

A Brief Report On

DST Funded 7-Day Training Program on “INTEGRATIVE RESEARCH IN VARIOUS FIELDS OF ENGINEERING” – September 2022.

Date: 21st – 27th September 2022

Venue: Sagi Rama Krishnam Raju (SRKR) Engineering College (A), Bhimavaram.

The inauguration of DST Funded 7-Day Training Program on “INTEGRATIVE RESEARCH IN VARIOUS FIELDS OF ENGINEERING” from 21st to 27th September 2022, organised at Sagi Rama Krishnam Raju (SRKR) Engineering College (A), Bhimavaram, Andhra Pradesh- 534204, in collaboration with GITAM Deemed to be University, VISAKHAPATNAM under STUTI Program-2021 (DST/RND/STUTI/2021/18) took place on 21st September.

INAUGURATION

Chief guests Dr. Jagapathi Raju, Principal, SRKREC; Sri S V Ranga Raju, Vice-President, SRKREC; Dr. P A R K Raju, Dean-R&D, SRKREC; Dr. A C S V Prasad, HOD- Civil, SRKREC; Dr. B Ravi Kumar Varma, HOD-EEE, SRKREC; Dr. Bh Ramakrishnam Raju, HOD-IT, SRKREC; Program coordinator Dr. N. Gopala Krishna Murthy, Head technology centre, SRKREC, and Dr. Balla Srinivasa Prasad, STUTI program coordinator from GITAM Deemed to be University; inaugurated the event by addressing the participants and the importance of collaborating with other organisations, he discussed the central theme behind this training program to establish and share the collaboration organisations with technical and practical education.. Dr. Jagapathi Raju, Principal, SRKREC, gave a brief about the research facilities available at SRKREC, Bhimavaram and congratulated the organisers for their initiative. The event was graced by participants from various branches of engineering such as CIVIL, CSE/IT, Mechanical, ECE, EEE and the management and faculty members of SRKREC. Then the program was followed by STUTI program coordinator Dr. Balla Srinivasa Prasad, who briefly addressed the STUTI program.



Figure 1: Inaugural of the DST Funded 7-Day Training Program on “Integrative Research in Various Fields of Engineering” on 21st September 2022.

SCHEDULE

Day	Morning Session (10.00 am-12.00 pm)	Afternoon Session (01.30 am-04.00pm)
Water Quality Assessment and Geospatial Technologies.		
Day 21/09/2022	Topic: Water Quality Testing: Standard drinking water quality criteria, Why Quality of water is essential for life existence, Describing the various standard testing procedures (based on international and Indian standards) and their examination and Test outcome interpretation methods.	<ul style="list-style-type: none"> • Hands-on practice for finding Water Quality Assessment Parameters by using portable devices • Demonstration of Water pollution constituents' detection by using various instruments
	Resource Person: Dr. P A R K Raju , Dean-R&D, SRKREC	Resource Person: Dr. Thokir Bhasha Shaik , Research Associate Wet-Centre, Dept. of CIVIL, SRKREC
Day 22/09/2022	Topic: Evaluation of Natural resources and management using Geospatial Technologies with various Case studies.	Hands-on practice in handling the Geospatial Data and Software
	Resource Person: Dr. P Raghu Ram , Assistant Professor, Wet Centre, Dept. of CIVIL, SRKREC	Resource Person: Dr. T Ram babu , Assistant Professor, Wet Centre, Dept. of CIVIL, SRKREC
Bioinformatics		
Day 23/09/2022	Topic: Development of Software Tools and Servers for Bioinformatics	Hands-on Session on the usage of Bioinformatics Software Tools
	Resource Person: Dr. Suresh Babu Mudunuri , Head –Centre Bioinformatics Research, SRKREC	Resource Person: Dr Suresh Babu Mudunuri , Head –Centre Bioinformatics Research, SRKREC
Implementation of Collaborative Product Development System Using STEP/XML		
Day 24/09/2022	Topic: Introduction to collaborative product development (CPD) and Basic approaches to CPD	Hands-on practice on Product modelling with emphasis on analysis using the Hyper Mesh tool
	Resource Person: Dr. A. Bala Krishna , Professor, Dept. of Mechanical	Resource Person: Dr. Balla Srinivasa Prasad , Professor, Dept. of mechanical, GITAM, deemed to be a university
Day 25/09/2022	Topic: Battery Management System and Hands on experience training CAN BUS, which is used in the automobile industry	Hands-on experience with GB/T Protocol in a virtual environment.
	Resource Person: Sri.Srujan Attaluri , Lead system design engineer, VOLVO	Resource Person: Sri. Dwarampudi Srinivasa Reddy , Founder – DS Reddy Consultancy
Day 26/09/2022	Topic: Introduction to Electrical Vehicles and EV Chargers, Different Protocols used in EVSE (Electric Vehicles Supply Equipment), EV and CMS (Central Management systems) Part-1	Demonstration of How to Control EV chargers from CMS, location identification of EV charger and EV charger payment Android App
	Resource Person: Sri. Kurella Pavan Kumar , Assistant Professor, Dept. of EEE, SRKREC Dr. Nukala Gopala Krishna Murthy , Head-Technology Centre, SRKREC	Resource Person: Sri. Kurella Pavan Kumar , Assistant Professor, Dept. of EEE, SRKREC Dr. Nukala Gopala Krishna Murthy , Head-Technology Centre, SRKREC
Day 27/09/2022	Topic: Introduction to Electrical Vehicles and EV Chargers, Different Protocols used in EVSE (Electric Vehicles Supply Equipment), EV and CMS (Central Management systems) Part-2 and Visit EV charger Infrastructure developed at SRKREC	Topic: Project Proposal Writing Case study: DST project Demonstration of Grid Supportive EV Charger and Charging Infrastructure at LT Level(D-EVCI)
	Resource Person: Sri. Kurella Pavan Kumar , Assistant Professor, Dept. of EEE, SRKREC Dr.Nukala Gpala Krishna Murthy , Head-Technology Centre, SRKREC	Resource Person: Dr. Nukala Gopla Krishna Murthy , Head-Technology Centre, SRKREC Sri. Kurella Pavan Kumar , Assistant Professor, Dept. of EEE, SRKREC

