GRIET/2022/IEEE IAS SBC-4

EVENT SUMMARY REPORT

<table>
<tr><td>GRIET/Other institutes/Organization Address:</td><td colspan="3">GRIET</td></tr>
<tr><td rowspan="2">Department</td><td rowspan="2"></td><td>Professional Body</td><td>Institutional Body</td></tr>
<tr><td>IEEE-IAS SB Chapter
IA34 (SBC64761C)</td><td>IEEE GRIET SB</td></tr>
<tr><td>Nature of the Event
(Workshop / Seminar / Guest Lecture / Tech Talk/FDP/GD/ Training Program / Quiz / Presentation/Conference/ Industry Visit/Any Co & Extra curricular Activities</td><td colspan="3">INTERNATIONAL CONFERENCE</td></tr>
<tr><td>Title / Theme of the Event</td><td colspan="3">Sustainable Energy and Future Electric Transportation</td></tr>
<tr><td>Details of the Coordinator& Designation</td><td colspan="3">1:-Dr. B. Phaneendra Babu
IEEE GRIET SB Counsellor
Professor and head of department (department of EEE)
GRIET, Hyderabad

2:-Mrs G Sandya Rani
IEEE GRIET IAS SB Chapter Advisor
Assistant Professor (EEE)</td></tr>
<tr><td rowspan="2">Event Dates/Days</td><td>From</td><td>To</td><td>No. of Days</td></tr>
<tr><td>4 Aug 2022</td><td>6 Aug 2022</td><td>3</td></tr>
<tr><td>Details of the Speaker / Guest
Organization Address:</td><td colspan="3">1:-D.M.Vinod Kumar
Professor (EEE),National Institute of Technology ,Warangal,INDIA
2:-Dr.Srinivasan Anandan
Senior Scientist ‘D’,ARCI,Hyderabad,INDIA
3:-Dr.Akshay Kumar Rathore
Singapore Institute of Technology,SINGAPORE</td></tr>
</table>

Participants (Teaching Faculty / Non-Teaching Faculty / Students)	No.of Faculty	No. of UG students	No.of PG Students	No.of outside participants	Total Participants
	100	100	100	200	500

Faculty Names & Designation	Dr T Suresh Kumar Professor GRIET EEE Department Dr D Raveendra Professor GRIET EEE Department

Summary of the Event

DAY 1:

Title: INAUGURATION OF SeFet 2022

Number of people attended: 200

The Hosts Suchismitha and Rajyasree started the session by welcoming all the guests, faculty, management of the college, delegates, and all the students. The inauguration is kick started with a mesmerizing classical dance by team rhythms and the lamp was lighted by the guest of honor Shri Srinivas Reddy Garu, Director(operations)TSSPDCL, Chief guest Shri Sunil Sharma (IAS) Spl. Chief Secretatry, Electrical department and IEEE IAS Representative Shri Akshay Kumar Rathore, Dr. Jandyala N Murty, Director, GRIET and Dr. PhaneendraBabu, Branch Counselor IEEE GRIET SB and HOD of EEE Dept, GRIET.

The opening remarks were given by Dr. PhaneendraBabu ,HOD ,EEE,where he has delivered few glimpses about SeFet related information followed by Dr. Jandyala N Murty, Director GRIET,who addressed the gathering and given the glimpses of the college and good traits to the students. In this sequence, Shri J Srinivas Reddy has given brief description about Electricity department of Telangana State and how it got developed. Then Dr.Akshay Kumar Rathore was invited and he briefed about what IEEE and IAS chapter does where IAS(Industrial Applications Society) holds the privilege of the SeFet. After then the chief guest Shri Sunil Sharma described about the importance of electrical vehicles, how should the society should get upgraded by electricity and the importance of ideas which tends to develop the the society. Finally the vote of thanks is given by Dr. RaveendraDogga, Associate Professor,EEEdept concluded the session with the vote of thanks. The Inaugural was ended by National Anthem.

