

**Report on Five Days Faculty Development Program on "3D Printing and Additive Manufacturing Technology" 26<sup>th</sup> Feb to 1<sup>st</sup> Mar 2024 funded by the National Centre for Additive Manufacturing (NCAM), Ministry of Electronics and Information Technology, Govt. of Telangana.**

**Brochure**

**Chief Patrons:-**

Dr.A.C.Shanmugam,  
B.A.LL.B, FIMSA, FRCPs (Glasgow, UK),  
Chairman, RRG1

Sri.A.C.S.Arunkumar,  
B.Tech(Hons), LMISTE, MIET, (UK), LMCSI.  
Vice-Chairman, RRG1

**Patrons:-**

Dr. S. Vijayanand, Executive Director, RRG1  
Sri. C. N. Seetharam, I.A.S.Rtd., CEO, RRG1  
Dr. S. Jayabalan, Special Officer, RRG1  
Dr. A.K. Mariyappan, Rector, RRCE

**Co-Patrons:-**

Dr. R. Balakrishna, Principal, RRCE  
Dr. J. Amutharaj, Vice-Principal, RRCE  
Dr. S. Usha, Dean R&I, RRCE  
Dr. Thangadurai. N, Dean IPS, RRCE

**Programme Conveners:-**

Dr. Vishwanath K.C., Asso. Prof., Dept. of R&A  
Dr. N. Sreenivasulu Reddy, Asso. Prof., Dept. of R&A

**Organizing Committee:-**

Dr. M. Karthikeyan, HOD, Dept. of R & A  
Dr. C. Ramesh, HOD, Dept. of ME  
Dr. D. Sivakumar, Professor, Dept. of CSE

**Co-ordinators:-**

Dr. Sathiesha V., Asso. Prof., Dept. of R&A  
Dr. Thanuj Kumar. M., Asst. Prof., Dept. of ME  
Dr. Madhu. K.S., Asst. Prof., Dept. of ME  
Dr. Radhakrishna R. K., Asst. Prof., Dept. of ME  
Prof. S. Praveen Kumar, Asst. Prof., Dept. of ME  
Prof. B. S. Dhanajaya, Asst. Prof., Dept. of ME

**Objectives of the ATEP FDP:-**

- > **Educational Empowerment:** The program aims to empower educators with a deep understanding of additive manufacturing technologies and their applications. Participants will gain hands-on experience with various 3D printing techniques, materials, and software tools.
- > **Fostering Innovation:** "Print, Educate, and Innovate" emphasizes the role of educators as innovation enablers. Participants will explore innovative pedagogical approaches and tools to inspire creativity in their students.
- > **Curriculum Enhancement:** Educators will learn how to integrate additive manufacturing concepts into their existing curricula, ensuring that students are well-prepared for the demands of a rapidly evolving workforce.

**Expected Outcome of the FDP:-**

- > Enhanced Awareness on 3D Printing & AM applications
- > Hand-on Experience on 3D Printing
- > Curriculum Development

**Registration Details (Who should attend):-**

Faculty of Mechanical Engineering & Allied Branches, ECE & EEE branches, Research Scholars and PG students

For registration Scan this QR code:



(or) <https://forms.gle/aKLNQP5je7GamVW5A>

**Registration Fee: "FREE"**

No TA/DA and Accommodation will be provided for the participants  
The Maximum number of Participants is limited to 35.

Limited Seats: Register early to secure your spot!

Last Date for Registration: 20-02-2024

Contact: Dr. Vishwanath.K.C Ph: +91-99004 49906

Mail: vishwaB160@gmail.com, vishwanath@rrce.org

A Unit of RajaRajeswari Group of Institutions



**RAJARAJESWARI COLLEGE OF ENGINEERING**

Approved by AICTE, New Delhi, Affiliated to VTU, Bengaluru, Govt. of Karnataka

#14, Ramohalli, Mysuru Road,  
Kumbalagodu, Bengaluru-560074

Phone: +91-80-28437512, +91-80-28437375

Website: [www.rrce.org](http://www.rrce.org)

**Five Days Faculty Development Program  
on**

**3D PRINTING AND ADDITIVE  
MANUFACTURING TECHNOLOGY**

**26<sup>th</sup> Feb - 1<sup>st</sup> March 2024**

*Organized by*

**DEPARTMENT OF  
ROBOTICS AND AUTOMATION  
&  
MECHANICAL ENGINEERING**

*In Association with*



Ministry of  
ELECTRONICS AND  
INFORMATION TECHNOLOGY



**NCAM**  
NATIONAL CENTRE FOR ADDITIVE MANUFACTURING

*M. K. Whetia*  
Professor & Head

Dept. of Robotics and Automation Engg  
Rajeswari College of Engineering  
Bengaluru-74.

*R. R. R. R.*  
Principal

RAJARAJESWARI  
COLLEGE OF ENGINEERING  
Ramohalli Cross, Bengaluru-74

## Brochure

### About MCET:-

Moogambigal Charitable and Educational Trust, Bengaluru was established in the year 1992 with the sole objective of starting institutions of higher education of exemplary stature in the state of Karnataka. In furtherance of this objective, the trust has been establishing institutions of higher learning in the state. Presently the trust is running 8 institutions in Karnataka and 19 institutions in Tamil Nadu in the fields of Medical, Dental, Engineering, and Management Institutes.

### About the Institution:-

RajaraJeswari College of Engineering (RRCE) was established in the year 2006. The Institution is recognized by AICTE, New Delhi, approved by Govt. of Karnataka & is affiliated to Visvesvaraya Technological University (VTU), Belagavi. The Institution is reaccredited by NBA (CSE, ECE, ISE), NAAC 'A+' Grade during 2nd Cycle, HLACT, and ISO 9001-2008 Certified. The Institution offers UG courses in the disciplines of Robotics and Automation, AI&ML, EEE, CIVIL, ECE, CSE, ISE, CSE (IoT and Cyber-Security including Block Chain Technology) and CSE & Design. Post Graduation Courses in Computer Science & Engineering, MBA, MCA & Research Programs in the Department of Mechanical Engineering, Computer Science & Engineering, Management Studies & Mathematics, Physics, Chemistry, Electronics and Communication Engineering, Civil Engineering leading to M.Sc (Engg.) by Research & Ph.D. programs of VTU. The faculty members are highly qualified & experienced. The campus is Wi-Fi enabled with well-equipped state-of-the-art laboratories, computing facilities, a library, sports, and hostel facilities for boys and girls. The college conducted more numbers of international conferences, National conferences, FDP, Seminars, etc. The college is located at a distance of 18 km from Bengaluru City Railway Station on Mysuru Road.

### About the Department:-

The Department of Mechanical Engineering was started in the year 2006 and the Department of Robotics and Automation Engineering was started in the year 2021. These departments have highly qualified and well-experienced faculty with a good track record in Academics, Research and Industry. The department has established with state of art laboratory facilities with advanced software. These departments have conducted several conferences, workshops, FDPs, seminars, and industrial visits. It has a "Centre of Excellence" with Altair Hyper works, Toyota. Currently, the Department of Mechanical Engineering offers a UG program, Ph.D. program. AICTE has sponsored funding of Rs. 16.47 Lakhs under the scheme of MODROB to set up a Center for Research on Automated Machining and Robotics for the Department of Mechanical Engineering. The Department of Robotics and Automation has a Robotics Programming Lab consisting of FANUC 6-axis Industrial ROBOT ER4IA and FANUC ROBOGUIDE software, Automation studio and LABVIEW software.

### About NCAM:-

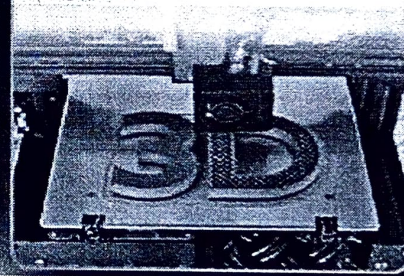
The National Centre for Additive Manufacturing (NCAM) has been established by the Ministry of Electronics and Information Technology (MeitY), Govt. of India and ITE&C Department, Govt. of Telangana in partnership with Industry. It is established with a vision to develop a comprehensive Additive Manufacturing (AM) ecosystem in the county and to position India as a global AM Manufacturing Hub. NCAM aims to create and enable a sustainable ecosystem for product innovation in India with an emphasis on research, design, development, and testing through collaborative efforts between academia, industry, and government using the disruptive technology of AM.

### About NCAM:-

The National Centre for Additive Manufacturing (NCAM) has been established by the Ministry of Electronics and Information Technology (MeitY), Govt. of India and ITE&C Department, Govt. of Telangana in partnership with Industry. It is established with a vision to develop a comprehensive Additive Manufacturing (AM) ecosystem in the county and to position India as a global AM Manufacturing Hub. NCAM aims to create and enable a sustainable ecosystem for product innovation in India with an emphasis on research, design, development, and testing through collaborative efforts between academia, industry, and government using the disruptive technology of AM.

### About ATEP FDP:-

The primary objective of the Additive Technology Enhancement Program (ATEP) of NCAM is to acquaint the participants with the concepts of AM, provide exposure to the various AM technologies, materials science aspect for AM, CAD modelling of AM processes, and their applications in various industry domains. Also, this programme can update the participants about the AM landscape with its latest advancements, opportunities, emerging trends and challenges involved in adoption in India. This programme also aims to provide hands-on exposure to the participants on 3D printers and for 3D printing of parts.





Professor & Head

Dept. of Robotics and Automation Engg  
RajaraJeswari College of Engineering  
Bengaluru-74.




Principal

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Ramohalli Cross, Bengaluru-74


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Banner




# RAJARAJESWARI COLLEGE OF ENGINEERING

#14, Ramohalli Cross, Mysore Road, Bengaluru – 560 074




**Chief Patron**  
**Dr. A.C. Shanmugam**  
B.A. LLB, FIMSA, FRCPS (Glasgow, UK)  
**Founder Chancellor**  
Dr. M.G.R. E & RI, Chennai & RRI, Bengaluru.


*Welcome to all the participants for*  
**One Week Faculty Development Program**  
**ADDITIVE TECHNOLOGY ENHANCEMENT PROGRAM (ATEP)**  
**ON**  
**"3D PRINTING AND ADDITIVE MANUFACTURING TECHNOLOGY"**



**Patron**  
**Sri. A.C.S Arun Kumar**  
B.Tech (Hons), LMISTE, MIET, (UK), LMCSI, MIEEE, MCSI, MISTE, CCRI (India)  
**President**  
Dr. M.G.R. E & RI, Chennai & RRI, Bengaluru.



**MINISTRY OF  
ELECTRONICS AND  
INFORMATION TECHNOLOGY**



**NCAM**  
NATIONAL CENTRE FOR ADDITIVE MANUFACTURING

*Organized by*

## Dept. of Robotics & Automation and Mechanical Engineering

Date: 26<sup>th</sup> Feb to 1<sup>st</sup> March 2024 Time: 9:00AM to 04:30PM Venue: Aryabhata Seminar Hall

**Dr.S.Vijayanand, M.Tech. Ph.D,**  
Executive Director, RRG1

**Sri.C.N.Seetharaman, IAS(Retd.)**  
Chief Executive Officer, RRG1

**Dr.S.Jeyabalan, M.B.A. Ph.D.**  
Special Officer, RRG1

**Dr.A.K.Mariappan**  
Rector, RRCE

**Dr.R.Balabrinha**  
Principal


**Dr.J.Amutharaj**  
Vice Principal

**Dr.Usha S**  
R & D, Dean

**Dr. Karthikeyan M**  
HOD, Dept. of R & A

**Dr. Ramesh C**  
HOD, Dept. of Mech

**Dr. Vishwanath K C**  
Program Convener


  
**Professor & Head**  
 Dept. of Robotics and Automation Engg  
 RajaRajeswari College of Engineering  
 Bengaluru-74.


  
**Principal**  
 RAJARAJESWARI  
 COLLEGE OF ENGINEERING  
 Ramohalli Cross, Bengaluru-74

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**Program Schedule of Five Days Faculty Development Program on "3D Printing and Additive Manufacturing Technology" 26<sup>th</sup> Feb to 1<sup>st</sup> Mar 2024, funded by the National Centre for Additive Manufacturing (NCAM), Ministry of Electronics and Information Technology, Govt. of Telangana.**

Monday, 26-02-2024 (DAY1)			
Time	Name of the Speaker and Designation	Organization	Topics to be covered
9:00 - 9:30 AM	Inauguration		
9:30 - 11:00AM	Dr.U.Chandrasekhar, CEO (Chief Guest)	GMSIR,Bangalore	Brief introduction about 3Dprinting & Industry 4.0
11.00 -11.15AM	Tea Break		
11.15 -12:45 PM	Dr.T.RamPrabhu Scientist B	DRDO	Project proposal related to 3DPrinting.
12:45 - 1:45PM	Lunch		
1:45 - 3:15 PM	Mrs.Akshatha Addwize leader-Manager	Wipro3D	Overview of Additive Technologies
3:15 - 3.30 PM	Tea Break		
3.30 - 4:30 PM	LabSession : Demo of DLP printer B.S.Manish, Wipro 3D		
Tuesday, 27-02-2024 (DAY2)			
9:30 - 11:00AM	Dr.Dheepa Srinivasan Chief Engineer	Pratt & Whitney	Additive Manufacturing Applications in Gas Turbines
11.00-11.15AM	Tea Break		
11.15-12:45 PM	Mr.Manjunath B NScientist B	CMTI,Bangalore.	Metal additive manufacturing (DMLS and DMD Technologies) or Design for AM
12:45-1:45PM	Lunch		
1:45 - 3:15 PM	Mrs.Akshatha Addwize leader -Manager	Wipro3D	Metal file preparation Demo
3:15 - 3.30 PM	Tea Break		
3.30 -4:30 PM	Lab Session: File preparation exercise Mr.B.S.Manish, Wipro 3D		

  
Professor & Head  
Dept. of Robotics and Automation Engg  
RajaRajeswari College of Engineering  
Bengaluru-74.

