

**SRI SAI RAM ENGINEERING COLLEGE**  
**DEPARTMENT OF MECHATRONICS ENGINEERING**

|                                                 |                                                                                    |
|-------------------------------------------------|------------------------------------------------------------------------------------|
| Name: <b>Dr.V.PANDYARAJ</b>                     |  |
| Designation:                                    | <b>AssociateProfessor</b>                                                          |
| Qualification:                                  | <b>Ph.D</b>                                                                        |
| Area of Specialization:                         | <b>Engineering Design</b>                                                          |
| Experience:                                     | <b>Teaching- 16 years 2 month</b>                                                  |
|                                                 | Industry - NIL                                                                     |
| Number of Workshops/ Conferences/ FDP Attended: | WORKSHOP- 20<br>NATIONAL/INT. CONFERENCE- 20                                       |
| Publication:                                    | Journal:<br>National:NIL<br>International: 10                                      |
|                                                 | Conference:<br>National: NIL<br>International: 20                                  |
| General:                                        | -                                                                                  |
| Staff Achievement                               | -                                                                                  |

### Professional Experience:

| Sl. No | College/Organization             | Designation         | Period<br>From To     | Total period | Nature of work |
|--------|----------------------------------|---------------------|-----------------------|--------------|----------------|
|        | Sri Sairam Engineering, Chennai. | Associate Professor | 01.09.25 to till date | 6 months     | Teaching       |
| 1.     | Sri Sairam Engineering, Chennai. | Assistant Professor | 09.06.10 to 30.8.25   | 15.3years    | Teaching       |
| 2.     | Kalasalingam University          | Assistant Professor | 03.01.10 to 31.05.10  | 5 months     | Teaching       |

International Conferences Attended: 20

Papers published in the international conferences: 10

Short Term Course (Refresher courses) Attended: 1

Faculty/Staff Development /Training Program (Orientation programmes) Attended: 25

Resource person In FDP: 1

Workshops Attended: 20

Events organized: 01 (**Workshop on Finite Element Analysis Tools and its applications**)

Funded Projects: NIL

List of publications in international journals: 10

### **International Journal:**

- Pandyaraj V, Rajadurai A, Kalaichelvan K, 2025, “Energy Absorption and Damage Analysis of Glass fibre reinforced polymer spherical core sandwich structures”. Materials Science (Medžiagotyra). Vol 32 (2).
- Pandyaraj V, Rajadurai A, 2023, “Experimental Investigation on Low-velocity Impact Response of spherical core sandwich structures”. Journal of Composite Materials, Vol 57(3), pp 425-442.
- Mohammed Imran I, Reshmaja K, Abineshwar S.S, Pandyaraj V, 2022, “Intelligent Fire Fighting Robot with Deep Learning”. IEEE: International conference on Communication, Computing and Internet of Things (IC3IoT)

- Pandyaraj V, Rajadurai A, 2021, “Experimental Investigation on flexural behaviour of spherical core sandwich structures”. Journal of Reinforced Plastics and composites. Vol 40 (3-4), pp143-164.
- Pandyaraj V, Ravindran A, 2019, “Development of Flapping Panel Vertical Axis Wind Turbine”. International Journal of Innovative Technology and Exploring Engineering. Vol 9(1).
- Pandyaraj V, Rajadurai A, Ganapathy Anand, 2018, “Experimental Investigation of compression strength in novel sandwich structures”. Material today proceedings.vol 5(2): pp8625-8650.
- Pandyaraj V, Ravi Kumar L, Chandramohan D, 2018, “Experimental Investigation of Mechanical properties of GFRP Reinforced with coir and flax”. International Journal of Mechanical Engineering and Technology. Vol 9 (12),pp 1034-1042.
- Pandyaraj V, Ravindran S, Sewnithilkumar R, Aiswarya V, 2016, “Investigation of Pump Impeller Performance Using CFD”. Indian Jouranl of Science and Technology Vol 9 s (1).
- Saravana Kumar J, Madhan T, Sri Ananda Atreya T, Sriram R, Pandyaraj V, 2015, “Structural Analysis of Heteromorphic Hexa Square Honeycomb Sandwich Panel in Aircraft”. International journal of Mechanical, Civil and Control Engineering,. Vol 1 (3).

