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❖ **EDUCATION QUALIFICATION:**

- **Ph.D (2020)**, Mechanical Engineering,  
Anna University, Chennai, Tamil Nadu, India.
- **Master of Engineering (2006)**, Internal Combustion Engineering,  
College of Engineering Gundy, Anna University, Chennai. Tamil Nadu, India.
- **Bachelor of Engineering (1997)**, First Class, Mechanical Engineering,  
R.V.S College of Engg. And Tech., Dindigul, Madurai Kamaraj University, Tamil Nadu, India.

❖ **EXPERIENCE :**

- **Professor / HoD-Mechatronics Engineering Department,**  
KCG College of Technology, Chennai , Aug-2023 to Till Date.
- **Professor / HoD-Mechanical Engineering Department,**  
Velammal Institute of Technology, Chennai , Aug-2022 to Aug-2023.
- **Professor / HoD-Mechanical & Mechatronics Engineering Department,**  
Velammal Institute of Technology, Chennai , 2022 to Aug-2022.
- **Associate Professor / HoD-Mechanical Engineering Department,**  
Velammal Institute of Technology, Chennai – 2012-2022.
- **Assistant Professor Grade-II / HoD-Mechanical Engineering Department,**  
Velammal Institute of Technology, Chennai , 2011-2012 .
- **Professor/ HoD-Aeronautical Engineering Department,**  
SAMS College of Engineering and Technology, Chennai , 2010-2011.
- **Assistant Professor/ HoD-Aeronautical Engineering Department,**  
SAMS College of Engineering and Technology, Chennai , 2008-2010.
- **Lecturer** , St. Peter's Engineering College, Chennai ,2006-2008.
- **Lecturer** , Rajarajeswari Engineering College, Chennai ,2000-2006.
- **Lecturer** , Thangavelu Engineering College, Chennai, 1998-2000.
- **Production Engineer**, Sels Industries, Chennai – 19,1997-1998.

❖ **GRANTS RECEIVED AND PROPOSAL SUBMITTED:**

1. Title : **ASSESSMENT IN ENGINEERING EDUCATION: A PEDAGOGICAL APPROACH**

Scheme : **AICTE- Short Term Training Program (STTP)** under AQIS 2019-20.

Total Cost (in Rs.) : 2,67,000

Ref. No. 34-66/424/FDC/STTP/Policy-1/2019-20.

Dated: 10-Aug-2020.

**Status: Completed**

2. Title: **MULTIFACETED ELECTRIC WHEELCHAIR**

Name of the Agency : DST-TIDE

Total Cost (in Rs.) : 1 lakh

Date : 31/10/2019

Status : Not Considered

3. Title: **Magnesium based composites for biomedical applications using 3D printing process**

Name of the Agency : SERB(Core Research Grant)

Total Cost (in Rs.) : 26,24,472

Date : 17/03/2021

Status : Not Considered

4. Title : **Design and Development of low-cost leather Ironing Machine A Miniature model for leather artisans.**

Name of the Agency : DST-SEED(STI Hub for SC Community)

Total Cost (in Rs.) : 36,60,000

Date : 30/09/2021

Status : Not Considered

5. Title: **Autonomous Windows closing system for buildings and Automobiles**

Name of the Agency : MSME

Total Cost (in Rs.) : 1,00,000

Date : 05/04/2022

Status : 1<sup>st</sup> Level Selected.

6. Title: **Design of Ultra Sonic Gas and Steam Flow meter For Industrial Applications**

Name of the Agency : MSME

Total Cost (in Rs.) : 5,00,000

Date : 05/04/2022

Status : 1<sup>st</sup> Level Selected.

7. Title: **Development of Food Dispensing Machine Using IOT & Artificial Intelligence Techniques**

Name of the Agency : DST-SERB(SURA)

Total Cost (in Rs.) : 23,21,700

Date : 05/10/2022

Status : Proposal Not Considered

8. Title: **Low Cost Calcium Ion Battery with Higher Efficiency Suitable For Electric Vehicle Application**

Name of the Agency : MSME

Total Cost (in Rs.) : 7,99,520

Date : 14/11/2022

Status : 1<sup>st</sup> Level Sort listed.