Title:-Data-Driven Approach- this covers Machine learning and Deep learning applications
Presenter :-D.M.Vinod Kumar

- **Data-driven approach**

Data Driven is data hunger
It is a new way of thinking enabled by machine learning

- **Model-driven approach**

Tries to build new models and new algorithms to improve performance

- **Integration of Model-Driven and Data-Driven Methods**

Application of the traditional model-driven methods is always limited by the contradiction between accuracy and efficiency, whileData-driven methodsdemonstrate strong abilities foronline decision-making support with the advancement of various data mining techniques.

- **Feasible integration approaches for Model driven and Data-driven Methods**

Series Integration Approach
Parallel Integration Approach and
Embedded Integration Approach

- **Role of Al in Autonomous Vehicles (AV)**

Autonomous Vehicles are starting to become a real possibility in some parts of industry ex:- Agriculture, Transportation and military.

Title:-Development and Demonstration of Indigenous Energy Storage (Li-ion Battery & Supercapacitory Materials for Electric Vehicles Application

Presenter :-Dr. SrinivasanAnandan

- International Scenario on EV
- Development and Demonstration of Indigenous Energy Storage (Li-ion Battery and Super Capacitor) Materials for EV application.
- Introduction to Li-ion Batteries
- History, Operation principles and applications of Li-ion Battery.
- Discussion on Research on Nanomaterials
- Analysis on Energy Sources and Global Energy Consumption
- Challenges for 21st century
- Cost Comparison between Fuel Vehicle and Electric Vehicle

Day -2:-

Title:- Scenario of Battery and Hydrogen Electric Vehicles in India

Presenter :-Dr. Akshay Kumar Rathore

Akshay Kumar Rathore (IEEE Fellow) is a full professor at Singapore Institute of Technology, Singapore since Jan 2022 and is an expert in power electronics and control of electric motor drives. He received his PhD from the University of Victoria, BC, Canada in 2008.He served as Graduate Program Director and Chair of Graduate Awards during 2020-21. He has one approved European Patent commercialized by WEG Brazil and developed above 99% neutral-point-clamped multilevel inverter-based medium voltage induction motor drive system. He is an IEEE, IAS Chair representative. He delivered the talk where he focused on the following points:

- Scenario on EV
- Hydrogen Fuel Cell-Based Electric Vehicles

- Battery-Based E-Mobility
- Electrification of Transportation/Vehicles, Battery Charging
- Hydrogen Infrastructure and Supply Chain
- Major Concern on Recharging/Refilling
- Vital Points to Meet the Energy Demand
- Recent Progress, Key Challenges, and Future Scopes of E-Mobility

Valedictory function of the 2022 IEEE 2nd International Conference on Sustainable Energy and Future Electric Transportation (SeFet) was organised on August 6th, 2022 at GRIET which was presided over by Dr.BobbaPhaneendraBabu, Convener of SeFeT, HOD, EEE Department, GRIET.

The Chief Guests of the valedictory function wereDr. Vinod Khadkikar, Professor, Khalifa University and Dr.Akshay Kumar rathore, IEEE IAS and IES Representative. During the welcome address of the function, Dr.BobbaPhaneendraBabu, Convener of SeFeT, HOD, EEE Department, GRIET informed that the conference was attended by more than 450 participants. The conference had four technical sessions along with online and offline presentations by the delegates and the students. At the very outset Course Coordinator, Dr.BobbaPhaneendraBabu extended a warm welcome to the Chief Guests as well as all participants of the conference that was attended by 41 faculty members from various colleges and universities.Dr.BobbaPhaneendraBabu presented a gist of proceedings of the threeday Conference stating that a total of 5 renowned and reputed Resource Persons from various Universities deliberated keynotes on various topics. He elaborated upon the design, planning, organization and conduct of the three day conference detailing out various Resource Persons that were invited and various topics that were covered during their deliberations.

