



Sri Venkateswara  
College of  
Engineering

Department of Mechanical Engineering

JANUARY 2024

# IGNITION NEWSLETTER

ISSUE 01

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## About the Department

The department of Mechanical Engineering started its successful journey in 1985 and has been accredited by the NBA since 1998. It is recognized as a research center approved by Anna University, as well. The UG/PG courses offered by the department cover the thrust areas such as Thermal, Design, Manufacturing and Industrial Engineering and is supplemented by well – equipped laboratories, reputed research supervisors and dedicated faculty members. The department has the privilege of housing research cells– namely the Fibre Reinforced Composite (FRP) Cell, Engine Testing and Bio – Fuel Research cell, Tribology research cell, Welding research cell which are used extensively for research and consultancy projects. The department has completed sponsored research projects for a worth of more than 1.5 crore and consultancy projects for more than 75 lakhs. The department has established a center of excellence in Additive Manufacturing and Computer Integrated Manufacturing, which houses the facilities such as Digital Manufacturing, Robotics and HMI based Automation and 3D printers. The department has published more than 150 papers in peer reviewed journals during the last 4 years.

The following programs are offered by the department

1. B.E. Mechanical Engineering
2. B.E. Mechanical and Automation Engineering
3. M.E. Industrial Automation and Robotics

## Vision

To be a leader in Higher Technical Education and Research by providing the state of the art facilities to transform the learners into global contributors and achievers.

## Mission

1. To be renowned for offering Programs in the field of Mechanical Engineering that imparts competent technical knowledge along with skill, research & innovation, leadership and life skills needed for the students to contribute and achieve at global level.
2. To provide quality education encompassing recent technological developments by continuously upgrading the academic infrastructure thereby enhancing the technical knowledge of students, teachers and supporting staff which facilitates technical assistance to industrial and societal needs.
3. To offer need based training to the students in tools relevant to mechanical engineering.
4. To continuously upgrade the research facility and provide a conducive environment leading to continuous learning, development and transfer of knowledge.
5. To inculcate in students minds about Professional ethics, Human Values and Environmental issues in Engineering.

# DISCOVERY DIGEST

*"Navigating the Frontiers"*

## Liquid Metal Printing: A Rapid 3D Printing Technique for Large-Scale Structures



MIT researchers have developed an additive manufacturing technique, known as liquid metal printing (LMP), that can rapidly produce large-scale parts such as table legs and chair frames in a matter of minutes. The process involves depositing molten aluminum into a bed of tiny glass beads, with the aluminum quickly hardening into a 3D structure. LMP is at least 10 times faster than comparable metal additive manufacturing methods,

making it suitable for applications in architecture, construction, and industrial design where extremely fine details are not required. While the technique sacrifices resolution for speed and scale, it offers a more efficient procedure for heating and melting the metal. LMP holds significant potential for rapid, low-cost, large-scale production, particularly in the construction and architecture industries. The process can produce larger, low-resolution structures without the susceptibility to cracking and warping associated with other metal 3D printing methods. While the technique currently sacrifices some aesthetic quality for speed and scale, its potential impact on the construction and architecture industries, as well as its ability to produce durable, low-resolution structures, makes it a significant advancement in the field of additive manufacturing.

**Project name:** Liquid Metal Printing | **MIT Institute** | **Laboratory:** Self-Assembly Lab | **Researchers:** Skylar Tibbits, Zain Karsan, Kimball Kaiser, Jared Laucks

**Source:** MIT News "<https://news.mit.edu/2024/researchers-demonstrate-rapid-3d-printing-liquid-metal-0125>"

# FACULTY ACHIEVEMENT

*"A Glimpse of Remarkable Achievements"*

**Dr. S. Ilaiyavel** and **Mr. V. SenthilVelan** participated in a one-day workshop on **Entrepreneurship and Rural Development** held on **January 24, 2024**, at **IIT Madras Research Park, Tharamani, Chennai**. During the workshop, they had the opportunity to meet **Dr. MJ Shankar Raman, CEO of Parver Tek**, an esteemed alumnus(1996-2000). Excitingly, Dr. MJ Shankar Raman has expressed willingness to sign a **Memorandum of Understanding (MoU)** with SVCE, fostering potential collaborations and initiatives between the two entities.



**Dr. S. Ilaiyavel** and **Dr. S. Gopinath** actively participated in the **Global Investor Meet TNGIM - 2024** at **Tradecenter Nandambakkam, Chennai**, on **January 7th and 8th, 2024**.



