

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

|                                                    |                                                                                                                                                                                                                                                     |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name: M. Sudhakar                                  |                                                                                                                                                                   |
| Designation:                                       | Assistant Professor                                                                                                                                                                                                                                 |
| Qualification:                                     | M.E, M.I.E, C.Eng., (P.hD)                                                                                                                                                                                                                          |
| Area of Specialization:                            | Energy Engineering                                                                                                                                                                                                                                  |
| Experience:                                        | Teaching- 12.7 Years                                                                                                                                                                                                                                |
|                                                    | Industry: 2.2 Years                                                                                                                                                                                                                                 |
| Number of Workshops/ Conferences/<br>FDP Attended: | Worshop- 12                                                                                                                                                                                                                                         |
|                                                    | FDP- 16                                                                                                                                                                                                                                             |
|                                                    | National/Int. Conference: 02                                                                                                                                                                                                                        |
| Publication:                                       | <b>Scopus/WoS Journal &amp; Conferene Publication:</b>                                                                                                                                                                                              |
|                                                    | <ul style="list-style-type: none"> <li>• Scopus Conference Publication: 35</li> <li>• WoS Journal Publications: 28</li> <li>• Scopus Journal Publications: 09</li> </ul>                                                                            |
| Publication:                                       | <b>Book/Book Chapters:</b>                                                                                                                                                                                                                          |
|                                                    | <ul style="list-style-type: none"> <li>• Book: 03</li> <li>• Book Chapter: 30</li> </ul>                                                                                                                                                            |
| General:                                           | <ul style="list-style-type: none"> <li>✓ 7 - NPTEL short term course completed.</li> <li>✓ 1 – NITTT short term course completed.</li> <li>✓ 2 - Online courses completed in UDEMY.</li> <li>✓ 25 - Online courses completed in CORSERA.</li> </ul> |

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|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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, ESN Publications, 2020.</li> <li>✓ Best Lead Editor Award for the Book titled “Robotics and Automation” ESN Publication in 2020.</li> <li>✓ Received “Award of Excellence in Research” from Novel Research Academy, Puducherry, 2022.</li> <li>✓ Received “Best Faculty Advisor Award” from IEI, Hosure Local Center, 2023.</li> <li>✓ Received “Academic Excellence Award” from IEI, Hosure Local Center, 2024.</li> </ul> |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**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 | 12.2 Years   | Teaching                  |
| Pee Vee Precisions Pvt Ltd              | Engineer Trainee | July’10 to July’11   | 1.1 Year     | Cost work out             |
| Pee Vee Precisions Pvt Ltd              | Diploma Trainee  | June’06 to June’07   | 1.1 Year     | Tapping Machine Assembler |

**PATENTS:**

| Applicant / Inventor                                                                                    | Title                                                                           | Patent Adoption | Filed/ Published/ Granted | Patent/Design Number |
|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------|---------------------------|----------------------|
| 1.K.Srividya<br>2. <b>M. Sudhakar</b><br>3.Mr. M.Jawahar<br>4.Mr. Narayan Krishan Vyas.                 | A Wearable Electronic Device with Camera                                        | 16/12/2022      | Granted                   | 350855-001           |
| <b>Applicant - M. Sudhakar,</b><br>Department of Mechanical Engineering, Sri Sairam Engineering College | A System And Method For Smart Mechanical Conversion Of Waste Into Usable Energy | 28/11/2025      | Published                 | 202541101529 A       |

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|---------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|------------|-----------|----------------|
| <b>Applicant - M. Sudhakar,</b><br>Department of Mechanical Engineering, Sri Sairam Engineering College | Compositions and Methods for Inhibiting Amyloid Fibril Aggregation                                       | 07/03/2025 | Published | 202541015737 A |
| <b>Applicant - M. Sudhakar,</b><br>Department of Mechanical Engineering, Sri Sairam Engineering College | Solar Dryer with IoT-Based Monitoring System for Enhanced Efficiency                                     | 13/12/2024 | Published | 202441095661 A |
| <b>Applicant - M. Sudhakar,</b><br>Department of Mechanical Engineering, Sri Sairam Engineering College | Fabrication of Solar Dryer with PCM Storage for Agricultural Product Preservation                        | 06/12/2024 | Published | 202441093380 A |
| <b>Applicant - M. Sudhakar,</b><br>Department of Mechanical Engineering, Sri Sairam Engineering College | Optimized Micro Wind Turbine For Maximum Efficiency In Variable Low-Speed Wind Conditions                | 29/11/2024 | Published | 202441092504 A |
| <b>Applicant - M. Sudhakar,</b><br>Department of Mechanical Engineering, Sri Sairam Engineering College | A Novel Gas Circulation Operating System For Alternative Fuel In Automobile Vehicles                     | 10/05/2024 | Published | 202441034466 A |
| <b>Applicant - M. Sudhakar,</b><br>Department of Mechanical Engineering, Sri Sairam Engineering College | Task Scheduling For Machine-Learning Workloads In Cloud Computing                                        | 09/02/2024 | Published | 202441004664 A |
| <b>Applicant - M. Sudhakar,</b><br>Department of Mechanical Engineering, Sri Sairam Engineering College | A Novel Tungsten-Carbide Tool to Reduce Consumption of Workpieces In Friction Stir Welding (FSW)         | 09/02/2024 | Published | 202441004663 A |
| <b>Applicant - M. Sudhakar,</b><br>Department of Mechanical Engineering, Sri Sairam Engineering College | A Control System For Internal Combustion Engines Utilizing Flexible Alternative Fuels And Method Thereof | 07/07/2023 | Published | 202341042495 A |
| <b>Applicant - M. Sudhakar,</b><br>Department of Mechanical Engineering, Sri Sairam Engineering College | Mechanism for Segmented Valve and Fuel Injection for Internal Combustion Engines                         | 18/08/2023 | Published | 202341033849 A |
| <b>Applicant - M. Sudhakar,</b><br>Department of Mechanical Engineering, Sri Sairam Engineering College | Ultra-Lightweight Natural Fiber Composites for Aerospace Applications                                    | 16/06/2023 | Published | 202321032319 A |
| <b>Applicant - M. Sudhakar,</b><br>Department of Mechanical Engineering, Sri Sairam Engineering College | A Novel Natural Fiber Composites with Enhanced Thermal Conductivity                                      | 17/11/2023 | Published | 202321030936 A |