9. Title: **DEVELOPMENT OF BAMBOO FIBER WITH GRAPE STALK CELLULOSE FIBER COMPOSITE MATERIAL USING SMART MANUFACTURING PROCESS FOR HEALTHCARE APPLICATIONS.**

Name of the Agency : DST-SERB(CRG)

Total Cost (in Rs.) : 29,41,000

Date : 16/3/2023

Status : Proposal Submitted

❖ **EDITORIAL ACTIVITIES:**

One of the **Editor** in IGI Global publisher Book Chapter title, “**Cyber –Physical systems and supporting Technologies for Industrial Automation**”.

❖ **DC MEMBER:**

Acting as **DC member** for Ph.D.(2 Research Scholars) at Saveetha School of Engineering, SIMATS ,Chennai - 602 105, TN.

❖ **REVIEWER/ EDITORIAL BOARD MEMBER/ Session Chair member (International Conference):**

1. Act as a Session Chair for **International Conference on Intelligence in Manufacturing, Energy and Design – ICIMED 2023** ‘ at Saveetha Engineering College, Chennai-602105 by **Mechanical Engineering Department**, on 12<sup>th</sup> April and 13<sup>th</sup> April, 2023.
  2. Act as a Session Chair for International Conference on **Automation and Computing Technologies (ICACT’18)** ‘ at **Velammal Institute of Technology**, Chennai-601204 by **EEE , ECE & Mechanical Engineering Department**, on 17-03-2018.
- Act as a Session Chair in International Conference titled, ‘**International Conference on research Advancements & Challenges in engineering Sciences (ICRACE’20)**’ , at **Velammal Institute of Technology**, Chennai-601204 jointly organized by the CSE, IT,ECE,EEE, H&S and Mechanical Engineering Department on 06<sup>th</sup> & 07<sup>th</sup> March 2020.
  - Editorial Board Member in **Journal of Coating Technology and Innovation** from **01-08-2023**.
  - Reviewer Panel Members in “**Corpus Online Journal of Civil Engineering (COJCE)**” from **28-04-2023**.
  - Reviewer Panel Members in “**Applied Energy**” from **11-04-2022**.
  - Reviewer Panel Members in “**Journal of Industrial Textiles**” from **07-04-2022**.
  - Reviewer Panel Members in “**Materials Today Proceedings**” from **01-02-2022**.
  - Reviewer Panel Members in “**Biomass Conversion and Biorefinery**” from **01-02-2022**.
  - Editorial Board Member in **Journal of Computer Aided Manufacturing and Automation** from **24-**

**04-2021.**

- Editorial Board Member in **Journal of Thermal Engineering and Technology** from 24-04-2021.
- Editorial Board Member in **Journal of Automotive Engineering and Technology** from 24-04-2021.
- Reviewer Panel Members in “**International Research Journal of Automotive Technology**” (**IRJAT**) (E ISSN 2581-5865) from 01-09-2020
- Editorial Board Member in **The Hertz Journal Of Engineering** from 13-06-2020.
- Reviewer in **Technium: Romanian Journal of Applied Sciences and Technology** from 28-05-2020.
- Editorial Board Member in **Engineering Report** from 03-01-2019.
- Editorial Board Member in **International Journal of Theoretical and Applied Mechanics (IJTAM)** from 11-06-2018.
- Reviewer in **International journal of Engineering Research & Technology (IJERT)** from 13-10-2017.

❖ **LIST OF PUBLICATIONS:**

| No of SCI / Scopus Indexed / WoS /Anna University Annexure Journals |
|---|
| 142   |

