


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

Name: M. Sudhakar	
Designation:	Assistant Professor
Qualification:	M.E, M.I.E, C.Eng.
Area of Specialization:	Energy Engineering
Experience:	Teaching- 8.5 Years
	Industry: 2 Years
Number of Workshops/ Conferences/ FDP Attended:	Worshop- 12
	FDP- 16
	National/Int. Conference- 02
Publication:	Journal: National - Nil <b>International - 15</b>
	Conference: National: 01 <b>International: 01</b>
General:	<ul style="list-style-type: none"> <li>✓ 3 - NPTEL short term course completed.</li> <li>✓ 1 –Online course completed in NITTTR</li> <li>✓ 2 - Online courses completed in UDEMY.</li> <li>✓ 25 - Online courses completed in CORSERA.</li> </ul>
Staff Achievement	<ul style="list-style-type: none"> <li>✓ Record holder in Asian and Indian Book of records towards Maximum authors contributing for a book.</li> <li>✓ Received “Award of Excellence in Research”</li> </ul>

	<p>from Novel Research Academy, Puducherry.</p> <p>✓ Lead Editor for the Book titled “Robotics and Automation” ESN Publication in 2020.</p> <p>✓ Produced <b>100% result</b> in Professional ethics, Engineering Metrology and Measurements, Advanced IC engines, Power plant engineering.</p>
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#### PROFESSIONAL EXPERIENCE:

College/Organization	Designation	Period From - To	Total period	Nature of work
Sri Sairam Engineering College, Chennai	Assistant Prof.	June'13 to Till date	8.5 Years	Teaching
Pee Vee Precisions Pvt Ltd	Engineer Trainee	July'10 to July'11	1 Years	Cost work out
Pee Vee Precisions Pvt Ltd	Diploma Trainee	June'06 to June'07	1 Years	Tapping Machine Assembler

#### PATENTS:

Applicant / Inventor	Title	Patent Adoption	Filed/ Published/ Granted	Patent Number
<b>Applicant - M. Sudhakar,</b> Department of Mechanical Engineering, Sri Sairam Engineering College.	Hybrid Solar Cooking System with Solar Thermal and Photovoltaics to Generate Electrical Energy for House hold applications	19/11/2019	Published	201941047107 A
<b>Inventor - M. Sudhakar,</b> Department of Mechanical Engineering, Sri Sairam Engineering College.	Lemon Grass Oil Composition-Diesel Blend as Alternative Fuel for Diesel Engine	06/12/2019	Published	201941048053 A
<b>Applicant - M. Sudhakar,</b> Department of Mechanical Engineering, Sri Sairam Engineering College.	Hybrid Pentagonal Pyramid Solar Still Integrated with PV/T system	27/11/2020	Published	202041049408 A
<b>Applicant - M. Sudhakar,</b> Department of Mechanical Engineering, Sri Sairam Engineering College.	Lantern type Wind Turbine	27/11/2020	Published	202041049414 A
<b>Applicant - M. Sudhakar,</b> Department of Mechanical	Experimental Investigation on Hybrid	25/11/2021	Published	202141054486 A

Engineering, Sri Sairam Engineering College	Double Slope Solar Still Integrated with PV/T System			
<b>Applicant - M. Sudhakar</b> , Department of Mechanical Engineering, Sri Sairam Engineering College	Experimental Investigation on Hybrid Square Pyramid Solar Still Integrated with PV/T System	10/12/2021	Published	202141054492 A

#### **PAPERS PUBLISHED IN THE NATIONAL CONFERENCES:**

1. **M.Sudhakar**, Kalidhasa Murugavel presented a paper entitled “Performance analysis of parabolic trough concentrating photovoltaic thermal system” in the MNRE Sponsored National conference on Research issues in Renewable energy and Conservation (ELCON’13) on 21<sup>st</sup> March 2013 conducted by National Engineering College, Kovilpatti.

#### **PAPERS PUBLISHED IN THE INTERNATIONAL CONFERENCES:**

1. **M. Sudhakar** presented a paper entitled study of “Design and analysis of shell and tube heat exchanger” in the National conference on Advancements in mechanical, mechatronics and management systems (AIMMMS’12) on 5<sup>th</sup> April 2012 conducted by Sri Sairam engineering college, Chennai.

#### **INTERNATIONAL CONFERENCES ATTENDED:**

1. Participated in 2<sup>nd</sup> international conference on “Emerging Trends in Energy and Environment” (ICETEE’14) on January 9<sup>th</sup> & 10<sup>th</sup>, 2014 conducted by Sri Sairam engineering college, Chennai.
2. Participated in 4<sup>th</sup> National Conference on “Recent Innovation in Mechanical Engineering” (NCRIME-2K17) under TEQIP – II S.C-1.1 on 21<sup>st</sup> January, 2017 held at Malla Reddy Engineering College, Secunderabad.

