LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING
(AUTONOMOUS)
L. B. Reddy Nagar, Mylavaram – 521 230, N.T.R. District, Andhra Pradesh, India
Affiliated to JNTUK, Kakinada & Approved by AICTE New Delhi
Accredited by NBA under Tier – I, Accredited by NAAC with 'A' grade,
An ISO 21001:2018, 500001:2018, 14001:2015 Certified Institution
DEPARTMENT OF AEROSPACE ENGINEERING
Estd.: 1998 Website: https://www.lbrce.ac.in/ase/index.php Email: hodaero@lbrce.ac.in Phone:08659-222933 Ext:624/623

A.Y.:2024-25

Report on the FDP titled "**Latest Developments in Additive Manufacturing Technologies**"

Duration: 5 Days [05/05/2025 – 09/05/2025]
Venue: Seminar Hall, Department of Aerospace Engineering, Lakireddy Bali Reddy College of Engineering

1. Introduction

A one-week Faculty Development Programme (FDP) on 'Latest Developments in Additive Manufacturing Technologies' was organized to enhance the knowledge and technical competencies of faculty members, researchers, and industry professionals in the rapidly evolving field of additive manufacturing (AM). The programme focused on recent advancements, industrial applications, design methodologies, materials, process optimization, and future trends in AM technologies.

2. Objectives of the Programme

- To provide an overview of recent developments in additive manufacturing.
- To familiarize participants with advanced AM processes and materials.
- To understand Design for Additive Manufacturing (DfAM) principles.
- To explore industrial applications of AM in aerospace, automotive, biomedical, and energy sectors.
- To discuss research opportunities and future trends in additive manufacturing.

3. Participants

The programme was attended by faculty members, research scholars, postgraduate students, and industry professionals from various engineering disciplines. Active participation and interaction contributed significantly to the success of the FDP. The list of participants is given below.

1	Dr. Aruna Nayudu	Associate Professor
2	Dr. R Vijaya Prakash	Assistant Professor
3	Mr. Avula Sai Surya Teja	PG Scholars
4	Mr. Cherukuri Jaya Vardhan	PG Scholars
5	Mr. Sambugalla Manoj Bharath	PG Scholars
6	Mr. Thatikonda Venkata Ramana	PG Scholars
7	Dr. M. Srinivasa Reddy	Associate Professor
8	Mr. Satish Prakash. K	Associate Professor
9	Mr. Mallapu Satyanarayana	Assistant Professor
10	Dr. Ramudu	Lecturer
11	Mrs. V. Umalakshmi	Associate Professor
12	Mr. Syed Ataul Rehaman Basha	Assistant Professor
13	Mr. Buradagunta Emmanuel	Assistant Professor
14	Mr. Nelakuditi Naresh Babu	Assistant Professor
15	Dr. D Venkata Sivareddy	Professor
16	Mr. Rajavarapu Rambabu	Assistant Professor
17	Mr. Kedaranath Mahapatro	Associate Professor
18	Mr. Graddala Suresh Babu	Associate Professor
19	Dr. Mallikarjunamallu K	Associate Professor
20	Dr. A.V.S Ram Prasad	Associate Professor
21	Dr. B J R S N Swamy	Assistant Professor
22	Dr. N Narsimha Rao	Assistant Professor
23	Dr. P Raghava Rao	Assistant Professor
24	Dr. Murahari Kolli	Associate Professor
25	Dr. Seelam Pichi Reddy	Professor
26	Mr. Aginiparthi Pratyush	Assistant Professor
27	Mr. Dhanunjay Kumar Ammisetti	Assistant Professor
28	Mr. G Venkata Surya Narayana	Assistant Professor
29	Mr. K Lakshmi Prasad	Assistant Professor