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|---------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|------------|-----------|----------------|
| <b>Applicant - M. Sudhakar,</b><br>Department of Mechanical Engineering, Sri Sairam Engineering College | Investigation on Emission Reduction Potential of Nickel And Zinc Coated Catalytic Converters                                         | 01/09/2023 | Published | 202341047372 A |
| <b>Applicant - M. Sudhakar,</b><br>Department of Mechanical Engineering, Sri Sairam Engineering College | Internal Combustion Engine Using Alternative Fuel Injection System and Method Thereof                                                | 06/10/2023 | Published | 202341059794 A |
| <b>Applicant - M. Sudhakar,</b><br>Department of Mechanical Engineering, Sri Sairam Engineering College | An Automated Decompression Mechanism for Valve-Regulated Internal                                                                    | 01/09/2023 | Published | 202341044193 A |
| <b>Applicant - M. Sudhakar,</b><br>Department of Mechanical Engineering, Sri Sairam Engineering College | A Multifunctional Foldable Solar Photovoltaic Assembly with IoT Connectivity and Method Thereof                                      | 11/11/2022 | Published | 202241062460 A |
| <b>Applicant - M. Sudhakar,</b><br>Department of Mechanical Engineering, Sri Sairam Engineering College | A Solar Photovoltaic Monitoring System with Automatic Dust Removing Protector of Photovoltaic Solar Panel and Working Method Thereof | 21/10/2022 | Published | 202241057687 A |
| <b>Applicant - M. Sudhakar,</b><br>Department of Mechanical Engineering, Sri Sairam Engineering College | An Inspection Support System for Building Hit by Earthquake and Method Thereof                                                       | 14/10/2022 | Published | 202241056617 A |
| <b>Applicant - M. Sudhakar,</b><br>Department of Mechanical Engineering, Sri Sairam Engineering College | A Deep Learning and Iot Based Wind Turbine Condition Monitoring & Classification                                                     | 09/09/2022 | Published | 202241050436 A |
| <b>Applicant - M. Sudhakar,</b><br>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 |
| <b>Applicant - M. Sudhakar,</b><br>Department of Mechanical Engineering, Sri Sairam Engineering College | Experimental Investigation on Hybrid Double Slope Solar Still Integrated with PV/T System                                            | 25/11/2021 | Published | 202141054486 A |

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|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|------------|-----------|----------------|
| <b>Applicant - M. Sudhakar,</b><br>Department of Mechanical Engineering, Sri Sairam Engineering College. | Lantern type Wind Turbine                                                                                                  | 27/11/2020 | Published | 202041049414 A |
| <b>Applicant - M. Sudhakar,</b><br>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>Inventor - M. Sudhakar,</b><br>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><br>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 |

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

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 PROCEEDINGS:**

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 the 2nd 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 WEB OF SCIENCE JOURNALS (WoS):**

1. A. Rajendra Prasad, Ravishankar Sathyamurthy, **M. Sudhakar**, B Madhu, D Mageshbabu, A Muthu Manokar, Ali J Chamkha, 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>.
2. S. Jayaprakash, S. Siva Chandran, T. Sathish, Bhiksha Gugulothu, R. Ramesh, **M. Sudhakar**, Ram Subbiah, 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>
3. V Sharun, M Rajasekaran, S Suresh Kumar, Vikas Tripathi, Rajneesh Sharma, G Puthilibai, **M Sudhakar**, Kassu Negash, published a paper entitled “Study on developments in protection coating techniques for steel”, in the journal Advances in Materials Science and Engineering, Volume **2022**, <https://doi.org/10.1155/2022/2843043>
4. P Yogesh, Santaji Krishna Shinde, R Suresh kumar, Moti Lal Rinawa, G Puthilibai, **M Sudhakar**, Kassu Negash, “Mechanical strengthening of lightweight Aluminium alloys through friction stir process”, Advances in Materials Science and Engineering, Vol 2022, Pages 8907250, DOI: <https://doi.org/10.1155/2022/8907250>
5. Mohamad Reda A Refaai, Jyothilal Nayak Bharothu, TVV Pavan Kumar, Chodagam Srinivas, **M Sudhakar**, Anirudh Bhowmick, “Battery energy forecasting in electric vehicle using deep residual neural network”, International Journal of Photoenergy, Vol 2022, Pages 5959443 DOI: <https://doi.org/10.1155/2022/5959443>
6. V Senthil Nayagam, AP Jyothi, P Abirami, J Femila Roseline, **M Sudhakar**, Essam A Al-Ammar, Saikh Mohammad Wabaidur, Nasrul Hoda, Asefa Sisay, “Deep Learning Model on Energy Management in Grid-Connected Solar Systems” International journal of photoenergy, Vol 2022, Pages 6371182, DOI: <https://doi.org/10.1155/2022/6371182>
7. AN Arularasan, Manoj Mathew, **M Sudhakar**, K Sivakumar, S Bhagavathi Perumal, P Madhu, C Sowmya Dhanalakshmi, J Isaac Joshua Ramesh Lalvani, “A Holistic Framework for Environment Conscious Based Material Selection and Experimental Assessment Using Digraph-Based Expert System”, Scientific Programming, Vol **2022**, Issue 1, Pages: 2112683, Doi: <https://doi.org/10.1155/2022/2112683>
8. T Sivakumar, Chikkappa Udagani, M Sivaranjani, **M Sudhakar**, Reem Mohammed Alharbi, Neveen Abdel-Raouf, Ibraheem Borie M Ibraheem, Essam Nageh Sholkamy,

