

SAEINDIA REEV 2024



Towards a Carbon Neutral World!



EXPERIENTIAL LEARNING STUDENT COMPETITION



SAEINDIA REEV



SAEINDIA_BENGALURU_SECTION

About SAEINDIA REEV

Globally we are witnessing a technology shift in Automotive Propulsion towards electrification and Students in the Engineering community have to be the front runners in this change. SAEINDIA Bangalore has initiated REEV (Range Extended Electric Vehicle) in the 4 wheeler Urban Mobility space.

REEV is a competition that has primary focus on range and fuel efficiency. The competition is going to drive the new age technologies in automotive industry, hybridization, light weighting, optimization, range extension, fuel awareness etc.

RECOGNITION AWARDS:

SAEINDIA REEV Winner	1,50,000/-
1st Runner up	1,00,000/-
2nd Runner up	75,000/-

**“ Towards
a Carbon
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”**

Benefit to the Students:

Getting industry ready

- Focus of this competition will be in the areas of Energy Balancing, Safety & New Technologies.
- Hands on Simulation Training on IPG CarMaker, ANSYS, MATLAB, ABAQUS and other analysis tools for students.
- Core Product Engineering Knowledge sharing Sessions by Industry Experts.
- Best Student Champion Awards.

Benefit to the Faculty Advisor:

Exclusive sessions on various technology topics by Industry experts.

- 4-Half Day sessions on Technical & Product development.
- Visit to State of the art Testing facility in India.
- Best Margdarshak(faculty) Awards.

Recognition Awards:

Special Recognition Award for the team that generates highest sponsorship amount for their team.

Each team will be mentored by Industry experts.



TECHNICAL SESSION TOPICS:

- | | |
|---|---|
|  Understanding of Vehicle Dynamics Applications - I |  Understanding of Vehicle Dynamics Applications - II |
|  EV Powertrain Optimization |  Electric Drives |
|  Automotive Safety and Crashworthiness - I & II |  Steering, Suspension and Brakes Fundamentals - I |
|  Steering, Suspension and Brakes Fundamentals - II |  Application & Base Software Development |
|  DFMEA, Costing Fundamentals |  Roll cage Design and Validation, Interiors and Ergonomics |
|  Electrical integration and Controllers - I & II |  Vehicle Development & Program Management |
|  Fundamentals of Automotive Noise, Vibration and Harshness - I & II |  Fundamentals of Propulsion, Batteries, Energy & Hybrid concepts in Automotive Application |

Event Details:

Registration Starts: March 2023

Technical Sessions: April 2023

Virtuals (Propulsion Readiness): October 2023

Finals (Vehicle Readiness & Launch): May 2024



ADVISORY BOARD MEMBERS :



Jayaraman ShivaKumar
GM Engineering.
Director



J. Munirathnam
Javaji M Consulting Pvt Ltd
CEO



Damodaran SUBRAMANIAN
AVTEC
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Vitesco Technologies
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SAEIBS Chairman



Rakesh Bidre
TCS
Head of Virtual Product Development
& SAEIBS Vice Chairman



Sunil Gupta
TCS
Sustainability

ORGANIZING COMMITTEE MEMBERS :



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TCS
Delivery Manager & SAEIBS MC



Chandrashekar Prasad S
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Venkata Panguluri
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Sukumar Gadumoori
TE Connectivity
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Arun S Bhaire
TCS
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Guruprasath Alagarsamy
Eaton
Engineering Leader - EV Applications



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SEG Automotive
Technical Leader



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Deputy manager



Ashish kumar Das
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NVH



Balaji Srinivasan
TVS motor
Assistant manager R&D



Padmesh Sewda
IQL , TVS motor
Program Manager - CD (NPD,EV)

Supported By



TESTIMONIALS



Mr. Dhaanish mohamadu

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REEV is a revolutionary platform that was organized by the efforts of SAE INDIA in collaboration with GM. It's gives me an immense pleasure to share this victory to our college management and the SAE INDIA REEV who provided us an enormous support.

Mr. Honey Kethan

”



It was a wonderful journey of engineering for me with vehicle design going on one side and academics on the other. Students like me learn by trying to apply what we learn in class to real life, and REEV helps us do exactly that. As an automobile engineering student, who doesn't dream of building a vehicle? Dreaming in classes about theories, concepts, and their relatability to REEV triggered my interest in the field. Getting industry exposure and connections is very important for any engineering student, which SAEINDIA ensures our competence by connecting us with industry experts in particular sub-systems. Additionally, each team is provided with two dedicated industrial mentors who are very supportive and kind, but at the same time they make us talk consciously, work accountably and learn exponentially.

Prof. Udaya Ravi Mannar PhD, FIE

“

REEV (Range Extended Electric Vehicle) competition conceived, planned and executed by SAEINDIA Bengaluru Section is a wonderful event. It is a hybrid vehicle building competition and one of its kind among different vehicle building competitions in India. In today's world of heavy pollution and depleting fossil fuels, the world is talking about green energy and electric vehicles. Hence, building a hybrid vehicle is the need of the hour. It is a real testimony to the talent of young minds.





SAEINDIA in REEV 3rd Edition Convenor Note

Chandrashekar Prasad S

Delivery Head, TCS & SAEINDIA REEV - Convenor

SAEINDIA REEV EDITION 3

"TOWARDS A CARBON NEUTRAL WORLD"

The Range Extended Electric Vehicle is a journey of experiential learning for students from all disciplines of Engineering which culminates with a competition to keep up the aspects of Energy, Education & Enthusiasm among all the participants be it the Students or Faculty or Industry experts.

After successful completion of 2nd Edition in January 2023, the Team REEV, comprising of enthusiastic faculty from Engineering educational institutions and passionate leaders from the industry have kicked off the 3rd Edition in March 2023.

Inline with the tag line "Towards Carbon Neutral World", in the 3rd edition the REEV team intends to work with students on Sustainability Development Goals (SDG) so that they start understanding Industry expectation on Sustainability. The outlook will be to explore alternatives which are less Carbon intensive. The Safety aspects will also be emphasized. In this way this program is unique as the students will get to understand on how to build a vehicle under tough boundary conditions as experienced in the industry.


There are two major milestones for this program:

1. REEV Virtual - April to November 2023.
 - a. Development & demonstration: App's, Controller, Test bench (EV & Hybrid), Cost, Virtual engineering, Go Green / Innovative POC's to name a few.
 - b. Theory & Practical sessions by Industry experts during the above period.
 - c. Virtual Competition by Mid Nov 2023.
2. REEV Physical Vehicle build and Final Competition in End March 2024
 - a. Safety Engineering.
 - b. Planning, Manufacturing, Assembly, Testing, Validation & Cost.
 - c. Handholding & guidance from Industry experts.

During the entire journey there will exclusive mentor from industry to each participating team to handhold & guide.


With this REEV journey & experiential learning, the industry expects students make a head start in their professional career once they are out of college & in real world.


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