

## Executive Summary

The recently concluded 17<sup>th</sup> edition of SIAT, viz. SIAT 2021, held from 29<sup>th</sup> September to 01<sup>st</sup> October 2021 on the digital platform is viewed upon as a benchmark virtual event.

SIAT 2021 & SIAT Expo 2021 were inaugurated at the hands of Dr. Mahendra Nath Pandey, Hon'ble Minister for Heavy Industries, Government of India. The SIAT 2021 was graced by Shri Nitin Gadkari, Hon'ble Union Minister for Road Transport & Highways, Govt. of India as a chief guest in the valedictory function

SIAT 2021 witnessed participation from around 4000 Indian and overseas delegates (representing over 15 countries) along with the presentation of 130+ technical papers & 45+ keynotes in 36 Technical Sessions spread over 3 days.

Conference did host 3 distinct Plenary Sessions wherein world-renowned domain experts presented their views on varied subjects.

Delegates also availed of the opportunity to listen to eminent personalities from the automotive domain during a Panel Discussion on the topic "Redefining Mobility for the future".

We are also in receipt of encouraging feedback from delegates, participants, keynote speakers, sponsors etc., citing words of appreciation on the technical content, organizational aspects, quality plenary sessions, Keynote addresses, Panel Discussions, presentation and being graced on all three days by eminent personalities virtually.

SIAT EXPO 2021, being concurrently organized, accommodated Indian and overseas component manufacturers, equipment suppliers and service providers to showcase a wide spectrum of their products and services across 100+ stalls showcasing the latest technologies.

I would like to place on record my special thanks to Dr. Reji Mathai, Director -ARAI & Chairperson - SIAT 2021 Advisory Committee, for entrusting me with the role of Convenor & providing guidance.

**Dr. B. V. Shamsundara**  
**Co-ordinator, SIAT Expo 2021**  
**DD- SHL**

**Dr. S. S. Thipse,**  
**Convenor, SIAT 2021**  
**Sr. DD & HoD - EDL and ERL**

## **Introduction:**

Widely acclaimed by the global automotive fraternity, SIAT is a benchmark biennial international event, organized by ARAI since 1985, that serves as a forum for the exchange of ideas & brainstorming for the automotive industry, with the participation of eminent worldwide experts in various automobile arenas.

The Automotive Research Association of India (ARAI), organizes Symposium on International Automotive Technology viz SIAT, biennially in association with SAE International (USA) & SAEINDIA.

SIAT 2021, the 17<sup>th</sup> in the series, was held from 29<sup>th</sup> September – 01<sup>st</sup> October 2021 virtually. Hitherto, all earlier SIAT's were held physically in Pune. However, in light of the ongoing disruption caused by the outbreak of Coronavirus (COVID-19), the SIAT 2021 was held through the digital platform.

The event was organized with support from the Ministry of Heavy Industries (MoHI), Ministry of Road Transport & Highways (MoRTH), Ministry of Environment Forests & Climate Change (MoEF&CC), Ministry of Petroleum & Natural Gas (MoP&NG), Ministry of Commerce & Industry (MoC&I), Indian Construction Equipment Vehicle Manufacturers (ICEMA), Society of Indian Automobile Manufacturers (SIAM), Automotive Component Manufacturers' Association (ACMA), Tractor Manufacturers Association (TMA), Central Institute of Road Transport (CIRT), Vehicles Research & Development Establishment (VRDE), Indian Institute of Petroleum (IIP) and Automotive Tyre Manufacturers Association (ATMA).

The central theme of SIAT 2021 was **“Redefining Mobility for the Future”** in tune with the latest trends and futuristic mobility challenges in front of the automotive community.

SIAT 2021 focused on recent advances in various automotive areas, such as Alternate Fuels, Safety, Emissions, Engines, Noise, Electric Mobility, Electronics, Intelligent Transportation, Vehicle Dynamics, Materials and Simulation & Modelling. It also brought to the fore innovative ideas and solutions in automotive technologies to meet future challenges.



### Glimpses of Virtual platform:

The virtual platform of the SIAT 2021 was built by V-confex (part of Times Internet). The SIAT platform is truly a benchmark platform for any virtual event.

### Rendering of ARAI premises on the virtual platform:

To give the texture of the physical SIAT event and ARAI as an organizer of the event, rendering of ARAI premises in the platform was provided. The same was highly appreciated by attendees and Organizing Committee.



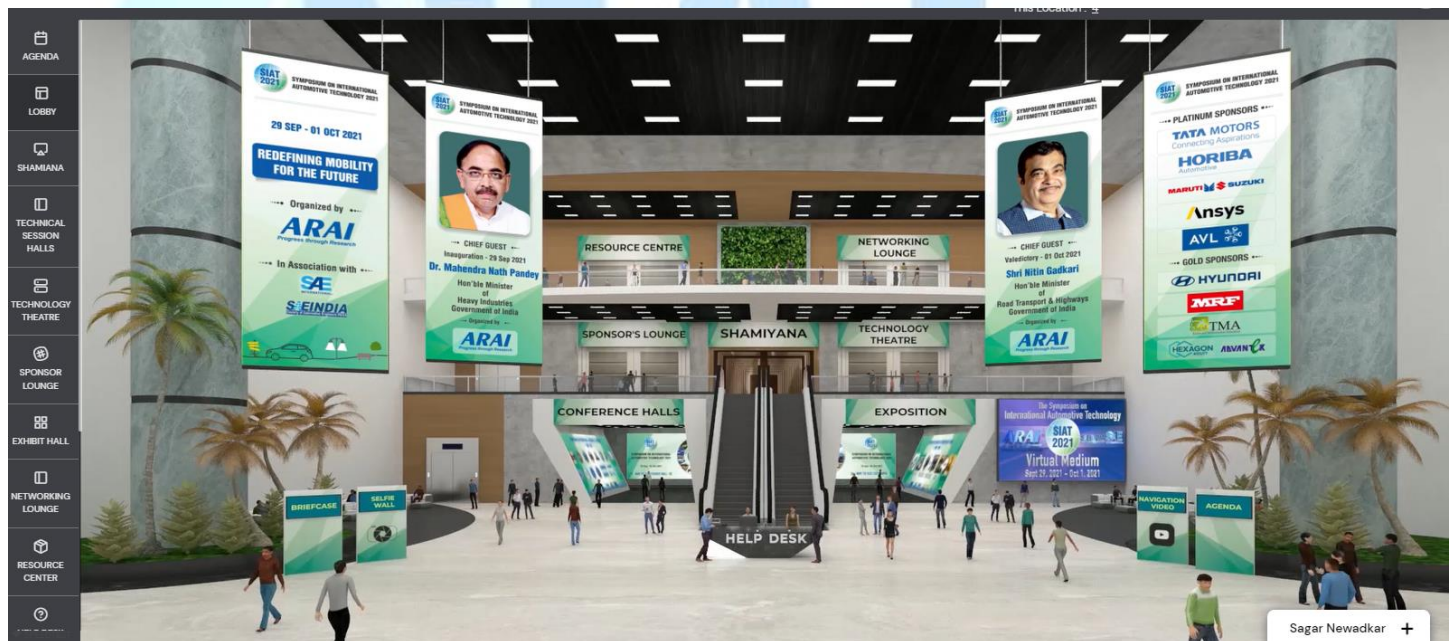
### Lobby:

The main landing page of the virtual platform (lobby) was rendered in 3D for giving a thrilling experience to the attendees. As depicted in the picture below the navigation bar was provided at the left side of the lobby for ease of the user. The following main sections were provided in the lobby:

1. Conference Halls
2. Exposition
3. Shamiyana
4. Sponsors Lounge
5. Technology Theatre
6. Resource Center
7. Networking lounge

Along with the above tab Selfie wall, Briefcase, Navigation Video and Agenda tabs were also added in the lobby.

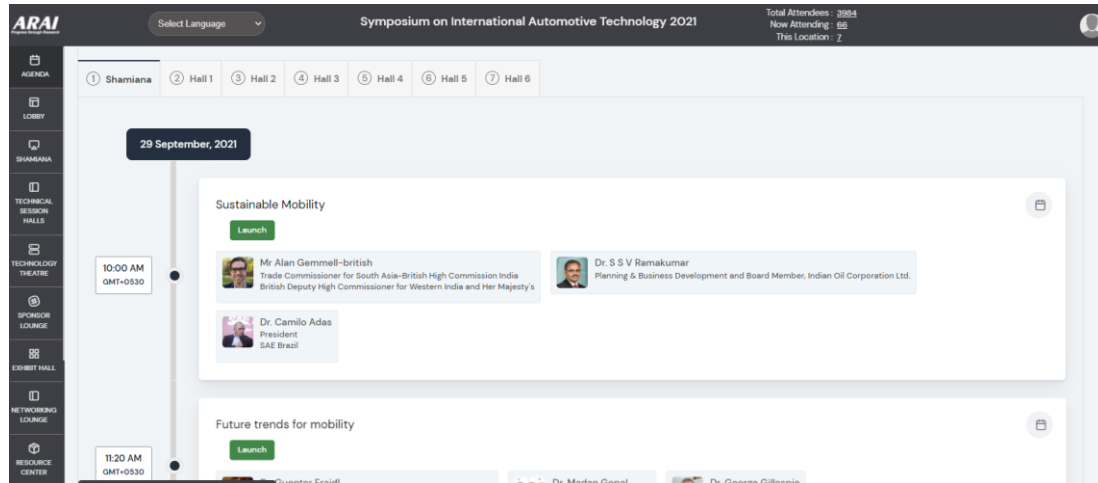
All the above tabs can be accessed directly from the lobby or from the navigation bar.



### Agenda:

The schedule of the daylong event along with the presenter's details was provided in the agenda tab. The agenda was divided into seven parts (Shamiyana, Virtual Hall 1 to Hall 6) and the schedule of the respective hall was provided in the separate tab.





### Auditoriums:

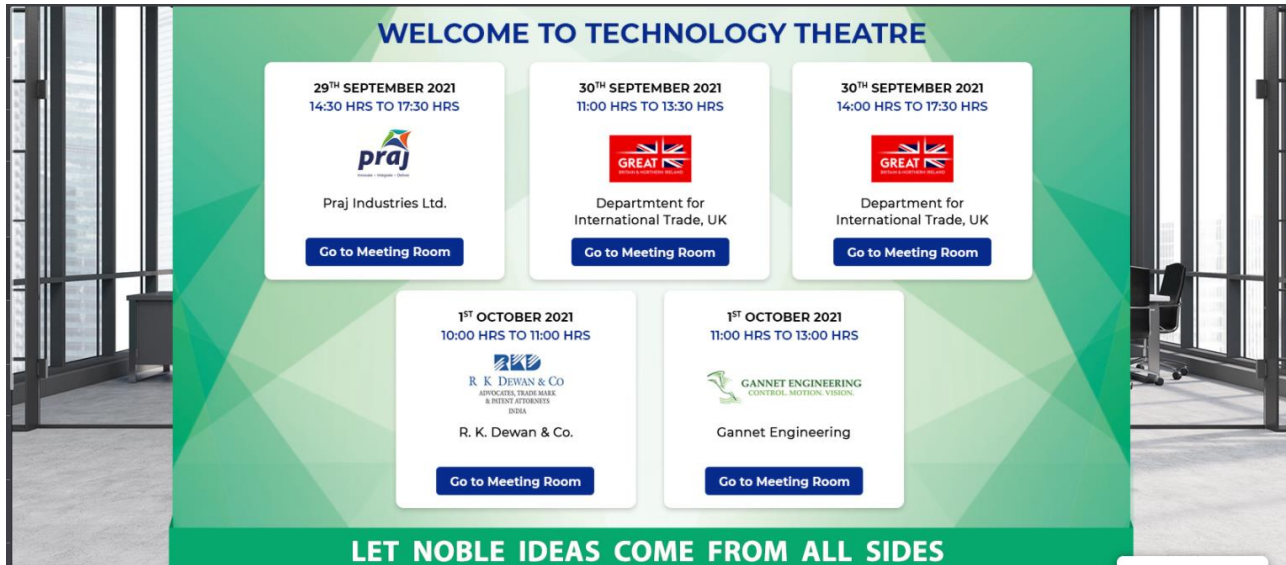
The seven auditoriums were built virtually (Shamiyana and 6 Technical session halls). The plenary sessions, inauguration function, valedictory function and panel discussion were held in Shamiyana. The schedule of the program for the particular hall was available in the form of agenda. The polls and ask a questions tab was also provided in each hall.