  
Principal  
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Wednesday, 28-02-2024 (DAY3)			
9:30 - 11:00AM	Dr.Vasu M Professor.	National Institute of Technology, Tiruchirappalli TamilNadu	Introduction to Additive Manufacturing Technology.
11.00 - 11.15AM	Tea Break		
11.15 - 12:45 PM	Dr.Vasu M Professor.	National Institute of Technology, Tiruchirappalli TamilNadu	Optimization of Additive Manufacturing Technology.
12:45 - 1:45PM	Lunch		
1:45 - 3:15 PM	Dr.S.Vinodh Professor	National Institute of Technology, Tiruchirappalli TamilNadu	Product development & Additive Manufacturing
3:15 - 3.30 PM	Tea Break		
3.30 - 4:30 PM	Dr.S.Vinodh Professor	National Institute of Technology, Tiruchirappalli TamilNadu	Sustainable Additive Manufacturing and Industry 4.0
Thursday, 29-02-2024 (DAY4)			
9:30 - 11:00AM	Mr.Sai Rakesh Addwize Engineer	Wipro 3D	DfAM for Laser Powder Bed Fusion
11.00 - 11.15 AM	Tea Break		
11.15 - 12:45 PM	Industrial Visit	Wipro 3D	Polymer printing
12:45 - 1:45 PM	Lunch		
1:45 - 3:15 PM	Industrial Visit	Wipro 3D	Metal Printing
3:15 - 3.30 PM	Tea Break		
3.30 - 4:30 PM	Industrial Visit	Wipro 3D	Post Processing and Quality
Friday, 01-03-2024 (DAY5)			
9:30 - 11:00AM	Mr.Sai Rakesh Addwize Engineer	Wipro 3D	Metal Materials for AM
11.00 - 11.15 AM	Tea Break		
11.15 - 12:45 PM	Lab Session : Fusion 360 Demo Mrs.Akshatha, Wipro 3D		
12:45 - 1:45 PM	Lunch		
1:45 - 3:15 PM	Dr. Chandrushekar A Professor	Bangalore Institute of Technology, Bangalore	Additive Manufacturing technology & industry 4.0
3:15 - 3.30 PM	Tea Break		
3.30 - 4:30 PM	ASSESSMENT & FEEDBACK, Valedictory		

*M. J. ...*  
Professor & Head  
Dept. of Robotics and Automation Engg  
Rajarajeswari College of Engineering  
Bangaluru-74.

*R. ...*  
Principal  
RAJARAJESWARI  
COLLEGE OF ENGINEERING  
Ramohalli Cross, Bengaluru-74

### List of participants attended the FDP on "3D Printing and Additive Manufacturing Technology"

Sl. No	Name as per the registration in the AICTE ATAL portal	Designation	Name of the college
1	Dr. Sreenidhi Sharma	Associate Professor	ACS College of Engineering
2	Mr. Ravindra K G	Assistant Professor	Bangalore institute of technology
3	Dr. K S Madhu	Assistant Professor	Rajarajeswari College of engineering
4	Mr. Vinod	Assistant Professor	Amruta Institute of Engineering and Management science Bangalore
5	Dr. Archana D P	Assistant Professor	Bangalore Institute of Technology
6	Dr. Swetha K B	Assistant Professor	Sapthagiri college of Engineering
7	Dr. Chandrashekar A	Assistant Professor	Bangalore Institute of Technology
8	Dr. Babu E R	Assistant Professor	Bangalore Institute of Technology
9	Dr. Chanakeshava Naik N	Assistant Professor	BGS College of Engineering and Technology
10	Mr. Hemanth Kumar	Assistant Professor	Bangalore Institute of Technology
11	Dr. Nagabhushana Narasappa	Assistant Professor	New Horizon College of Engineering
12	Mr. Chethan D	Assistant Professor	NMIT
13	Mr. Bappugowda	Assistant Professor	BNM INSTITUTE OF TECHNOLOGY
14	Dr. M.C. Manjunath	Associate Professor	Bangalore Institute of technology
15	Dr. Reddappa	Associate Professor	Bangalore Institute of Technology
16	Mr. Premchanda	Assistant Professor	Bangalore Institute of Technology
17	Mr. Jagadessha N	Assistant Professor	Bangalore Institute of Technology
18	Mr. Vishwanath B R	Assistant Professor	BNMIT
19	Mr. Avinash	Assistant Professor	NITTE MEENAKSHI INSTITUTE OF TECHNOLOGY
20	Dr. Sivakumar D	Professor	Rajarajeswari College of Engineering

*M. Lakshmi*  
Professor & Head

Head of Robotics and Automation Engg  
Rajarajeswari College of Engineering

*M. Lakshmi*  
Principal

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21	Dr. Ashok kumar	Professor	ACS College of Engineering
22	Dr. Thejaraju	Assistant Professor	CHRIST Deemed to be University Bangalore
23	Dr. Sowmya	Assistant Professor	GITAM Bangalore campus
24	Mrs. Manasa G	Assistant Professor	Rajarajeshwari college of engineering
25	Mr. Anand	Assistant Professor	P E S College of Engineering Mandya
26	Dr. Satheesha V	Associate Professor	RajaRajeswari College of Engineering
27	Mrs. Nithyasree	Assistant Professor	Dr. Ambedkar Institute of Technology
28	Mr. Rajesh G L	Assistant Professor	K.S Institute of Technology
29	Dr. Rahdakrishna R K	Assistant Professor	Rajarajeswari College of Engineering
30	Mr. Karthik S	Assistant Professor	Acharya Institute of Technology
31	Dr. Karthikeyan M	Professor	RajaRajeswari College of Engineering
32	Mr. Dhananjya B S	Assistant Professor	Rajarajeswari college of engineering
33	Mrs. Rashmi	Assistant Professor	Rajarajeshwari college of engineering
34	Mrs. Suguna G C	Assistant Professor	JSS Academy of Technical Education
35	Dr. N. Sreenivasalu reddy	Associate Professor	Rajarajeswari College of Engineering
36	Dr. Vasanth Kumar	Assistant Professor	Bangalore Institute of Technology
37	Dr. Y. J. Manjunath	Assistant Professor	Bangalore Institute of Technology
38	Mr. Kamalakar	Assistant Professor	RRCE
39	Mr. Praveen Kumar S	Assistant Professor	RajaRajeswari College of Engineering
40	Dr. Madhu	Industrial Personnel	Jindal Aluminium Limited
41	Dr. Sunil Raj	Associate Professor	A C S College of Engineering
42	Mr. Kumar	Assistant Professor	ACS college of engineering
43	Mr. Rakshith	Industrial Personnel	Echidna Software Private Limited
44	Dr. Sunitha manoj	Associate Professor	Rajarajeswari college of engineering


*M. H. H. H.*  
**Professor & Head**  
 Dept. of Robotics and Automation Engg  
 Rajeswari College of Engineering  
 Bangalore-74.

*RRCE*  
**RAJARAJESWARI**  
**COLLEGE OF ENGINEERING**  
 Ramohalli Cross, Bengaluru-74

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45	Mr.Ramesh S	Assistant Professor	RajaRajeswari College of Engineering
46	Dr. Jobish Johns	Professor	Rajarajeswari College of Engineering
47	Mr.Abdul Razak	Associate Professor	P A College of Engineering, Mangalore
48	Mr.Bharath V	Assistant Professor	RNS INSTITUTE OF TECHNOLOGY
49	Mr.Arul	Associate Professor	Agni College of Technology
50	Mr.Nataraj P	Assistant Professor	Manakula Vinayagar Institute of Technology

  
Professor & Head  
Dept. of Robotics and Automation Engg  
RajaRajeswari College of Engineering  
Bengaluru-74

  
Principal  
RAJARAJESWARI  
COLLEGE OF ENGINEERING  
Ramohalli Cross, Bengaluru-74



## Day 1 (26/02/2024 )


### ➤ Inaugural Function


Five Days Faculty Development Program on "3D Printing and Additive Manufacturing Technology" funded National Centre for Additive Manufacturing (NCAM), Ministry of Electronics and Information Technology, Govt. of Telangana, FDP is commenced on 26<sup>th</sup> Feb 2024 and inaugurated by Dr.U.Chandrasekhar, GMSIR, Bangalore (Chief Guest), Bangalore and be the Chief Guest for the 'Inaugural Ceremony' of FDPs on 26<sup>th</sup> Feb 2024 from 9:00 a.m. to 11.30 a.m (IST).

Being a distinguished academic leader, Dr.U.Chandrasekhar has shared his expertise and views on evolving trends, Additive technology, disruptive technologies, changing job scenarios, academia-industry linkage, and translating research into impactful applications to the participants.

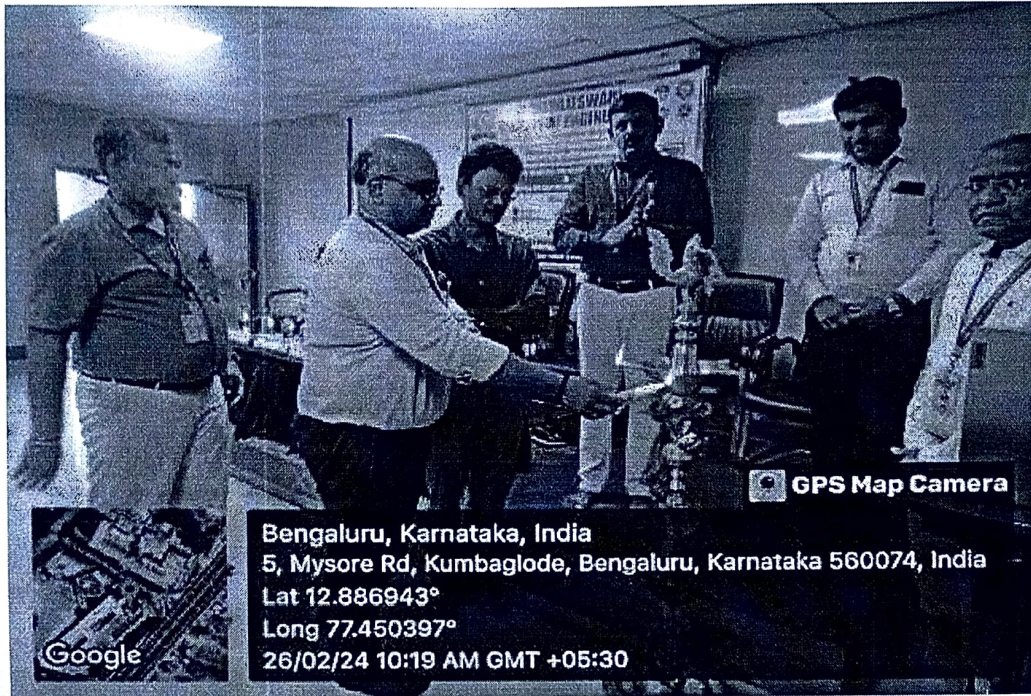


Chief Guest Dr.U Chandrasekhar, CEO, GMSIR (Chief Guest), Bangalore

  
Professor & Head  
Dept. of Robotics and Automation Engg  
Rajawari College of Engg

  
Principal  
RAJARAJESWARI  
COLLEGE OF ENGINEERING  
Ramohalli Cross, Bengaluru-7<sup>th</sup>

**Report on Five Days Faculty Development Program on "3D Printing and Additive Manufacturing Technology" 26<sup>th</sup> Feb to 1<sup>st</sup> Mar 2024 funded by the National Centre for Additive Manufacturing (NCAM), Ministry of Electronics and Information Technology, Govt. of Telangana.**



Lighting the lamp by Chief Guest Dr.U Chandrasekhar, CEO, GMSIR (Chief Guest), Bangalore

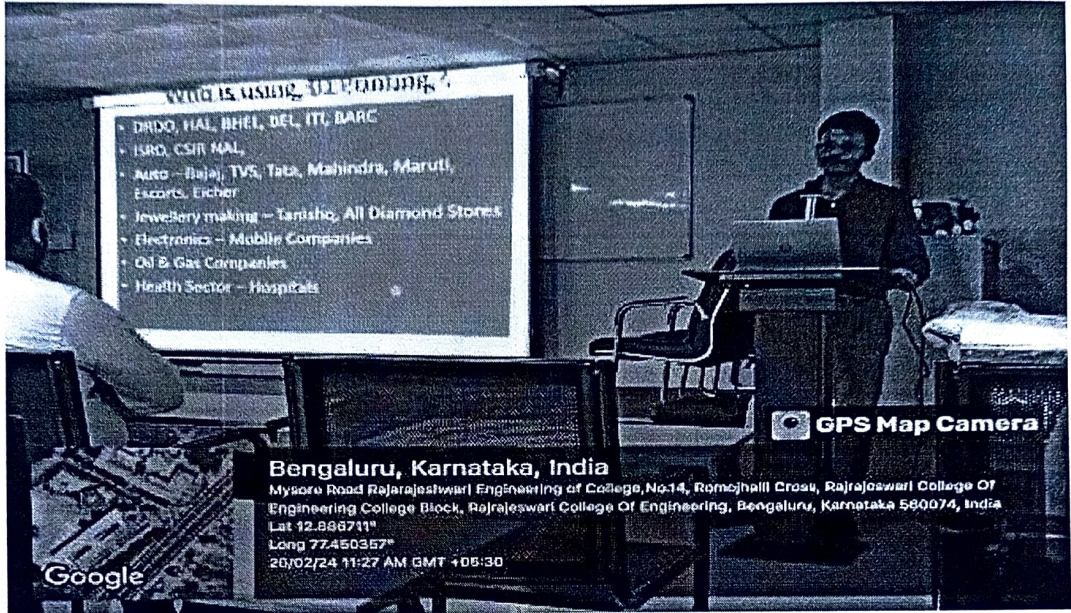


Felicitations to Chief Guest Dr.U Chandrasekhar, CEO, GMSIR (Chief Guest), Bangalore

*M. K. M. N. S.*  
 Dept. of Robotics and Automation  
 RajaRajeswari College of Engineering  
 Bengaluru-74.