### **Conferences:**

#### **International**

1. **Pandayaraj, V**, Janardhanan R, Isac Watson G, Saravanel M, Mamtheeswaran R 2025, 'Smart Waters: Edge AI, IoT and Underwater Robotics for pollution-Free Futures' presented at the 5<sup>th</sup> IEOM India, Vellore conference held on November 6-8,2025.
2. **Pandayaraj, V**, Mathan Raj S, Sakthi Babu N, Arun V, 2025, 'Solar Powered E-Bicycle: sustainable Ride for the Future' presented at the 5<sup>th</sup> IEOM India, Vellore conference held on November 6-8,2025.
3. **Pandayaraj, V**, Vallarasu S, Hemanathan S Rajadevan M , 2025, 'Automated Gray Water Management systems for Sustainable Water reuse in Urban Applications' presented at the 5<sup>th</sup> IEOM India, Vellore conference held on November 6-8,2025.
4. **Pandayaraj, V**, Sylesh D, Thayanithi M, Tamil Selvam S , 2025, 'AI Driven Rescue Robots for Efficient Human Detection During Earthquake Emergencies' presented at the 5<sup>th</sup> IEOM India, Vellore conference held on November 6-8,2025.

5. **Pandiyaraj, V**, Yuva kumar,B, Balamurugan R, Sabarish P, 2025 , ‘Crash Test Analysis in the Frontal Portion of a car’, Proceedings of the International Conference on Innovations in Materials, Manufacturing and Energy Engineering (ICIMME25), Sri Sai Ram Engineering College, Chennai 29<sup>th</sup>-30<sup>th</sup> January 2025.
6. **Pandiyaraj, V**, Rajadurai, A, Kalaichelvan, K 2024, ‘Energy absorption and damage analysis of glass fibre reinforced polymer spherical core sandwich structures’, Proceedings of the International Conference on Recent Innovations in Production Engineering (RIPE 2024), Anna University MIT campus, Chennai 30<sup>th</sup>-31<sup>st</sup> May; pp 137.
7. **Pandiyaraj, V**, Mathan Raj S, Sakthi Babu N, Arun V, 2024 presented a paper titled ‘Review on Electric Bicycle Assisted with Solar Power’, in the 14<sup>th</sup> International conference on science e& Innovative Engineering held on 27<sup>th</sup>&28<sup>th</sup> April 2024at Prince Dr.K Vasudevan College of Engineering &Technology
8. **Pandiyaraj, V**, Rajadurai, A, Kalaichelvan, K 2024, ‘Evaluation of Energy absorption and damage analysis of spherical core sandwich structures Subjected to low velocity Impact Test’, Presented in the International Conference on Mechanical Engineering Design, SSN college of Engineering, Chennai 21<sup>st</sup>-22<sup>nd</sup> March 2024.
9. **Pandiyaraj, V**, Rajadurai, A, Kalaichelvan, K 2024, ‘Energy absorption characteristics of spherical sandwich structures’, Presented in the National Conference on Advances in Polymer Composites (APC 2024), Department of Rubber and Plastic Technology, Anna University MIT campus, Chennai 23<sup>rd</sup>24<sup>th</sup> February 2024.
10. **Pandiyaraj, V & Rajadurai, A** 2023, ‘Failure Pattern Analysis of spherical sandwich structure subjected to impact Test’, Proceedings of the Second International Conference on Materials, Design and Manufacturing Process (ICMDM 23), Anna Univeristy CEG campus, Chennai; 23<sup>rd</sup>-25<sup>th</sup> February; pp.21.
11. **Pandiyaraj V** ,Mohammed Imran I, Reshmaja K, Abineshwar S.S, , 2021’Autonomous Fire fighting Robot using Computer Vision, GSM and GPS module’ Second International conference on Robotics, Intelligent Automation and Control Technologies (RIACT 2021) organised by VIT University from 23<sup>rd</sup> to 25<sup>th</sup> September 2021.
12. **Pandiyaraj, V & Rajadurai, A** 2018, ‘Experimental investigation on core shear properties and facing sheet fracture of spherical core sandwich structure by Four Point bend Test, Proceedings of the Third International Conference on Advanced Materials and Manufacturing process for strategic sectors (ICAMPS18), Indian Institute of Metals (IIM) Thiruvanthapuram, Kerala; 25<sup>th</sup>-27<sup>th</sup> October, pp144.
13. **Pandiyaraj, V & Rajadurai, A** 2017, ‘Experimental study on core shear properties and facing sheet fracture of spherical core sandwich structure’, Proceedings of the International Conference on Manufacturing Technology and Simulation (ICMTS17), Indian Institute of Technology, Madras; 7<sup>th</sup>-8<sup>th</sup> July; pp 47.