#### **PAPERS PUBLISHED IN THE INTERNATIONAL JOURNALS:**

1. **M. Sudhakar**, A. Rajendra Prasad, A. Ravinthiran, M.C. Anand Chakaravarthi, T. Vignesh published a paper entitled “Performance Analysis Of Parabolic Trough Concentrating Photovoltaic Thermal System With Trapezoidal Receiver” International Journal of Mechanical Engineering and Technology (IJMET) Volume 9, Issue 13, December 2018, pp. 353–361, Article ID: IJMET\_09\_13\_037.
2. **M. Sudhakar\***, Rajendra Prasad A, A. Ravinthiran, Priyadarshi Dutt, M.C. Anand Chakaravarthi published a paper entitled “Performance Improvement of Trough

Concentrating Photovoltaic Thermal System: A Review” in the journal Materials Today: Proceedings 16 (2019) 647–652. <https://doi.org/10.1016/j.matpr.2019.05.141>

3. T. Naresh Kumar, A.K.Saravanan, S. Shylin H. Jose, L. Ravikumar, **M. Sudhakar** published a paper entitled “Reinforcing Adhesive Plastic-Coated Grins through FRP Compounds” in the International Journal of Engineering and Advanced Technology, Volume-9 Issue-1, October 2019. <https://doi.org/10.35940/ijeat.A1516.109119>
4. D. Ramesh, V. R. Muruganantham, K. Arun Balasubramanian, A. Thirumoorthy, **M. Sudhakar** published a paper entitled “Experimental Research on the Tribological - Mechanical Properties of Al-SiC composites and EN31 Steel” in the International Journal of Engineering and Advanced Technology, Volume-9 Issue-2, December, 2019. <https://doi.org/10.35940/ijeat.B3897.129219>
5. A.K.Saravanan, A.Rajendra Prasad, D.Muruganandam, G.Saravanan, S.Vivekanandan, **M.Sudhakar** published a paper entitled “Study on natural fiber composites of jute, pine apple and banana compositions percentage of weight basis for thermal resistance and thermal conductivity” in the journal Materials Today: Proceedings, Volume 37, Part 2, 2021, Pages 147-151. <https://doi.org/10.1016/j.matpr.2020.04.662>
6. G.Puthilibai, DineshKumar, Singaravelu, C.Dinesh, S.Chitradevi, **M.Sudhakar**, M. Keerthika published a paper entitled “Experimental investigation regarding emissivity of black nickel coated on aluminium surface” in the journal Materials Today: Proceedings Volume 37, Part 2, 2021, Pages 248-251. <https://doi.org/10.1016/j.matpr.2020.05.149>
7. D.Logendran, K.Gurusami, M.C.Anand Chakaravarthi, G.Puthilibai, M.Suresh, M.Sudhakar, “Experimental research on glass fibres / caustic soda treated banana fibers hybrid composite” in the journal Materials Today: Proceedings Volume 33, Part 7, 2020, Pages 4408-4411. <https://doi.org/10.1016/j.matpr.2020.07.662>
8. D. Chandramohan, T. Sathish, S. Dinesh Kumar, **M. Sudhakar**, published a paper entitled, “Mechanical and thermal properties of jute/aloevera hybrid natural fiber reinforced composites” in the journal AIP Conference Proceedings 2283, 020084 (2020); <https://doi.org/10.1063/5.002497>
9. Muruganandam, D., Jayapriya, J., Suresh, M., Puthilibai, G., **Sudhakar, M**, Simple study on behavior of composites with augmentation of Silicon carbide on Al6061 aluminium alloy based on mechanical properties, Materials Today: Proceedingsthis link is disabled, 2020, 33, pp. 4573–4577. <https://doi.org/10.1016/j.matpr.2020.08.189>