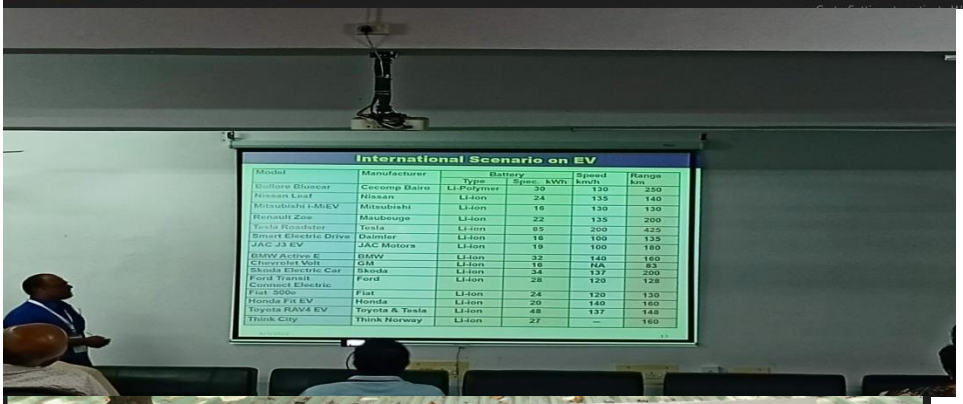
Later on Dr. J. Praveen, Principal, GRIET has congratulated everyone, for making the conference a grand success. He has introduced GRIET to all the guests, presenters as the college is in its 25th year of establishment.During the ceremony, it is informed that around 450 papers were presented in which 5 papers were awarded as the "Best Paper Award" by the Chief guests Dr. Vinod Khadkikar,Professor,Khalifa University and Dr.Akshay Kumar Rathore, IEEE IAS and IES Representative.The papers are

1. Paper-1 "Power Quality Improvement and Energy Management of Air Conditioning System with Photovoltaics and Battery Storage".
2. Paper-2 "Implementation and Test Bench Development of GB/T 27930-2015 Communication Protocol for Electric Vehicle Charger".
3. Paper-3 "Design and Analysis of a High-Efficiency Electric Vehicle Charging Using Inductive Wireless Power Transfer System".
4. Paper-4 "Integrated Utility-Transit Model for a Comprehensive Transition Plan for Battery-Electric Bus Fleets".
5. Paper-5 "Control of Supply Voltage Power Quality Issues using DVR Through Forward-Backward LMS".

Volunteers were awarded the certificates for their support by Dr. J. Praveen, Principal, GRIET.

IRG (in rupees**)**	Rs18,32,828/-
Expenditure (in rupees**)**	Rs18,09,881/-
POs attained with this Event (number and description)	*1. Broad education necessary to understand latest trends and development in electrical machines.* *2. Recognition of the need for, and an ability to engage in life-long learning.*
Photographs of the event (Hard copy and Soft copy)	


SeFet 2022
GOKARAJU RANGARAJU
Institute of Engineering and Technology
IEEE
Advancing Technology for Humanity


International Scenario on EV
Model
Manufacturer
Battery
Type
Spec. kWh
Speed km/h
Range km
Bollore Bluecar
Cecomp Bairu
Li-Polymer
30
130
250
Nissan Leaf
Nissan
Li-ion
24
135
140
Mitsubishi i-MiEV
Mitsubishi
Li-ion
16
130
130
Renault Zoe
Maubeuge
Li-ion
22
135
200
Tesla Roadster
Tesla
Li-ion
85
200
425
Smart Electric Drive
Daimler
Li-ion
16
100
135
JAC J3 EV
JAC Motors
Li-ion
19
100
180
BMW Active E
BMW
Li-ion
32
140
160
Chevrolet Volt
GM
Li-ion
16
NA
83
Skoda Electric Car
Skoda
Li-ion
34
137
200
Ford Transit Connect Electric
Ford
Li-ion
28
120
128
Fiat 500e
Fiat
Li-ion
24
120
130
Honda Fit EV
Honda
Li-ion
20
140
160
Toyota RAV4 EV
Toyota & Tesla
Li-ion
48
137
148
Think City
Think Norway
Li-ion
27
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160


SeFet 2022
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Proofs: **1.Certificates copies** **2.Profile of Speaker** **3.PPT/Material as applicable. etc.,**	

Signature of Coordinator

Signature of HOD