### Technology Theatre:

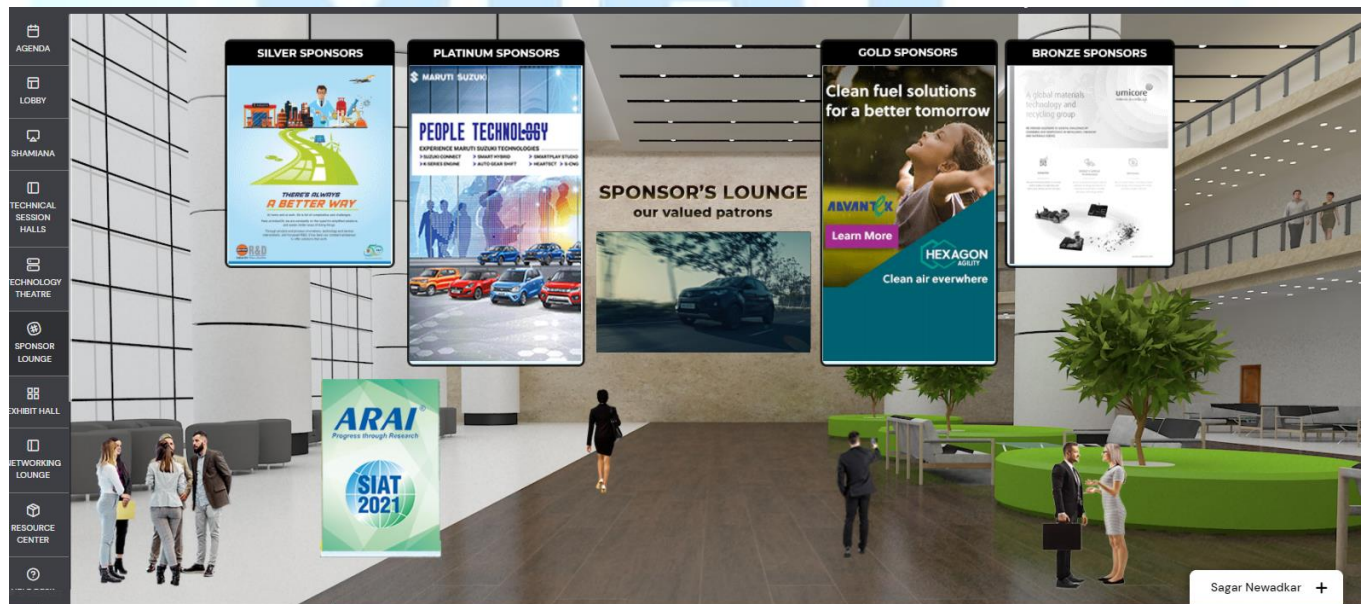
Technology Theater is a meeting room through which representatives/exhibitors can arrange any type of meeting, technical presentations, product display, launch etc. through Zoom with pre-scheduled as a part of the agenda by staying on the platform itself.

This was the meeting room for sharing innovation and noble ideas among the technocrats.



### Sponsors Lounge:

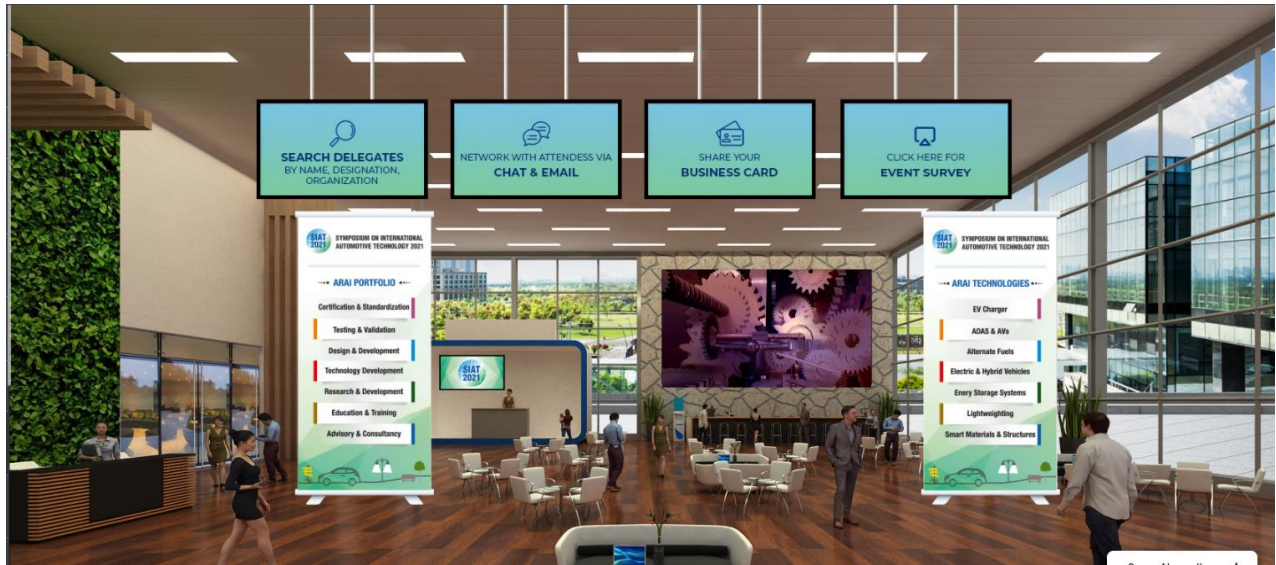
This was the gallery dedicated to all the valuable sponsors who contributed towards the SIAT 2021 for displaying their brandings.



### Networking Lounge:

Here attendees can search the delegate for networking with them. The chat and email option along with the sharing of the business card facilities were available in the Networking Lounge.





### Resource Center:

In this section, the attendees can download all the resources belonging to SIAT 2021. Especially most appreciated SIAT proceeding was also downloadable from this section.



### Helpdesk:

The virtual helpdesk was also provided in the virtual platform for supporting the attending for their technical difficulties throughout the event.



**Program Schedule:**

Time	Day 1 (29 <sup>th</sup> September 2021)	
10:00 to 11:15 hrs	Plenary Session 1	SIAT 2021- Exposition + Technology Theater + Student Poster Presentation
11:30 to 12:45 hrs	Plenary Session 2	
13:00 to 14:30 hrs	Inaugural Function	
15:00 to 17:30 hr	Six parallel technical session	
Time	Day 2 (30 <sup>th</sup> September 2021)	
10:00 to 12:00 hrs	Six parallel technical sessions	SIAT 2021- Exposition + Technology Theater + Student Poster Presentation
12:15 to 13:45 hrs	Six parallel technical sessions	
14:15 to 15:30 hrs	Plenary Session 3	



15:30 to 18:00 hrs	Six parallel technical sessions	
Time	Day 3 (01 <sup>st</sup> October 2021)	
09:00 to 11:00 hrs	Six parallel technical sessions	SIAT 2021- Exposition + Technology Theater + Student Poster Presentation
11:15 to 12:45 hrs	Six parallel technical sessions	
13:00 to 14:00 hrs	Valedictory Function	
14:15 to 15:45 hrs	Panel Discussion	

### Inauguration of SIAT 2021:

The SIAT 2021 was graced by Dr. Mahendra Nath Pandey, Minister for Heavy Industries, Government of India as a chief guest. The honorable Minister highlighted the following points in his address:

- ✓ SIAT 2021 contributes towards the Govt. of India ambition of “Aatmanirbhar Bharat”
- ✓ More than Rs. 44000 Cr. PLI scheme is allotted for the auto industry, the highest amongst 30 PLI schemes. This will help the Indian economy to achieve the ambitious target of \$ 5 Trillion and try to make India a central hub for automobile manufacturing.
- ✓ Indian auto industry is a cost-sensitive market & needs to have local manufacturing & raw material production to boost the growth

Following dignitaries shared the dais with Dr. Mahendra Nath Pandey ji:

1. Shri. C.V.Raman, President, ARAI & CTO Maruti Suzuki India Ltd.
2. Dr. Reji Mathai, Director –ARAI & Chairperson – SIAT 2021
3. Mrs. Rashmi Urdhwareshe, President, SAE India
4. Dr. S S Thipse, Convenor - SIAT 2021

Subsequent to the Inauguration of SIAT 2021 & SIAT Expo 2021 following things were also inaugurated/released at the hands of Dr. Mahendra Nath Pandey, Minister for Heavy Industries, Government of India:

1. Release of Symposium Proceedings
2. Release of Technical Reference Bulletin
3. Release of ARAI Journal
4. Inauguration of Student Poster
5. Release of Wissen Baum Safety booklet



## Plenary Session

The cynosure of SIAT 2021 were three Plenary Sessions, wherein presiding experts elevated the audience with their presentations on trending topics.

### Plenary Session 1: **Sustainable Mobility**

**Mr. Alan Gemmell**, British Deputy High Commissioner for Western India and Her Majesty's Trade Commissioner for South Asia, British High Commission India

Topic: Role of UK Trade in fostering India- UK partnership in Automotive Sector

**Dr.SSV Ramakumar**, Director, (R&D) and (Planning & Business Development), Indian Oil Corporation Ltd.

Topic: Emerging Fuel Paradigm for Mobility Sector

**Dr. Camilo Adas**, President, SAE Brazil.

Topic: The Ethanol Mobility Scenario in Brazil

### Plenary Session 2: **Future Trends for Mobility**

**Dr. Guenter Fraidl**, Senior Vice President – Power Train Engineering (PTE) Department, AVL Graz

Topic: Overview of global emission scenario & future challenges



**Dr. Madan Gopal**, Principal Safety Engineer, Tesla  
Topic: Tesla approach to safety systems development

**Dr. George Gillespie**, President, HORIBA Automotive  
Topic: Auto Industry Mega-Trends-Shifting priorities and emerging challenges

Plenary Session 2: **Smart Mobility**

**Shri. Swapnil Jain**, Co-founder & CTO, Ather Energy  
Topic: Development of cost-effective E-mobility solutions for India

**Shri. Tarun Aggarwal**, Executive Director R&D, Maruti Suzuki India Limited  
Topic: Smart Mobility - Opportunities and Way forward

**Shri. Rajeev Singh**, Partner and Leader Automotive, Deloitte India  
Topic: Global perspective on technological roadmap for the automotive sector

**Keynote Papers:**

The conference was flavoured with enriching 45 Keynote Addresses by renowned automotive experts from across the globe. They addressed on topics such as:

- ✓ Accidental Research and Safety.
- ✓ Electrification – The Futuristic mode of Transport.
- ✓ Enhancement of Transmissions - Intelligent Way.
- ✓ Simulated Research of Futuristic Mobility Solutions.
- ✓ Evincing the research through Regulatory Testing and Evaluation.
- ✓ Towards Zero Emissions for a Safer and Cleaner Environment.