10. A. Rajendra Prasad, Ravishankar Sathyamurthy , **M. Sudhakar**, et al, published a paper entitled “Effect of Design Parameters on Fresh Water Produced from Triangular Basin and Conventional Basin Solar Still” in the journal International Journal of Photoenergy” Volume 2021, Article ID 6619138, <https://doi.org/10.1155/2021/6619138>.
11. S. Jayaprakash, S. Siva Chandran, T. Sathish , Bhiksha Gugulothu, R. Ramesh, **M.Sudhakar**, et al, published a paper entitled “Effect of Tool Profile Influence in Dissimilar Friction Stir Welding of Aluminium Alloys (AA5083 and AA7068)” in the journal, Advances in Materials Science and Engineering, Volume 2021, Article ID 7387296, 7 pages, <https://doi.org/10.1155/2021/7387296>.
12. Ravishankar Sathyamurthy, D. Mageshbabu, B. Madhu, A. Muthu Manokar, A. Rajendra Prasad, **M. Sudhakar** published a paper entitled “Influence of fins on the absorber plate of tubular solar still- An experimental study” in the journal Materials Today: Proceedings Volume 46, Part 9, 2021, Pages 3270-3274. <https://doi.org/10.1016/j.matpr.2020.11.355>
13. T Vennila, Raviteja Surakasi, KS Raghuram, G Ravi, S Madhavarao, Chikkappa Udagani, **M Sudhakar\***, published a paper entitled “Investigation on tensile behaviour of Al/Si3N4/sugarcane ash particles reinforced FSP composites” in the journal Materials Today: Proceedings, <https://doi.org/10.1016/j.matpr.2021.11.477>
14. J.Karpagam, Chandrashekhar K.Patil, K.V.Pradeep Kumar, AnkurDutt Sharma, RaviKumar Goyal, MotiLal Rinawa, **M.Sudhakar\***, published a paper entitled “Fabrication of Al-Zr -Mg-Ni matrix composite with TiC reinforcement by multi-pass recursive friction stir processing and its characterization” in the journal Materials Today: Proceedings, <https://doi.org/10.1016/j.matpr.2022.01.239>
15. A. Rajendra Prasad, Mohammed El Hadi Attia, **M. Sudhakar**, Ravishankar Sathyamurthy, A. Muthu Manokar, published a paper entitled “Performance improvement of solar still using phosphate granules as energy storing materials: an experimental study” in the journal, Desalination and Water Treatment, Accepted 6 January 2022, [doi:10.5004/dwt.2022.28180](https://doi.org/10.5004/dwt.2022.28180)
16. Sharun V, Rajasekaran M, Suresh Kumar S, Vikas Tripathi, Rajneesh Sharma, G. Puthilibai, M. Sudhakar, Kassu Negash, published a paper entitled “Developments in Protection Coating Techniques for Steel” in the journal, Advances in Materials Science and Engineering, Accepted for Publication.

## REVIEWER FOR INTERNATIONAL JOURNALS:

1. Materials Today Proceedings - ELSEVIER

### **SHORT TERM COURSE COMPLETED:**

1. Successfully completed 8 weeks NPTEL course on topic “Waste to Energy Conversion” held between February – March 2018.
2. Successfully completed 8 weeks NPTEL course on topic “Introduction to Research” held between February – March 2019.
3. Successfully completed 4 weeks NPTEL course on topic “Introduction to Professional Scientific Communication” held between January – February 2020.
4. Successfully completed NITTTR, Module 5 – “Technology Enabled Learning & Life Long Self Learning” Course held on September 2021.

### **FACULTY DEVELOPEMNT PROGRAMS ATTENDED:**

1. Attended 7 days online FDP on “ MATLAB AND ITS APPLICATIONS ” organized by Department of Mathematics, Dr.N.G.P. Institute of Technology, Coimbatore during 7 - 12, June 2021.
2. Attended two weeks online FDP / Refresher Course on “Recent Innovation in Electrical, Electronics, Instrumentation, Automation & Teaching Pedagogy” from 18th to 30th May, 2020 held at Sri Sairam Engineering College, Chennai.
3. Attended one day online FDP on “CFD Simulation of Thermal Management of Batteries and Power Converters” on 28th May, 2020 held at Vel Tech High Tech Dr. RR Dr. SR Engineering College, Chennai.
3. Attended 7 days online FDP on “Ethical Practices in Engineering” from 28th and 3rd May, 2020 held at Sri Sai Ram Engineering College, Chennai.
4. Attended 5 days online FDP on “Materials for Thermal and Renewable Energy Research” from 20th and 24th May, 2020 held at Sri Sai Ram Institute of Technology, Chennai.
5. Attended 3 days online FDP on “Electric Vehicle” from 20th to 23rd May, 2020 held at Mohammed Sathak AJ College of Engineering, Chennai.
6. Attended 2 days online FDP on “Tips for clearing Patent Agent Examination” from 6th and 7th May, 2020 held at Velammal Engineering College, Chennai.
7. Attended one week FDP on “Working Culture for Professionals” from 11th to 16th November, 2019 held at Sri Sai Ram Engineering College, Chennai.
8. Attended two weeks FDP on “Modelling and control of high efficiency electric and hybrid vehicles and the future vehicle fleet in 2030” from 10<sup>th</sup> June to 23<sup>rd</sup> June, 2019 held at Eswari Engineering College, Chennai.
9. Attended 5 days FDP on “Recent Advances in Renewable Energy Technologies for Sustainable Development” from 26th to 30th November, 2018 held at SRM Institute of Science and Technology, Chennai.
10. Attended One week FDP on “Automobile Engineering” from 29<sup>th</sup> November to 5<sup>th</sup> December, 2017 conducted at Sri Sairam engineering college, Chennai.