# FACULTY ACHIEVEMENT

"A Glimpse of Remarkable Achievements"

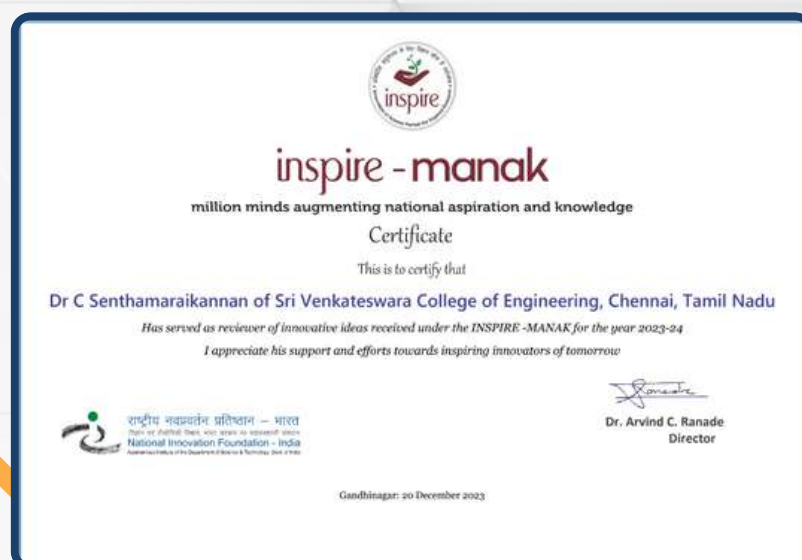


**Book Chapter Publication:** Warm congratulations to **Dr. U. Magarajan** for the publication of the book chapter titled "**Biomimetic Design Approaches for Impact Applications: A Review**" in the "**Dynamic Behavior of Soft and Hard Materials Volume 1.**", Springer Proceedings in Materials, **Volume 34. Springer.** This significant contribution enhances the knowledge in the field.

[https://doi.org/10.1007/978-981-99-6030-9\\_20](https://doi.org/10.1007/978-981-99-6030-9_20)



Congratulations to **Dr. C. Senthamarai Kannan**, Associate Professor, for receiving a certificate in recognition of serving as a reviewer for innovative ideas submitted under the **INSPIRE-MANAK** program by the **National Innovation Foundation-India** for the year **2023-24.**



# FACULTY ACHIEVEMENT

*"A Glimpse of Remarkable Achievements"*



**Patent Publication:** Dr. A. Saravanan, has recently published a patent titled "**Fixture for Cylindrical Workpiece.**" This achievement is recorded under Journal number **02/2024**, with a publication date of **12/01/2024**, and the application bears the number **202341058706**

**A.** Congratulations on this noteworthy accomplishment!

**Patent Grant:** Congratulations! The patent titled "**Design and Development of higher order device with adjustable deflection corrective mechanism**" filed by

**Dr. R. Ramesh,** and **Dr. C.**

**Senthamarai Kannan,** has been

officially granted. The patent,

numbered **499411**, was granted

on **15/01/2024**, and its

application number is

**201841015943.**



# FACULTY ACHIEVEMENT

*"A Glimpse of Remarkable Achievements"*



## Research Paper Publication:

**Mr. G. Kirubakaran** and **Dr. C. Senthamarai Kannan** have authored a research paper titled "**Mechanical, wear, and water absorption behavior of polyester biocomposite using jackfruit seed husk**

**cellulose and pineapple fiber**" This significant contribution has been published in the **Biomass Conversion and Biorefinery** journal, known for its impact factor of **4.0**. Congratulations on this noteworthy achievement. **DOI:10.1007/s13399-024-05268-z**.

**Dr. S. Ilaiyavel** had a productive meeting with **Dr. Balamurugan, Head of the Bio-Technology Department at Alagappa University, Karaikudi**, on **January 25, 2024**, at SVCE. The purpose of the meeting was to discuss and establish a

**Memorandum of Understanding (MoU)** between SVCE and Alagappa University.



# FACULTY ACHIEVEMENT

"A Glimpse of Remarkable Achievements"

Congratulations to **Mr. Sakthivel. K,**  
**Mr. Senthilkumar. N,** and **Mr. Vijay.**

**R** for successfully completing the  
one-week course on "**5S**  
**MANAGEMENT & TOTAL**  
**PRODUCTIVE MAINTENANCE.**" The

course took place at the National  
**Skill Training Institute, Guindy,**  
**Chennai,** from 8th January to 12th  
January, 2024, under RDSDE, Tamil  
Nadu. This initiative showcases a  
commitment to continuous  
learning and skill enhancement.