DAY-1, 21st SEPTEMBER 2022: (CIVIL)

TECHNICAL SESSION:

The first-day session focused on “*Water Quality Testing: Standard drinking water quality criteria*” was taken by **Dr. P A R K Raju, Dean-R&D, SRKREC**. He lectured on why water quality is essential for life’s existence, describing the various standards.



Figure 3: Session by **Dr. P A R K Raju, Dean-R&D, SRKREC**, on Water Quality Testing

HANDS-ON SESSION:

Later in the afternoon, the hands-on session was carried out by **Dr. Thokir Bhasha Shaik, Research Associate Wet-Centre, Dept. of CIVIL, SRKREC**, on the “*Water Quality Assessment Parameters by using portable devices*”. The session taught the participants how to detect water pollution constituents using various instruments.



Figure 4: Training session on finding water quality assessment

DAY-2, 22nd SEPTEMBER 2022:

TECHNICAL SESSION:

On day 2, the session started with “*Evaluation of Natural resources and management using Geospatial Technologies with various Case studies*” by Dr. P Raghu Ram, Assistant Professor, Wet Centre, Dept. of CIVIL, SRKREC, focused on lecturing evaluation of natural resources.



Figure 5: Session by Dr. P Raghu Ram

HANDS-ON SESSION:

In the afternoon session after lunch, Dr. T Ram babu, Assistant Professor, Wet Centre; Dept. of CIVIL, SRKREC, conducted a hands-on session in handling Geospatial Data and Software.



Figure 6: Training session on handling Geospatial Data and Software

DAY-3, 23rd SEPTEMBER 2022:

TECHNICAL SESSION:

On day three, **Dr. Suresh Babu Mudunuri, Head –of Centre Bioinformatics Research, SRKREC** and an expert, delivered a session on **“Development of Software Tools and Servers for Bioinformatics”**. He discussed the importance of software tools and servers developed for extracting meaningful information from the mass of molecular biology.



Figure 7: Session delivered by Dr. Suresh Babu Mudunuri, SRKREC

HANDS-ON SESSION:

Later in the afternoon session, the practical hands-on sessions were conducted using bioinformatics software tools by Dr. Suresh Babu Mudunuri, SRKREC.



Figure 8: Practical session on the usage of bioinformatics software tools.

DAY-4, 24th SEPTEMBER 2022:

TECHNICAL SESSION:

On day four, **Dr. A. Bala Krishna, Professor, Department of Mechanical, SRKREC**, gave a presentation on *“Introduction to collaborative product development (CPD) and Basic approaches to CPD”*. He explained the importance. He gave a brief description of CDP origin and its roles.



Figure 9: Session delivered by **Dr. A. Bala Krishna**, Department of Mechanical, SRKREC

HANDS-ON SESSION:

In the afternoon session, **Dr. Balla Srinivasa Prasad, Professor, Dept. of mechanical, GITAM, Deemed to be a University**, focused on training participants in a *“Hands-on session on the usage of Bioinformatics Software Tools”*.



Figure 10: **Dr. Balla Srinivasa Prasad**, Professor, GITAM, Visakhapatnam

DAY-5, 25th SEPTEMBER 2022:

TECHNICAL SESSION:

On the fourth day of class, the session was delivered by a resource person **Sri Srujan Attaluri**, lead system design engineer, **VOLVO**, on the topic “**Battery Management System and Hands-on experience training CAN BUS, which is used in the automobile Industry.**” He mainly stated that the function of BMS (Battery management system) and safety limit is prevented.

