

SRM INSTITUTE OF SCIENCE AND TECHNOLOGY
CENTRE FOR ELECTRIC MOBILITY/ EEE
XPLORE EVENTURE 2024
24.10.2024- 25.10.2024

Event Report (2024-2025)

Event Title: Xplore Eventure Hackathon

Date: 24th Oct – 25th Oct, 2024

Time: 09:00 AM to 05:00 PM

Venue: Conference Hall, Department of EEE and Room No ESB 402

Convenor: Dr. C. Bharatiraja,
Professor,
Department of Electrical and Electronics Engineering,
SRM Institute of Science and Technology, Kattankulathur, Chennai 603203.

Description of the Event/Objective

The DST PURSE Sponsored National College Level Hackathon, **Xplore EVenture**, organized in association with the Department of Electrical and Electronics Engineering at SRM Institute of Science and Technology, took place from 24th -25th October, 2024. Designed to ignite innovation in the field of electric vehicles (EVs), the event brought together creative minds to address critical challenges and advance sustainable transportation. This hackathon provided an invaluable platform for students, researchers, and professionals to showcase their ideas, collaborate, and refine prototypes that contribute to the advancement of EV technology.

As a follow-up to the hackathon, selected and improved version of the prototypes will be showcased in a live demonstration event on January 24-25, 2025. This event is anticipated to draw numerous visitors from various industries, original equipment manufacturers (OEMs), research centers, and academic institutions, providing participants with a unique opportunity to gain insights, receive expert feedback, and network with key stakeholders in the EV domain. Additionally, the live demonstration will include a pitching session for startup opportunities, allowing participants to present their innovations as potential business ventures. This dynamic event promises to be a powerful convergence of talent and expertise, fostering connections that could catalyze the growth of new startups and drive further advancements in EV technology.

Chief Guest (Name/profile): Mr. Muthu Kumaran Pitchai,
Director,
Rockwell Automation Pvt. Ltd., Singapore

Sequence of the event:

Signature of Convenor



**INVITING
YOUNG MINDS!!!**



EVenture

**NO REGISTRATION
FEE**

**PRIZES WORTH
INR.3 LAKHS**

**LIMITED TEAMS ARE
INVITED**

LIVE EVENT



INAUGURATION

**24-25
OCTOBER
2024**

FINAL DISPLAY

**24-25
JANUARY
2025**



**CENTRE FOR E-MOBILITY, SRM INSTITUTE OF SCIENCE
& TECHNOLOGY, KATTANKULATHUR, CHENNAI, TAMIL NADU**

LAST DATE FOR REGISTRATION - 28/09/2024

**REGISTRATION AND
RULES & REGULATIONS**



For Queries

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Mr.S.M.Sidharth (+91 90927 25456)
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E-mail - xploreeventure@gmail.com**

**DETAILS ABOUT CENTRE FOR
E-MOBILITY**



**Event Convener : Dr.C.BharathiRaja,
Head of Centre For E-Mobility, SRMIST**

ROAD MAP

01 Registration

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02 Level 1 Presentation

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03 Level 2 Presentation

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04 Event Inauguration

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Mentor Round 1

J J E

05



06 Mentor Round 2

J J E

07 XPLORE LIVE E Venture EVENT

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INSTITUTE OF SCIENCE & TECHNOLOGY
(Deemed to be University u/s 3 of UGC Act, 1956)



विज्ञान एवं प्रौद्योगिकी विभाग
DEPARTMENT OF
SCIENCE & TECHNOLOGY



CENTER FOR
ELECTRIC MOBILITY

**WE CORDIALLY WELCOME TO INAUGURATION
CEREMONY OF**

**DST-PURSE SPONSORED
NATIONAL LEVEL HACKATHON**

XPLORE EVENTURE (A COLLEGE LEVEL HACKATHON)

-An aspiration to transcend academic limits.

24.10.2024 & 25.10.2024

IN ASSOCIATION WITH THE DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING,
SRM INSTITUTE OF SCIENCE AND TECHNOLOGY, KATTANKULATHUR

VENUE: EEE CONFERENCE HALL, ESB SRMIST, KATTANKULATHUR

INAUGURAL FUNCTION (24.10.2024)

Welcome Address

09.30 AM to 09.35 AM

Dr. Sridhar. R
Professor and Head
Department of Electrical and Electronics Engineering
SRMIST.

About the Hackathon

09.35 AM to 09.40 AM

Dr. C. Bharatiraja
Professor
Department of Electrical and Electronics Engineering,
SRMIST.