**PUBLICATIONS:**

**AY-2023**

1. SK. Fakruddin Babavali, N.S.M.P. Latha Devi, **Seeniappan Kaliappan**, Neha Garg, V. Nagalakshmi, N.R. Rajagopalan, “Thermal management of PV panel through the circulation of a nano-MgO/water-based nanofluid”, **Materials Today: Proceedings**, 2023, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2023.09.001>. (<https://www.sciencedirect.com/science/article/pii/S2214785323046606>)
2. Trupti S. Gajbhiye, Keval C. Nikam, **S. Kaliappan**, Pravin P. Patil, P. K. Dhal, C. K. Arvinda Pandian, “Sustainable renewable energy sources and solar mounting systems for PV panels: A critical review”, **Proceedings of the International Conference on Materials for Emerging Technologies**, AIP Conf. Proc. 2800, 020066-1–020066-10; <https://doi.org/10.1063/5.0163017>. (Scopus/WOS).
3. Laxmikant D. Jathar, S. Ganesan, Keval Chandrakant Nikam, Pravin P. Patil, **S. Kaliappan**, Pandurang Y. Patil, “Physiochemical analysis of distillate output obtained from novel desalination unit”, **Proceedings of the International Conference on Materials for Emerging Technologies**, AIP Conf. Proc. 2800, 020150-1–020150-8; <https://doi.org/10.1063/5.0162822>. (Scopus/WOS).
4. **S. Kaliappan**, Pranav Kumar Prabhakar, Joseph Manuel, Pravin P. Patil, M. Sathya Prakash, Baskara Sethupathy Subbaiah, “Recent advancements in aluminum metal matrix composites: A review of processing and application” **Proceedings of the International Conference on Materials for Emerging**

- Technologies, AIP Conf. Proc. 2800, 020130-1–020130-6; <https://doi.org/10.1063/5.0168369>. (Scopus/WOS).
5. D. P. Kamble, Hanumant P. Jagtap, S. **S. Kaliappan**, Pravin P. Patil, Kshitij Anand , “Comparative analysis of heat pipe with PCM, Cu powder, and fin for thermal enhancement” , Proceedings of the International Conference on Materials for Emerging Technologies , AIP Conf. Proc. 2800, 020142-1–020142-11; <https://doi.org/10.1063/5.0163117>. (Scopus/WOS).
  6. Anand K. Bewoor, Harish M. Shinde, Ajit A. Bhosale, Pravin P Patil, **S. Kaliappan**, S. Socrates , “Ergonomic analysis and improvement for ease of work of post engine testing activities by using RULA and REBA techniques” , Proceedings of the International Conference on Materials for Emerging Technologies , AIP Conf. Proc. 2800, 020169-1–020169-18; <https://doi.org/10.1063/5.0165413>. (Scopus/WOS).
  7. **S. Kaliappan**, Baskara Sethupathy Subbaiah, Pranav Kumar Prabhakar, Pravin P. Patil, S. Socrates, V. Balaji , “Sand-casting process parameters influence casting mechanical properties in stainless steel alloys” , Proceedings of the International Conference on Materials for Emerging Technologies , AIP Conf. Proc. 2800, 020235-1–020235-7; <https://doi.org/10.1063/5.016791>. (Scopus/WOS).
  8. P. K. Prabhakar, B. S. Subbaiah, V. Balaji, P. P. Patil, R. K. Meivel Dhavamani, **S. Kaliappan**, “Elemental stack method optical and surface properties of Fe doped ZrO<sub>2</sub>”, Proceedings of the International Conference on Materials for Emerging Technologies, AIP Conf. Proc. 2800, 020132-1–020132-5; <https://doi.org/10.1063/5.0162705>. (Scopus/WOS).
  9. Pranav Kumar Prabhakar, Joseph Manuel, **S. Kaliappan**, Pravin P. Patil, T. Mothilal, H. Mohammed Ali , “ Mechanical and wear properties of 7075 Al reinforced with graphite particulate metal matrix composites: Preparation and evaluation”, Proceedings of the International Conference on Materials for Emerging Technologies, AIP Conf. Proc. 2800, 020239-1–020239-7; <https://doi.org/10.1063/5.0167686>. (Scopus/WOS).
  10. Jatoth Heeraman, Laxmi A. Bewoor, Anand Bewoor, **S. Kaliappan**, Pravin P. Patil, S. Socrates, “Applications of firefly algorithm in hydrology”, Proceedings of the International Conference on Materials for Emerging Technologies , AIP Conf. Proc. 2800, 020137-1–020137-7; <https://doi.org/10.1063/5.0163090>. (Scopus/WOS).
  11. Jatoth Heeraman, Sumit Kumar, **S. Kaliappan**, Pravin P. Patil, Dheerendra Vikram Singh, “Paddy residue potential as energy resources - A critical review”, Proceedings of the International Conference on Materials for Emerging Technologies, AIP Conf. Proc. 2800, 020145-1–020145-7; <https://doi.org/10.1063/5.0163092>. (Scopus/WOS).
  12. A. K. Bewoor, Nitin Patil, **S. Kaliappan**, Pravin P. Patil, Raja Raju, P. Ramanathan, V. A. Kulkarni, “Sustainability assessment of tungsten inert gas welding process using grey relational analysis”, Proceedings of the International Conference on Materials for Emerging Technologies, AIP Conf. Proc. 2800, 020232-1–020232-14; <https://doi.org/10.1063/5.0163918>. (Scopus/WOS).