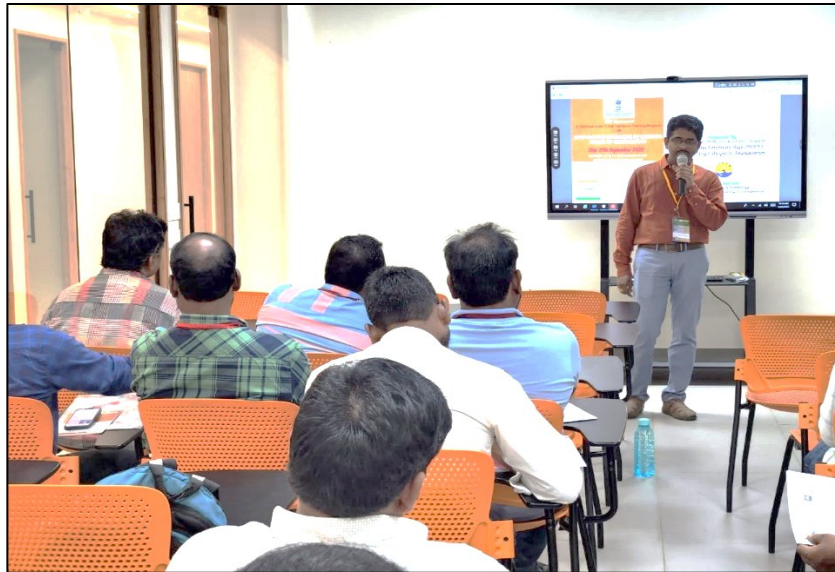


Figure 11. Session delivered by Sri Srujan Attaluri, lead system design engineer, VOLVO

HANDS-ON SESSION:

Later in the afternoon, **Sri. Dwarampudi Srinivasa Reddy**, Founder – of DS Reddy Consultancy, demonstrated how to use GB/T Protocol in a virtual environment.



Figure 12: Sri. Dwarampudi Srinivasa Reddy, Founder – DS Reddy Consultancy

DAY-6, 26th SEPTEMBER 2022:

TECHNICAL SESSION:

On day 6, **Sri. Kurella Pavan Kumar**, Assistant Professor, EEE, SRKREC, delivered a lecture on ***“Introduction to Electrical Vehicles and EV Chargers, Different Protocols used in EVSE (Electric Vehicles Supply Equipment), EV and CMS (Central Management systems) Part-1”***.



Figure 13: Session by Sri. Kurella Pavan Kumar, Dept. of EEE, SRKREC

HANDS-ON SESSION:

Later in the afternoon, **Dr. Nukala Gopala Krishna Murthy**, Head- Technology centre, SRKREC, and **Sri. Kurella Pavan Kumar**, SRKREC, demonstrated how to Control EV chargers from CMS, location identification of EV chargers, and EV charger payment Android App.



Figure 14: Hands-on practical session on EV chargers and EV charging Android App

DAY-7, 27th SEPTEMBER 2022:

TECHNICAL SESSION:

On day 7, **Dr. Nukala Gopala Krishna Murthy**, Head-Technology Centre, SRKREC, delivered a presentation on "*Project Proposal Writing Case study: DST project Demonstration of Grid Supportive EV Charger and Charging Infrastructure at LT Level(D-EVCI)*" and Visited EV charger Infrastructure developed at SRKREC.



Figure 15: Session delivered by Dr. Nukala Gopala Krishna Murthy, Head-Technology Centre, SRKREC

HANDS-ON SESSION:

In the afternoon, **Sri. Kurella Pavan Kumar**, Assistant Professor, Department of EEE, SRKREC, gave a hands-on experience on EV charger Infrastructure developed at SRKREC. The participants were able to understand the concept and working of EV chargers at the end of the day.



Figure 16: Hands-on live demonstration of EV Chargers

Distribution of Certificates:



Figure 17: Distribution of certificates to the Participants at SRKREC, Bhimavaram

STUTI program coordinator Dr. Balla Srinivasa Prasad congratulated all the participants on the successful completion of the seven-day training. The training coordinators, Dr. N. Gopala Krishna Murthy of Sagi Rama Krishnam Raju (SRKR) Engineering College (A), Bhimavaram, thanked each other for completing the training program successfully. Coordinators distributed certificates to participants and collected feedback forms from the participants.

VOTE OF THANKS

At the end of day seven, the STUTI program coordinator Dr. Balla Srinivasa Prasad, thanked the training coordinator of SRKR college, Dr. Nukala Gopala Krishna Murthy, and also the program panel members of SRKR college, and also thanked the delegates and resource persons on successful completion of the 7-day program by sharing their knowledge and experiences to all participants. The program concluded with the National Anthem.



Figure 18: Group photo with the participants who attended the 7-day workshop from 21st – 27th SEPTEMBER 2022 at SRKREC, Bhimavaram, West Godavari, Andhra Pradesh.