Felicitation Address

09.40 AM to 09.45 AM

Dr. K. Vijayakumar
Professor and Dean SEEE,
Department of Electrical and Electronics Engineering
SRMIST.

Chief Guest Address

09.45 AM to 10:00 AM

Mr. Muthu Kumaran Pitchai
Director,
Rockwell Automation Pvt.Ltd, Singapore.

Vote of Thanks

10.00AM to 10.05 AM

Mr. TM Navinkumar
Project Associate I - DST PURSE,
Department of Electrical and Electronics Engineering,
SRMIST.

Presentation

10.30 AM Onwards

: Team Presentation Starts



90956 80071



xploreeventure@gmail.com



WE CORDIALLY WELCOME TO

DST-PURSE SPONSORED
NATIONAL LEVEL HACKATHON

XPLORE EVENTURE (A COLLEGE STUDENT HACKATHON)

-An aspiration to transcend academic limits.

24.10.2024 & 25.10.2024

IN ASSOCIATION WITH THE DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING,
SRM INSTITUTE OF SCIENCE AND TECHNOLOGY, KATTANKULATHUR

VENUE: EEE CONFERENCE HALL, ESB, SRMIST(MAIN CAMPUS), KATTANKULATHUR

24.10.2024

Registration

Time : 8.30 AM - 09.00 AM

Inaguration

Time : 9.00 AM - 10.30 AM

Guest : Mr. Muthu Kumaran Pitchai
Director,
Rockwell Automation Pvt.Ltd, Singapore.

Tea Break

Time : 10.30 AM - 10.45 AM

Team Presentation 1 / CEM Visit - Panel 1

Time : 10.45 AM - 12.30 PM

1. Mr. S.Vijaykumar, JE, Ashokleyland , Chennai.
2. Dr.D.Karthikeyan, AP/EEE, SRMIST Ktr.

Team Presentation 2 / CEM Visit - Panel 2

Time : 10.45 AM - 12.30 PM

- 1.Mr.P.Pragash, Control System Engineer, Foxconn, Chennai.
2. Dr.S.Vidyasagar, AP/EEE, SRMIST Ktr.

Lunch Break **Time** : 12.30 PM - 1.30 PM

Team Presentation 3 / CEM Visit - Panel 3

Time : 1.30 PM - 3.45 PM

1. Mr. J.Nirmal, Powertrain Engineer, TRI Electric, Chennai
2. Mr.V.Manojkumar, AP/Mechanical, SRMIST Ktr.

Team Presentation 4 / CEM Visit - Panel 4

Time : 01.30 PM - 03.45 PM

1. Mr. R.Anand kumar, EV Trainer , TVS , Chennai
2. Dr.S.Manikandan, AP/Mechanical, SRMIST Ktr.

Tea Break

Time : 03.45 PM - 04.00 PM

Convenor's Address

Time : 04.00 PM - 04.15 PM

Feedback

Time : 04.15 PM - 04.35 PM

25.10.2024

SESSION - 1

EV INTRODUCTION AND POWER TRAIN DESIGN

Time : 09.15 AM - 10.15 AM

Resource Person: Dr. C. Bharatiraja
Professor / EEE, SRMIST -Ktr

SESSION - 2

BATTERY PACK DESIGN

Time : 10.15 AM - 11.15 AM

Resource Person: Mr. S. Dineshkumar
IV year EEE, SRMIST -Ktr

Tea Break

Time : 11.15 AM - 11.30 AM

SESSION - 3

THERMAL MANAGEMENT AND CHASSIS DESIGN

Time : 11.30 AM - 12.30PM

Resource Person: Mr. J.Nirmal,
Powertrain Engineer , TRI Electric , Chennai.

Lunch Break

Time : 12.30 PM - 01.30 PM

SESSION - 4

VEHICLE DYNAMICS AND POWER TRAIN DESIGN

Time : 01.30 PM - 03.30 PM

Resource Person: Mr. S. Aravindan & N. Rishi kumar
III year Mechanical, SRMIST -Ktr

SESSION - 5

BASIC CONCEPTS OF AUTONOMOUS VEHICLES:

Time : 03.30 PM - 04.30 PM

Resource Person: Mr. G.Manikandan
PA1, DST-PURSE, SRMIST , Ktr,

TEA-BREAK

Time : 04.30 PM - 04.45 PM

Feedback

Time : 04.45 PM - 05.00 PM





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DEPARTMENT OF
SCIENCE & TECHNOLOGY



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(Deemed to be University u/s 3 of UGC Act, 1956)