13. Chetan Pawar, Shreeprakash Balekumeri, Nitin Motgi, Pravin P. Patil, **Kaliappan Seeniappan**, Joseph Manuel , “A comprehensive look at the aluminum oxide nano-additive effects on engine performance and emissions”, Proceedings of the International Conference on Materials for Emerging Technologies , AIP Conf. Proc. 2800, 020155-1–020155-7; <https://doi.org/10.1063/5.0163475>. (Scopus/WOS).
14. **Kaliappan Seeniappa**, Baskara Sethupathy Subbaiah, V. Balaji, Pravin P. Patil, Manish Gupta, S. Socrates, “Magnetic characteristics of electroplated NiAl/CuO<sub>2</sub> composite wires as a function of magnetic field”, Proceedings of the International Conference on Materials for Emerging Technologies, AIP Conf. Proc. 2800, 020236-1–020236-5; <https://doi.org/10.1063/5.0167920>. (Scopus/WOS).
15. **Kaliappan Seeniappan**, Mothilal Thulasiraman, Manish Gupta, Pravin P. Patil, Nageswari Devana, Raj Kamal M. Dhavamani, “Experimental analysis of Al-SiC-TiB<sub>2</sub> hybrid metal matrix composite” , Proceedings of the International Conference on Materials for Emerging Technologies, AIP Conf. Proc. 2800, 020238-1–020238-6; <https://doi.org/10.1063/5.0162706>. (Scopus/WOS).
16. **Kaliappan Seeniappan**, Rajkamal M. Dhavamani, Baskara Sethupathy Subbaiah, Pravin P. Patil, Ramanathan Pichappan, Pranav Kumar Prabhakar, “Material characterization and testing using linear polarization optical coherence tomography”, Proceedings of the International Conference on Materials for Emerging Technologies, AIP Conf. Proc. 2800, 020131-1–020131-7; <https://doi.org/10.1063/5.0162703>. (Scopus/WOS).
17. Kadirvel Arumugam, Mohammed Ali Haleem, **Kaliappan Seeniappan**, Pravin P. Patil, V. Balaji, Pranav Kumar Prabhakar , “Ni addition results in the formation of a bulk metallic glass matrix composite based on ductile Cu” Proceedings of the International Conference on Materials for Emerging Technologies, AIP Conf. Proc. 2800, 020133-1–020133-5; <https://doi.org/10.1063/5.0162704>. (Scopus/WOS).
18. SK. Fakruddin Babavali, N.S.M.P. Latha Devi, **Seeniappan Kaliappan**, Neha Garg, V. Nagalakshmi, N.R. Rajagopalan, “Thermal management of PV panel through the circulation of a nano-MgO/water-based nanofluid”, Materials Today: Proceedings, 2023, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2023.09.001>.(<https://www.sciencedirect.com/science/article/pii/S2214785323046606>) (Scopus). **Cite Score: 2.3**
19. Patlola Madhusudhan, N.S.M.P. Latha Devi, **Dr. Seeniappan Kaliappan**, Dinesh Chandra Pandey, J. Sai Chandra, C.A. Jyothirmayee, “Improving the productivity of the solar-based evaporative still (SBES) using the nano-coated absorber”, Materials Today: Proceedings,2023, ISSN 2214-7853,<https://doi.org/10.1016/j.matpr.2023.09.014>. (<https://www.sciencedirect.com/science/article/pii/S2214785323046734>) (Scopus). **Cite Score: 2.3**
20. G.A. Sivasankar, C. Balakrishna Moorthy, **Seeniappan Kaliappan**, Ravishankar Sathyamurthy, T. Sathish, R. Saravanan, Ümit Ağbulut, "Sustainable nano-added biofuel production from borassus flabellifer oil for conventional internal combustion engines", Energy, Volume 282,2023,128381,ISSN 0360-5442, <https://doi.org/10.1016/j.energy.2023.128381>.(<https://www.sciencedirect.com/science/article/pii/S0360544223017759>). (WOS/SCIE/Anna University Annexure). Impact factor : 9 Q1 Journal