*R. R. S.*  
 RAJARAJESWARI  
 COLLEGE OF ENGINEERING  
 Ramohalli Cross, Bengaluru-74

**First Session (10:00 to 11:30 PM)**



Key note speech by Dr.U Chandrasekhar, CEO, GMSIR (Chief Guest), Bangalore

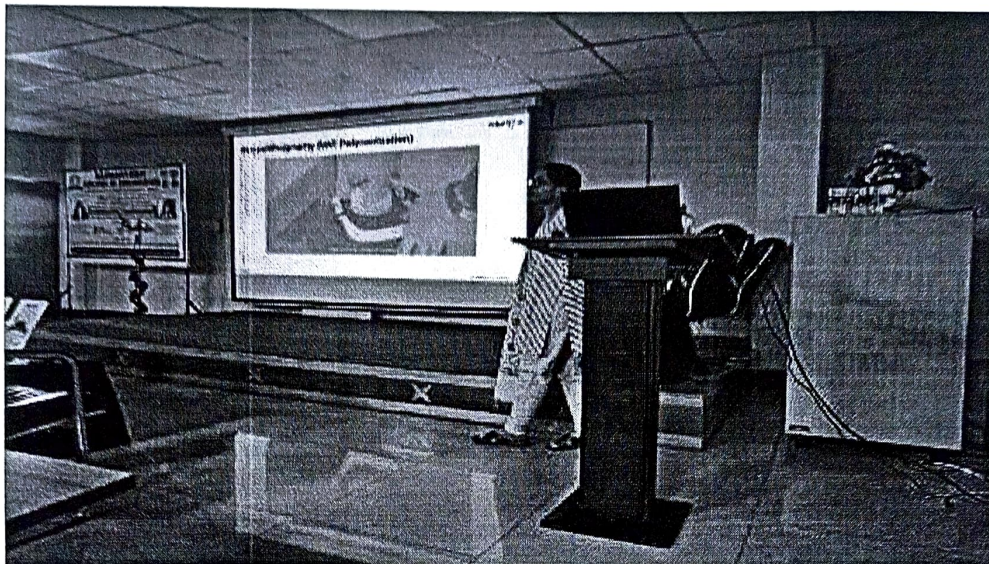


Key note speech by Dr.U Chandrasekhar, CEO, GMSIR (Chief Guest), Bangalore

*M. H. M. S.*  
**Professor & Head**  
 Dept. of Robotics and Automation Engg  
 Rajarajeshwari College of Engineering  
 Bengaluru-74.

*R. S. S.*  
**Principal**  
 RAJARAJESHWARI  
 COLLEGE OF ENGINEERING  
 Ramohalli Cross, Bengaluru-74

Second Session (11:45 to 01:00 PM )



Presentation by Mrs.Akshatha Addwizeleader-Manager, Wipro3D, Bangalore

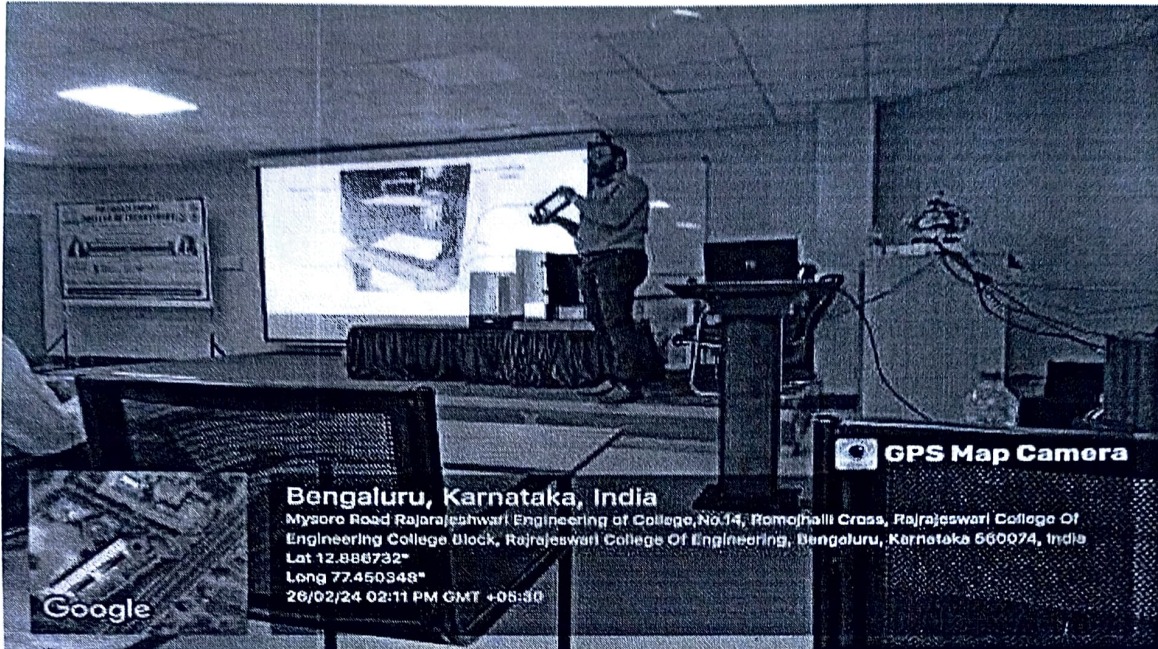


Presentation by Mrs.Akshatha Addwizeleader-Manager, Wipro3D, Bangalore

*M. Lakshmi*  
Professor & Head  
Dept. of Robotics and Automation Engg  
RajaRajeswari College of Engineering  
Bengaluru-74.

*R. Rajeswari*  
Principal  
RAJARAJESWARI  
COLLEGE OF ENGINEERING  
Ramohalli Cross, Bengaluru-74

Third Session (1:30 to 3:00 PM)



Lab Session : Demo of DLP printer, Mr.B.S.Manish, Wipro 3D, Bangalore



Lab Session : Demo of DLP printer, Mr.B.S.Manish, Wipro 3D, Bangalore

*M. S. Manish*  
Professor & Head  
Dept. of Robotics and Automation Engg  
Rajarajeshwari College of Engg

*Rajeshwari*  
Principal  
RAJARAJESHWARI  
COLLEGE OF ENGINEERING  
Ramohalli Cross, Bengaluru-77

**Fourth Session (3:15 to 4:30 PM )**



Presentation by Dr.T.RamPrabhu, Scientist B, DRDO, Bangalore



Presentation by Dr.T.RamPrabhu, Scientist B, DRDO, Bangalore

*M. K. M. S.*  
Professor & Head  
Dept. of Robotics and Automation Engg  
RajaRajeswari College of Engineering  
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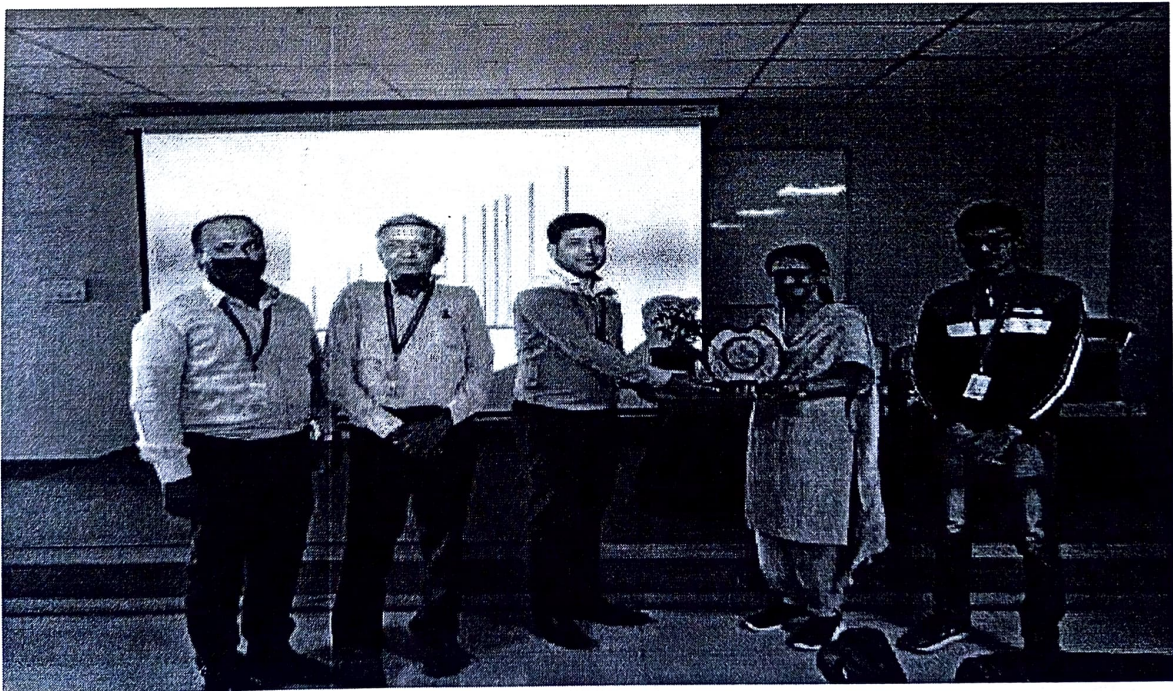
*M. K. M. S.*  
Principal  
RAJARAJESWARI  
COLLEGE OF ENGINEERING  
Ramohalli Cross, Bengaluru-74

**Day 2 (27/02/2024)**


**First Session (09:30 to 11:00 PM )**



Presentation by Dr.Dheepa, Srinivasan, Chief Engineer, Pratt & Whitney

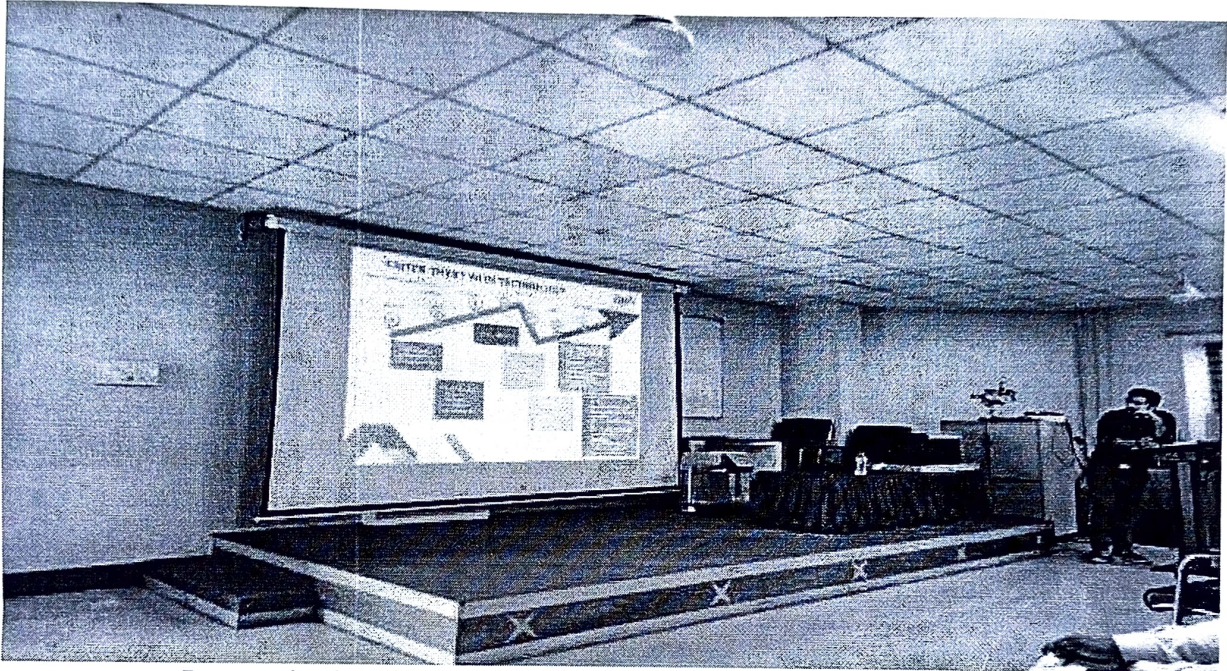


Presentation by Dr.Dheepa, Srinivasan Chief Engineer, Pratt & Whitney

  
Professor & Head  
Dept. of Robotics and Automation Engg  
Rajeswari College of Engineering  
Bengaluru-74

  
Principal  
RAJARAJESWAR  
COLLEGE OF ENGINEERING  
Ramohalli Cross, Bengaluru-74

Second Session (11:15 to 12:45 PM)



Presentation by Mr. Manjunath B N, Scientist B, CMTI, Bangalore



Presentation by Mr. Manjunath B N Scientist B, CMTI, Bangalore

*M. Manjunath*  
Professor & Head

Dept. of Robotics and Automation Engg  
Rajeswari College of Engineering  
Bengaluru-74.