Mahadeo A Mahadik, Simon Yishak, "Impact of BN and WC particulate reinforcements on mechanical properties and damage development of Al-2048 metal matrix composites", *Advances in Materials Science and Engineering*, Vol **2022**, DOI: <https://doi.org/10.1155/2022/2286713>

9. V Vedanarayanan, J Dilli Srinivasan, K Arulvendhan, P Thirusenthil Kumaran, R Selvakumar, T Maridurai, **M Sudhakar**, Sami Al Obaid, Saleh Alfarraj, MM Raj, Ishwarya Komalnu Raghavan, "Performance development and evaluation of solar air collector with novel phase change material", *International Journal of Photoenergy*, Volume – **2022**, Issue – 1 <https://doi.org/10.1155/2022/3787141>
10. Raj Kumar, Mahmad Ziya Gous, Raviteja Surakasi, KS Raghuram, Prashant Sunagar, Neelam Sanjeev Kumar, Anand K Pandey, S Padmavathy, **M Sudhakar**, S Praveen Kumar, "Investigation of Curing Mechanism and Mechanical Properties of Polypropylene/Aliphatic Epoxy Composites", *Advances in Polymer Technology*, Volume **2022**, Issue 1, <https://doi.org/10.1155/2022/4167871>
11. Mohamad Reda A Refaai, Jyothilal Nayak Bharothu, TVV Pavan Kumar, Chodagam Srinivas, **M Sudhakar**, Anirudh Bhowmick, "Battery energy forecasting in electric vehicle using deep residual neural network", *International Journal of Photoenergy*, Vol **2022**, Pages 5959443 DOI: <https://doi.org/10.1155/2022/5959443>
12. Raj Kumar, Mahmad Ziya Gous, Raviteja Surakasi, KS Raghuram, Prashant Sunagar, Neelam Sanjeev Kumar, Anand K Pandey, S Padmavathy, **M Sudhakar**, S Praveen Kumar, "Investigation of Curing Mechanism and Mechanical Properties of Polypropylene/Aliphatic Epoxy Composites", *Advances in Polymer Technology*, Volume 2022, Article ID 4167871, <https://doi.org/10.1155/2022/4167871>
13. A Rajendra Prasad, Mohammed El Hadi Attia, **M Sudhakar**, Ravishankar Sathyamurthy, A Muthu Manokar, "Performance improvement of solar still using phosphate granules as energy storing materials: an experimental study", *Desalination and Water Treatment*, Vol 250, Pages 16-26, **2022**, <https://doi.org/10.5004/dwt.2022.28180>
14. Syed Hamim Jeelani, R Puviarasi, Sarita Santaji Shinde, Raviteja Surakasi, Vipin Sharma, S Madhavarao, **M Sudhakar**, V Mohanavel, "An approach to the utilization of grid integration to analyze the performance and quality of solar photovoltaic

- model” Energy Reports, Volume 8, Pages: 1029-1044, **2022**,  
<https://doi.org/10.1016/j.egy.2022.10.282>
15. G Srinivasa Sudharsan, R Venkatasubramanian, N Hemalatha, Radhika G Deshmukh, Mohana Alanazi, Ahmad Almadhor, S Lokesh, **M Sudhakar**, “Power yield improvement of wind turbine and fatigue load mitigation using predictive-based Active flow controller”, Energy Reports, Volume 8, **2022**,  
<https://doi.org/10.1016/j.egy.2022.10.285>
  16. V Senthil Nayagam, K Geetha, R Vallikannu, Suresh Kumar Muthuvel, G Chinna Ram, Parul Gupta, **M Sudhakar**, V Mohanavel, Ravishankar Sathyamurthy, “Energy efficient tubular solar still for augmented yield using electrical heater”, Energy Reports, Vol 8, **2022**, <https://doi.org/10.1016/j.egy.2022.10.283>
  17. T Jayakumar, Natesh M Gowda, R Sujatha, Shankar Nayak Bhukya, G Padmapriya, S Radhika, V Mohanavel, **M Sudhakar**, Ravishankar Sathyamurthy, “Machine Learning approach for Prediction of residual energy in batteries” Energy Reports, Vol 8, pages 756-764, **2022**, <https://doi.org/10.1016/j.egy.2022.10.027>
  18. S Jaanaa Rubavathy, Nithiyananthan Kannan, D Dhanya, Santaji Krishna Shinde, NB Soni, Abhishek Madduri, V Mohanavel, **M Sudhakar**, Ravishankar Sathyamurthy, “Machine learning strategy for solar energy optimisation in distributed systems”, Energy Reports, Vol 8, Pages 872-881, **2022**,  
<https://doi.org/10.1016/j.egy.2022.09.209>
  19. P Asha, Kasiprasad Mannepalli, Rashmita Khilar, N Subbulakshmi, R Dhanalakshmi, Vikas Tripathi, V Mohanavel, Ravishankar Sathyamurthy, **M Sudhakar**, “Role of machine learning in attaining environmental sustainability”, Energy Reports, Vol 8, Pages 863-871, **2022**, <https://doi.org/10.1016/j.egy.2022.09.206>
  20. Radha Raman Chandan, CR Aditya, R Elankeerthana, K Anitha, R Sabitha, Ravishankar Sathyamurthy, V Mohanavel, **M Sudhakar**, “Machine learning Technique for improving the stability of Thermal Energy storage”, Energy Reports, Volume 8, **2022**,  
<https://doi.org/10.1016/j.egy.2022.09.205>
  21. Bharat Bhushan Sharma, R Raffik, Abhay Chaturvedi, S Geeitha, Patan Saleem Akram, L Natrayan, V Mohanavel, **M Sudhakar**, Ravishankar Sathyamurthy, “Designing and implementing a smart transplanting framework using programmable logic controller and photoelectric sensor”, Energy Reports, Vol 8, Pages 430-444, **2022**,  
<https://doi.org/10.1016/j.egy.2022.07.019>