Name	Designation	Organization
<b>Plenary Keynote</b>		
Mr Alan Gemmell	British Deputy High Commissioner for Western India and Her Majesty's Trade Commissioner for South Asia, GOV.UK	
Dr.SSV Ramakumar	Director (R&D), Planning & Business Development and Board Member	Indian Oil Corporation Ltd.
Dr. Camilo Adas	President	SAE Brazil
Dr. Guenter Fraidl	Senior Vice President – Powertrain System Passenger Cars	AVL
Dr. Madan Gopal	Principal Safety Engineer	Tesla

Name	Designation	Organization
Dr. George Gillespie	President	HORIBA Automotive
Shri. Swapnil Jain	Co-founder & CTO	Ather Energy
Shri. Tarun Aggarwal	Executive Director R&D	Maruti Suzuki India Limited
Shri. Rajeev Singh	Partner and Leader Automotive	Deloitte India
<b>Keynote Speakers</b>		
Mr. Ravindra Vasisht	Regional Director - India	Hexagonagility
Mr. Siddharth Mayur	Founder & Managing Director	h2e
Mr. Ian Constance	CEO	Advanced Propulsion Centre
Mr. Prasanna Deshpande	Manager Application Engineering (Automotive Industry)	MathWorks
Mrs Beth Hinchee	Global Regulatory Affairs Manager	Caterpillar
Mr. Kazuya Tsurumi	Head of R&D	Horiba
Dr. Joseph Venor		ESI Group
Mr. Oliver Knaus		AVL
Mr. Julian Busch	Managing Director	MPR International
Mr. Pachyappa Baladhandayuthapani ( P Bala)	Chief Technology officer & Co-Founder	Ampere Vehicles Pvt Ltd
Mr. Martin Abart & Mr. Emre Kural (Co-presenter)	Senior Product Manager Smart Calibration and Virtual Testing	AVL
Mr. Avinash Padmappa	Lead Technology specialist - Lighting	Ansys



Name	Designation	Organization
Dr Peter Broll	Head of Innovation and Total System Engineering	Deutz
Dr Amitab Saran	Founder & CEO	Altigreen Propulsion Labs
Dr. Ameya Joshi	Director of Emerging Technologies and Regulations	Corning Incorporated
Prof. M. L. Munjal	AICTE Distinguished Chair Professor	Indian Institute of Science, Bengaluru
Mr. Nick Molden	Chief Executive Officer	Emissions Analytics
Mr. KVS Ravikrishna	Lead Technology specialist	Ansys software private limited
Dr. Mircea Gradu	Senior Vice President	Velodyne Lidar, Inc.
Dr. Giorgio Rizzoni		The Ohio State University houses the Center for Automotive Research (CAR) in Columbus, OH, USA
Mr. Geoffrey R Draper		Ex.GTB & Senior Regulatory Advisor, DVN
Mr. Arvind Nene	Business Manager/ Independent Consultant	Innuovo Magnetics, China
Dr. Venkat Srinivas	Sr. Vice President	Mahindra Truck and Bus Division
Mr. Saurabh Diddi	Director	Bureau of Energy Efficiency, GOI.
Mr David Milam	Global Product Manager, Advanced Power Products	Caterpillar

Name	Designation	Organization
Dr. Kanakasabapathi Subramanian	Senior Vice President	Ashok Leyland
Mr. Jochen Feese	Head of Accident Research, Concepts, Child Safety, Sensor Functions & Systems of Integral Safety	Mercedes-Benz Cars Research & Development, Mercedes-Benz AG
Dr. Anna Winge Berling	Traffic and Product Safety Director	Volvo
Dr. Eckhoff Stephan	Director Global Product Management	Umicore
Mr. Klaus Hau	Executive Vice President Sensing & Actuation Business Unit	Vitesco Technologies
Mr. Santhosh Kumar Murugadass	Principal Technology Specialist	Ansys
Mr. John Kell	R&D Technology Specialist	Department for International Trade (DIT)
Dr. Gerhard Schagerl	Product Line Manager – Data Intelligence	AVL List GmbH
Mr. Rohit Vaidya	General Manager, Digital Solution (CAE) Engineering Research Centre	Tata Motors Ltd.
Dr S. K. Puri	Consultant	Indian Oil Corporation Limited , R&D Centre
Dr. Pradeep Mohan	General Manager	Humanetics, Inc., USA
Mr. Rajesh Maynal	Director- Product Management India	Umicore Autocat
Mr. David Hudson	Head of EV Strategy	ePROPELLED Limited, Innovation Centre
Mr. P S Gowrishankar	GM & Head-Regulations & IB	Tata Motors Ltd.



Name	Designation	Organization
Mr. Ramnik Singh	Head – India Operations	Gamma Technologies India
Mr. Shailendra Jagtap	Managing Director & Country Manager	John Deere India
Mr Britto Edward	Managing Director	Rohm Semiconductor India Pvt. Ltd
Mr. Abel Carbonell	Head of Electronics, ADAS & CAV	Applus IDIADA
Dr. Shanti Medasani	Director of Engineering	MathWorks
Mr. Gunnar O'Connor	Senior Product Development Engineer	Latent Heat Solutions LLC.
Mr. John Fredrik Gronvall	Area Manager	Chalmers University of Technology
Dr. Akella Sarma	Vice President	Mahindra & Mahindra Limited

### Technical Research Papers:

The call for papers was given viz First and Second Announcements released in January 2020 and October 2020 respectively. The announcements contained the data for how to submit the paper and its further stages.

Several authors across the globe presented their technical research works and recent challenges on varied topics on automotive technologies. 1560 abstracts were received over 24 topics from multiple countries around the world, out of which around 1067 abstracts were accepted. We received around 509 draft manuscripts, which were subjected to plagiarism detection through world-renowned software. Manuscripts with similarity content above 20% were rejected. Finally, around 300 papers are accepted for publication and given SAE paper number, out of which around 132 papers are shortlisted for presentation, spread across 36 technical sessions.

### Panel Discussion:

One of the highlights of the SIAT conference was the panel discussion. Experts, Researchers, Engineers and Scientists shared the SIAT 2021 platform to share their views on the topic “Redefining Mobility for the Future”, which is a need of the hour.

Name	Designation & Organization
Shri Rajendra Petkar	President & CTO, Tata Motors Limited Vice-President, ARAI
Shri Neeraj Sinha	Senior Adviser, NITI Aayog
Dr. Reji Mathai	Director - ARAI, Pune
Mr. Vinnie Mehta	Director General, ACMA
Dr. Rahul Walawalkar	President, India Energy Storage Alliance (IESA)
Shri. Varun Dubey	CMO, Ola Electric

### Technical Reference Bulletin:

Technical Reference Bulletin (TRB), comprising of technical articles, advertisements, etc. was published digitally to commemorate SIAT 2021. TRB comprised on technical articles contributed by automotive enthusiasts on various domains. It provided an opportunity for sharing various technological advancements in automotive technology.

### Student Poster Presentation Competition:

SIAT 2021 also hosted “Student Poster Presentation Competition” for Under Graduate / Post Graduate engineering students and PhD Research Scholars from various Universities in three categories, viz. Automotive Safety, Sustainable Mobility and Smart Vehicles.

### Delegate Registration:

The Delegate registration was done online and offline method. The individual delegate registration was done online using the SIAT 2021 microsite and Group Delegate registration was done offline.

### Awards

Technical Papers presented in SIAT 2021 and Students participated in Poster Presentation Competition availed of the opportunity to win awards in the following categories:

Technical Paper awards	Student Poster Presentation Competition
Best Technical Paper - 1st Prize	a. First Prize
Best Technical Paper 2nd Prize	b. Second Prize
Best Technical Paper 3rd Prize	c. Third Prize



Best International paper	On Sustainable Mobility Safe Mobility Smart Mobility
Best paper on safety	
Best Paper on Simulation & Modeling	
Best paper on environmental pollution	
Best Paper on Electric mobility	

### Sponsors

The event had been well-supported by the Automotive Industry in the form of Sponsorship, which includes Auto giants as categorized below:

<b>Platinum Category</b>	    
<b>Gold Category</b>	   
<b>Silver Category</b>	     
<b>Bronze Category</b>	          

**Media Partners:**

Wide coverage was provided by our media partners AutoCar Professional, PIN 365 and ET Auto.

**SIAT Expo 2021:**

SIAT EXPO 2021, concurrently organized with SIAT 2021 was held using virtual platform from 29<sup>th</sup> Sept to 1<sup>st</sup> Oct 2021.

SIAT EXPO 2021 offered an appropriate platform for spectrum of worldwide companies to showcase their products / technologies / innovations / services through various stalls. Due to pandemic, SIAT and EXPO were held on virtual platform. The technology displayed during EXPO was in line with SIAT theme viz. "Redefining Mobility for the future". Redefining mobility theme was covered by Stalls on Active & Passive Safety supported by Advanced Instrumentation & Data Acquisition Technologies. Intelligent Mobility theme was showcased by various Stalls featuring technologies in the area of Simulation, E-mobility, Battery Technology, Internet of Things (IOT) and Connected Vehicles. In addition to this, other Stalls displayed trends in Vehicular Emissions, Advanced Powertrain & Materials, Alternate Fuels, safety, etc. First time in the SIAT history vehicle manufacturer participated and received good feedback.

EXPO received tremendous response from automotive manufacturers and suppliers from India and abroad. There were 103 Stalls accommodated in three galleries viz, Basic, Enhanced and Premium. Expo also showcased pavilions viz; UK pavilion to accommodate UK based company's exhibitors, ARAI Pavilion and Student Pavilion to accommodate student's poster presentation & competition. There were 103 exhibitors, 26 Stalls from overseas customers once again emphasized popularity of EXPO abroad. This was shortly followed by 77 Stalls from India. Out of 103 Stalls, 4 Stalls were reserved for ARAI and 5 Stalls were reserved for student pavilion which covers student poster presentation & competition and ARAI academy.

The online booking facility, launched for the EXPO received good response and was much appreciated by the automotive fraternity. Initially the stall creation was given to the exhibitors as per their choice and

subsequently managed by our virtual platform owner Vconfex.

SIAT EXPO 2021 also created an interactive audio-video platform called “Technology Theatre” in all 5 slots were booked by various companies during the SIAT2021. Technology Theater is a meeting room through which representatives / exhibitors can arrange any type of meeting, technical presentations, product display, launch etc. through Zoom with pre-schedules. Provision was created wherein exhibitors can mute - unmute themselves, switch on/off their camera, share their screens, chat with each other and see a list of participants in the meeting. Participants were also mute / unmute their audio and video for one-to-one interaction, chatting etc. Data shows there are 2100+ visitors visited Technology Theater.

The EXPO was inaugurated at the august hands of Dr. Mahendra Nath Pandey, Minister for Heavy Industries, Government of India on 29th September 2021.

EXPO received an overwhelming response. There were almost footfalls of 2,500+ visitors who made their way to the EXPO, a new record in itself. This count will continue to grow as the expo will continue for another month. Considering SIATEXPO2021 is virtual platform, Expo awards was not a part of this SIAT.

SIAT EXPO 2021 will be available in “On demand” mode for another month i.e. till 1st Nov 2021 Also provided admin login credential for all exhibitors to download daily reports independently till 1st Nov 2021. Existing as well as new registered users can access expo stalls during this period.

**Positive feedback:**

1. Excellent organisation of SIAT 2021 and SIAT Expo 2021
2. Ease of Stall reservation due to ‘online booking’ facility.
3. Flexibility in creation of stalls
4. Many more features as compared to Physical
5. Collectively, all your support had made the stall look cute & beautiful

**Negative feedback:**

1. Poor help desk response from virtual platform
2. Not able to edit anything from the back-end right from the start and had raised the issue
3. Creatives and other documents not uploaded as per the time line
4. No preview was available to the stall owner, to ensure everything was in order, prior to the event at least two days in advance.





### Valedictory Function:

The SIAT 2021 was graced by Shri Nitin Gadkari, Hon'ble Union Minister for Road Transport & Highways, Govt. of India as a chief guest in the valedictory function. The honorable Minister highlighted the following points in his address:

1. EV policies in India
2. Alternative fuels

Following dignitaries shared the dais with the Shri Nitin Gadkari ji:

1. Shri Rajendra Petkar, President & CTO, Tata Motors Ltd · & Vice President – ARAI
2. Dr. Reji Mathai, Chairperson – SIAT 2021 Advisory Committee & Director – ARAI
3. Dr. S S Thipse, Convenor – SIAT 2021 & Sr. Deputy Director – ARAI
4. Mr. Nabeel Khan, Editor- Economic Times (ET Auto) – Master of Ceremony

### Certificate of Honour to all the speakers, Session Chairpersons and Panelists:

The certificate of honour was issued to all the speakers, Session Chairpersons and Panelists for their valuable contributions towards SIAT 2021 as a mark of our appreciation.