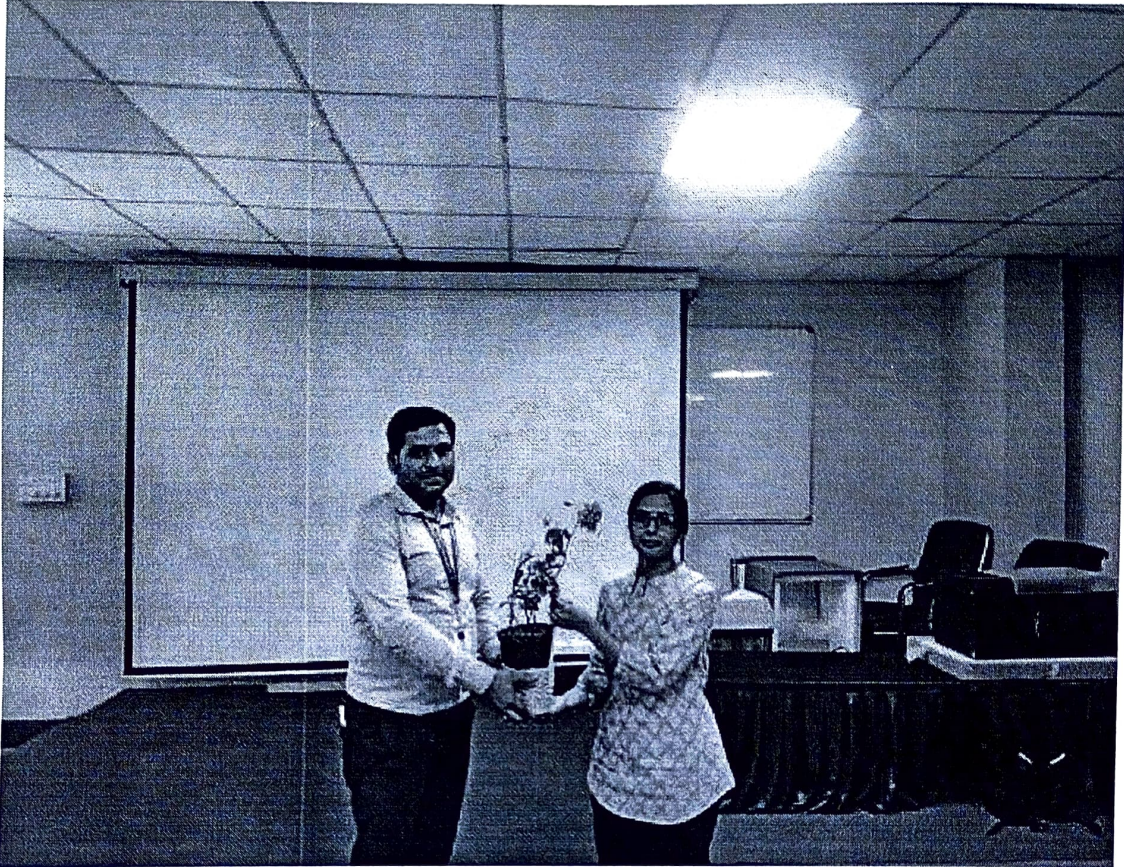
*R. Rajeswari*  
Principal  
RAJESWAR  
COLLEGE OF ENGINEERING  
Ramohalli Cross, Bengaluru-74



Report on Five Days Faculty Development Program on "3D Printing and Additive Manufacturing Technology" 26<sup>th</sup> Feb to 1<sup>st</sup> Mar 2024 funded by the National Centre for Additive Manufacturing (NCAM), Ministry of Electronics and Information Technology, Govt. of Telangana.

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### Third Session (1:45 to 3:15 PM)

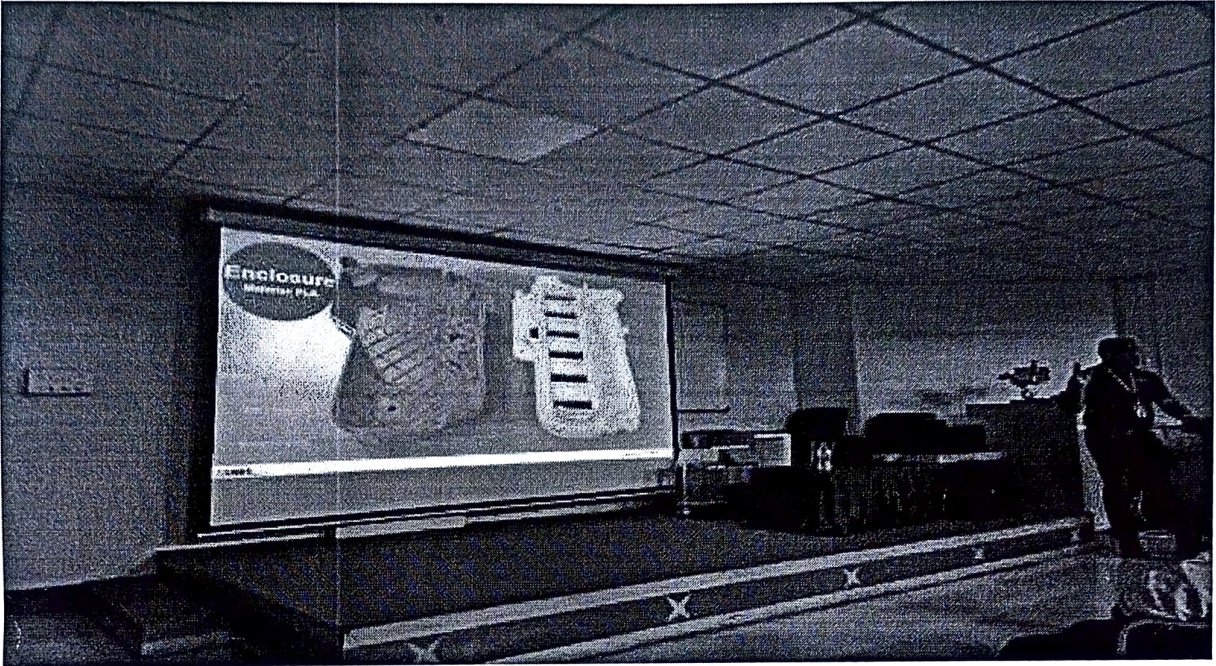


Presentation by Mrs. Akshatha, Addwize leader Manager, Wipro 3D, Bangalore

*M. S. Khanna*  
Professor & Head  
Dept. of Robotics and Automation Engg  
RajaRajeswari College of Engg  
Bengaluru-74

*R. Rajeswari*  
Principal  
RAJARAJESWARI  
COLLEGE OF ENGINEERING  
Ramohalli Cross, Bengaluru-74

### Fourth Session (3:30 to 4:30 PM)



Lab Session: File preparation exercise Mr.B.S.Manish, Wipro 3D



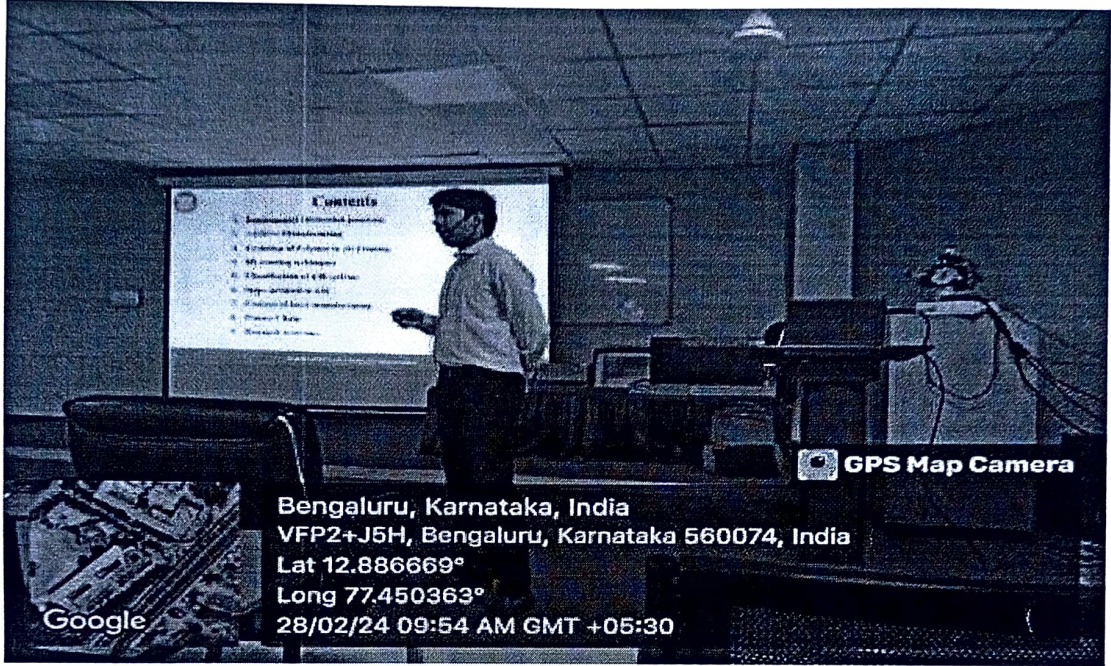
Lab Session/ File preparation exercise Mr.B.S.Manish, Wipro 3D

*M. H. Manish*  
Professor & Head  
Dept. of Robotics and Automation Engg  
Rajeswari College of Engineering

Principal  
RAJESWAR  
COLLEGE OF ENGINEERING  
Ramohalli Cross, Bengaluru-74

Day 3 ( 28/02/2024)

First Session (09:30 to 11:00 PM )



Presentation by Dr. Vasu M, Professor, National Institute of Technology, Tiruchirappalli Tamil Nadu

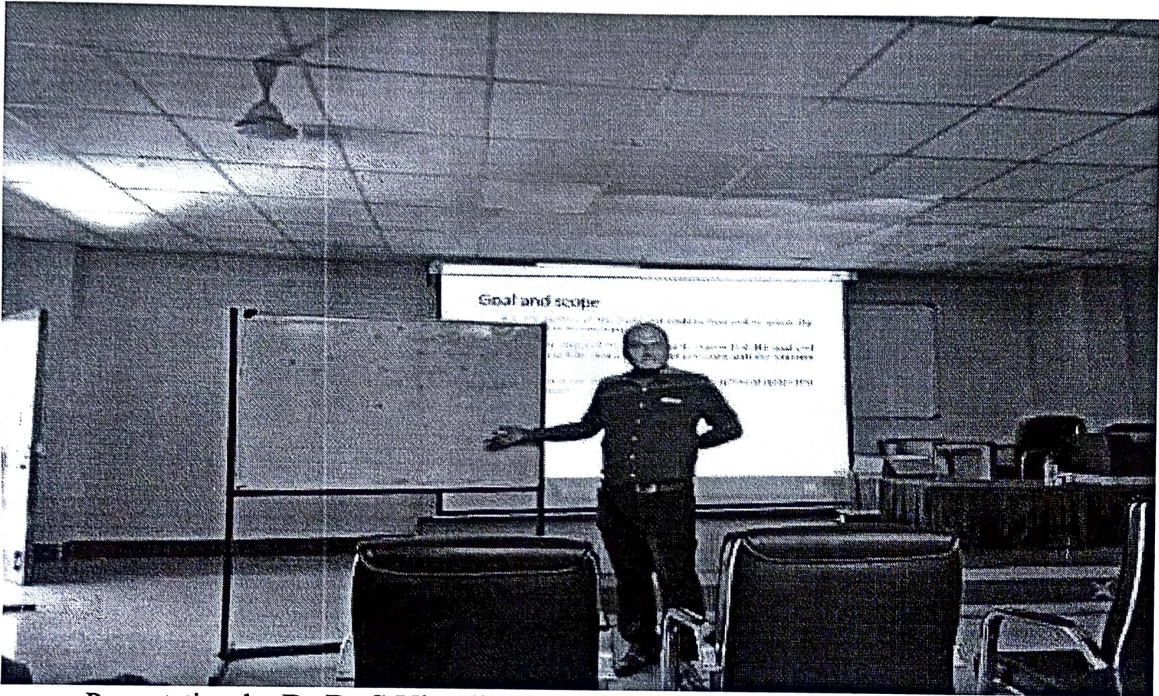


Presentation by Dr. Vasu M, Professor, National Institute of Technology, Tiruchirappalli Tamil Nadu

*M. Vasu M*  
Professor & Head  
Dept. of Robotics and Automation Engg  
RajaRajeswari College of Engineering  
Bengaluru-74.