22. Nalla Bhanu Teja, Karthikeyan Natarajan, Ramesh Adireddy, Rajendra Prasad Arani, **Sudhakar Meganathan**, Tien Anh Tran, “Emission analysis of esterified mahua oil fuelled with DTBP blends in conventional diesel engine”, International Journal of Oil, Gas and Coal Technology, Volume 34, Issue 2, <https://doi.org/10.1504/IJOGCT.2023.133810>
23. Arani Rajendra Prasad, Ravishankar Sathyamurthy, Abd Elnaby Kabeel, **Meganathan Sudhakar**, “Concentrator-assisted solar still for improving freshwater yield: an experimental approach” Environmental Science and Pollution Research, Volume 30, Issue 9, 2022, <https://doi.org/10.1007/s11356-022-23926-5>
24. P Manoj Kumar, Murugesan Palaniappan, Madhusoodan Sharma, R Suresh, Kartikeya Parmar, Raviteja Surakasi, Dileshwar Rana, **M Sudhakar**, “Modelling and analysis of an N-DPCM (nano-doped PCM) integrated solar water heater using CFD”, International Journal on Interactive Design and Manufacturing (IJIDeM), Pages 1-12, <https://doi.org/10.1007/s12008-022-01159-7>
25. B Murali, N Krishnamoorthy, P Manoj Kumar, M Saravanan, D Madankumar, Raviteja Surakasi, Arvind Sharma, M Sudhakar, “Design and performance optimization of a solar still using Nano-Coated Condensing Glass”, International Journal on Interactive Design and Manufacturing (IJIDeM), Pages 1-6, 2022, <https://doi.org/10.1007/s12008-022-01168-6>
26. P Manoj Kumar, Radhey Shyam Meena, S Sivaramakrishnan, **M Sudhakar**, KT Thilagham, KR Senthil Kumar, Raviteja Surakasi, “Study on the photovoltaic panel using nano-CeO<sub>2</sub>/ Water-based Nanofluid” International Journal on Interactive Design and Manufacturing (IJIDeM), Volume 18, Issue 8, 2023, <https://doi.org/10.1007/s12008-023-01604-1>
27. **Sudhakar M** N.Ravi Kumar, D.Jyothi Swarup, Selvam B, Sivapriya J, Nellore Manoj Kumar, Naveen R, Poonam Khan, K. Selvaraju, “Engineering Sustainable Interior Materials: Performance Analysis of PLA Composites Reinforced with Banana Stem Fiber and Spent Coffee Grounds”, Journal of Polymer and Composites (STM Journals), Volume 13, Issue 04, Pages: 94-105
28. J.Lurdhumary, K. Alagarraja, S.karthikeyan, Sathyaseelan. P, P. Sobhanachalam, P. Nantha kumar, Kirubakaran D, Nellore Manoj Kumar, **Sudhakar M**, “High-Performance Biodegradable Films from Bamboo Derived Cellulose Nanofibers and Silk Fibroin: Engineering Sustainable Polymer Composites”, Journal of Polymer and Composites (STM Journals), Volume 13, Issue 04, Pages: 256-265

## PAPERS PUBLISHED IN SCOPUS JOURNALS:

1. A. Rajaram A. Syed Musthafa, S. Lakshmi, P. Arthi Devarani, N. Kanagavalli, G. Soma Sekhar, Harshal Patil, Nellore Manoj Kumar, **M. Sudhakar**, published a paper entitled “Connectivity In Bloom Promoting Biodiversity Through Eco-Friendly Wireless Networks”, Journal of Environmental Protection and Ecology, Vol – 25, Issue 4, Pages: 1150–1159
2. A. Rajaram S. Sujatha, K. Swaroopa, S. Swathi, K. Sekar, Shaik Shafi, Harshal Patil, Nellore Manoj Kumar, **M. Sudhakar**, published a paper entitled “Energy-Aware Heterogeneous Networks Resource Management For Sustainable Agricultural Data”, Journal of Environmental Protection and Ecology, Vol – 25, Issue 4, Pages: 1139–1149
3. **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.
4. 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>
5. 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>
6. M Meena, B Murali, G Diwakar, J Ananth, Venkat M Shinde, Prashant Sunagar, N Rajesha, **M Sudhakar**, “Preparation of Activated Carbon Derived from Prosopis Juliflora For The Removal Of Malachite Green.”, Oxidation Communications, Volume 47. Issue 1
7. S Titus, V Renuka, Anil Kumar Thandlam, Ct Muthiah, Ng Nagaveni, A Jayanthi, K Rani, **M Sudhakar**, “Production of Bioenergy Molecules from Waste Spent Coffee Grounds- A Green Chemistry Approach.”, Oxidation Communications, Volume 47. Issue 1
8. G Murugan, C Padmaja, R Sindhuja, Pallavi Yarde, Guduri Chitanya, Kalyan Devappa Bamane, M Sudhakar, “A Comprehensive Survey on Cyber-Physical System Security

in the Internet of Things (IoT): Addressing and Solutions”, Recent Advances in Computer Science and Communications,