**Testimonial:**

Judging from the attendance it appears that SIAT 2021 was very successful.  
Please convey my compliments to all who made it possible.

-Dr. Pawan Kumar Goenka, Independent Director, Bosch & Chairperson Designate for INSPaCe -  
Dept. of Space, Government of India.

Congratulations to whole of ARAI team. One the validictory function in  
which proud to say The Minister repetitively said ARAI. Proud moments  
to remember. All the best.

-Mr. Alok Jaitley, Sr. Vice President, Maruti Suzuki India Ltd.

A very well organized and coordinated virtual siat. Congrats.  
Three cheers. Regards. Best wishes..

-Mr. Vinay Mundada

Congratulating Dr Reji Mathai, Dr Thipse and entire ARAI team for the virtual  
SIAT 2021 to be such a grand success and a bench mark for the future.

-Mr. Z. A. Mujawar

Congratulations to Dr Thipse and the whole ARAI team for the excellent organization of SIAT  
21. There must have been many sleepless nights to be able to organize this virtual  
conference on this vast scale. Thankfully there were no glitches and the smooth moving from  
one speaker to the next was in fact a one-up on physical meetings. Thank you all.

-Mr. Rustom Cursetji

Indeed very well organised and quite impressive event .  
Congratulations!!!

-Mr. M. K. Jain



Excellent work without any strain, thanks to ARAI and modern technology!

-Dr. P. A. Lakshminarayanan

very well organised and quite impressive event, Congratulations to organising committee!!!

-Dr. Vijay Narkhede

This has been a " game changer " conference in its very virtual nature but did not loose the "old world charm " due to flawless execution thru expert online skill set. Salute to Organisers led ably by Dr Sukrut Thipse !!

-Mr. P. V. Sardesai

Congratulations to Dr. Thipse & ARAI SIAT 21 Co-ordinating team for well organised, one of it's kind Mega event success.

-Mr. Gajanan Salunke

Well organised and impressive event, Kudos to the entire organising committee / ARAI team under the leadership of Dr Mathai and Dr Thipse !

-Dr. N. Karuppaiah

Congratulations to whole of ARAI team. One the validictory function in which proud to say The Minister repetitively said ARAI. Proud moments to remember. All the best.

-Mr. Arankalle Avinash



Congratulations to Dr Thipse, Shyam and team for an excellent performance of SIAT. All the Best!

-Mr. Shrikant Marathe

Congratulations to Dr. Thipse & ARAI SIAT 21 team for a well organised, Mega event successfully.

-Dr. Sanjay Arole

Congrats Dr Thipse & Dr Shyam for excellent Virtual SIAT, first ever of its kind in the history.

-Dr.P. P. Chattaraj

## Overview of Media Coverage:

Newspaper – Financial Express

Edition – Pune

Date – September 22, 2021 / Page – 12



## Arai setting up a new facility to expand testing

GEETA NAIR  
Pune, September 21

**THE AUTOMOTIVE RESEARCH**  
Association of India (Arai) is setting up a ₹500-crore facility to expand testing capabilities in

emerging automotive technologies. Arai is also expanding its e-vehicle testing capability with an advance battery safety testing lab at its existing facility for testing lithium ion battery safety.

Reji Mathai, director, Arai,

said the new Mobility Research Centre will come up in Takwe in Pune. Arai has acquired 110 acres at Takwe for ₹110 crore. The facility would be developed in phases and ₹500 crore would be invested over a three to four years

period. Arai has three existing units in Pune with one centre in Kothrud and two in Chakan.

One of the focus areas for the new facility would be advanced driver-assistance systems (ADAS) — electronic systems in

a vehicle that use advanced technologies to assist the driver, Mathai said. These tests and evaluation could not be done in the existing facilities as they were working at full capacity. They also needed to put infra-

structure in place for developing and testing for hydrogen and fuel cells, he said. The Takwe unit would have a full-fledged test track, cylinder testing facility, hydrogen/fuel cell development and a rapid prototyping centre.

## ARAI makes chargers for electric vehicles

**HT Correspondent**  
patrickson@live.com

**PUNE:** The Automotive Research Association of India (ARAI) has indigenously developed charger for electric vehicles considering the need to boost the charging mechanism of electric vehicles in the country, said Raj Mathai, director, ARAI.

Speaking during a press conference on Tuesday, Mozhai said that to promote electric vehicles, infrastructure for charging is important and since the mobility chargers are imported, the focus of ARAI is to develop chargers indigenously, which will be cost-effective and boost local economy.

"Many components of EV like motors and controllers are imported and even chargers are being brought from abroad. ARAI has developed an indigenous technology for EV charger AC00, which has been taken up for manufacturing and promotion by Bharat Electronics. The charging points will be set up by Bharat Electronics and parts for EV charger systems Type 1, Type 2, CCS and CHADEMO will be manufactured locally," said Mohan.

He said that the charger has been designed considering the safety aspects and power supply in India with other aspects like environmental conditions and it will also be cost-competitive. ARAI has recently signed MoU with Bharti Electronics Limited where ARAI will provide the knowhow of the chargers and Bharti Electronics will manufacture the chargers. The cost of the charger is expected to be in the range of Rs 50,000-60,000.

In addition, as ADAS (Advanced Driver Assistance Systems) vehicles and cylinder testing centres need dedicated space, ARAI is setting up a new centre in Tokyo. Investments to the tune of ¥500 crore shall be made in phased manner in the next 3-4 years in setting up this centre.

"One of the areas would be 'Testing Tracks' which could be useful for carrying out development of ADAS vehicles. Additional facilities related with the cylinder testing and Transmission Gearbox Testing Center (TGTC) have been planned along with a Hydro-fuel cell and Rapid Prototyping centre at Takve," said Methal.

Nitin Chandok, senior deputy director, ARAI, said that the organisation is planning to set up dedicated skill development centres. The course content is ready and some part of it could be available in the form of e-content. These centres would also have research and test labs, which could also be utilised to nurture startups in the e-mobility sector. ARAI is currently in talks with Telangana and Kerala Government to set up such centres.

17th edition of SIAT will be online

The 17th edition of Symposium on International Automotive Technology (SIAT) 2021 organised by ARAI in association with SAEINDIA and SAE International (USA) will be held from September 29 to October 1, 2021. In the light of the current situation related to Covid, the conference and Expo will be organised in virtual mode for the first time.

Publication – The Times of India

Edition – Pune

Date – October 2, 2021 / Page – 08

## ARAI ties up for indigenous EV charger

**Pune:** The Automotive Research Association of India (ARAI) has collaborated with Bharat Electronics Limited to manufacture and market an e-vehicle charger, which it claims to have been tested for the Indian weather and infrastructural needs.

A unit of the charger, after its complete development and commercialisation, is expected to cost between Rs50,000 and Rs60,000, the ARAI said in a statement.

"Many components of EV like motors and controllers are imported and even chargers are being brought from abroad. ARAI has developed an indigenous technology for EV chargers, AC001, which has been taken up for manufacturing and promotion by Bharat Electronics," said Reji Mathai, the director of ARAI.

—Shiladitya Pandit

Newspaper – Sakal

Edition – Pune (Main Edition)

Date – September 22, 2021 / Page – 02



PUBLIC A

Newspaper – The Times of India

Edition – Pune

Date – September 22, 2021 / Page – 17

## ARAI's virtual symposium

**Pune:** The Automotive Research Association of India (ARAI) announced that its annual Symposium of International Automotive Technology and the accompanying expo, would be held online next, with extensive focus on e-mobility and bio-fuels.

It will be inaugurated by Union heavy industries minister Mahendra Nath Pandey, the ARAI stated. The expo will feature pavilions of countries such as the UK, as well as that of major auto players.

— Shiladitya Pandit

## इलेक्ट्रिक वाहनांसाठी स्वदेशी चार्जर

एआरएआयने विकसित केले तंत्रज्ञान; भारतीय कंपन्या करणार उत्पादन



पृष्ठ २९ | अतिरिक्त

[illegible][illegible]

“पुण्याजयकोल ताकोने ता पिछलो  
मुलापुआचका थोरीने सव्य कोचिल्लो  
सिचने रोलेली जमासो कसयल वेला ज्जुन वेच  
ता ते चव जली विविध उपयो ते चारोमिल  
होईल. वो कोरासो विविध उपयो एकू ५००  
कोटी रुपयाची मुलबलूक होसा जेणे.  
- डॉ. वि. वसुदेव, मंत्रालय, पुण्याजय

इंदौराणी कौशल्य विकास केंद्र

[illegible]

पार्श्वचे वैशिष्ट्ये

- [illegible]

Newspaper – Sakal  
Edition – Pune Today  
Date – September 25, 2021 / Page – 07



वाहनविषयक  
आंतरराष्ट्रीय  
परिषदेचे  
आयोजन

**पुणे, ता. २४ : नॅशनल डेव्हलपिंग कॉर्पोरेशन ऑफ इंडियाच्या (एनडीसीई) वतीने शिष्टोत्तमता आणि ईमानदारी नॅशनल डेव्हलपिंग कॉर्पोरेशन २०२१ (एडव्हायसरी) या काळात विषयक अंतराष्ट्रीय स्तरावरील जाहीरात करण्यात आले आहे. २९ सप्टेंबर ते १ नोव्हेंबर २०२१ दरम्यान**

ही प्रतिष्ठे होना अभ्युद्योगी महिलाएँ  
एकमात्रावधि संश्लेषण ही ऐसी  
महार्थ वाली कुलीन पारम्पर्य प्रतिष्ठा  
होती.

परिमोले उद्घाटन केन्द्र परम्परागत  
जयजय लडो। सुखपावे भरी लई,  
महिदरुम पावे धोला हल्ले होला अमृत  
सोला सल्लोपास केडीम राले वाहलुम

सबसे पहिले सडकको खुल्ला पट्टाले बाटोमा  
असुराखन बढेकोमा चिन्तित गर्नुपर्ने अवस्था  
पहिलेदेखि हो भन्नुपर्ने बाबुको दावा। बाबु  
गोठिपट्टानले बाटोको किनारमा बाटो  
हो वा भन्नुपर्ने बाटोको किनारमा  
भन्ने, कोठाको बाहिर बाटोको किनारमा  
बस्नुपर्ने हो भन्नुपर्ने बाटोको किनारमा  
बस्नुपर्ने हो भन्नुपर्ने बाटोको किनारमा

एशियन गेम्स २०१४, सुकन विजे  
पाने म्हुत केले. एअरएअरवे वरिष्ठ  
उपाध्यक्ष नितीन शर्मा, अरुण  
देवगिरी, अमरगंजक निवास पंढरपुरा  
अणि बी. सी. स्वामिभुज, पाण्डे  
अभिषेक होते. एअरए इंडिया अणि  
एअरए इन्फोमेशन (अमेरिका) कॉर्पोर  
शनअरवि ही वरिष्ठ होता अजे.