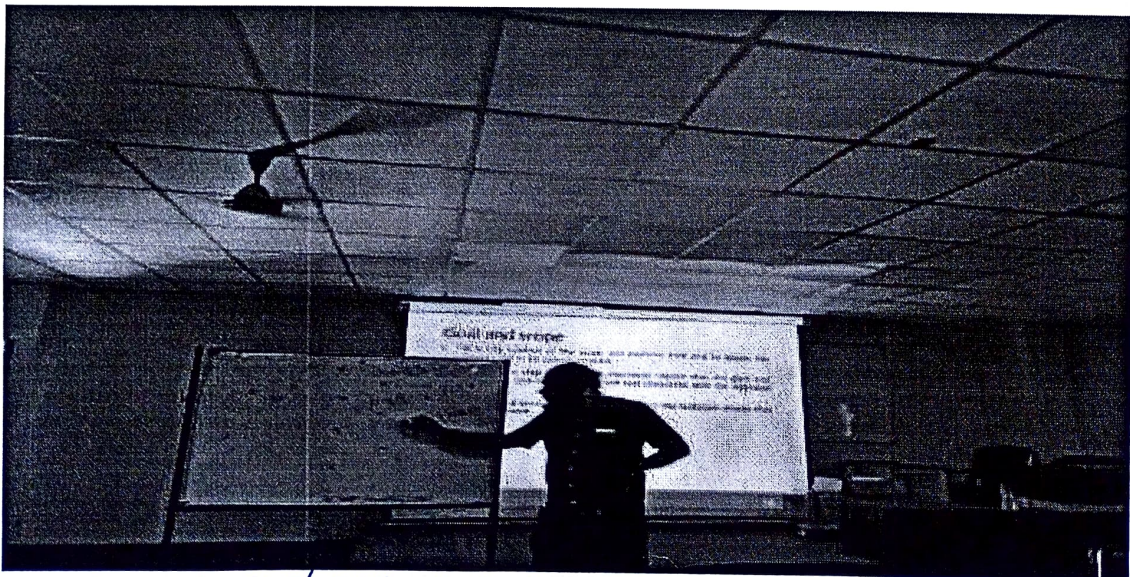
*R. Rajarajeswari*  
Principal  
RAJARAJESWARI  
COLLEGE OF ENGINEERING  
Ramohalli Cross, Bengaluru-74

**Second Session (11:15 to 12:45 PM )**



Presentation by Dr Dr.S.Vinodh, Professor, National Institute of Technology, Tiruchirappalli Tamil Nadu

**Third Session (1:45 to 3:15 PM )**

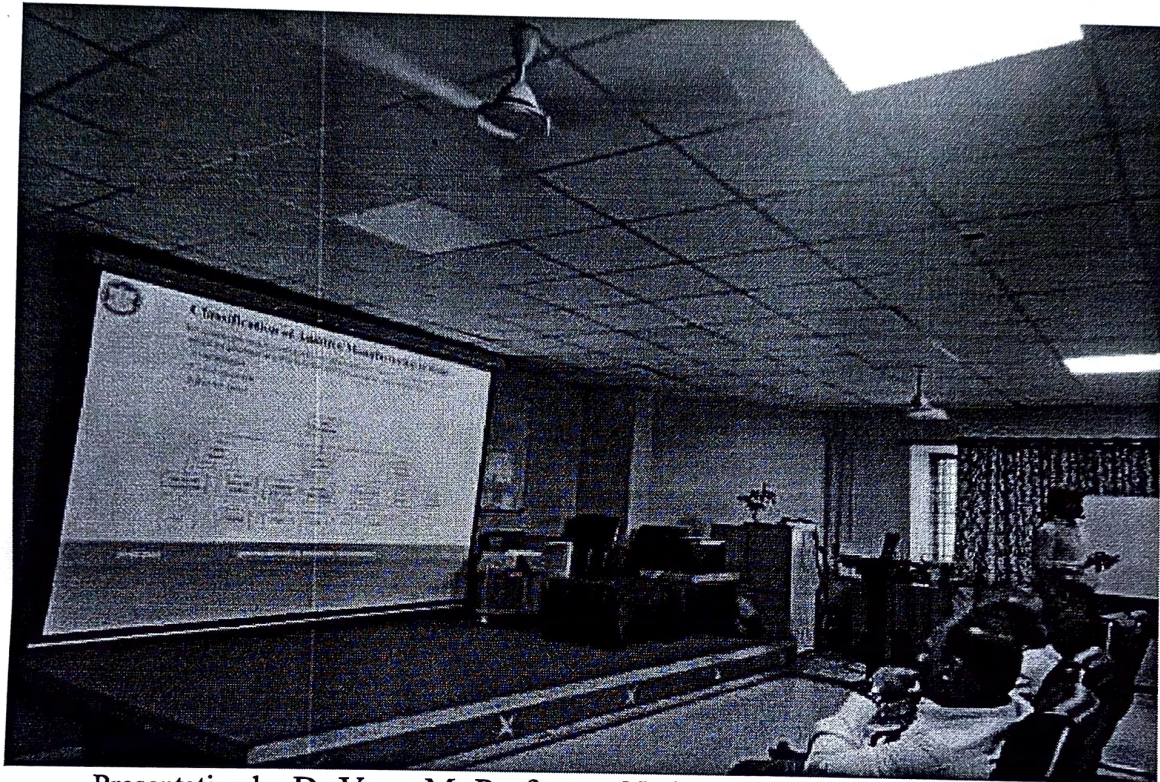


Presentation by Dr.S.Vinodh, Professor, National Institute of Technology, Tiruchirappalli Tamil Nadu

*M. Rajeswari*  
Professor & Head  
Dept. of Robotics and Automation Engg  
RajaRajeswari College of Engineering  
Bengaluru-74.

MAJARAJESWARI  
COLLEGE OF ENGINEERING  
Ramohalli Cross, Bengaluru-74  
*M. Rajeswari*

### Fourth Session (3:30 to 4:30 PM)



Presentation by Dr. Vasu M, Professor, National Institute of Technology, Tiruchirappalli Tamil Nadu

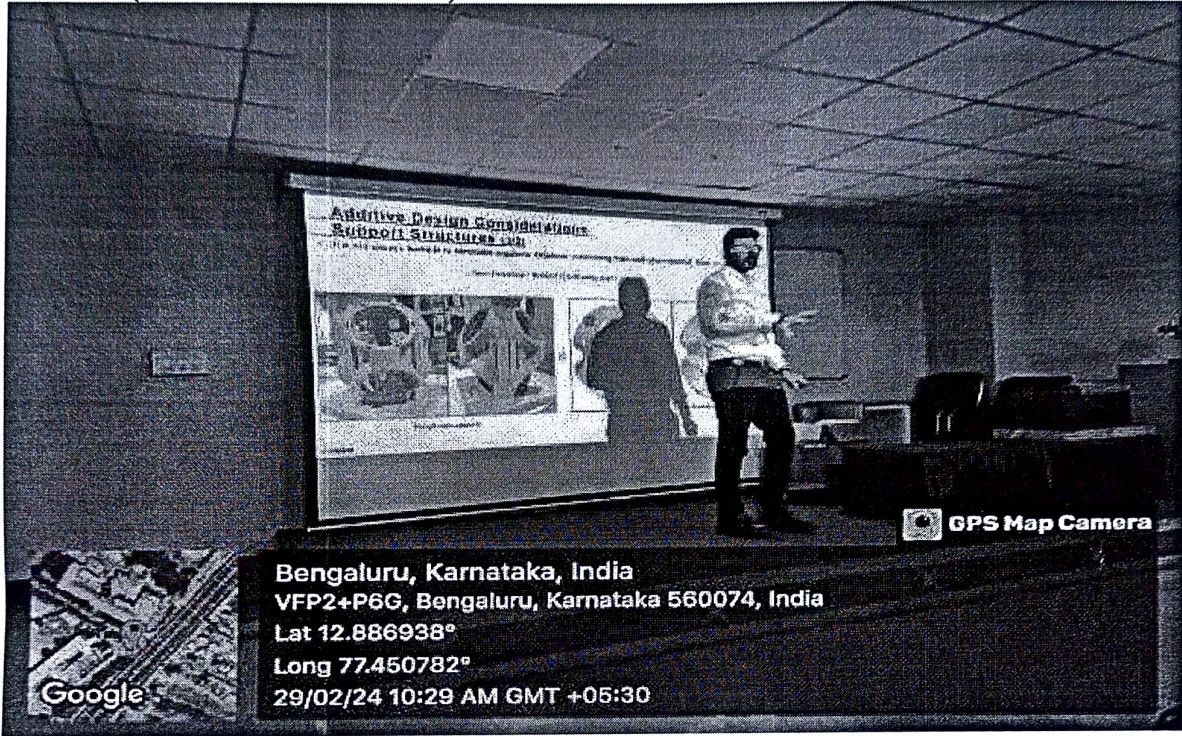
Professor & Head  
Dept. of Robotics and Automation Engg  
RajaRajeswari College of Engineering  
Bengaluru-74.

Principal  
RAJARAJESWARI  
COLLEGE OF ENGINEERING  
Ramohalli Cross, Bengaluru-74

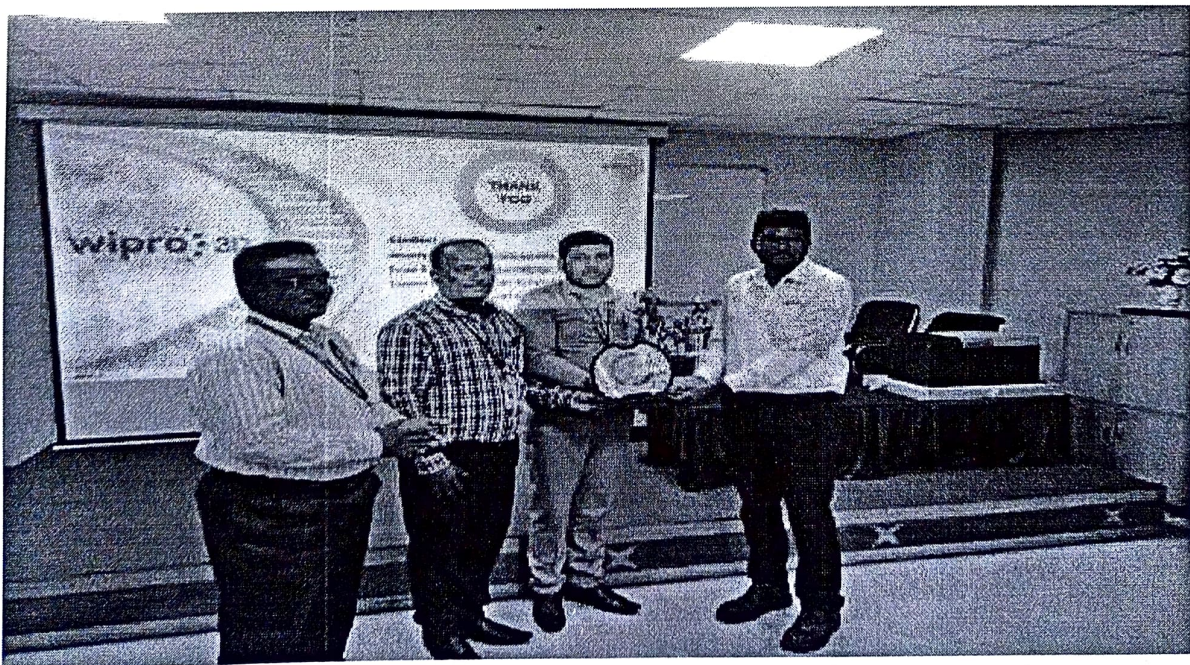
Report on Five Days Faculty Development Program on "3D Printing and Additive Manufacturing Technology" 26<sup>th</sup> Feb to 1<sup>st</sup> Mar 2024 funded by the National Centre for Additive Manufacturing (NCAM), Ministry of Electronics and Information Technology, Govt. of Telangana.