<https://doi.org/10.2174/0126662558311697241023114206>

9. S Sarveswara Reddy, Priyanka Bhatnagar, S Sathya, Mp Indumathi, J Geetha Priya, S Bhagavathi Perumal, Sandeep Gupta, M Sudhakar, Jim Philip, Rajaram Ayyasamy, “Integrated Membrane Catalysis and Electrochemical Systems for Sustainable Wastewater Treatment.” Oxidation Communications, Volume 48, Issue 1

#### PAPERS PUBLISHED IN CONFERENCE JOURNALS:

1. **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>
2. 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>
3. 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: Proceedings this link is disabled, 2020, 33, pp. 4573–4577.  
<https://doi.org/10.1016/j.matpr.2020.08.189>
4. D Muruganandam, J Jayapriya, G Ramakrishnan, G Puthilibai, P Karthick, **M Sudhakar**, “Enhancing heat transfer rate in heat exchanger using nano particles of the natural Glay”, Materials Today: Proceedings, Vol 33, Pages 4402-4407, DOI: <https://doi.org/10.1016/j.matpr.2020.07.661>
5. 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>
6. 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>

7. 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>
8. 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>
9. Pamula Keerthana, G Ravi, Kumud Pant, **M Sudhakar**, “Bio polymer based food packaging using composite materials”, Materials Today: Proceedings, Vol 66, Pages 834-837. Doi: <https://doi.org/10.1016/j.matpr.2022.04.434>
10. Raj Kumar, BS Praveen Kumar, KV Pradeep Kumar, KS Raghuram, V Ranjith Kumar, Chirag Vibhakar, **M Sudhakar** , “Thermomechanical pretreatment of Al-Zr-Mg-Cr alloy to improve the performance through creep-age forming”, Materials Today: Proceedings, Pages 1520-1525, DOI: <https://doi.org/10.1016/j.matpr.2022.01.405>
11. Sidhartha Kumar Samal, Smrutisikha Jena, Bibhu Prasad Ganthia, S Kaliappan, **M Sudhakar**, SK Sriram Kalyan, “Sensorless speed control of doubly-fed induction machine using reactive power based MRAS”, Journal of Physics: Conference Series, Vol 2161, Issue 1, Pages: 012069, Doi: [10.1088/1742-6596/2161/1/012069](https://doi.org/10.1088/1742-6596/2161/1/012069)
12. Moti Lal Rinawa, Prashant Chauhan, Amit Kumar Sharma, Hari Kumar Singh, MS Karuna, **M Sudhakar**, “An investigation on synthesis, aggregation, and mechanical properties of Al 6082 nanocomposites reinforced by Titanium carbide”, Materials Today: Proceedings, Vol 59, Pages 1526-1532. Doi: <https://doi.org/10.1016/j.matpr.2022.01.406>
13. T Vennila, Raviteja Surakasi, KS Raghuram, G Ravi, S Madhavarao, Chikkappa Udagani, **M Sudhakar**, “Investigation on tensile behaviour of Al/Si<sub>3</sub>N<sub>4</sub>/sugarcane ash particles reinforced FSP composites”, Materials Today: Proceedings, Vol 59, Pages 1266-1270, DOI: <https://doi.org/10.1016/j.matpr.2021.11.477>

14. A Saravanan, R Venkatasubramanian, R Khare, R Surakasi, S Boopathi, S Ray, **M Sudhakar**, "Policy trends of renewable energy and non-renewable energy", renewable energy
15. 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>
16. P Sakthi, R Bhavani, D Arulselvam, R Karthick, S Selvakumar, **M Sudhakar**, "Energy efficient cluster head selection and routing protocol for WSN" AIP Conference Proceedings, Vol 2518, DOI: <https://doi.org/10.1063/5.0105010>
17. VM Manickavasagam, M Prabakaran, K Balamurugan, Anirudh Srinivas Vellimedu, **M Sudhakar**, V Senthil Nayagam, M Siva Ramkumar, "Design and comparison of metaheuristic optimization learning approach PID controller for self-balancing bicycle", AIP Conference Proceedings, Volume 2519, Issue 1, <https://doi.org/10.1063/5.0110000>
18. K Rameshkumar, TJ Catherine, **M Sudhakar**, I Kathir, S Hemavathi, K Balamurugan, "Bio-Inspired Algorithm for Speed Control of Electric Vehicle", 2022 International Conference on Automation, Computing and Renewable Systems (ICACRS), IEEE, [10.1109/ICACRS55517.2022.10029113](https://doi.org/10.1109/ICACRS55517.2022.10029113)
19. Kondireddy Muni Sankar, B Booba, C Rangaswamy, PV Pramila, Sangita Rani Kar, Ashok Kumar, **M Sudhakar**, "IoT based Weather, Soil, Earthquake, Air pollution Monitoring System", 2023 3rd International Conference on Innovative Practices in Technology and Management (ICIPTM), IEEE, [10.1109/ICIPTM57143.2023.10118160](https://doi.org/10.1109/ICIPTM57143.2023.10118160)
20. Mary Getsy, Heena Kousar, A Shanmugam, J Samson Isaac, Nirzar Kulkarni, P Raja, **M Sudhakar**, "An Innovative Shopping System with GSM Based Automation for Physically Challenging and Old Age People" 2023 3rd International Conference on Innovative Practices in Technology and Management (ICIPTM), IEEE
21. K Venkata Ramana, S Arulkumar, Asmita Marathe, Kedir Beshir, V Jaiganesh, K Tamilselvi, **M Sudhakar**, "Design and Implementation of Renewable Energy Applications Based Bi-Directional Buck-Boost Converter", 2023 3rd International Conference on Innovative Practices in Technology and Management (ICIPTM), IEEE