11. Attended three days FDP on “Computer Aided Design and Usage of Software” from 4<sup>th</sup> August to 6<sup>th</sup> August, 2016 at Sri Sairam engineering college, Chennai.
12. Attended two days National Level - FDP on “Teaching Excellence in Engineering & Management curriculum” during 20 - 21 June, 2016 conducted by Sri Sairam Institute of Management studies held on Sri Sairam engineering college, Chennai.
13. Attended one week FDP on “ME6404 – Thermal Engineering” during 23<sup>rd</sup> to 30<sup>th</sup> November, 2015 at Kings Engineering College.
14. Attended two weeks FDP on “Faculty Development Programme on Mechatronics” during 2<sup>nd</sup> December 2013 – 15<sup>th</sup> December 2013 organized by Department of mechanical engineering at, SSN college of Engineering.
15. Attended two days FDP on “Advancements in Materials, Manufacturing and Management Systems” from November 4 to November 16, 2013 at Sri Sairam engineering college, Chennai.
16. Participated & completed AICTE Training and Learning (ATAL) Academy Online FDP on "Electric Vehicles" from 2020-11-30 to 2020-12-4 at IFET College of engineering.

#### **WEBINARS ATTENDED:**

1. Attended one day webinar on “Effective Virtual Classroom Teaching for Teachers” on 19th June, 2020 conducted by Sri Sairam Engineering College, Chennai.
2. Attended one day webinar on “Role of Mechanical Engineering in Space Technology Development” on 2nd June, 2020 conducted by Vel Tech High Tech Dr. RR Dr. SR Engineering College.
3. Attended one day webinar on “Manufacturing Process and ESPRIT CAD/CAM software” on 21st May, 2020 conducted by R. N. G. Patel Institute of Technology, Bradoli.
4. Attended one day webinar on “META-HEURISTIC OPTIMIZATION ALGORITHMS” on 26th May, 2020 conducted by SRM Institute of Science and Technology, Chennai.
5. Attended one day webinar on “How to get Published in Scientific Journal: From Research to Publication” on 27th May, 2020 conducted by Sri Sai Ram Institute of Technology, Chennai.
6. Attended one day webinar on “Nox and PM Emissions - Formation and Control” on 28th May, 2020 conducted by Rajalakshmi Engineering College, Chennai.
7. Attended one day webinar on “Insight to INDUSTRY 4.0” on 29th, May 2020 conducted by S.A Engineering College.
8. Attended one day webinar on “Air Conditioning in Automobiles” on 30th May, 2020 conducted by KCG College of Technology, Chennai.

#### **WORKSHOPS ATTENDED:**

1. Attended one day work shop on “Value Engineering using ANSYS” on 19<sup>th</sup> August 2016 conducted by CADD center, Tambaram in association with Sri Sairam engineering college, Chennai.
2. Attended one day training program on “ISO 9001:200 Quality management system and Audit Training” on 1<sup>st</sup> October 2014 conducted by “Creative Management Consultants” held at Sri Sairam engineering college, Chennai.
3. Attended one day workshop on “Role of Lean Manufacturing on Organization Competitiveness” on August 28, 2014 organised by Department of Mechanical Engineering, Sri Sairam engineering college, Chennai.
4. Participated in Industry – Institution Interaction Event on “Environment Management in Industrial Sector – Status and Needs” on 24<sup>th</sup> & 25<sup>th</sup> July 2014 conducted by Mechanical Engineering Department of Sri Sairam engineering college, Chennai.
5. Attended one day National Seminar on “Research Opportunities in Solar Thermal” on 12<sup>th</sup> December 2012 conducted by Center for Energy Studies, National Engineering College, Kovilpatti.
6. Attended one day National Seminar on “Research Methods for Academicians, Research Scholars & Practitioners” on 17<sup>th</sup> November 2012 conducted by National Engineering College, Kovilpatti.
7. Attended 2 days ISTE workshop on “Writing Effective Conference Papers” on 18<sup>th</sup> & 19<sup>th</sup> February 2012 conducted by IIT-Bombay, in association with Amrita School of Engineering, Coimbatore.
8. Attended one day National seminar on “Opportunities and Challenges in Renewable Power Generation” on 02<sup>nd</sup> February 2012 conducted by CAPE Institute of Technology, Nagercoil.
9. Attended 2 days seminar on “Application of Artificial Intelligence Techniques in Renewable Energy Systems” on 20<sup>th</sup> & 21<sup>st</sup> January 2012 conducted by National Engineering College, Kovilpatti.
10. Attended DRDO sponsored 2 days National Seminar on “Solar Energy Conversion with Nano Particles” on 14<sup>th</sup> & 15<sup>th</sup> October 2011 conducted by Velammal College of Engineering and Technology, Madurai.