30	Mr. P Venkata Ratnam	PG Scholars
31	Mrs. P Vijaya Sirisha	Assistant Professor
32	Dr. Satyanarayana Talam	Professor
33	Mr. Kothari Venkataviswanadh	Sr. Asst. Professor
34	Mrs. Udaya Lakshmi Bondada	Assistant Professor
35	Mr. Simhadri Indrasena Reddy	Sr. Asst. Professor
36	Miss Dharnasi sunitha	Assistant Professor
37	Mrs. Kukati Aruna Kumari	Sr. Asst. Professor
38	Mrs. Sri Lakshmi Chandana	Assistant Professor
39	Mrs. Praveena Bai Desavathu	Assistant Professor
40	Mr. KBV Satya Prakash	Sr. Asst. Professor
41	Dr. Gopichand Dirisenapu	Associate Professor
42	Dr. Gunnam Nagarjuna	Assistant Professor
43	Mr. Ranjith Kumar Nandeti	Assistant Professor
44	Mr. Basa Aditya Mani Sai Pavan	Assistant Professor
45	Mr. Gopinadh Chowdary Ponnaganti	Assistant Professor
46	Mr. Bandela Nagababu	Sr. Assistant Professor
47	Mrs. Monika Agrawal	Assistant Professor
48	Dr. V. Dhana Raju	Associate Professor
49	Dr. Ch. Siva Sankara Babu	Associate Professor
50	Mr. S. Srinivasa Reddy	Associate Professor
51	Mr. J. Subba Reddy	Associate Professor
52	Dr. Sudheer Kumar B	Sr. Assistant Professor
53	Dr. A. Nageswara Rao	Sr. Assistant Professor
54	Mr. S. Srinivasa Reddy	Sr. Assistant Professor
55	Mr. K.V. Viswanadh	Sr. Assistant Professor
56	Dr. S. Rami Reddy	Sr. Assistant Professor
57	Mr. K. Lakshmi Prasad	Sr. Assistant Professor
58	Mr. Sankararao V	Sr. Assistant Professor
59	Mr. D. Mallikarjuna Rao	Sr. Assistant Professor
60	Mrs. B. Kamala Priya	Sr. Assistant Professor
61	Mr. K. Venkateswara Reddy	Sr. Assistant Professor
62	Mr. K. Sai Babu	Assistant Professor
63	Mr. S. Uma Maheswara Reddy	Assistant Professor
64	Ms. P. Mounika	Assistant Professor
65	Mr. M. Oliva	Assistant Professor
66	Mr. M. Manoj Kumar	Assistant Professor
67	Ms. P. Keerthi	Assistant Professor
68	Mr. M. Karthik Kumar	Assistant Professor
69	Mr. P. Mohana Ganga Raju	Assistant Professor
70	Mr. Eeshwar Ram. J	Assistant Professor

4. Resource persons details:

	Name of the Expert: Dr. K Siva Prasad Designation: Head R&D Organization: T-Works, Hyderabad Experience in Years: 20
	Name of the Expert: Dr. TVK Gupta Designation: Associate Professor Organization: VNIT Nagpur Experience in Years: 15
	Name of the Expert: Dr. Murahari Kolli Designation: Associate Professor Organization: LakiReddy Bali Reddy College of Engineering Experience in Years: 15

5. Day-wise Summary of Sessions

Day 1: A presentation on Fundamentals and Emerging Trends in Additive Manufacturing was delivered by Dr. K Siva Prasad, Head R&D, T-Works, Hyderabad. This lecture provided an insight into the following:

• Overview of AM technologies and industry evolution.

• Classification of additive manufacturing processes.

• Recent market trends and industrial adoption.

Day 2: A presentation on Advanced Materials and Process Technologies was delivered by Dr. K Siva Prasad, Head R&D, T-Works, Hyderabad. This lecture provided an insight into the following:

• Metal additive manufacturing processes.

• Polymer, ceramic, and composite materials for AM.

• Process parameter optimization and quality control.

Day 3: A presentation on Design for Additive Manufacturing (DfAM) was delivered by Dr. Murahari Kolli, Associate Professor, Department of Mechanical Engineering Lakireddy Bali Reddy College of Engineering. The following topics were discussed in the session.

• Topology optimization and lattice structures.

• Generative design techniques.

• Case studies on lightweight component design.

Following the lecture, a hands on session was conducted at the IDEA lab on additive manufacturing process

Day 4: A presentation on Industrial Applications and Case Studies was delivered by Dr. TVK Gupta, Associate Professor VNIT Nagpur. In his presentation he touched upon the research being undertaken in the following topics:

• Aerospace and biomedical applications.

• Automotive and tooling applications.

• Industrial success stories and implementation challenges.