“परिचय के बाद उद्योग क्षेत्राधीन संकायपत्र, पत्रिका, त्रैमासिक प्रगति का आकषण पैदा हो, वहन उद्योगाधीन संकायपत्रों के शोधनबंधों के सादरीकरण होई।  
- डॉ. नेती प्रसाद,  
संकायपत्र, १९९९/२०००

Newspaper – Maharashtra Times  
Edition – Pune (Main Edition)  
Date – September 22, 2021 / Page – 04

Newspaper – Lokmat  
Edition – Pune (Main Edition)  
Date – September 22, 2021 / Page – 02

वाहन परिषदेचे  
आयोजन

म. टा. त्रिनिदाद, पुणे

[illegible][illegible]

‘एआरएआय’तर्फे  
स्वदेशी चार्जर विकसित

म. टा. प्रलिनिधी, पुणे

अभिनेता दिवंगत अश्विनीकुमार  
पटवर्धन (अग्रतः)। अश्विनीकुमार  
पटवर्धनजी अनेकी भेटी चलाय। त्यांच्या  
तुलना पाहिली आहे असे, जगज्जिज्ञा  
समजाय व अनेकी चर्चासुद्धा उपलब्ध  
आहे। प्रत्यक्ष तुलना असल्याने हा चर्चा  
कलाप्रेमियों मध्ये वादग्रस्त होऊन आहे।  
परंतु प्रत्यक्ष तुलना करून त्यांच्या  
मधल्या लोकांचा वेगळा वेगळा प्रत्यक्ष  
आविर्भाव पाहण्यास आले आहे।  
“तुलना करायची असल्यास  
दमस्तोती वहीत प्रत्यक्षच कोणीत  
दोघांपैकी एकाला घेऊन त्याच्या  
सह पाहण्यास आम्हीला घात व ‘जिह्वा  
वदल’ होऊ शकतो व तुलनासमिती  
हीच ‘अग्रतः’असून व त्यावर टीका करी  
आयें वहीत प्रत्यक्ष तुलना करीत आहे  
जे तुलना कराय च्यांनी टोळीत, कोणीत,  
तेव्हाच तुलना करीत आहे। ‘अश्विनी  
पटवर्धन’ अश्विनीकुमार व अश्विनीकुमार  
होती मध्ये चर्चा कोणत्याही दिशि।

मुद्राकीसाठीही लवकरच चार्ज

[illegible]

‘एआरएडब्ल्यू’ ने विजयमिता कलेक्शन  
खाजूर

[illegible]

‘एआरएआय’ने विकसित केले  
इलेक्ट्रिक वाहनांचे स्वदेशी चार्जर

जोडकणाला ज्युड नेटवर्क

[illegible]

દેવતા બની. પાછો પગલપગલ  
ચીંથડાં ઝાંઝાળાં ઝીંકી વીંકી, ઝાંઝા  
દેવતા, ઝાંઝાળાં ઝીંકી  
ઝાંઝાળાં, ઝીંકીને મુઠા ઝાંઝાળાં  
હીં, ઝાંઝાળાં, ઝાંઝાળાં, ઝાંઝાળાં, ઝાંઝાળાં  
ઝાંઝાળાં ઝાંઝાળાં, ઝાંઝાળાં, ઝાંઝાળાં, ઝાંઝાળાં, ઝાંઝાળાં



कशलि मनध्यायक हरे

संस्था का कार्य देशी एवं विदेशी  
वहनवाहकों के अन्तर्गत कुशल  
समुदायवादी गति शक्ति पर  
एकत्रित प्रभाव होने का लक्ष्य  
विश्व बैंक की योजना का अन्तर्गत  
कैप ३००, ३०० मीटर की गति का  
होने वाला है।

સાધુસાધવી કાશ્યાપક અભયેલી વા  
દે કાનુચાને બહેરિલ દેશમ  
અપાત ભુતપાત વેલત. લે  
સત્કાર્યદા અકસ્મિતેર ખાલ વ મે  
ફુલ ફેરિયે તા રૂપાભ્યંચરે સદા  
દીત કાલ દામરસમને તર્કિત દે

पन्नी चार्ज पोईट सेवधान विनियम  
कहाँ आठे हे सेवधान भात चार्जों  
सेवधानी केमिस्ट (CHAMC/MO),  
सेवधानी (सेवधानी) चार्जों  
विनियम। सेवधानी सेवधानी आठे, चार्जों  
भारतीय सेवधानी आठे या सेवधानी  
चार्जों सेवधानी कल्ला सेवधानी  
आठे सेवधानी आठे हे चार्जों सेवधानी  
सेवधानी चार्जों सेवधानी सेवधानी  
सेवधानी सेवधानी आठे

આચાર્ય દોશમ્ભે કમળાને કીર-  
સુભાગ્યપાત્રે વિવિધા કિલેસને  
સાધન-સાધક પ્રમાણે ધરણ  
દુલેશવર્તીસમ સિમિતિદ વા કમળીય  
પાત્રેને મારણ હતી ૦૦૧ વા મહિષા  
પાત્રેની ઈશિની ભરી સત્કર્મ  
સાધકી અમલકાંદ દેવેશ્વરી  
દા પાત્રાવલમ્બા સ્ત્રીસમીતિદ વૃત્તી પ્રભો  
ભરી હતી ૦૦૧ પાત્રી હા ઉત્તી  
પાત્રી અમુક વા પાત્રી પાત્રાવલમ્બી  
પાત્રાવલમ્બા કાળી સમ્બદ્ધ હતી. હા  
પાત્રી સિમિતિ પેઠા અમુક પાત્રાવલમ્બી  
૨૩૦ મિતિદ ૧૬ ઈશિવલ્લ દુલ્ભા  
પાત્રાવલમ્બી હતી.



Newspaper – LokSatta  
Edition – Pune  
Date – September 22, 2021 / Page – 03

इलेक्ट्रिक वाहनांसाठी  
स्वदेशी चार्जरचे तंत्रज्ञान

संयोजक-संस्था प्रतिनिधि

पुष्पे : इन्फिडुस, बलपमाटी  
आजयवक, अललेला, पानिग  
मुक्किना विरल कोट, अदीमोडिह  
विष अलोमिपान अडि हाण्डे (   
पञ्चाग्राह ) मयेडी प्रोटी लडि  
पानि मिमोड ताडन मिमिडि केले  
अदी.

[illegible]

संस्कृतम् 'अवधायीयम्' अर्थात् 'अवधानं' इति। 'मैत्र' इति शब्दः। वा उपलब्धमर्थम्। 'मैत्र' इति शब्दः। वा उपलब्धमर्थम्। 'मैत्र' इति शब्दः। वा उपलब्धमर्थम्।

देशाचे महत्त्वे वी, एमआयव्हेन विसर्जित केलेल्या तंत्रज्ञानावर अजब घरात इलेक्ट्रॉनिक्स निर्मितीत या कंपन्यांचे भरात आहे ००१ या पत्रिका घाबरायी निर्मित केलेली लक्षात आहे. घाबरायी लक्षात घ्यायच्या एमआयव्हेन इलेक्ट्रॉनिक्स पूर्णतः स्वतः लक्षात

**INTERVIEW**

पुनःसाजीत तामरे-वा तिराई  
हजलजकलवा वारीले लवा  
मेळितीरी तिराई तिराई जवळी  
कलकल कलकल जवळी  
वा-वा वारीले तिराई तिराई  
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वा-वा वारीले तिराई तिराई

10. 11. 2015

अनुदान अक्षत (कम्पारिबल रिपोर्ट) देखील कोणत्या उद्देशांसाठी अर्थसंचालक मंडळ वलयत असते. सार्वजनिक क्षेत्रातील वा पोलिस बळी आरु वा आरपी एमएलएली संघेने हे अक्षत एअरअक्षतअनुदान पोली अक्षत

चार्जद असा आहे

પૈલી ૦૦૧ પર્સન/૪ પર્સન અનુક્રમ કાપવાથી  
મહાનગરની ભરત ભરત થવાની શક્યતા છે. ૪ પર્સન  
ફિલ્લો થતા અનુક્રમ પાટી બેઠી ૨૩૦ લેવેલ ૫૫  
ડિગ્રીમાં ફાલ્ગુ કાપેલી છે. ૪ પર્સન વાગવાપછી  
ફિલ્લો પૂરત કાપવાની થી. વાગુ થતા પાટી કાપેલી છે  
પરવાળ છે. વાગુ પાલ ભરત મહાનગરની ભર  
પાટી કાપેલી કાપા કાપેલી. કાપી નગરની ફિલ્લો બી બેઠી  
૫૦ થી ૬૦ ટકાવ થવાની કાપી અનુક્રમ સંચિતવા વાગે  
પરવાળની ભર પૂરત કાપેલી સેલોના કાપેલી વાગેલી  
પાટી બેઠી ૨૩૦ લેવેલ ૫૫ ડિગ્રીમાં ફાલ્ગુ થી

‘एआरएआय’ तर्फे वाहनविषयक आंतरराष्ट्रीय परिषद

### हलोजनसमूहा प्रतिनिधी

सूचक : अतिमिष्टिच सिध  
अतिमिष्टिच अति अतिमिष्टिच  
(अतिमिष्टिच) अति अतिमिष्टिच  
अतिमिष्टिच अति अतिमिष्टिच  
अतिमिष्टिच अति अतिमिष्टिच  
(अतिमिष्टिच) अति अतिमिष्टिच  
अतिमिष्टिच अति अतिमिष्टिच  
अतिमिष्टिच अति अतिमिष्टिच  
अतिमिष्टिच अति अतिमिष्टिच  
अतिमिष्टिच अति अतिमिष्टिच

ધેન વસતી હોવાથી ધર્મદત્ત નેતા કલેશ  
 ચિંતાપત્રેથી કહીને જાણ કરાવે છે કે  
 'સિંહસારની સંસ્કૃતિથી પૂર્વે ગુજરાત  
 જ્યાં કે ધર્મદત્તની મંદિરવનમાં હતી.  
 જુદાજુદા અવધે સંસ્કૃતિના જોડે, તેથી  
 મધ્યથી જોડી નેતાવસતી થી જાણી  
 નીચી, ધર્મનાચલક સિંહસાર  
 જાણી અપાધિકારક અવધે વેસાર  
 અવધે વિકાસ પંચાલક, ધર્મદત્તે  
 સંસ્કૃતિના જોડે, મુજબ વિધેય જાણી  
 થી, જાણવડીના જોડે કહીને જાણી

કેટલાં અકાદમિક પ્રશ્નોનું પર્ચ  
મોડરનમ પહેલું અને કેટલાં સરકારી  
મંત્રી નિર્ણય લેવાની જગ્યા  
પરિવર્તન ફેરવાયેલું કે કેમ?

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**वाहनविषयक आंतरराष्ट्रीय परिषद २९ सप्टेंबरपासून**

पुणे : पुढारी वृत्तसेवा

[illegible]

कोरोनाच्या पार्श्वभूमीवर वंदा प्रखर  
ही परिषद ऑनलाइन पद्धतीने आयोजित



इग्वीकडून विजय पंजाबाला, नितीन धांडे, डॉ. रेजी मखाडू, डॉ. सुकृत ठिप्से आणि बी. व्ही. शामसुंदर

करण्यात येणार आहे. असे परिषदेचे संघोजक डॉ. सुकृत तिससे यांनी नमूद केले. यश्वरकार परिषदेस एआरएआयचे इतर पदाधिकारी वरिष्ठ उपसंचालक विनीत थोडे, वरिष्ठ उपसंचालक आनंद देशपांडे, उपसंचालक विजय पंढारवाला आणि उपसंचालक बी. व्ही. शामसुंदर आदी उपस्थित होते. ही परिषद आयोजित करण्यास

एसएई इंडिया आणि एसएई इंटरनॅशनल (अमेरिका) यांचे सहकार्य लाभते आहे. परिषदेचे उद्घाटन केंद्र सरकारच्या अखंड उद्योग खात्याचे मंत्री डॉ. मोहनदास पांडे यांच्या हस्ते होणार असून, सांगता समारंभास केंद्रीय रस्ते वाहतूक मंत्री नितीन गडकरी प्रमुख पाहुणे म्हणून उपस्थित असतील. दोघोरी मान्यवर हे ऑनलाईन

परिषदेत सहभागी होतील.