|   |   |   |
|---|---|---|
| प्रमाणपत्र संख्या<br>Certificate No. 96309  |    |    |
|   | प्रशिक्षण महाविद्यालय<br>Directorate General of Training<br>कोशल विकास एवं उद्यमिता मंत्रालय<br>Ministry of Skill Development and Entrepreneurship<br>भारत सरकार<br>GOVERNMENT OF INDIA |   |
| <b>CERTIFICATE / प्रमाणपत्र</b>   |   |   |
| Certified that / प्रमाणित किया जाता है: Shri/ Smt/ Kumari श्री/ श्रीमति/ कुमारी .....<br><b>SENTHILKUMAR, N</b> ..... Son/ Daughter/<br>Wife of Shri. सुपुत्र/ सुपुत्री/पत्नी/ श्री ..... <b>NARAYANASAMY</b><br>has successfully completed the training programme as per the detail given below and awarded<br>this certificate / ने सफलतापूर्वक नीचे दिये गए विवरण के अनुसार प्रशिक्षण प्राप्त किया जिसके लहत इस प्रमाण पत्र<br>से सम्मानित किया जाते है। |   |   |
| Name of the Course / पाठ्यक्रम का नाम<br><b>5 S MANAGEMENT &amp; TOTAL PRODUCTIVE MAINTENANCE</b>   |   |   |
| Course conducted at / पर पाठ्यक्रम का आयोजन <b>NATIONAL SKILL TRAINING INSTITUTE, GUINDY,<br/>CHENNAI - 600032</b> under RDSDE, Tamil Nadu  |   |   |
| Duration of the Course / पाठ्यक्रम की अवधि <b>ONE WEEK</b>  |   |   |
| From/ से <b>08-01-2024</b> To/ तक <b>12-01-2024</b>   |   |   |
| Deputed / Private / प्रतिनिधित्व / निजी <b>SRI VENKATESWARA COLLEGE OF ENGG. PENNALAR - 602 117</b>   |   |   |
| Place / स्थान <b>Chennai</b><br>Date / तिथि <b>12-01-2024</b>   | <br>संस्था का मुहर<br>Seal of the Institute  | <br>क्षेत्रीय निदेशक<br>Regional Director<br>RDSDE, Tamil Nadu |



# STUDENTS ACCOLADES

*"Diverse Talents, One Campus Spirit"*

1st-year students **Ms. Rutheeshtaa S U**, **Ms. Namratha M R**, **THANUSHKA B** showcased their talents at the **Bureau of Indian Standard (BIS) Foundation Day celebration 2024** in Chennai, Mylapore, on **5th Jan, 2024**. Their exceptional performance in the **dance event** earned them trophies, adding to the vibrancy of the club's participation in the celebration. Congratulations to both for their outstanding achievement!



# STUDENTS ACCOLADES

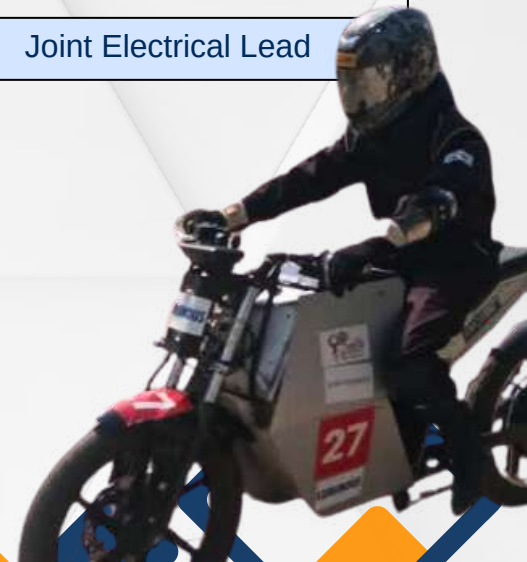
*"Diverse Talents, One Campus Spirit"*

Kudos to our **E-mortals** team comprising **21** talented **students**, with representation from IV, III, and II years, who participated in the **4th season of SIEP E-BIKE CHALLENGE 2024**. The final event, held from **24-th-28th January, 2024**, at **IES UNIVERSITY BHOPAL, MADHYA PRADESH**, witnessed their exceptional skills. Special thanks to faculty **Dr.S.Saravanan** for coordinating the team's accommodation in Bhopal. The team was mentored by **Mr.J.Sivaramapandian** and **Dr.S.Saravanan**.