22. Praful V Nandankar, C Jeeva, Vinjamuri SN Ch Dattu, M Thangaraj, Chikkappa Udagani, D Kirubakaran, M Sudhakar, "Study of Energy Capture with Photovoltaic Cell in Zinc Tile", 2023 7th International Conference on Intelligent Computing and Control Systems (ICICCS), IEEE,
23. R Bhoopathi, A Premnath, T Surendhar, V Vasanth, **M Sudhakar**, Ravishankar Sathyamurthy, "Comparative study on pentagonal pyramid (PPy) and tubular (Tub) solar stills with thermal energy storage (TES)", Materials Today: Proceedings, <https://doi.org/10.1016/j.matpr.2023.08.336>
24. **M Sudhakar**, V Sundar, I Umar Farooq, A Elvin Andrew, A Rajendra Prasad, M Arul Prakash, "Experimental study on double slope (DSL) and triangular pyramid (TPy) solar stills under the influence of latent heat storage material (LHSM)", Materials Today: Proceedings, <https://doi.org/10.1016/j.matpr.2023.08.350>
25. D Gnanasangeetha, A Muthuraman, KN Ramu, I Kathir, S Kiruba, Pinjala Tejomurthi, **M Sudhakar**, "Evaluation of the potential of biomass energy as a sustainable alternative energy source", 2023 7th International Conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud)(I-SMAC), IEEE
26. D Vignesh, S Sanchan Kumar, V Saravanan, M Sudhakar, "Design and Optimization of Go-Kart Chassis", SAE Technical Paper, Issue 2023-01-5135,
27. S YUVARAAJ KUMAR, P Srivarshani, SV Nitin Sanjeeth, M Sudhakar, "Design and Optimization of the Steering System in Go-Kart", SAE Technical Paper, Issue 2023-01-5147
28. S Akash, S Sharadha, VV Kavi Priyadarson, K Siddharth, M Sudhakar, "Design and Analysis of the Transmission System in Go-Kart", SAE Technical Paper, Issue 2023-01-5148
29. KARTHIKEYAN SS Naren, Kumar S Santhosh, M Ilamparithi, S Srisakthivel, M Sudhakar, "Design and Analysis of Brakes in Go-kart Vehicle", SAE Technical Paper, Issue 2023-01-5168
30. Nagasrisaihari Sunkara, A Chandrashekhar, Ankit, Praveen Vundrajavarapu, I John Solomon, Ramesh Velumayil, **M Sudhakar**, V Vijayan, "Optimization of 3D printing parameters for enhanced mechanical properties of biodegradable polycaprolactone (PCL) specimens", AIP Conference Proceedings, Volume 3270, Issue 1, <https://doi.org/10.1063/5.0263193>

31. M Saravanan, Mit Patel, M Rajkumar, D Aishwarya, G Srimathy, Raviteja Surakasi, Monika, M Sudhakar, "Enhanced performance of single sloped double basin solar stills using ZrO<sub>2</sub> nanoparticles: An experimental investigation" AIP Conference Proceedings, Volume 3270, Issue 1, <https://doi.org/10.1063/5.0262520>
32. M Bommy, K Sankara Moorthy, M Arul Joseph Amalraj, S Krishnaveni, D Leela Rani, M Clement Joe Anand, M Sudhakar, R Ramkumar, "Advanced feature learning for multi-scenario rankings: The maria framework for product recommendations" AIP Conference Proceedings, Volume 3270, Issue 1, <https://doi.org/10.1063/5.0262223>
33. G Rathinasabapathi, Rupesh Kushwah, D Sudha, T Viswanathan, Abhijeet Das, M Manohara, Monika, M Sudhakar, "Enhanced air-water interface solar heating using electrochemically reduced WC nanotubes on titanium gauze: Implications for industrial photothermal applications", AIP Conference Proceedings, Volume 3270, Issue 1, <https://doi.org/10.1063/5.0262519>
34. Suresh Tiwari, U Rajesh Kumar, Moti Lal Rinawa, Boddu Soundarya Santhoshi, Singuru Madhavarao, I John Solomon, M Sudhakar, N Parkunam, "Optimization of friction stir welding parameters for enhanced ultimate tensile strength in aluminium AA1050 alloy", AIP Conference Proceedings, Volume 3270, Issue 1, <https://doi.org/10.1063/5.0262584>
35. Rajesh Kumar Patnaik, MR Kamesh, D Nagamalleswari, G Ramya, V Surendar, Ramesh Velumayil, M Sudhakar, V Vijayan, "Enhancing solar still performance with jute cloth wicks: A comparative study of absorber geometries", AIP Conference Proceedings, Volume 3270, Issue 1, <https://doi.org/10.1063/5.0261587>

#### **TEXT BOOK PUBLISHED:**

1. **M. Sudhakar** - Robotics and Automation, ESN Publications – 2021, ISBN: 978-93-90781-09-6
2. **M. Sudhakar** - Covid-19 and its Impact, ESN Publications – 2021, ISBN: 978-81-947019-4-1
3. **M. Sudhakar**, L Deepak Gowda, Sumit Kumar Mishra - Automation and Control Engineering, ESN Publications – 2022, ISBN: 978-93-95196-41-3