Day 5: A presentation on Future Directions and Research Opportunities was delivered by Dr. Murahari Kolli, Associate Professor, Department of Mechanical Engineering Lakireddy Bali Reddy College of Engineering. The following topics were discussed in the session, which provided an in-depth insight on

• Industry 4.0 integration with additive manufacturing.

• Artificial Intelligence and machine learning in AM.

• Sustainability, circular economy, and future research directions.

5. Key Learning Outcomes

Participants gained knowledge about advanced AM processes, emerging materials, DfAM methodologies, industrial applications, and future research opportunities. The programme enhanced awareness of the technological, economic, and sustainability aspects of additive manufacturing.

6. Feedback and Evaluation

Participants expressed positive feedback regarding the quality of expert lectures, practical case studies, and interactive discussions. The programme successfully met its intended learning objectives and encouraged participants to pursue further research and collaborations in additive manufacturing.

7. Conclusion

The Five-Day Faculty Development Programme on 'Latest Developments in Additive Manufacturing Technologies' provided a comprehensive understanding of current advancements and future directions in additive manufacturing. The FDP served as an excellent platform for knowledge sharing, professional development, and networking among academicians and industry experts.

ABOUT THE INSTITUTE

The Lakireddy Bali Reddy College of Engineering (LBRCE) was established in the year 1998 by Lakireddy Bali Reddy Charitable Trust, whose architect is Er. Lakireddy Bali Reddy. The institute is established with the sole aim of providing high quality educational opportunities in the field of science, engineering, technology and management. It is spread over 60 acres of sprawling lush green landscape spotted with orchids and grooves. It is approved by AICTE, affiliated to JNTUK, Kakinada and attained autonomous status in the year 2010. It attained NAAC accreditation status with 'A' Grade. The institute is certified by ISO: 9001-2015.

ABOUT THE DEPARTMENT

The department of Aerospace Engineering was started in the year 2011. The department offers 4years undergraduate program, B.Tech in Aerospace Engineering. The department has a team of highly qualified, dedicated, and motivated faculty and well-equipped laboratories. The department has laboratories, classrooms, faculty rooms, sophisticated lab equipment's and well-versed library. The department has a wide range of teaching activities.

ABOU THE PROGRAMME

The program is intended to impart to the participants the knowledge on the following topics in Additive Manufacturing.

- Overview of Additive Manufacturing
- History and Evolution of 3D Printing
- Fused Deposition Modeling (FDM)
- Stereolithography (SLA)
- Selective Laser Sintering (SLS)
- Direct Metal Laser Sintering (DMLS) / SLM
- Binder Jetting, Material Jetting, Electron Beam Melting
- CAD Tools for AM
- Post-Processing Techniques: Support Removal, Surface Finishing, Heat Treatment

RESOURCE PERSON

Dr. K Siva Prasad, Head R&D, T-Works Hyderabad.
Dr. TVK Gupta, Associate Professor, VNIT Nagpur.
Dr. Murahari Kolli, Associate Professor, LBRCE Mylavaram.

ELIGIBILITY

The programme is open to all faculty members, Research scholars and M. Tech/ME students of AICTE approved Engineering colleges and industry personnel who are working in related fields.

Registration Link:
https://forms.gle/uMcGo1na4vKoTpog9

Address for Correspondence:
Dr. A Revanth Reddy
E-mail: revman16388@gmail.com
Mobile: 7598708977

One-week Faculty development on
"Latest Developments in Additive Manufacturing Technologies"
05th to 9th May. 2025

Chief Patrons
Sri. Lakireddy Jaya Prakash Reddy
Honorary Chairman
Sri Lakireddy Prasad Reddy
Chairman
Sri Lakireddy Vijay Kumar Reddy
Vice-Chairman

Patrons
Sri G. Srinivasa Reddy
President, LBRCT

Dr. K. Appa Rao
Principal

Convener
Dr. P. Lovaraju
Professor & HOD
Aerospace Engineering
Coordinators
Dr. A Revanth Reddy
Associate Professor
Dept. of Aerospace Engineering
Mr. Indrasena Reddy
Sr. Assistant Professor
Dept. of Aerospace Engineering

Organized by:
DEPARTMENTS OF AEROSPACE ENGINEERING
LAKIREDDY BALIREDDY COLLEGE OF ENGINEERING (AUTONOMOUS), MYLAVARAM
KRISHNA (Dt), A.P.