SRM INSTITUTE OF SCIENCE AND TECHNOLOGY
CENTRE FOR ELECTRIC MOBILITY/EEE
XPLORE EVENTURE 2024
24.10.2024- 25.10.2024

Registration Form

Team ID:

Team Name:

Participants	Name	Mail-id	Signature
Student 1 (Leader)			
Student 2			
Student 3			
Student 4			
Student 5			
Student 6			
Student 7			

College Name:

College Address:

Team leader Mobile Number:

Mentor name & Mobile Number:

For Organizers Use

Bone fide	
Undertaking form	
ID card	

DST PURSE Sponsored National level hackathon Xplore EVenture
In Associated with the department of Electrical and Electronics Engineering,
SRM Institute of Science and Technology
Date: 24th to 25th October, 2024 and 24th to 25th October, 2024

Introduction

The DST PURSE Sponsored National Level Hackathon, Xplore EVenture, was held in association with the Department of Electrical and Electronics Engineering at SRM Institute of Science and Technology from 24th to 25th October 2024. This hackathon aimed to bring together innovative minds to tackle challenges in the field of electric vehicles (EVs), promoting research and development in sustainable transportation. The event provided a platform for students, researchers, and professionals to present and refine their ideas, contributing to the growth of EV technology.

Pre-Event Activities

Preparations began with a brochure outlining the event details, which was circulated among various engineering colleges and universities. Registration opened on 28th August and closed on 28th September 2024, with 102 teams signing up.

- **Initial Screening and First-Level Presentation (online)**

A total of 102 teams registered for the hackathon, with 50 eliminated in the initial screening. The first evaluation round took place online on 30th September 2024, where the remaining 52 teams presented their ideas to the organizing committee. Four expert panels assessed the proposals based on innovation, potential impact on the EV industry, and feasibility. The strongest teams were shortlisted to advance to the second-level presentation.

- **Second-Level Presentation (online)**

The second-level presentation took place online on 15th October 2024, with 52 shortlisted teams expanding on their initial concepts and integrating feedback from the first round. Teams provided detailed insights into technical aspects, timelines, resources, and challenges. The evaluation committee offered constructive suggestions, encouraging advanced technologies and multi-disciplinary approaches. After a thorough assessment, 18 teams were selected for the final presentation. The shortlisted teams were notified, and preparations for the final round of the hackathon commenced.

Event day (24th and 25th October 2024)

Day 1: 24th October 2024

- **Registration and Inauguration (8:00 AM - 10:30 AM):**

The registration began at 8:00 AM, followed by the inauguration ceremony at 9:30 AM. Dr. Sridhar R., Head of the Department of EEE, welcomed the attendees. Dr. C. Bharatiraja, the event convener, gave an introduction about the event, and Dr. K. Vijayakumar, Dean of the School of EEE, provided a felicitation address. The chief guest, Mr. Muthu Kumaran Pitchai, Director of Rockwell Automation Pvt. Ltd., Singapore, discussed the importance of bridging the gap between academic institutions and industry. The inaugural session concluded with a vote of thanks by T.M. Navinkumar, Project Associate I, Department of EEE, at 10:15 AM, followed by a tea break.

- **Morning Session (10:45 AM - 12:30 PM):**

The participants were divided into four panels, with two panels presenting their projects to evaluators in the morning session. Panel 1, consisting of 5 teams, was evaluated by Mr. S. Vijaykumar, JE at Ashok Leyland, Chennai, and Dr. D. Karthikeyan, AP/EEE, SREMIST, Kattankulathur. Panel 2, consisting of 4 teams, was evaluated by Mr. P. Pragash, Control System Engineer at Foxconn, Chennai, and Dr. S. Vidyasagar, AP/EEE, SREMIST, Kattankulathur. The session provided a platform for participants to receive valuable feedback from industry experts and academics, with several innovative ideas related to EV technology presented.

- **Lunch Break (12:30 PM - 1:30 PM):**

Lunch was provided for all participants, organizers, and jury members.

- **Afternoon Session (1:30 PM - 3:45 PM):**

In the afternoon session, another two panels presented their ideas to the evaluators. Panel 3, consisting of 5 teams, was evaluated by Mr. J. Nirmal, Powertrain Engineer at TRI Electric, Chennai, and Mr. V. Manojkumar, AP/Mechanical, SREMIST, Kattankulathur. Panel 4, consisting of 4 teams, was evaluated by Mr. R. Anand Kumar, EV Trainer at TVS, Chennai, and Dr. S. Manikandan, AP/Mechanical, SREMIST, Kattankulathur. The evaluators assessed the feasibility, innovation, and potential impact of the presented ideas.