### SIEP E-BIKE CHALLENGE 2024 Team Composition

| S. No | Name                | Year | Position in Team        |
|-------|---------------------|------|-------------------------|
| 1     | PERUNDEVAN S        | IV   | CAPTAIN                 |
| 2     | LAKSHMANAN K        | III  | Vice Captain            |
| 3     | MOHAMMED AASHIQ A   | IV   | TREASURER               |
| 4     | ANUSHYANTH A        | IV   | DESIGN LEAD             |
| 5     | HARIHARAN M         | IV   | ELECTRICAL LEAD         |
| 6     | MAHENDRA SENANI K   | IV   | MANAGER                 |
| 7     | DEVARAJ S           | III  | JOINT TREASURER         |
| 8     | GOWTHAM V           | III  | Joint Design Lead       |
| 9     | DHARUN PRAKASH M    | III  | Joint Fabrication Lead  |
| 10    | AJAY SRIKANTH G     | III  | Joint Fabrication Lead  |
| 11    | JEFRIN ROY B        | III  | Joint Fabrication Lead  |
| 12    | A.KRITHIK RAJ       | III  | Joint Design Lead       |
| 13    | C.AKSHAI            | III  | Joint Design Lead       |
| 14    | S.B.CHARAN          | III  | Fabrication lead        |
| 15    | S.DHAYA SHANKAR     | III  | Joint Fabrication Lead  |
| 16    | RAGHUL PRASANTH     | III  | Joint Fabrication Lead  |
| 17    | JESTIN JOYAL MATHEW | II   | Design team member      |
| 18    | SHARN BRITTO L      | II   | Fabrication team member |
| 19    | VIBHAV              | II   | Fabrication Team member |
| 20    | YUKENDREN R         | II   | Electrical team member  |
| 21    | METHUN T            | IV   | Joint Electrical Lead   |



# STUDENTS ACCOLADES

*"Diverse Talents, One Campus Spirit"*

Congratulations to the **Music Club team** member **Melvin Rosoario A - IV year MECH**, for securing the **SECOND PLACE** in the Group Singing **"Sing in the rain"** event at **PRIDE 2k24'**, a Cultural fest organized by the management of **Saveetha School of Management** on **January 5th, 2024**. Your talent and dedication have brought pride to SVCE's Music Club.



# EVENT

## *“Recapping the Buzzworthy Happenings”*

- The Ph.D. Viva Voce examination of **Dr.S Ramesh Babu's** research scholar **Mr. T. S. Senthil (Reg. No:- 19152991104/Ph.D/AR9)** was successfully conducted on **10/01/2024** at **2:00 pm** in the **CAD Lab, Department of Mechanical Engineering.**



- The Pre-Synopsis Seminar Presentation of **Dr. C Senthamarai Kannan's** Research Scholar, **Mr G Kirubakaran (17142991240), Part-Time Ph.D.** program is took place on on **30th January 2024, Tuesday, 02.00 PM** at **QMC Seminar Hall (IInd Floor), Department of Mechanical Engineering**



# PLACEMENTS

"Opening Doors to Career Opportunities"



**Aatheeshwar G**  
(2127201001001)



**Sai Surya S**  
(2127201001061)



**Harsha Vardhan J**  
(2127201001022)



**Hari Hara Sudan R**  
(2127201001021)

Congratulations to the final year students **Mr. Aatheeshwar G, Mr. Harsha Vardhan J, Mr. Hari Hara Sudan R,** and **Mr. Sai Surya S** for securing placements at **M/s. Emerson Electric Company India Pvt Ltd.** as a **Graduate Engineer Trainee.** Wishing them success in their careers ahead!

# PLACEMENTS

"Opening Doors to Career Opportunities"



**Sachithananthan**  
(2127201001060)



**Tarun MSK**  
(2127201001074)



**Manikandan J**  
(2127201001037)

Congratulations to **Mr. Sachithananthan, Mr. Manikandan J, and Mr. Tarun MSK** for securing positions as **Graduate Engineer Trainees** at **M/s. Kobelco Industrial Machinery India Pvt Ltd.** on **25th Jan, 2024.** We wish you success in your new roles!



**Lokesh A**  
(2127201001035)



**Rajeshkumar A**  
(2127201001314)

Congratulations to **Mr. A. Lokesh** and **Mr. A. Rajeshkumar** for securing positions as **Graduate Engineer Trainees** at **M/s Conserve Solutions** on **25th Jan, 2024**

Best wishes for a successful journey in your new roles.

# EDITORIAL TEAM



**Dr. S. RAMESH BABU**  
Professor & Head  
*Mechanical Engineering*



**Dr. S. MUNIRAJ**  
Assistant Professor  
*Mechanical Engineering*



**Mr. A. Ranjith Raj**  
Assistant Professor  
*Mechanical Engineering*



# STUDENT EDITORIAL TEAM



**Mr. Lohesh M V**  
IV Year  
*Mechanical Engineering*



**Mr. Raviram R**  
IV Year  
*Mechanical Engineering*



**Mr. Kiran Kumar D P**  
III Year  
*Mechanical Engineering*



**Mr. Mithun Aravind O**  
III Year  
*Mechanical Engineering*



**Mr. G Bharath Kumar**  
II Year  
*Mechanical Engineering*



**Mr. Bharath Vigneshwar R**  
II Year - Mechanical and  
*Automation Engineering*



**Mr. M Sanjay**  
I Year  
*Mechanical Engineering*



**Mr. Lithesh C**  
I Year - Mechanical and  
*Automation Engineering*