**Day 4 (29/02/2024)**

**First Session (9:30 to 11:00 AM)**



Presentation by Mr.Sai Rakesh Addwize Engineer, Wipro 3D, Bangalore



Presentation by Mr.Sai Rakesh Addwize Engineer, Wipro 3D, Bangalore

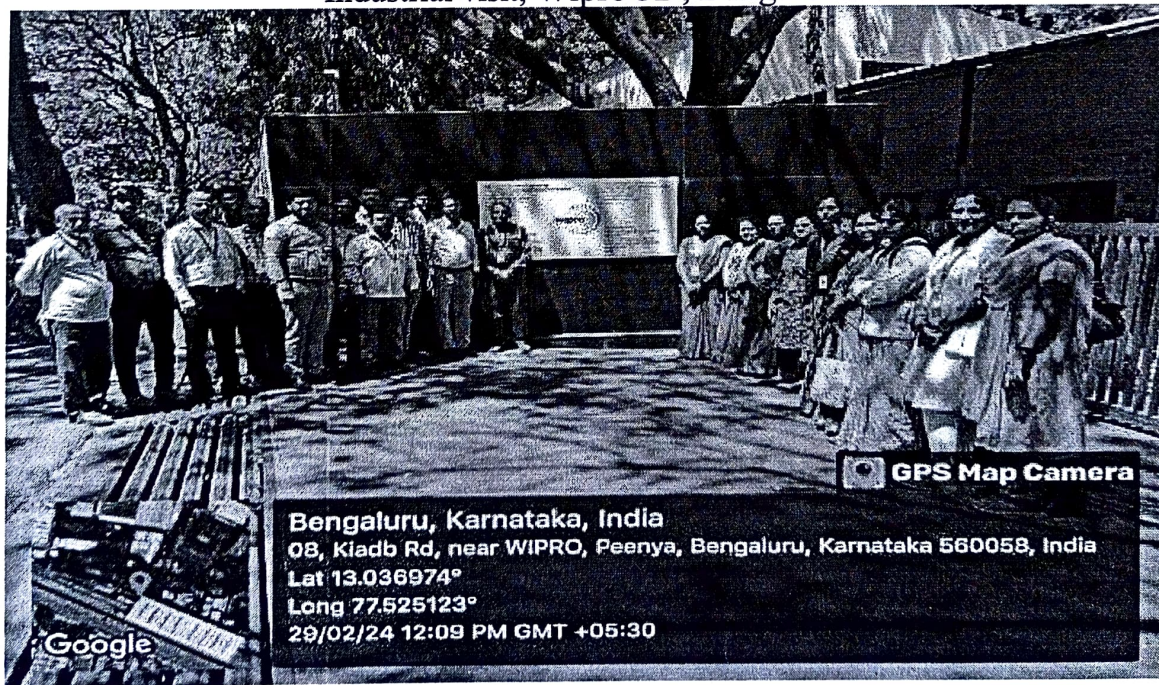
*M. Rajarajeswari*  
Professor & Head  
Dept. of Robotics and Automation Engg  
RajaRajeswari College of Engineering  
Bengaluru-74.

*RajaRajeswari*  
RAJARAJESWARI  
COLLEGE OF ENGINEERING  
Samahalli Cross, Bengaluru-74

Second Session (11:15 to 12:45 PM)



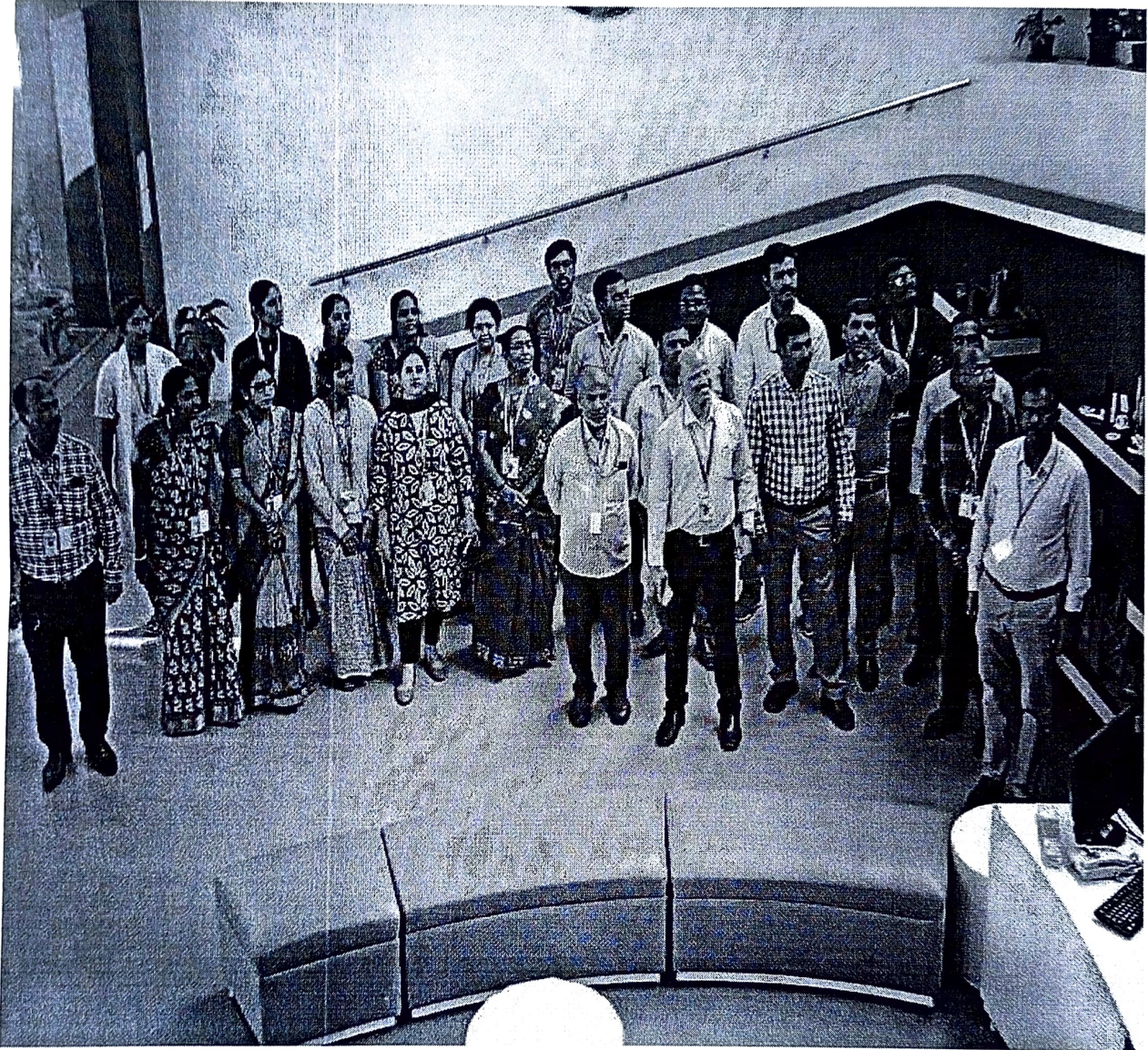
Industrial visit, Wipro 3D, Bangalore



Industrial visit, Wipro 3D, Bangalore

*M. Sathya*  
Professor & Head  
Dept. of Robotics and Automation Engg  
College of Engg

Principal  
*P. Rajeswari*  
RAJAJESWARI  
COLLEGE OF ENGINEERING  
Ramohalli Cross, Bengaluru-74



Industrial visit, Wipro 3D, Bangalore

*M. Subhakar*  
Professor & Head

Dept. of Robotics and Automation Engg  
Rajarajeswari College of Engineering  
Bengaluru-74.

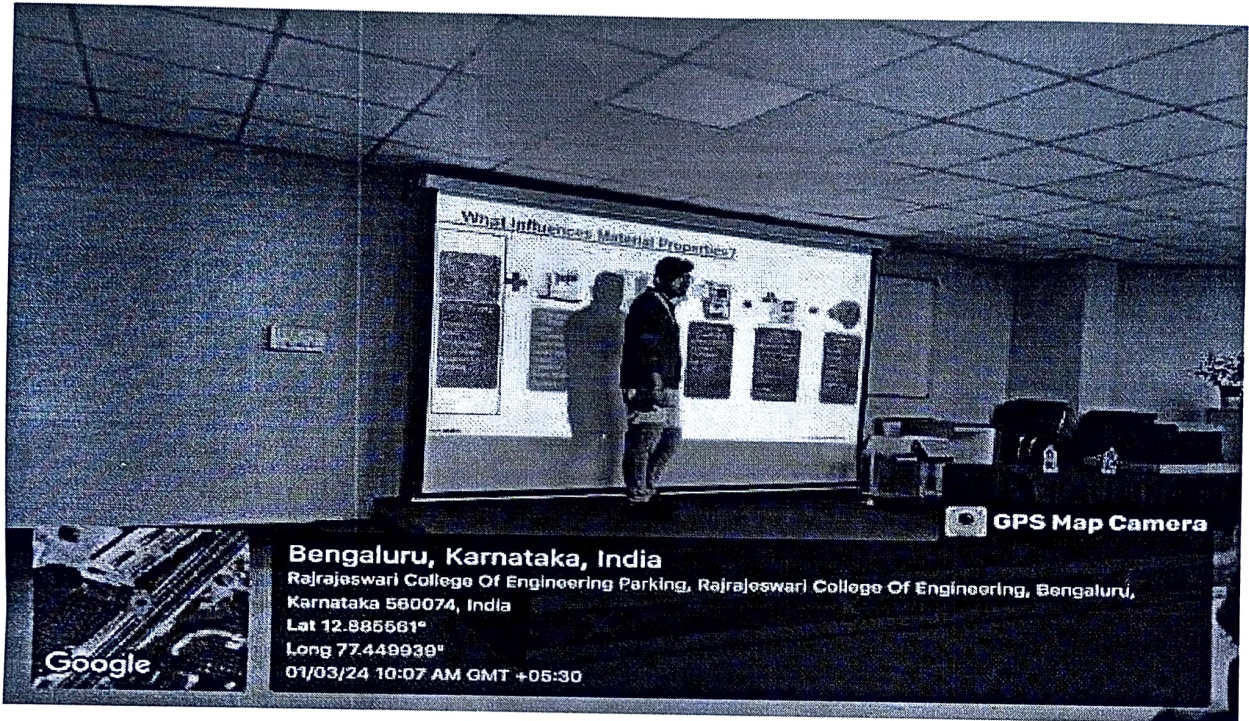
*R. Rajeswari*

-Principal  
RAJARAJESWARI  
COLLEGE OF ENGINEERING  
Ramohalli Cross, Bengaluru-74