## **BOOK CHAPTER PUBLISHED:**

1. Mr. M. Sudhakar, "Covid 19 Impacts On Growth, Manufacturing, Trade and MSME Sector", in a book titled Mechanical and Instrumentation, ISBN: 978-81-947019-8-9
2. M. Sudhakar, Sustainable developments of hybrid floating solar power plants: photovoltaic system, "Human Agro-Energy Optimization for Business and Industry", Pages: 148-167 DOI: [10.4018/978-1-6684-4118-3.ch008](https://doi.org/10.4018/978-1-6684-4118-3.ch008)
3. M. Sudhakar, Sustainable Developments of Modern Soil-Less Agro-Cultivation Systems: Aquaponic Culture, "Human Agro-Energy Optimization for Business and Industry", Pages: 69-87 DOI: [10.4018/978-1-6684-4118-3.ch004](https://doi.org/10.4018/978-1-6684-4118-3.ch004)
4. M. Sudhakar, Internet of things and artificial intelligence-integrated nano-materials research, "Sustainable Utilization of Nanoparticles and Nanofluids in Engineering Applications", Pages: 156-183 DOI: [10.4018/978-1-6684-9135-5.ch007](https://doi.org/10.4018/978-1-6684-9135-5.ch007)
5. M. Sudhakar, Artificial intelligence applications in water treatment and water resource assessment: challenges, innovations, and future directions, "Intelligent Engineering Applications and Applied Sciences for Sustainability", Pages: 248-269 DOI: [10.4018/979-8-3693-0044-2.ch014](https://doi.org/10.4018/979-8-3693-0044-2.ch014)
6. M. Sudhakar, Sustainable developments of human-machine interaction for knowledge discovery and management: Healthcare and agricultural domains, "Sustainable Science and Intelligent Technologies for Societal Development", Pages: 415-439 DOI: [10.4018/979-8-3693-1186-8.ch023](https://doi.org/10.4018/979-8-3693-1186-8.ch023)
7. M. Sudhakar, Exploring AI and Machine Learning Integration in Medical Assistive Robotics: An Experimental Approach, "Fostering Cross-Industry Sustainability With Intelligent Technologies", Pages: 130-151 DOI: [10.4018/979-8-3693-1638-2.ch009](https://doi.org/10.4018/979-8-3693-1638-2.ch009)
8. M Sudhakar, Future Trends in ICT and E-Services Through Advanced Assessment Metrics: Harnessing the Power of AI, "Convergence of Human Resources Technologies and Industry 5.0", Pages: 147-169 DOI: [10.4018/979-8-3693-1343-5.ch008](https://doi.org/10.4018/979-8-3693-1343-5.ch008)
9. M Sudhakar, Enhancing usability and control in artificial intelligence of things environments (AIoT) through semantic web control models, "Semantic Web Technologies and Applications in Artificial Intelligence of Things", Pages: 186-206 DOI: [10.4018/979-8-3693-1487-6.ch009](https://doi.org/10.4018/979-8-3693-1487-6.ch009)

10. M Sudhakar, A Study on Blockchain's Transformation of Healthcare Systems, "Lightweight Digital Trust Architectures in the Internet of Medical Things (IoMT)", Pages: 145-165 DOI: [10.4018/979-8-3693-2109-6.ch009](https://doi.org/10.4018/979-8-3693-2109-6.ch009)
11. M Sudhakar, Elevating Performance for Enhancing AI-Powered Humanoid Robots Through Innovation, "Applied AI and Humanoid Robotics for the Ultra-Smart Cyberspace", Pages: 85-119 DOI: [10.4018/979-8-3693-2399-1.ch004](https://doi.org/10.4018/979-8-3693-2399-1.ch004)
12. M Sudhakar, Study on Nano Robotic Systems for Industry 4.0: Overcoming Challenges and Shaping Future Developments, "Multidisciplinary Applications of AI Robotics and Autonomous Systems", Pages: 242-266 DOI: [10.4018/979-8-3693-5767-5.ch017](https://doi.org/10.4018/979-8-3693-5767-5.ch017)
13. M Sudhakar, Study on 6G's Spectrum in Evolving the Landscape of Hyper-Connected Communication, "Social Innovations in Education, Environment, and Healthcare", Pages: 191-215, DOI: [10.4018/979-8-3693-2569-8.ch010](https://doi.org/10.4018/979-8-3693-2569-8.ch010)
14. M Sudhakar, Integrating Machine Learning-IoT Technologies Integration for Building Sustainable Digital Ecosystems, "Multidisciplinary Applications of Extended Reality for Human Experience", Pages: 259-291, DOI: [10.4018/979-8-3693-2432-5.ch012](https://doi.org/10.4018/979-8-3693-2432-5.ch012)
15. M Sudhakar, The Evolution of Electric Vehicle Market Dynamics, "Solving Fundamental Challenges of Electric Vehicles", Pages: 157-178, DOI: [10.4018/979-8-3693-4314-2.ch007](https://doi.org/10.4018/979-8-3693-4314-2.ch007)
16. M Sudhakar, Integrating Clean Technologies and IoT for Waste Reduction in Manufacturing, "Environmental Applications of Carbon-Based Materials", Pages: 288-316, DOI: [10.4018/979-8-3693-3625-0.ch011](https://doi.org/10.4018/979-8-3693-3625-0.ch011)
17. M Sudhakar, Harnessing Digitalization and Internet of Things for Sustainable Energy: A Comprehensive Study, "Navigating the Circular Age of a Sustainable Digital Revolution", Pages: 231-262, DOI: [10.4018/979-8-3693-2827-9.ch008](https://doi.org/10.4018/979-8-3693-2827-9.ch008)
18. M Sudhakar, Building a sustainable future through innovations in green construction and recycling waste materials, "Innovations in Energy Efficient Construction Through Sustainable Materials", Pages: 33-64, DOI: [10.4018/979-8-3693-3398-3.ch002](https://doi.org/10.4018/979-8-3693-3398-3.ch002)
19. M Sudhakar, Blockchain for Pharmaceutical Data Management and Quantum Computing Innovations, "AI-Powered Advances in Pharmacology", Pages: 201-234, DOI: [10.4018/979-8-3693-3212-2.ch008](https://doi.org/10.4018/979-8-3693-3212-2.ch008)

