:15 AM - 09:00 AM

Registration

09:00 - 09:20 AM

Carbon-Neutral Powertrains for Future Mobility and its Impact on
Thermal Management

Speaker: Selvaraji Muthu, Vellore Institute of Technology

09:20 - 09:40 AM

Developing Intelligent Windshield Fogging Prediction and HVAC Control
Model

Speaker: Bhavik Mehta, Tata Motors Ltd.

09:40 - 10:00 AM

Assessment of an Electric-Vehicle HVAC System Using Numerical
Simulation and Experimental Validation

Speaker: Somnath Sen, Subros Limited.

10:00 - 10:20 AM

A Comparison Study of Battery Thermal Management using Different
Fluids

Speaker: Tarun Rana, Valeo India Pvt. Ltd.

10:20 - 10:40 AM

Feasibility Analysis of Biogas-Based Charging Station using MATLAB
Simulation

Speaker: Jiiva K, D Soundara Baranidaran, Kongu Engineering College

10:40 - 11:00 AM

Investigation on Thermophysical Characterization of Nano Composite
Phase Change Materials for Battery Cooling in EV

Speaker: Anandan Vishnu, Sadhasivam Deepan Kumar, Bannari Amman
Institute of Technology

01:00 PM - 02:00 PM

Lunch Break

02:00 PM - 02:40 PM

Invited Sponsor's Speakers Topics

Case Studies / Technology Trends Presentations by Sponsor's
Representatives

02:40 - 03:00 PM

Numerical Modeling of Electro-Thermal Behavior of a Typical
Lithium-Ion Cell and Pack Level Using NewmanP2D Approach

Speaker: Abhay Gudi, Tata Motors Ltd.

03:00 - 03:20 PM

A Review on Various Heating Strategies for Electric Vehicle for
Indian Climatic Conditions

Speaker: Saurabh Suman, Subros Limited.

03:20 - 03:40 PM

Parametric Studies Using CFD to Predict the Conditions Leading
to Thermal Runaway

Speaker: Suvankar Manna, Novus Nexus Inc.

03:40 - 04:00 PM

Tea Break & Networking Session

Session Break

04:00 - 04:20 PM

**Predicting the Onset of Vent Valve Opening in an 18650 Cell
During Thermal Runaway**

Speaker: Reghunath U, Tata Consultancy Services

<p>11:00 - 11:20 AM Tea Break & Networking Session Session Break</p>	<p>04:20 - 04:40 PM Technical and Economical Evaluation of Different EXV Concepts Speaker: Eike Willers, Otto Egelhof GmbH & Co.</p>
<p>11:20 - 11:40 AM Experimental Study to Analyze the Parameters Affecting the Cabin Air Quality Speaker: Uttam Sharma, Maruti Suzuki India Ltd.</p>	<p>04:40 - 05:00 PM Electric Vehicle Battery and Traction Motor Heat Load Estimation Using MATLAB Apps Tool Speaker: Navneet K Jha, Blesswin Alexander, Hero MotoCorp Ltd.</p>
<p>11:40 - 12:20 PM Real Drive Emissions - Opportunities & Challenges. Keynote Speakers: Industry Experts / Technology Leaders</p>	<p>05:00 - 05:20 PM Improving Defrost Performance through Design Change in Simulation and Validating through Experimental Analysis Speaker: Avadhesh Kumar Meena, Subros, Ltd.</p>
<p>12:20 - 12:40 PM Immersion Cooling for Power Electronics Speaker: Pranati Sahoo, 3M</p>	<p>05:20 - 05:40 PM An Experimental Study on Effectiveness of Electronic Expansion Valve [EXV] in EV HVAC System Speaker: Sayan Majumder, Mahindra Research Valley</p>
<p>12:40 - 01:00 PM Performance Improvement on Electric BUS A/C Through CAE & CFD Simulation Speaker: Paulson Parayil, Subros Limited</p>	<p>05:40 - 06:00 PM A Novel Approach for Assessing Vehicle Interior Air Quality (VIAQ) in Future Mobility Solutions Speaker: Shubham Vijay Nimsatkar, Sambhaji Jaybhay, Shridhar Kulkarni, Tata Motors Passenger Vehicles Ltd.</p>

DAY-3

18th November, 2022 - FRIDAY

**Note: (1) Organizers reserves the right to change presentation schedule and speakers without any prior notice.
(2) Local Sight Seeing Accompanied with Dinner will be Arranged on Paid basis at the End of the Session.**