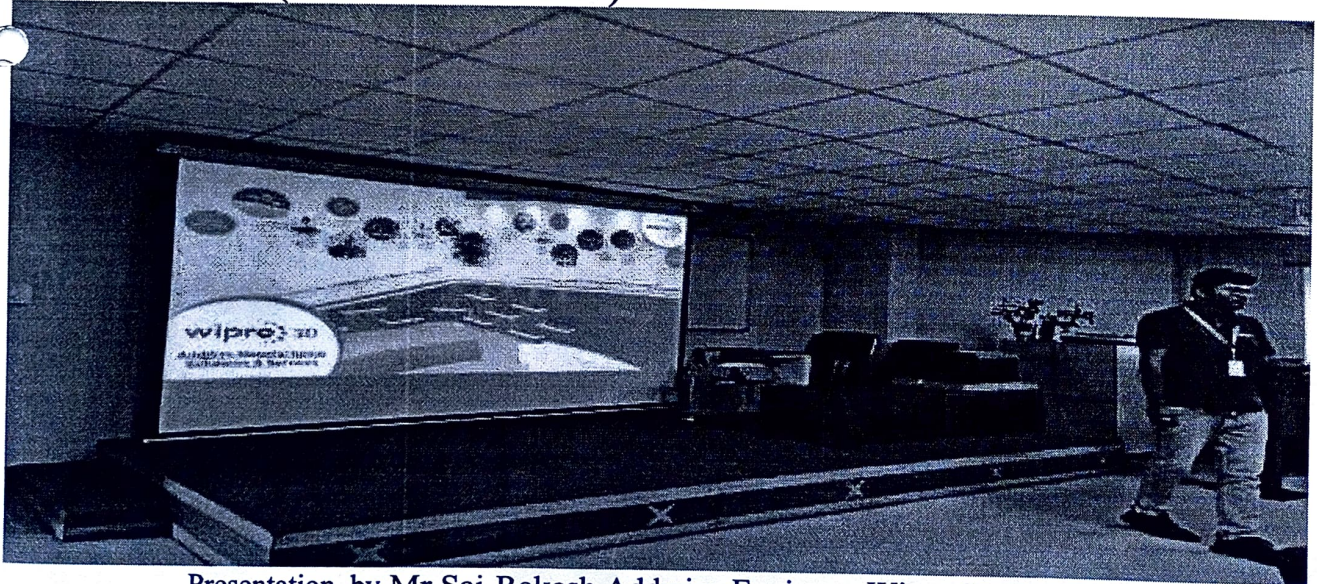
**Day 5 (01/03/2024)**

**First Session (9:30 to 11:00 AM)**



Presentation by Mr.Sai Rakesh Addwize Engineer, Wipro 3D, Bangalore

**Second Session (11:15 to 12:45 PM )**



Presentation by Mr.Sai Rakesh Addwize Engineer, Wipro 3D, Bangalore

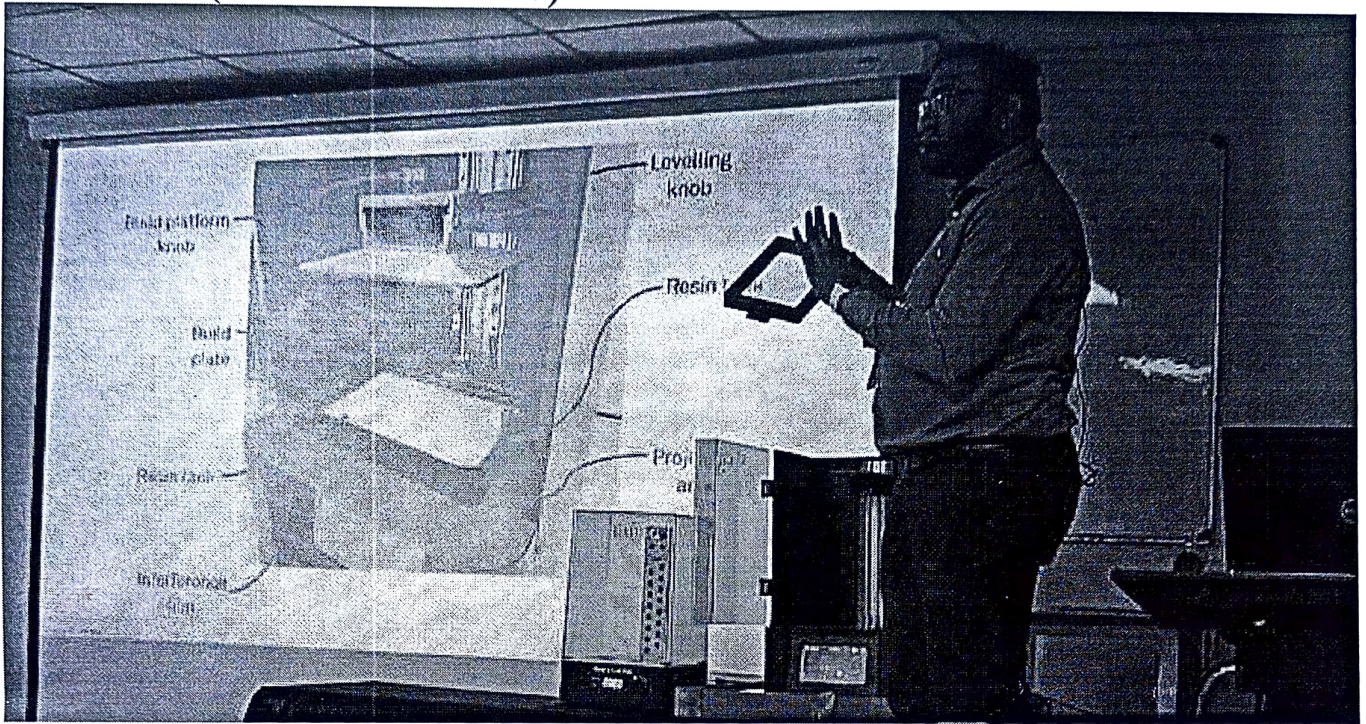
*M. L. M. M.*  
Professor & Head

Dept. of Robotics and Automation Engg  
RajaRajeswari College of Engineering  
Bengaluru-74.

*R. R. R.*  
Principal  
RAJARAJESWARI  
COLLEGE OF ENGINEERING  
Ramohalli Cross, Bengaluru-74

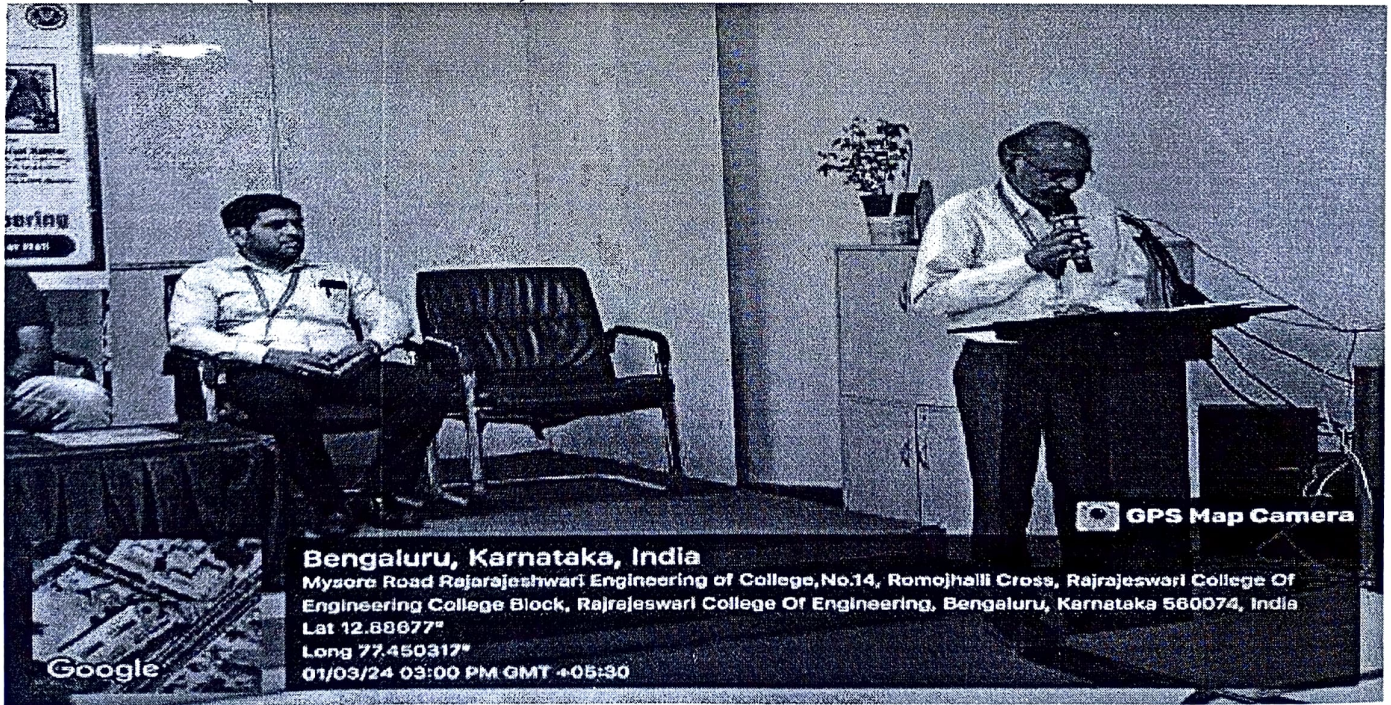
Report on Five Days Faculty Development Program on "3D Printing and Additive Manufacturing Technology" 26<sup>th</sup> Feb to 1<sup>st</sup> Mar 2024 funded by the National Centre for Additive Manufacturing (NCAM), Ministry of Electronics and Information Technology, Govt. of Telangana.

**Third Session (11:15 to 12:45 PM )**



Presentation by Dr.Chandrashekar A, Professor, BIT, Bangalore

**Fourth Session (3:30 to 4:30PM)**



Bengaluru, Karnataka, India  
 Mysore Road Rajarajeshwari Engineering of College, No.14, Romohalli Cross, Rajarajeshwari College Of Engineering College Block, Rajarajeshwari College Of Engineering, Bengaluru, Karnataka 560074, India  
 Lat 12.88677°  
 Long 77.450317°  
 01/03/24 03:00 PM GMT +05:30

Dr.M.Karthikeyan, HOD RA addressing during valedictory function

*M. Karthikeyan*  
 Professor & Head  
 Dept. of Robotics and Automation Engg  
 RajaRajeshwari College of Engineering  
 Bengaluru-74.

*[Signature]*  
 Principal  
 RAJARAJESHWARI  
 COLLEGE OF ENGINEERING  
 Ramohalli Cross, Bengaluru-74

Report on Five Days Faculty Development Program on "3D Printing and Additive Manufacturing Technology" 26<sup>th</sup> Feb to 1<sup>st</sup> Mar 2024 funded by the National Centre for Additive Manufacturing (NCAM), Ministry of Electronics and Information Technology, Govt. of Telangana.



Group Photos



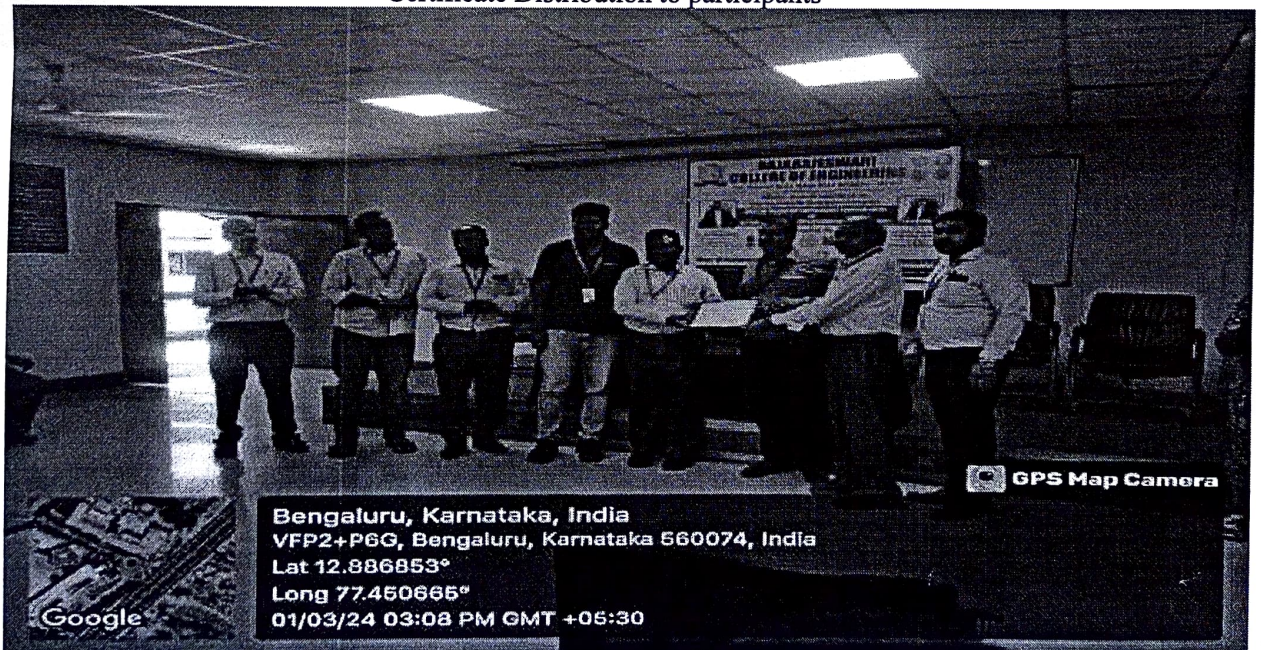
*M. S. Lakshmi*  
 Professor & Head  
 Dept. of Robotics and Automation Engg  
 RajaRajeswari College of Engineering  
 Bengaluru-74.

*[Signature]*  
 Principal  
 RAJAJESWARI  
 COLLEGE OF ENGINEERING  
 Ramohalli Cross, Bengaluru-74

**Report on Five Days Faculty Development Program on "3D Printing and Additive Manufacturing Technology" 26<sup>th</sup> Feb to 1<sup>st</sup> Mar 2024 funded by the National Centre for Additive Manufacturing (NCAM), Ministry of Electronics and Information Technology, Govt. of Telangana.**



Certificate Distribution to participants



Certificate Distribution to participants

*M. K. K...*  
 Professor & Head  
 Dept. of Robotics and Automation Engg  
 Rajarajeshwari College of Engineering  
 Bengaluru-74.