डॉ. रेवती मधारी म्हणाले, एवढाएवढाच वतीने आयोजित करण्यात येत असलेली 'सिम्योजियम ऑन इन्टरनॅशनल ओटोमोटिव्ह टेक्नॉलॉजी' ही वाहनतद्योग क्षेत्रातील आंतरराष्ट्रीय पातळीवरील नावाजलेली परिषद आहे. वाहन तद्योग क्षेत्रातील संकल्पना, प्रतिपक्ष

नासिक प्रगती यांचा आढावा घ्यायचे येथ्यात  
येथे. वाहन उद्योगाशी संबंधित जागृतातील  
तज्ज्ञ, अर्थतज्ज्ञ, निर्याती व्यापार क्षेत्रातील  
अनुभूत, १० प्रमुख व्यवसायानिरीतारच २००  
हून अधिक लोक प्रदर्शनांमध्ये सहभागीकरण  
यादीही होईल. डॉ. मुकुंत दिवसे सभासती, येंदळ  
या परिषदेत सविष्वातील इतरव्यवस्थाच्या  
सितीया येा येथ्याचा प्रवेश केला जातील,  
प्रवाशांची सुरक्षात, अंतराळनाय प्रमुख  
असिस्टन्ट रिजिडंट, जेड होयल, वायकाम  
केला लागणारी आहे, ऐलंकृत, नव  
प्रदेश यांयारच आदि निवृत्त, निवृत्ताकीचे  
मुमुर्वाकरण, वाहन उद्योगात लागणारी साहित्य  
आणि सार्वजनिक वाहतूक आदी निवृत्तांची  
जागृतातील तज्ज्ञ यांयारच निवृत्त करतील.

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**100%**  
PUBLIC RELATIONS

# आता इलेक्ट्रिक वाहनांचे चार्जिंग होणार फारस्ट

पुणे : पुढारी वृत्तसेवा  
इलेक्ट्रिक वाहनांच्या चार्जिंगसाठी लागणारा कालावधी कमी करून चार्जिंग फास्ट व्हावे, यासाठी एआरएआयकडून (ऑटोमोटिव्ह रिसर्च असोसिएशन ऑफ इंडिया) इलेक्ट्रिक वाहनांच्या चार्जिंगसाठी हलक्या वजनाचे आणि फास्ट चार्जिंग करणारे चार्जिंग स्टेशन विकसित करण्यात आले आहे. यामुळे इलेक्ट्रिक वाहनांच्या चार्जिंगसाठी लागणारा कालावधी कमी होणार असून, भविष्यात या वाहनांच्या विक्रीला मोठा हातभार लागणार आहे.

■ हलक्या वजनाचे चार्जिंग स्टेशन विकसित

■ व्यावसायिक उत्पादनासाठी भारत इलेक्ट्रॉनिक्सकडे हस्तांतर

ताकवेला नवे रिसर्च सेंटर

पुणेमध्ये ताकवे या ट्रिक्कारी एआरएआयच्या वतीने नव्या मोबिलिटी रिसर्च सेंटरची उभारणी करण्यात येणार असून, येथे ४ ते ५ वर्षांचे विविध टप्प्यांत ते कार्यान्विष्ट होईल. या सेंटरसाठी विविध टप्प्यांत एकूण ५०० कोटी रुपयांची गुंतवणूक होणार आहे. या ठिकाणी टायर टेस्टिंग, मिलिटरी टेस्ट सुविधा, टेस्ट ट्रॅक, हायड्रोजन पंपउत्पत्ती सेल सेलकलम्बर, रॅपिड प्रोटोटाइप सेंटर आदी सुविधा असतील. अॅडव्हान्स ड्राफ्टर असिस्टन्स सिस्टिम (अॅडव्हान्स) हे मोबिलिटी क्षेत्रातील पंचम्य असून, याचा विचार करीत टेस्टिंग आणि तंत्रज्ञान विकसित करणे यामुळे यालागत आहे.



“ संशोधन घराणू वापरासाठी स्वदेशी कच्चावस्तू आणि वजनाने हलके असणारे चार्जिंग स्टेशन विकसित करण्यात आले आहे. या स्टेशनच्या वापरामुळे वाहनांची, तेलनाकी आणि दुचाकी अशी दोन्ही प्रकारची वाहने चार्ज होऊ शकतील. या संघर्षातील व्यावसायिक उत्पादनासाठी भारत इलेक्ट्रॉनिक्सला हे तंत्रज्ञान हस्तांतरित करण्यात आले आहे. या कंपनीकडे नुकतेच एक प्रोटोटाइप अर्थात नमुना उत्पादन बनविण्यात आले असून, त्याची यशस्वी चाचणी करण्यात आली आहे. एआरएआयने या संघर्षातील प्रमाणपत्र कंपनीला दिले असून, लवकरच या चार्जिंग स्टेशनचे व्यावसायिक उत्पादन सुरू होईल. - डॉ. रेजी मथाई, संचालक, एआरएआय

इलेक्ट्रिक वाहनांसाठीच्या स्वदेशी चार्जरचे तंत्रज्ञान

इलेक्ट्रिक वाहनांसाठी आवश्यक असलेले चार्जर प्रामुख्याने बाहेरील देशातून आयात करण्यात येतात. केंद्र सरकारच्या आत्मनिर्भर भारत व मेक इन इंडिया या उपक्रमांमध्ये सहभागी होत आता एआरएआयने एलईट ईव्ही एसी चार्जिंग पॉइंट तंत्रज्ञान विकसित केले आहे. हे तंत्रज्ञान भारत चार्जिंग स्टेशन, कॅडो, सीसीएस (कॅबार्डन चार्जिंग सिस्टिम) यांच्या मालकीचे आहे. याद्वारे भारतीय कंपन्यांना आता या स्वदेशी चार्जरचे उत्पादन करता येणे शक्य होणार असून, हे चार्जरदेखील स्थानिक बाजारपेठांमध्ये उपलब्ध होऊ शकणार आहेत.

असा आहे स्वदेशी चार्जर..

एसी ००१ चार्जर एसी चार्जर असून, चारचाकी गाड्यांसाठी त्याचा वापर करणे शक्य आहे. हा चार्जर मिनाल फेज असून, त्याची वॉट २३० वॉट १५ अँम्पअर इतक्या क्षमतेची आहे. हा चार्जर चापरलान्सेर किंवा चार्ज वापरली गेली, वाहन किती चार्ज झाले ते कळू शकणार आहे. याद्वारे घरगुतीवर महागातीवरदेखील वाहन चार्ज करणे शक्य होईल. याची मर्यादी किंमत अंदाजे ५० ते ६० हजार रुपये इतकी असून, भविष्यात टाईप २ प्रकारातील हायपॉवर चार्जिंगसोबतच दुचाकी वाहनांसाठी चार्जर निर्मिती करण्याचा कंपनीचा विचार आहे.

“ भारत इलेक्ट्रॉनिक्स लिमिटेड या कंपनीच्या वतीने भारत एसी ००१ या पहिल्या चार्जरची निर्मिती केली जाणार आहे. यासाठी आवश्यक टेस्टिंग एअरएआय प्रयोगशाळेत पूर्ण झाले असून, त्याचा अनुसन्धान अडवेल (कम्प्लायंस रिपोर्ट) देखील कंपनीच्या उत्पादन अधिकृत्याकडे सुपूर्त करण्यात आला आहे. सार्वजनिक क्षेत्रातील हा पहिलाच चार्जर असून, याआधी एक खासगी संस्थेने हे तंत्रज्ञान एआरएआयकडे केल्याचे आहे. - अन्वय देशपांडे, वीथ उपसंचालक, एआरएआय

एआरएआयने बनविलेले चार्जिंग स्टेशन घराणी वापरात येणार आहे. हे चार्जिंग स्टेशन एआरएआय स्वदेशी कच्चावस्तूचे आहे. तंत्रज्ञान संशोधन हे टेस्टिंगनुकतेच पार इलेक्ट्रॉनिक्स कंपनीकडे व्यावसायिक उत्पादनासाठी हस्तांतरित करण्यात आले, अशी माहिती एआरएआयचे संचालक डॉ. रेजी मथाई यांनी दिली.

देशात इलेक्ट्रिक वाहनं घालून देण्यासाठी शासनाकडून विविध उपक्रम राबविण्यात येत आहेत. इलेक्ट्रिक वाहनांच्या धोरणावर केंद्र शासन आणि राज्य शासनाकडून अडवेल देण्यात येत आहे. विविध करात सुट देण्यात येत आहे. या वाहनांना प्रोत्साहन देण्यासाठी एआरएआयच्या वतीने हे चार्जिंग स्टेशन विकसित

करण्यात आले आहे. एआरएआयच्या वतीने केंद्रस्थानिक विकास केंद्रांची उभारणी देण्यात येणार आहे. देशात इलेक्ट्रिक वाहनांसाठी आवश्यक कुशल मनुष्यबळाची गरज लक्षात घेता एआरएआयच्या वतीने कोशल्य विकास केंद्रांची

उभारणी करण्यात येणार आहे. वेगळ व तेवढाच येथील राज्य सरकारांनी याविषयीची प्राथमिक चर्चा सुरू असल्याची माहिती वरील उपसंचालक निती घडे यांनी दिली. यामध्ये प्रामुख्याने अगिवायिनी गावेच्या निवासीयांसाठीच्या इलेक्ट्रिक वाहन उभारणी संबंधित अभ्यासक्रमांचा समावेश असेल. अभ्यासक्रमांची कळी

हे-मोड्युल आणि लंब वॉल्टाजिंयामध्ये समावेश आहे. या केंद्रांमध्ये संशोधन व विकास व चाचण्यांसाठी आवश्यक पायाभूत सुविधा अडवेल या प्रयोगशाळांवरदेखील समावेश असेल. त्याचबरोबर या विषयाशी संबंधित स्टार्टअप्सलादेखील या केंद्राच्या माध्यमातून मदत केली जाईल, असेही घडे यांनी स्पष्टीकरणे.

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## इलेक्ट्रिक वाहनांना 'एआरएआय'चे करंट स्वदेशी तंत्रज्ञान : घरगुती वापराचे चार्जिंग स्टेशन विकसित

प्रभात वृत्तसेवा

पुणे, दि. २१ - इलेक्ट्रिक वाहनांना प्रोत्साहन देत 'ऑटोमोटिव्ह रिसर्च असोसिएशन ऑफ इंडिया' अर्थात 'एआरएआय'ने इलेक्ट्रिक वाहन चार्जिंगसाठी घरगुती वापराचे 'एसी-००१' हे चार्जिंग स्टेशन विकसित केले आहे. पूर्वीचे स्वदेशी असलेले हे तंत्रज्ञान सार्वजनिक क्षेत्रातील पहिलेच उत्पादन असल्याचे संस्थेचे संचालक डॉ. रेजी मथाई यांनी सांगितले. यावेळी संस्थेचे वरिष्ठ उपसंचालक निती घडे, आनंद देशपांडे, विजय पंजाबाला आणि



उपसंचालक बी. व्ही. शामसुंदर उपस्थित होते. डॉ. मथाई म्हणाले, "या चार्जिंग स्टेशनच्या वापरामुळे चारचाकी आणि दुचाकी अशी दोन्ही वाहने चार्ज होऊ शकतील. याबाबत नुकतेच भारत इलेक्ट्रॉनिक्स कंपनीकडे एक प्रोटोटाइप अर्थात नमुना उत्पादन बनविण्यात आले आहे. त्याची यशस्वी चाचणी करण्यात

आंतरराष्ट्रीय परिषदेचे आयोजन

'एआरएआय'ने दि. २९ सप्टेंबर ते १ ऑक्टोबरदरम्यान 'सिम्पोजियम ऑन इंटरनॅशनल ऑटोमोटिव्ह टेक्नॉलॉजी' या वाहनविषयक आंतरराष्ट्रीय परिषदेचे आयोजन केले आहे. ऑनलाइन होणाऱ्या या परिषदेची यावर्षाची संकल्पना 'रिडिफाईन मोबिलिटी फॉर फ्युचर' ही अडवेल आहे. परिषदेचे उद्घाटन केंद्रीय अवजड उद्योगमंत्री डॉ. महेशनाथ घडे यांच्या हस्ते होणार असून केंद्रीय रस्ते वाहतूक मंत्री निती गडकरी यांच्या प्रमुख उपस्थितीत परिषदेची सांगडा होईल. जगभरातील १०० वाहन उत्पादन कंपन्या तसेच तब्बल ३,००० हून अधिक प्रतिनिधी यामध्ये सहभागी होतील. असे परिषदेचे संयोजक डॉ. सुकृत ठियसे यांनी सांगितले.