<p>08:15 - 09:20 AM Registration</p>	<p>01:00 - 02:00 PM Lunch Break</p>
<p>09:20 - 09:40 AM Development of Internal Heat Exchanger for Truck AC System Application Speaker: Sarvesh Srivastava, Tata Motors Ltd.</p>	<p>02:00 - 02:40 PM Corporate Average Fuel Economy Keynote Speakers: Industry Experts / Technology Leaders</p>
<p>09:40 - 10:00 AM A Real Time Numerical Co-Simulation Method for Predicting Cabin Thermal Comfort Speaker: Shekhar Bhangale, Maruti Suzuki India, Ltd.</p>	<p>02:40 - 03:00 PM Design of Hybrid Air Conditioning System Using Phase Change Material for Commercial Sleeper Vehicles Speaker: Sandeep Shalgar, Tata Motors Ltd.</p>
<p>10:00 - 10:20 AM Comparative Numerical Study on Heat Dissipation Behaviour of Conventional Disk Brake Designs for High-Performance Requirements. Speaker: Rishabh Arora, Vikram Rao, Punjab Engineering College</p>	<p>03:00 - 03:20 PM Feasibility Analysis of Submerged Battery Cooling System for EVs Speaker: R Sabariraj, Sadhasivam Deepan Kumar, Bannari Amman Institute of Technology</p>
<p>10:20 - 10:40 AM Identification of Noise Sources of an Automotive HVAC by Acoustical Duct Method Speaker: Arun Kumar Goel, Subros, Ltd.</p>	<p>03:20 - 03:40 PM Development Of A Novel Methodology In Predicting Transient Deicing Simulation Of An Automotive Windshield Speaker: Anit Sen, Subros, Ltd.</p>
<p>10:40 - 11:00 AM Real-World Emissions of Motorcycles in Delhi-NCR Region, India Speaker: M. Sithananthan, ACSIR, Ghaziabad</p>	<p>03:40 - 04:00 PM Tea Break & Networking Session Session Break</p>
<p>11:00 - 11:20 AM A Methodology to Optimize Fan Duty Cycle (FDC) by Deploying 1D CAE Simulation Tool Speaker: Sambhaji Jaybhay, Tata Motors Passenger Vehicles Ltd.</p>	<p>04:00 - 04:20 PM An Experimental Study for Reduction of Refrigerant Flow Induced Noise in a Passenger Vehicle Speaker: Shubham Kumar, Rachit Sharma, Mukesh Kumar, MSIL</p>

11:20 - 11:40 AM

Tea Break & Networking Session
Session Break

04:20 - 04:40 PM

Design and Development of a Novel Air Cycle Refrigeration System
for Passenger Vehicles

Speaker: Rajat Gupta, Tata Motors Ltd.

11:40 - 12:00 PM

Effect of Sunroof on Occupant's Thermal Comfort in a Car and
Potential Solutions for its Cooling Performance Optimization

Speaker: Kamal Sethi, Maruti Suzuki India, Ltd.

04:40 - 05:00 PM

Cost Effective Method of Improving the Cabin Air Quality using
HVAC Case Coating

Speaker: Ram Anandan, Mahindra & Mahindra Ltd.

12:00 - 12:40 PM

Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles.
Keynote Speaker : Industry Experts / Technology Leaders

05:00 - 05:40 PM

Invited Sponsor's Speakers Topics
Case Studies / Technology Trends Presentations by Sponsor's
Representatives

12:40 - 01:00 PM

Optimized Supervision of Variable Displacement Compressor for
Automotive Air Conditioning

Speaker: Aditya Pratap Yadav, Ankit Shukla, Subros Limited

05:40 - 06:00 PM

Experimental Investigation of Direct Injection Compression Ignition
Engine Fueled with Diesel-Biobutanol-Castor Oil Blends on the
Performance

Speaker: Prabakaran B, Hindustan Institute Of Technology & Science

DAY-4

19th November, 2022 - SATURDAY

Note: Organizers reserves the right to change presentation schedule and speakers without any prior notice.

08:15 - 09:00 AM

Breakfast & Networking Session

09:00 - 09:20 AM

Case Study Championship Team 1
Top 3 Team (Team 1) Presentation

10:00 - 12:00 PM

Valedictory Session

Representatives from OEM's, Civil Society, ACMA,
Industry Experts

09:20 - 09:40 AM

Case Study Championship Team 2
Top 3 Team (Team 2) Presentation

Felicitation of Top 3 Papers & Top 3 Presentations

09:40 - 10:00 AM

Case Study Championship Team 3
Top 3 Team (Team 3) Presentation

Felicitation of Case Study Championship-2022 Winners

**Scan to
Register**



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