20. M Sudhakar, Impacts of National Board Accreditation (NBA) on Engineering Disciplines in India, "Navigating Leadership and Policy Management in Education", Pages: 43-76 DOI: [10.4018/979-8-3693-9215-7.ch002](https://doi.org/10.4018/979-8-3693-9215-7.ch002)
21. M Sudhakar, Strategic Integration of Smart Digital Business Continuity and Configuration Management, "Essential Information Systems Service Management", Pages: 133-162, DOI: [10.4018/979-8-3693-4227-5.ch006](https://doi.org/10.4018/979-8-3693-4227-5.ch006)
22. M Sudhakar, The Future of Machine Learning and Robotics in Digital Technology for Hospitality, "Cutting-Edge Technologies for Business Sectors", Pages: 401-428, DOI: [10.4018/979-8-3693-9586-8.ch014](https://doi.org/10.4018/979-8-3693-9586-8.ch014)
23. M Sudhakar, Integrating IoT and Machine Learning for Advanced Nuclear Structure Analysis, "Integrating Machine Learning Into HPC-Based Simulations and Analytics", Pages: 383-408, DOI: [10.4018/978-1-6684-3795-7.ch015](https://doi.org/10.4018/978-1-6684-3795-7.ch015)
24. M Sudhakar, AI and Machine Learning in Earthquake Prediction: Enhancing Precision and Early Warning Systems, "Modern SuperHyperSoft Computing Trends in Science and Technology", Pages: 1-32, DOI: [10.4018/979-8-3693-6875-6.ch001](https://doi.org/10.4018/979-8-3693-6875-6.ch001)
25. M Sudhakar, Integrating IoT and Cloud Computing in Aquaponics and Aeroponics Methods, "Utilizing Aeroponics Techniques for Improved Farming", Pages: 133-168
26. M Sudhakar, Aeroponics Techniques for Improved Farming Using Artificial and Deep Learning techniques, "Utilizing Aeroponics Techniques for Improved Farming", Pages: 81-118, DOI: [10.4018/979-8-3693-2320-5.ch005](https://doi.org/10.4018/979-8-3693-2320-5.ch005)
27. M Sudhakar, A Multidisciplinary Approach to Sustainable Smart City Development: Cyber-Physical Systems, "Urban Mobility and Challenges of Intelligent Transportation Systems", Pages: 421-442, DOI: [10.4018/979-8-3693-7984-4.ch023](https://doi.org/10.4018/979-8-3693-7984-4.ch023)
28. M Sudhakar, Virtual Prototyping in the Automotive Industry, "Virtual and Augmented Reality Applications in the Automobile Industry", Pages: 29-58, DOI: [10.4018/979-8-3693-7287-6.ch002](https://doi.org/10.4018/979-8-3693-7287-6.ch002)
29. M Sudhakar, AI-Powered Smart Traffic Management in Intelligent Transportation Systems, "Urban Mobility and Challenges of Intelligent Transportation Systems", Pages: 51-70, DOI: [10.4018/979-8-3693-7984-4.ch004](https://doi.org/10.4018/979-8-3693-7984-4.ch004)
30. K Priyadarshini, R Purushothaman, V Jaiganesh, M Sudhakar, "Integrating Machine Learning for Accurate Diagnostics and Real-Time Monitoring for Revolutionizing

Healthcare With Visual Intelligence”, Combining Visual Intelligence and Federated Learning in Smart Healthcare, IGI Global Scientific Publishing, Pages: 111-140, Doi: 10.4018/979-8-3693-6094-1.ch005

**REVIEWER FOR INTERNATIONAL JOURNALS:**

1. ELSEVIER - Materials Today Proceedings
2. ELSEVIER - Journal of the Taiwan Institute of Chemical Engineers, Q1, IF: 6.3
3. ELSEVIER – Results in Engineering, Q1, IF: 7.9
4. ELSEVIER – International Journal of Thermofluids Q1, IF: 7.5
5. SPRINGER - International Journal on Interactive Design and Manufacturing, Q2, IF:2.5
6. Tech Science Press - CMC-Computers, Materials & Continua, Q2, IF: 1.7
- 7.

**SHORT TERM COURSE COMPLETED:**

1. Successfully completed 4 weeks NPTEL course on topic “Teaching and Learning in General Programs: TALG” held between Jul-Aug 2024.
2. Successfully completed 8 weeks NPTEL course on the topic “Accreditation and Outcome Based Learning” held between Aug-Oct 2023.
3. Successfully completed 12 weeks NPTEL course on the topic “Solar Energy Engineering and Technology” held between Jul-Oct 2023.
4. Successfully completed all 8 Modules – “AICTE - National Initiative for Technical Teachers Training (NITTT)” Course held in February 2023, Certified by AICTE, Registration No: 20212115140.
5. Successfully completed 4 weeks NPTEL course on topic “Introduction to Professional Scientific Communication” held between January – February 2020.
6. Successfully completed 8 weeks NPTEL course on topic “Introduction to Research” held between February – March 2019.
7. Successfully completed 8 weeks NPTEL course on topic “Waste to Energy Conversion” held between February – March 2018.

**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.

**MEMBERSHIP IN PROFESSIONAL SOCIETIES:**

1. Life member in “The Indian Society for Technical Education (ISTE)”.
2. Life member in “Indian Welding Society (IWS)”.
3. Life member in “The Institution of Engineers (IEI)”.
4. Member in “Institute of Electrical and Electronics Engineers (IEEE)”.
5. 10 Years Member in “Society of Automotive Engineers (SAE)”.