14. **Pandiyaraj, V** & Rajadurai, A 2017, 'Investigation on core shear properties of novel sandwich structure by beam flexure', Proceedings of the International Conference on Recent Innovations in Production Engineering (RIPE17), Madras Institute of Technology, Anna University, Chennai; 24<sup>th</sup>-25<sup>th</sup> March, pp. 101.
15. **Pandiyaraj, V**, 2016, 'Investigation of pump impeller performance using CFD', Presented in the International Conference on Mechanical, Materials and Manufacturing systems (ICMMMS16), SSEC, Chennai; 24<sup>th</sup>-25<sup>th</sup> February 2016.
16. Ganapathy Anand, **Pandiyaraj, V** & Rajadurai, A 2015, 'FEA of novel sandwich structures', Proceedings of the International Conference on Advances in materials, Manufacturing and Applications (AMMA 15), National Institute of Technology, Tiruchirappalli; 9<sup>th</sup>-11<sup>th</sup> April, pp. 180.
17. **Pandiyaraj, V** 2015, attended SEDS International Conference, VIT University, Vellore, 13<sup>th</sup>-14<sup>th</sup> March 2015.
18. **Pandiyaraj, V** 2014, attended second International Conference on Emerging Trends in Energy and Environment, SSEC, Chennai, 9<sup>th</sup>-10<sup>th</sup> January 2014.
19. **Pandiyaraj, V**, 2012, 'Optimization of centrifugal pump impeller using Taguchii concept through CFD', Presented in the International Conference on Advances in Mechanical, Manufacturing and Building sciences (ICAMB), VIT, Vellore; 9<sup>th</sup>-11<sup>th</sup> January 2012.
20. **Pandiyaraj, V**, 2012, 'Optimal Scalability of Reconfigurable Manufacturing System Configurations', Presented in the International Conference on Advances in Mechanical, Manufacturing and Building sciences (ICAMB), VIT, Vellore; 9<sup>th</sup>-11<sup>th</sup> January 2012.

### **RESOURCE PERSON**

Acted as a **keynote speaker** at the SAE India sponsored Five Days virtual Faculty Development Programme on ME8694- Hydraulics and Pneumatics, held at SSEC, Chennai on 03-02-21

### **Workshop/Conferences/FDP attended:**

1. Attended FDP on **Generative AI and Agentic AI** organised by ICFAI Hyderabad, Telangana and Sathyabama Institute of science and Technology in collaboration with ExcelR ETech Pvt. Ltd., from 10.11.25 to 14.11.25.
2. Attended FDP on **GEN AI-RAG (Retrieval-Augmented Generation)** organised by Chaitanya Bharathi Institute of Technology, Telangana and ExcelR ETech Pvt. Ltd., from 08.09.25 to 12.09.25.
3. Attended FDP on **Empowering Research and Innovation: Writing, Proposal Writing and Patent Development** organised by Sanjivani College of Engineering, Maharashtra and RSP Science Hub & Powered by Eclearnix Edtech, Coimbatore from 07.07.25 to 12.07.25.