आली आहे. 'एआरएआय'ने यासंदर्भातील प्रमाणपत्र कंपनीला दिले असून, लवकरच या चार्जिंग स्टेशनचे व्यावसायिक उत्पादन सुरू होईल. कंपनीने आतापर्यंत सुमारे चार ते पाच कंपन्यांची चार्जिंग स्टेशन संदर्भातील तंत्रज्ञान हस्तांतरण केले आहे.



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Date – September 22, 2021 / Page – 11

## वाहनविषयक आंतरराष्ट्रीय परिषदेचे आयोजन

**पुणे : प्रतिनिधी**  
ऑटोमोटिव्ह रिसर्च असोसिएशन ऑफ इंडियाच्या (एआरएआय) वतीने येत्या दि. २९ सप्टेंबर ते १ ऑक्टोबर दरम्यान सिम्पोजियम ऑन इंटरनॅशनल ऑटोमोटिव्ह टेक्नॉलॉजी २०२१ (एसआयएटी २०२१) या वाहनविषयक आंतरराष्ट्रीय परिषदेचे आयोजन केले आहे. अशी माहिती एआरएआयचे संचालक डॉ. रेजी मथाई यांनी दिली. परिषदेची ही १७वी आवृत्ती असून 'रिडिफाईन मोबिलिटी फॉर फ्यूचर' ही या वर्षाच्या परिषदेची संकल्पना असल्याचेही त्यांनी सांगितले. ही परिषद ऑनलाइन पद्धतीने होणार आहे, असे परिषदेचे संयोजक डॉ. सुकृत ठिपसे यांनी नमूद केले. एआरएआयचे वरिष्ठ उपसंचालक नितीन घाडे, आनंद देशपांडे, उपसंचालक विजय पंखावाला, बी. व्ही. प्रयामसुंदर आदी उपस्थित होते. वाहन उद्योगाशी संबंधित जगभरातील तज्ज्ञ अभियंते, विद्यार्थी यामध्ये सहभागी होणार असून ४० प्रमुख व्याख्यानबरोबरच २०० हून अधिक शोधनिबंधांचे सादरीकरण या वेळी होईल. परिषदेचे उद्घाटन अक्कड उद्योग खात्याचे मंत्री डॉ. महेंद्रनाथ घाडे यांच्या हस्ते होणार असून समारंभास केंद्रीय रस्ते वाहतूक मंत्री नितीन गडकरी प्रमुख पाहुणे म्हणून उपस्थित असतील.

Newspaper – Saamana  
Edition – Pune  
Date – September 24, 2021 / Page – 05

## ‘एआरएआय’च्या वतीने आंतरराष्ट्रीय परिषदेचे आयोजन

**पुण्यातील** ऑटोमोटिव्ह रिसर्च असोसिएशन ऑफ इंडिया अर्थात एआरएआयच्या वतीने येत्या २९ सप्टेंबर ते १ ऑक्टोबर २०२१ दरम्यान सिम्पोजियम ऑन इंटरनॅशनल ऑटोमोटिव्ह टेक्नॉलॉजी २०२१ (एसआयएटी २०२१) या प्रसिद्ध वाहनविषयक आंतरराष्ट्रीय परिषदेचे आयोजन करण्यात आले आहे. 'रिडिफाईन मोबिलिटी फॉर फ्यूचर' ही यावर्षाच्या परिषदेची संकल्पना आहे. अशी माहिती

एआरएआयचे संचालक डॉ. रेजी मथाई यांनी पत्रकार परिषदेत दिली. कोरोनाच्या काळातूनही ही परिषद ऑनलाइन पद्धतीने आयोजित करण्यात येणार आहे. असे परिषदेचे संयोजक डॉ. सुकृत ठिपसे यांनी नमूद केले. वाहन उद्योगाशी संबंधित जगभरातील तज्ज्ञ, अभियंते, विद्यार्थी यामध्ये सहभागी होणार असून ४० व्याख्यानबरोबरच २००हून अधिक शोधनिबंधांचे सादरीकरण होणार आहे.



Newspaper – Aaj Ka Anand
Edition – Pune Today
Date – September 25, 2021 / Page – 09

## ARAI में एसआईएटी की अंतर्राष्ट्रीय कांफ्रेंस का ऑनलाइन आयोजन 29 से भारी उद्योग मंत्री डॉ. महेंद्रनाथ पांडे के हार्थों होगा उद्घाटन : नितिन गड्करी के संबोधन के साथ होगा समापन

पुणे, 24 सितंबर (आ.प्र.)

पुणे के ऑटोमोटिव रिसर्च एसोसिएशन ऑफ इंडिया द्वारा आगामी 29 सितंबर से 1 अक्टूबर 2021 तक सिंपोजियम ऑन इंटरनेशनल ऑटोमोटिव प्रौद्योगिकी (एसआईएटी) पर अंतर्राष्ट्रीय कांफ्रेंस आयोजन 29 सितंबर से 1 अक्टूबर तक आयोजित किया जाएगा. यह जानकारी एआरएआई के संचालक डॉ. रेजी मधवाई ने गत दिन पत्रकार-वार्ता में दी. अंतर्राष्ट्रीय कांफ्रेंस के 17वें संस्करण का विषय 'भविष्य के लिए गतिशीलता को फिर से परिभाषित करना' है. कांफ्रेंस के संयोजक डॉ. सुकृत ठिपसे ने बताया कि, कोरोना के मद्देनजर कांफ्रेंस का आयोजन ऑनलाइन पद्धति से होगा. इस दौरान एआरएआई के वरिष्ठ उपसंचालक नितिन धांडे, वरिष्ठ उपसंचालक आनंद देशपांडे, उपसंचालक विजय पंखावाला व उपसंचालक बी.बी. श्वामसुंदर आदि उपस्थित थे. एआरएआई इंडिया और एसआई इंटरनेशनल अमेरिका के सहयोग से कांफ्रेंस को सहयोग मिलेगा.



ऑटोमोटिव रिसर्च एसोसिएशन ऑफ इंडिया द्वारा आयोजित पत्रकार-वार्ता में विजय पंखावाला, नितिन धांडे, डॉ. रेजी मधवाई, डॉ. सुकृत ठिपसे व बी.बी. श्वामसुंदर उपस्थित थे. वहां विस्तार से जानकारी दी गई.

**एआरएआई द्वारा इलेक्ट्रिक वाहनों के लिए प्रोटोटाइप चार्जर सिस्टम विकसित**  
डॉ. रेजी मधवाई ने बताया कि, एआरएआई ने इलेक्ट्रिक वाहनों के लिए स्वदेशी बनावट का प्रोटोटाइप चार्जर सिस्टम विकसित किया है. केंद्र सरकार के आत्मनिर्भर भारत और मेक इन इंडिया का यह एक भाग है. इससे भारतीय कंपनियां स्वदेशी चार्जर का उत्पादन कर सकेंगी.

कांफ्रेंस का उद्घाटन केंद्रीय भारी उद्योग मंत्री डॉ. महेंद्रनाथ पांडे के हार्थों होगा. जबकि इसका समापन केंद्रीय सड़क परिवहनमंत्री नितिन गड्करी के ऑनलाइन संबोधन के साथ होगा.

डॉ. मधवाई ने कहा कि, एआरएआई द्वारा कांफ्रेंस में वाहन उद्योग का कॉम्पेट,

भविष्य, तकनीकी प्रगति का भोरा दिया जाएगा. वाहन उद्योग के दुनियाभर के विशेषज्ञ, इंजीनियर व विद्यार्थी कांफ्रेंस में शामिल होंगे. 40 प्रमुख संबोधन के साथ-साथ 200 से अधिक तकनीकी शोष प्रबंध की प्रस्तुति इस दौरान की जाएगी. युवा वैज्ञानिकों को शोष के क्षेत्र में अवसर

उपलब्ध होंगे. इसके लिए तेलंगाना सरकार के साथ हमने करार किया है. जबकि केरल सरकार के साथ भी स्मिल डेवलपमेंट के संबंध में करार किया जाएगा.

डॉ. सुकृत ठिपसे ने कहा कि, दुनियाभर के विशेषज्ञ कांफ्रेंस में वाता को सुश्रित बनाने, एडवांस ट्राइबर असिस्टेंस सिस्टम, जैव ईंधन, कंस्ट्रक्शन क्षेत्र में लगने वाले वाहन, इलेक्ट्रिक वाहन, प्रदूषण की जांच व नियंत्रण, नियमावली का सरलीकरण, वाहन उद्योग में इस्तेमाल होने वाली सामग्री और सार्वजनिक यातायात आदि विषयों पर अपने विचार व्यक्त करेंगे.

2021

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## 'PLIs to bring revolutionary change to auto sector'

TIMES NEWS NETWORK

**Pune:** The Union heavy industries minister, Mahendra Nath Pandey, on Wednesday said his government's product-linked incentive (PLI) schemes would bring revolutionary change to the automobile and allied sectors.

Pandey was speaking at the opening ceremony of the Symposium on International Automotive Technology (SIAT), the biennial auto expo organised by the Automotive Research Association of India (Arai).

For the first time, the

event has been organised online, with over 2,000 delegates joining in from all over the world, Arai director Reji Mathai said.

In his address, Pandey insisted that the auto sector was receiving "special

### AUTO EXPO

focus" from his government. He said the sector could be a driver into making the country a global manufacturing hub.

"The government under the leadership of the Prime Minister (Narendra Modi) is providing special

focus on the auto sector. With schemes like FAME-II, subaidia and the PLI schemes on auto and advanced chemistry cells, there will be a revolutionary change to the auto manufacturing sector in the country. Of the Rs 1.5 lakh crore of PLIs announced by the government, around 25% will benefit the auto industry," Pandey said, while praising the Arai for its work in e-mobility.

The minister said all certification requirements for e-vehicles and allied equipment were being fulfilled.

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## देशाच्या प्रगतीत वाहन उद्योगाचे योगदान

केंद्रीय अवजड उद्योगमंत्री डॉ. पंडे यांचे मत

म. टा. प्रतिनिधी, पुणे

'नवीन काळात देशाला पाच लाख कोटी डॉलरची अर्थव्यवस्था बनविण्याच्या दृष्टीने वाटपात तुरु अमुन, यामध्ये वाहतूक उद्योग क्षेत्राचे योगदान महत्वाचे आहे,' असे मत केंद्रीय अवजड उद्योगमंत्री डॉ. महेंद्रनाथ पंडे यांनी बुधवारी पुण्यात व्यक्त केले. ऑटोमोटिव्ह रिसर्च इन्स्टिट्यूट ऑफ इंडियाच्या (एआरएआय) कर्तव्य आणि सोसायटी ऑफ ऑटोमोटिव्ह इंजिनीअर्स (एसएई) इंडिया यांच्या सहकार्याने आयोजित 'एसआयएटी २०२१' या परिषदेचे ऑनलाइन पद्धतीने आयोजन करण्यात आले आहे. त्याचे उद्घाटन डॉ. पंडे यांच्या उपस्थितीत झाले. या वेळी ते बोलत होते.

'एआरएआय'चे अध्यक्ष सी. जे. रामण, रमणी उध्दरे, 'एआरएआय'चे

संचालक डॉ. रेजी मथाई, डॉ. सुकृत ठिपसे उपस्थित होते.