- **Tea Break (3:45 PM – 4:00PM)**

- **Convenor's Address (4:00 PM – 4:15 PM):**

Participants regrouped in the conference hall where the convener summarized the feedback from the evaluators.

- **Feedback (4:15 PM - 4:30 PM):**

An open feedback session allowed participants to share their experiences and suggestions. with this day one was concluded.

Day 2: 25th October 2024

- **Morning Technical Sessions:**

Session 1 (9:15 AM - 10:15 AM): Dr. C. Bharatiraja delivered an insightful session on electric vehicle and powertrain design.

Session 2 (10:15 AM - 11:15AM): Mr.Dinesh, presented a detailed session on battery pack design for EVs.

- **Tea Break (11:15 AM - 11:30 AM).**

Session 3 (11:30 AM - 12:30 PM): Mr. Nirmal discussed battery thermal management techniques.

- **Lunch Break (12:30 PM - 1:30 PM):**

Lunch was served to all attendees and organizing team members.

- **Afternoon Technical Sessions:**

Session 4 (1:30 PM - 3:30 PM): Mr. S. Aravindan & N. Rishi kumar covered vehicle dynamics and chassis design.

Session 5 (3:30 PM - 4:30 PM): Mr. G. Manikandan provided an introduction to autonomous vehicle concepts also demonstrated the essentials of autonomous vehicle technologies, focusing on practical applications and recent advancements.

- **Tea Break (4:30 PM - 4:45 PM).**

- **Feedback and Conclusion (4:45 PM - 5:00 PM):**

Feedback was collected from participants regarding the day's sessions, and the event officially concluded, marking the end of an engaging and educational hackathon.

Conclusion

The DST PURSE Sponsored National Level Hackathon – Xplore EVenture – was a successful event that united bright young minds from across the nation to foster innovation in electric vehicles, featuring a multi-stage evaluation process that highlighted the most feasible and promising ideas. The hackathon not only encouraged participants to think critically and creatively but also provided valuable insights into the latest trends and challenges in the electric vehicle industry. It marked a significant step toward promoting research and development in sustainable transportation, aligning with the objectives of the Department of Science and Technology and SRM Institute of Science and Technology.

Acknowledgments

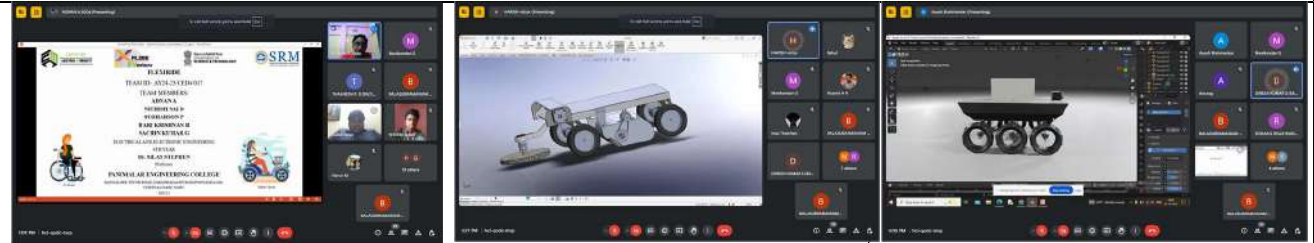
The organizing committee thanks DST PURSE, the Department of EEE, SRM Institute of Science and Technology, the evaluators, speakers, and participants for contributing to the success of Xplore EVenture.

Event Photos:

Online presentation 1 (30th September 2024)



Online presentation 2 (15th October 2024)



Event Day (24th and 25th October 2024)

Day 1 (24th October 2024)



Day 2 (25th October 2024)

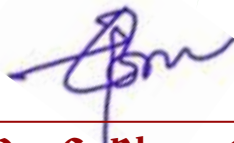


*DST-Sponsored
National Level Hackathon*
XPLORE EVENTURE

Certificate of participation

This Certificate is Proudly Presented To

from “Kumaraguru College of technology” for their participation in “Xplore EVenture”. A Hackathon presentation on 24/10/2024 & 25/10/2024 conducted by ‘Center for Electric Mobility’ in Association with the Department of Electrical and Electronics Engineering, SRM Institute of Science and Technology, Kattankulathur Campus, Chengalpattu District, Tamil Nadu, India - 603203.



Dr. C. Bharatiraja,
Professor/EEE, SRMIST



Team ID: AY24-25/CE04/0019



Dr. R. Sridhar

Professor and Head /EEE, SRMIST.