**FEEDBACK**

*R. P. S...*  
 Principal  
 RAJARAJESHWARI  
 COLLEGE OF ENGINEERING  
 Ramohalli Cross, Bengaluru-74

---

### The course contents were relevant to my expectations

100 responses

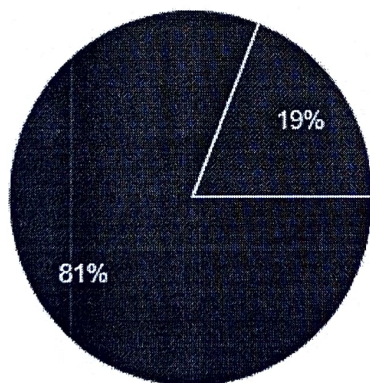


- yes
- no
- some extent

---

### How was explanation / presentation done

100 responses



- Excellent
- Good
- poor

*M. Kulkarni*

Professor & Head

Dept. of Robotics and Automation Engg

Rajeswari College of Engin

Bengaluru-74

*R.R.R.*

Principal

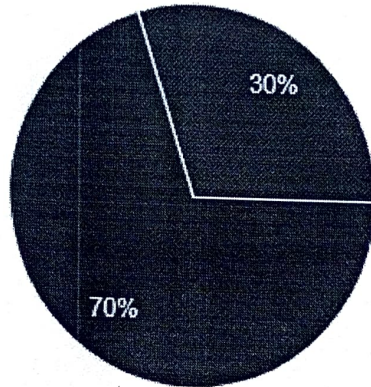
RAJARAJESWARI

COLLEGE OF ENGINEERING

Ramohalli Cross, Bengaluru-74

Were sincere efforts put in by the faculty in imparting training

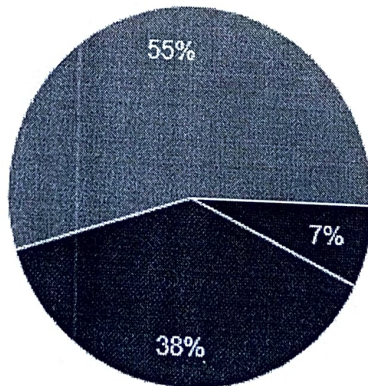
100 responses



- Excellent
- Very good
- Fair
- Poor

Was subject simplified and made interesting

100 responses



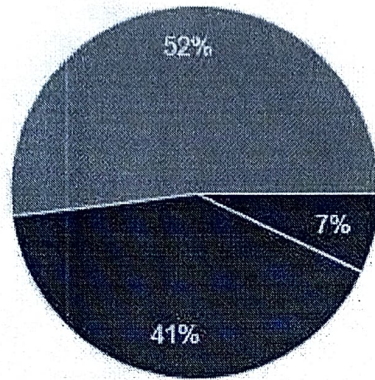
- Strongly disagree
- Agree
- Strongly agree

*M. K. Reddy*  
Professor & Head  
Dept. of Robotics and Automation Engg  
and College of Engineering

*R. Rajeswari*  
Principal  
RAJARAJESWARI  
COLLEGE OF ENGINEERING  
Ramohalli Cross, Bengaluru-74

### Was the available training time properly utilized

100 responses

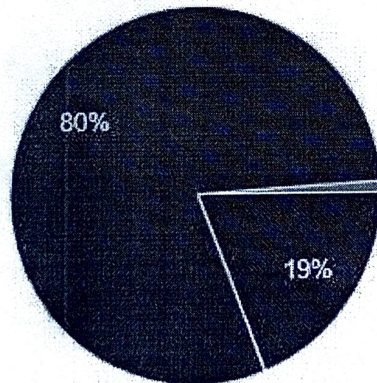


- Strongly disagree
- Agree
- Strongly agree

---

### Training Material Provided

100 responses



- Too much
- Adequate
- Not enough

*M. Lakshya*  
Professor & Head

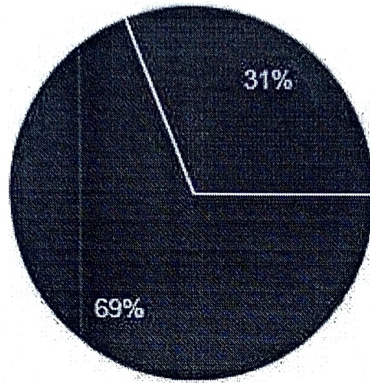
Dept. of Robotics and Automation Engg  
Rajajeswari College of Engg  
Bengaluru

*R.R. Raju*  
Principal

RAJARAJESWARI  
COLLEGE OF ENGINEERING  
Ramohalli Cross, Bengaluru-7c

### Trainer Interaction with participants

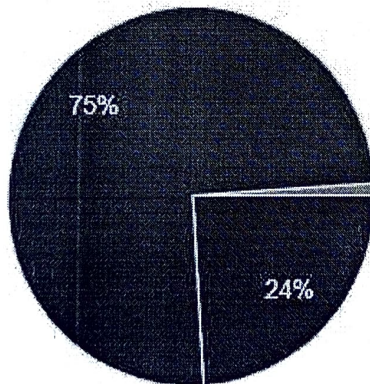
100 responses



- Excellent
- Good
- poor

### Was time given for hands-on practice

100 responses



- More
- Adequate
- Less

*M. K. Srinivas*  
Professor & Head

Dept. of Robotics and Automation Engg  
Rajawari College of Engineering  
Bengaluru-74.

*R. Rajawari*  
Principal

RAJARAJESWARI  
COLLEGE OF ENGINEERING  
Ramohalli Cross, Bengaluru-74

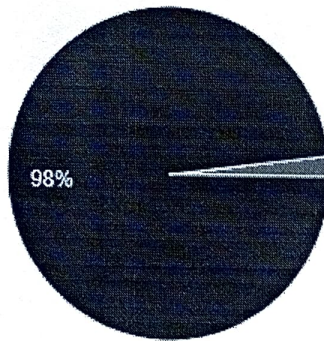


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Has practical training helped in consolidation of theoretical

learning

100 responses



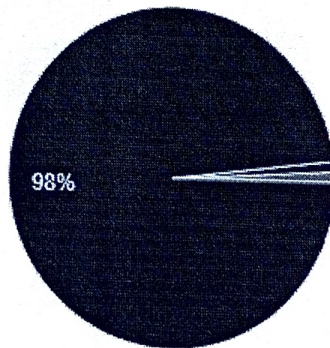
- yes
- No
- some extent

---

The class room facilities & environment was conducive

to learning

100 responses



- yes
- No
- some extent

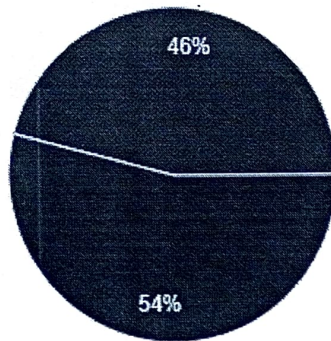
*M. J. Lakshmi*  
Professor & Head  
Dept. of Robotics and Automation Engg  
RajaRajeswari College of Engineering  
Bengaluru-74.

*R. Rajeswari*  
Principal  
RAJARAJESWARI  
COLLEGE OF ENGINEERING  
Ramohalli Cross, Bengaluru-74

---

The breakfast / lunch provided was

100 responses

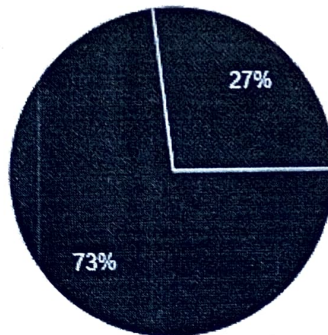


- excellent
- Good
- poor

---

My overall impression about the topic

100 responses



- excellent
- Good
- poor

*M. K. Lakshay*  
Professor & Head  
Dept. of Robotics and Automation Engg  
Rajajeswari College of Engineering  
Bengaluru-74

*R. Rajeswari*  
Principal  
RAJARAJESWARI  
COLLEGE OF ENGINEERING  
Ramohalli Cross, Bengaluru-74

# 5 Days FDP on "3D Printing and Additive Manufacturing Technology" funded by the National Centre for Additive Manufacturing (NCAM), Ministry of Electronics and Information Technology, Govt. of Telangana

Form description

Name of the Participant \*

Short answer text


Dept&Designation \*


Short answer text

Name of the Institute \*

Short answer text

Online Feedback Google form

  
Professor & Head  
Dept. of Robotics and Automation Engg  
RajaRajeswari College of Engineering  
Bengaluru-74.

  
Principal  
RAJARAJESWARI  
COLLEGE OF ENGINEERING  
Ramohalli Cross, Bengaluru-74

**SAMPLE QUESTIONS FOR ONLINE TEST**

## Online Test on

5 Days FDP on "3D Printing and Additive Manufacturing Technology" funded by the National Centre for Additive Manufacturing (NCAM), Ministry of Electronics and Information Technology, Govt. of Telangana.

---

1. Additive manufacturing uses much less material than other subtractive manufacturing processes. \*

- a) True
- b) False

2. Which of the following is typically the cheapest type of 3D printer? \*

- a) FDM
- b) SLA
- c) Powder-based
- d) SLM

  
Professor & Head

Dept. of Robotics and Automation Engg  
Rajeswari College of Engineering  
Bengaluru-7



Principal  
RAJARAJESWARI  
COLLEGE OF ENGINEERING  
Ramohalli Cross, Bengaluru-74



# RAJARAJESWARI COLLEGE OF ENGINEERING

#14, Ramohalli Cross, Mysore Road, Bengaluru – 560 074



इलेक्ट्रॉनिकी एवं  
सूचना प्रौद्योगिकी मंत्रालय  
MINISTRY OF  
ELECTRONICS AND  
INFORMATION TECHNOLOGY



NCAM  
NATIONAL CENTRE FOR ADDITIVE MANUFACTURING



One Week Faculty Development Program

## “3D PRINTING AND ADDITIVE MANUFACTURING TECHNOLOGY”

### Certificate of Participation

This is to Certify Dr./Mr./Mrs. Dhananjya B.S (2023BBCEBN623)  
of Rajarajeswari College of Engineering has successfully attended  
Five Days Faculty Development Program on “3D Printing and Additive Manufacturing Technology”  
conducted by Department of Robotics & Automation and Mechanical Engineering, RRCE, Bengaluru  
from 26<sup>th</sup> February to 1<sup>st</sup> March 2024 in association with

National Centre for Additive Manufacturing (NCAM)

Professor & Head

Dept. of Robotics and Automation Eng.  
Rajarajeswari College of Engineering  
Bengaluru-74.

JASPREET SIDHU  
Mrs. Jaspreet Sidhu  
CEO, NCAM

Dr. Balakrishna R  
Principal

Dr. Vishwanath K C  
Program Convehor

Dr. Karthikeyan M  
HOD, Dept. of R & A

Dr. Ramesh C  
HOD, Dept. of Mech

Principal  
RAJARAJESWARI  
COLLEGE OF ENGINEERING  
Ramohalli Cross, Bengaluru-74

**PARTICIPANTS ATTENDANCE**

**RAJARAJESWARI COLLEGE OF ENGINEERING**

#14, Ramohalli Cross, Kumbalaguda, Bengaluru-560074.

DEPARTMENT OF ROBOTICS & AUTOMATION  
DEPARTMENT OF MECHANICAL ENGINEERING

List of participants attended the FDP on "3D Printing and Additive Manufacturing Technology"

Sl No.	Name as per the registration in the AICTE ATAL portal	26/02/2024		27/02/2025		28/02/2026		29/02/2027		1/3/2027		Signature
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	
1	Dr. Sreenidhi Sharma	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2	Prof.Ravindra K G	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3	Dr. K S MADHU	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4	Prof.Vinod	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5	Dr. Archana D P	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6	Dr. Swetha K B	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
7	Dr. Chandrashekar A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8	Dr. Babu E R	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
9	Dr. Chanakeshava Naik N	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
10	Prof.Hemanth Kumar	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
11	Dr. Nagebhushana Narasappa	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12	Prof.Chethan D	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
13	Prof.Happugowda	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
14	Dr. M.C. Manjunath	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
15	Dr. Reddappa	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
16	Prof.Premchanda	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
17	Prof.Jagadesha N	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
18	Prof.Vishwanath B R	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
19	Prof.Avinash	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
20	Dr. Sivakumar D	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
21	Dr. Ashok kumar	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

*M. P. M...*  
Professor & Head  
Dept. of Robotics and Automation Engg  
Rajarajeswari College of Engineering

*R.P.P.*  
Principal  
RAJARAJESWARI  
COLLEGE OF ENGINEERING  
Ramohalli Cross, Bengaluru-7<sup>th</sup>

Report on Five Days Faculty Development Program on "3D Printing and Additive Manufacturing Technology" 26<sup>th</sup> Feb to 1<sup>st</sup> Mar 2024 funded by the National Centre for Additive Manufacturing (NCAM), Ministry of Electronics and Information Technology, Govt. of Telangana.

22	Dr. Thejambu	TG	TG	TG	TG	TG	TG	TG	TG	TG	TG	TG
23	Dr. Sowmya	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO	SO
24	Prof. Manasa G	MA	MA	MA	MA	MA	MA	MA	MA	MA	MA	MA
25	Prof. Anand	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
26	Dr. Sathesha V	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
27	Prof. Nithyasree	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
28	Prof. Rajesh G L	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA
29	Dr. Rahdakristina R K	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA
30	Prof. Karthik S	KA	KA	KA	KA	KA	KA	KA	KA	KA	KA	KA
31	Dr. Karthikeyan M	KA	KA	KA	KA	KA	KA	KA	KA	KA	KA	KA
32	Prof. Dhannanjya B S	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA
33	Prof. Rashmi	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA
34	Prof. Suguna G C	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
35	Dr. N. Sreenivasulu reddy	SR	SR	SR	SR	SR	SR	SR	SR	SR	SR	SR
36	Dr. Vasanth Kumar	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA
37	Dr. V. J. Manjunath	MA	MA	MA	MA	MA	MA	MA	MA	MA	MA	MA
38	Prof. Kamalakar	KA	KA	KA	KA	KA	KA	KA	KA	KA	KA	KA
39	Prof. Praveen Kumar S	PR	PR	PR	PR	PR	PR	PR	PR	PR	PR	PR
40	Dr. Madhu	MA	MA	MA	MA	MA	MA	MA	MA	MA	MA	MA
41	Dr. Sunil Raj	SR	SR	SR	SR	SR	SR	SR	SR	SR	SR	SR
42	Prof. Kumar	KA	KA	KA	KA	KA	KA	KA	KA	KA	KA	KA
43	Prof. Rakshith	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA	RA
44	Dr. Sunitha manoj	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM	SM
45	Prof. Ramesh S	RS	RS	RS	RS	RS	RS	RS	RS	RS	RS	RS
46	Dr. Jobish Johns	JO	JO	JO	JO	JO	JO	JO	JO	JO	JO	JO
47	Prof. Abdul Razak	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
48	Prof. Bharath V	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
49	Prof. Arul	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
50	Prof. Nataraj P	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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