डॉ. पंडे म्हणाले, 'वाहन उद्योग क्षेत्राची उत्पादन क्षमता, रोजगार निर्मिती आणि कमी किमतीमध्ये प्रभावी निर्मिती करण्याचे कौशल्य लक्षात घेऊन पंतप्रधान नरेंद्र मोदी यांच्या 'आत्मनिर्भर भारत' या उपक्रमामध्ये वाहन उद्योग क्षेत्रावर विशेष लक्ष केंद्रित करण्यात आले आहे. अवजड उद्योग मंत्रालयाने देशातून उत्पादनाला चालना देण्याच्या उद्देशाने २५ हजार ८०० कोटी रुपयांची प्रोत्साहन पर योजना वाहतूक उद्योगासाठी काहीर केली आहे. 'भारताला वाहन उद्योग क्षेत्राला जगातील 'सर्वोत्कृष्ट' देशांमध्ये बनविण्याची योजना आहे,' असेही पंडे यांना सांगितले.

'वाहन उद्योग क्षेत्र हे 'कोस्ट रेन्निटिव्ह माकेट' असून यामध्ये आणखी संशोधन हाँग आवश्यक आहे. 'प्रोडक्शन लिंबड इन्वेस्टिव्ह' योजनेसोबतच स्थानिक पातळीवर कच्च्या मालाची निर्मितीसाठी प्रोत्साहन देण्याच्या सरकारच्या निर्णयाचे स्वागत करीत आहोम,' असे रामण म्हणाले.

2021



Newspaper – Financial Express

Edition – Pune

Date – September 22, 2021 / Page – 03

## Tesla's Madan Gopal to speak at auto tech show

FE BUREAU  
Pune, September 21

TESLA WILL BE making its debut at automotive technology show Symposium on International Automotive Technology (SIAT), being organised by the Automotive Research Association of India (ARAI). Madan Gopal, principal safety engineer at Tesla, will be speaking at the event's plenary session on future trends for mobility. Gopal has been with Tesla for 12 years and developing safety systems for Tesla products – S, X, 3, Y, semi and pick-up trucks.

Ola co-founder and CEO Bhavish Agarwal will also be speaking at the event, whose theme this year is 'Redefining Mobility for the Future'.

SS Thipse, convener, SIAT 2021, and senior deputy director, ARAI, said SIAT conference and SIAT Expo, usually held biennially in Pune, will be held virtually from September 29 to October 1 due to

SIAT Expo, usually held biennially in Pune, will be held virtually from September 29 to October 1

Covid disruptions.

Thipse said though they were apprehensive about industry participation and sponsorship after going virtual, they received a lot of interest and had to stop the bookings after over 100 auto companies registered for the expo, around 3,000 delegates from various countries are expected to attend the conference and expo.

Union minister for heavy industries Mahendra Nath Pandey will be inaugurating the event, while Union road transport minister Nitin Gadkari will be the key speaker at the valedictory function.

SIAT 2021 is being organised ARAI in association with SAE INDIA and SAE International (US).

Publication – Financial Express

Edition – Mumbai / Pune

Date – September 30, 2021 / Page – 04

## Tesla designing 400 kmph car with record range

FE BUREAU  
Pune, September 29

ELECTRIC-CAR MAKER TESLA is designing and building the quickest car in the world with record-setting acceleration, range and performance, Madan Gopal, principal safety engineer, Tesla, said. "We are hoping to deliver this in future to the world to help accelerate Tesla's next step towards sustainable energy and safety," Gopal said. This planned Roadster would have a range of 1,000 km, go from zero to 100 km/hour in 2.1 seconds with a top speed of 400 km/hour.

An alumnus of the Indian Institute of Science, Bengaluru, Gopal, who has been working on Tesla's car safety, said Tesla was going beyond a 5-star safety rating and looking at real-time data to improve vehicle safety. The company would identify and close real-world safety gaps by using real-world data he said.

Gopal was speaking on Wednesday at the annual Symposium on International Automotive Technology (SIAT) 2021, being organised virtually by the Automotive Research Association of India (ARAI) with SAE India, on 'Future Trends for Mobility'.



The planned vehicle would have a range of 1,000 km

Unlike traditional cars, Tesla's cars keep improving over time with vehicles getting updated regularly, Gopal said. He owns a Tesla Model 3 car himself and has in three years received 50 updates, with one to two updates on an average every month. Tesla provides the air safety updates that can be downloaded through smartphones.

Tesla wants the rest of the world to catch up and accelerate, Gopal said. Given the environmental challenge and the understanding that it cannot do everything, Tesla had opened up 300 patents that they have worked on and this is available to anyone who wanted to use it.

Publication – Financial Express

Edition – Mumbai / Pune

Date – October 2, 2021 / Page – 05

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PUBLIC RELATIONS

## Global brands entering India to make EVs, says Gadkari

AFE BUREAU  
Pune, October 1

NITIN GADKARI, UNION minister for road transport and highways, on Friday, said the production linked incentive (PLI) scheme for the automobile sector would lead to fresh investments of ₹42,500 crore in the automotive industry and create 7.5 lakh additional jobs. The minister said several global brands are entering India to produce electric vehicles at a mass scale.

There was a massive response in the domestic market for electric scooters from startups with a company recently setting a record of one lakh units

booked worth ₹1,100 crore, he said. The minister said electric two-wheeler sales in the country was at 13,335 units during July 2021, which was a massive 229% month on month jump and an 836% year-on-year leap in registrations, which was extremely encouraging.

He expected people to slowly move away from diesel and petrol vehicles. Gadkari was speaking at the annual Symposium on International Automotive Technology (SIAT) 2021 being organised virtually by the Automotive Research Association of India with SAE India on 'Future Trends for Mobility'.

In the case of lithium-ion batteries, the country can generate 83% of the value in India and there is a need to work on alternatives such as aluminium ion, zinc ion sodium-ion batteries. He urged the Automotive Research Association of India to work on battery alter-



natives and join hands with ISRO, DRDO and IITs that were working on indigenous development of low-cost battery technology. To support the EV ecosystem, the NHAI was developing electric vehicle

To support the EV ecosystem, the NHAI is developing electric vehicle charging infrastructure along the highway to promote the use of EVs

charging infrastructure along the highway to promote the use of EVs, he said.

Simultaneously the country also needs to work on alternative fuels such as ethanol, methanol, bio CNG, LNG, S-CNG and green hydrogen fuel, he suggested. The government was planning to introduce flex-fuel vehicles which allow opera-

tion of the vehicle on 100% ethanol and petrol. The flex engine-based vehicles were running in the US, Brazil and Canada with 83% of the light vehicles in Brazil running with flex engines, Gadkari said. He wanted India to move on a similar path. Brazil was also using ethanol for aviation and India too should look at using bioethanol for aviation would be a game-changer, he said.

Gadkari said there was a need to find appropriate and affordable technology for the generation, transportation and storage of green Hydrogen. MoRTH had already notified standards for emission and safety of hydrogen.



Publication – The Times of India

Edition – Pune

Date – October 2, 2021 / Page – 06

## Gadkari bats for shift to alternative sources of fuel

Shiladitya Pandit  
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**Pune:** Union road transport and highways minister **Nitin Gadkari**, speaking at the valedictory session of the Symposium on International Automotive Technology (SIAT) 2021, urged manufacturers to focus on salvage from scrapped vehicles to tide over the global semiconductor shortage.

He also asked Automotive Research Association of India (ARAI), organisers of the symposium, to help state transport agencies, many of which are in the red due to the rising fuel costs, to shift to more efficient and cheaper alternative sources.

"Hydrogen fuel development is very important to mobility. The government has already notified standards for fuel cells and retrofitting, including for long-run vehicles. The cost of retrofitting vehicles is around Rs 10 lakh, which is recoverable within 285 days. ARAI should set up an ecosystem to help state transport agen-

cies with the conversion of their fleets to alternative fuels, such as electricity, hydrogen, bio-CNG, ethanol, and others, as it would result in huge savings," Gadkari said.

He also asked ARAI to work with Defence Research and Development Organisation (DRDO) and Indian Space Research Organisation (ISRO) — which are working to develop indigenous clean energy and energy storage solutions — to develop "long-life, low-cost, high-efficiency" EV batteries.

Gadkari also emphasized the need to use ethanol in mobility and follow the example of countries such as Brazil, which he said has one of the cleanest energy matrices in the world.

"The use of ethanol in vehicles should be encouraged, and we want to introduce flex-fuel engines, which can run on petrol blended with ethanol. It emits significantly less greenhouse gases. ARAI should develop BS-VI or Euro-VI equivalent flex-fuel engines," Gadkari further added.



Publication – Hindustan Times

Edition – Pune

Date – October 7, 2021 / Page – 05

SIAT 2021 | VIRTUAL EVENT

## ARAI presents awards for best technical papers, student poster competition

HT Correspondent  
punetimes@ht.com

**PUNE:** The Automotive Research Association of India (ARAI) in association with SAE-INDIA and SAE International (USA) presented awards for best technical papers and student poster competition during the 17th edition of the Symposium on International Automotive Technology (SIAT) 2021.

The symposium was held in virtual form for the first time. The awards were presented under eight categories for technical papers and three categories for the student poster presentation.

Experts from around the world presented 130 technical papers, including 40 keynote and 19 international papers on

**AWARDS WERE PRESENTED UNDER EIGHT CATEGORIES FOR TECHNICAL PAPERS AND THREE CATEGORIES FOR THE STUDENT POSTER PRESENTATION**

various subjects, which were evaluated by a total of 115 members of the jury and by at least three domain expert jury members.

In the technical awards categories, Massimiliano Calloni from TSI Group, Italy, was awarded for the 'best international paper', while Gertmar Kamarek from Robert Bosch

Engineering Business Solutions was awarded for 'best paper on safety'.

Pavan Prakash Desai from Cummins Technical Centre, India, was awarded for 'best paper on simulation and modelling', while Sanjit Kala from Ashok Leyland, India, was awarded for 'best paper on environmental pollution' and Hemant Kumar Dashora from KPT Technologies Ltd, India for 'best paper on electric mobility'.

Similarly, Best paper: first prize was awarded to Gertmar Hasenbichler from AVL LIST GmbH, Austria, while Best paper: the second prize was given to Sivaprasad Korada of Tata Motors Ltd, India and Best paper: third prize to Dr Ravindra Uglikar, Prax Industries Limited.

The student poster presentation competition was held for UG, PG, engineering students and PhD research scholars from various universities on contemporary topics on mobility. The competition was conducted on TechNovus – the Technology Innovation Platform of ARAI.

Under 'Safe mobility' category first prize was given to Arka Pans for 'real-time driver behaviour assessment in two wheelers', while second prize was given to Pradha, Dandge and Shubham Gajpal for 'smart collision avoidance system by detecting vehicle brake lights using computer vision' and third to Manish Kodage and Ganapath Waghmare for 'self-activated vehicle turn indicator for collision avoidance'.

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**Acknowledgement:**

It was indeed my privilege to be the Convenor for such a Mega Event. I am grateful to Dr. Reji Mathai, Director–ARAI for giving me this wonderful opportunity, and also for her guidance and reviewing the progress of SIAT 2021 from time to time in the capacity of Chairperson-SIAT 2021 Advisory Committee.

I would like to thank our associates for SIAT events, i.e. SAE International (USA) and SAEINDIA, for their continuous support in successfully organizing this event biennially.

It is indeed very promising to note that SIAT Conference is getting bigger with each edition - in terms of attendance, in terms of participation and in terms of number of papers and Exposition Stalls. I extend my sincere gratitude to the distinguished Authors, Keynote Speakers, Plenary speakers, Exhibitors & Delegates, from India as well as overseas for participating in the event. I am glad to note that so many experts from various countries are participating in this Conference and contributing for technology development.

I extend my sincere thanks to all the representatives of the media for fantastically covering the entire event.

I would also like to thank my core team members who had supported me in all times before during and after the event.

Last but not the least I extend my sincere thanks to all the working committees of SIAT 2021, who had put up in their fantastic effort to make this SIAT a memorable one.

**Dr. S. S. Thipse,**  
**Convenor, SIAT 2021**  
**Sr. DD & HoD - EDL and ERL**