4. Attended FDP on **Successful writing of Research Paper In SCI/Scopus ABDC Indexed Journals with New GEN AI Tools** organised by DIGI Skill Development and Training Institute, from 29.06.25 to 1.07.25.
5. Attended online FDP on **Advanced Materials for Defence and Aerospace Applications** organised by Ballari Institute of Technology and Management, Ballari karnataka from 27-01-25 to 01-02-25.
6. Attended online FDP on **Innovations and Frontiers in Metallurgical Engineering** organised by Dr. Vishwanath MIT world Peace University, pune from 13-01-25 to 17-01-25.
7. Attended online FDP on **Program on Additive Manufacturing Advancements in Different Applications** organised by SRM Institute of Science and Technology, from 21.10.24 to 26.10.24.
8. Attended online FDP on **Progress in Mechanical Engineering** organised by SRM Institute of Science and Technology, from 14.10.24 to 19.10.24
9. Attended online STTP on **Hands on AI tools: Elevate your Creative Research writing** organised by Radhakrishnan Institute of Technology Bhubaneswar, Orissa from 17.6.24 to 21.6.24
10. Attended FDP on **OBE & NEP 2020** organised by PBR VITs, Kavali and VIT-AP, from 10.06.24 to 14.06.24
11. Attended FDP on **Recent Advancements in Materials and Manufacturing** organised by SSEC, Chennai from 22.04.24 to 26.04.24.
12. Attended FDP on **Recent Trends and Advances in Manufacturing Engineering** organised by SSEC, Chennai from 25.03.24 to 29.03.24
13. Attended online STTP on **Research writing, Funding Proposal Development and Patent Drafting** organised by Vidya Vihar Institute of Technology, Purnea, Bihar from 08-07-24 to 20-07-24.
14. Attended FDP on **“Product Design Engineering using Fusion 360** ‘conducted by ICT Academy from 1-08-2022 to 5-08-2022 at SSEC, Chennai.
15. Attended online STTP on **Managing Aspects of Laboratory Classes** organised by NITTTR Kolkata from 07-03-22 to 11-03-22.

Attended a FDP on “Finite Element Analysis” in MIT , Anna University from DEC 2 to 8,2011.

Attended a workshop on “Renewable Energy” in sri sairam Engineering College held on 24th FEB 2012

- Attended a workshop on “Finite element analysis Tools and its applications ” in sri sairam Engineering College held on 19th July 2012.
- Attended a workshop on “Recent advances in Low cost Automation” in VIT University held on 4<sup>th</sup> MAY 2013.

- Attended a FDP on “Design of Jigs, Fixture & Press tools” in MIT , Anna University from JUNE 3 to 10, 2013.
- Attended Basic fire safety and emergency preparedness workshop program organized by Thilak Safety Associates, held at SSEC, Chennai.
- Attended a FDP on “Advancement in Materials, Manufacturing Processes and Management systems” in Sri Sairam Engg college from NOV 4 to 16, 2013.
- Attended 2nd International Conference on "Emerging trends in Energy and Environment " Organized by Sri Sai Ram Engineering college Chennai on 9th & 10th 2014.
- Attended a two day Workshop on “Industry-Institution Interaction Event on Environment Management In Industrial Sectors-Status And Needs”, Organized by Sri Sai Ram Engineering held on 24 -25 th July 2014.
- Attended one day Workshop on “ROLE OF LEAN MANUFACTURING ON ORGANIZATION COMPETITIVENESS “, Organized by Sri Sai Ram Engineering college Chennai on 28<sup>th</sup> August 2014.
- Attended SEDS International Conference 2015 held during 13th & 14th March 2015 at VIT University.
- Attended a FDP on “Processing and characterization of composite materials including Natural Fiber Re-inforced Composites” in Sri Sairam Institute of Technology from March 18 to 31, 2015.
- Attended a workshop on “Recent Trends in AWJM” in MIT Campus Anna University held on 19<sup>th</sup> FEB 2016.
- Attended a FDP on “Computer Aided Design and usage of Software ” in Sri Sairam Engg collegee fro 4th Aug to 6th AUG 2016.
- Attended one day Workshop on “Value engineering using ANSYS “, Organized by Sri Sai Ram Engineering college Chennai on 19<sup>th</sup> August 2016.
- Attended two day Workshop on “Automotive Technology “, at Sri Sai Ram Engineering college Chennai held on 12th & 13th SEP 2017 Organised by Goodwin Motors.
- Attended a FDP on “Automobile engineering” in Sri Sairam Engg college from NOV 29th to DEC 5, 2017.