21. Prabhushankar, N., Balaji, N. & Kaliappan, S. (2023) , Effect of sisal/kevlar inter-ply stacking and silane-treatment on mechanical, wear, fracture toughness, drop load impact, and hydrophobicity behavior of cellulose toughened polyester composite. *Biomass Conv. Bioref.* (2023). <https://doi.org/10.1007/s13399-023-04416-1>. (WOS/SCIE/Anna University Annexure-1).Impact factor : 4.050 Q2 Journal
22. S. Kaliappan, T. Mothilal, L. Natrayan, P. Pravin, Tewedaj Tariku Olkeba, "Mechanical Characterization of Friction-Stir-Welded Aluminum AA7010 Alloy with TiC Nanofiber", *Advances in Materials Science and Engineering*, vol. 2023, Article ID 1466963, 7 pages, 2023. <https://doi.org/10.1155/2023/1466963>. (Scopus/Anna University Annexure-1). **Impact Factor:2.098 Q2 Journal**
23. L. Natrayan, Raviteja Surakasi, Pravin P. Patil, S. Kaliappan, V. Selvam, P. Murugan, "Optimizing Numerous Influencing Parameters of Nano-SiO<sub>2</sub>/Banana Fiber-Reinforced Hybrid Composites using Taguchi and ANN Approach", *Journal of Nanomaterials*, vol. 2023, Article ID 3317584, 14 pages, 2023. <https://doi.org/10.1155/2023/3317584>. (Science Citation Index Expanded/Scopus/WoS /Anna University Annexure-1). **Impact Factor:3.791 Q2 Journal**
24. M. P. Natarajan, K. Rameshkumar, D. Vijayakumar, Pravin P. Patil, **S. Kaliappan**, T. Thirumalai (2023); Carburization effect on mechanical properties of EN-12 steel in different quenching medium at different quenching time intervals. *AIP Conference Proceedings* 12 May 2023; 2747 (1): 020020. <https://doi.org/10.1063/5.0132575>. (Scopus/WOS).
25. **S. Kaliappan**, S. Syath Abuthakeer, Piyush Gaur, Pravin P. Patil, G. Bhavani, M. Logesh (2023); A study on multi-walled carbon nanotube reinforced Al7075 nano composites by P/M route. *AIP Conference Proceedings* 12 May 2023; 2747 (1): 020019. <https://doi.org/10.1063/5.0132555>. (Scopus/WOS).
26. **S. Kaliappan**, Chandrashekhar K. Pati, M. Karthick, Pravin P. Patil, S. Socrates, V. Balaji (2023); Determinants of dielectric behaviour of MO<sub>8</sub>+ substituted LiFe<sub>5</sub>O<sub>8</sub>. *AIP Conference Proceedings* 12 May 2023; 2747 (1): 020018. <https://doi.org/10.1063/5.0132567>. (Scopus/WOS).
27. S. Syath Abuthakeer, A. Alagu Sundara Pandian, M. P. Natarajan, Pravin P. Patil, **S. Kaliappan**, V. Balaji (2023); Factors influencing the gas porosity formation in A438 alloy wheels produced by gravity die casting. *AIP Conference Proceedings* 12 May 2023; 2747 (1): 030003. <https://doi.org/10.1063/5.0132576>. (Scopus/WOS).
28. **S. Kaliappan**, Chandrashekhar K. Pati, M. D. Raj Kamal, Pravin P. Patil, M. S. Sureshkumar, V. Balaji (2023); A study on methylene blue photocatalytic activity in the presence of different shape lead (II) sulphide nanoparticles. *AIP Conference Proceedings* 12 May 2023; 2747 (1): 020017. <https://doi.org/10.1063/5.0132568>. (Scopus/WOS).
29. **S. Kaliappan**, K. Muralidharan, M. P. Natarajan, Pravin P. Patil, R. Karthick, S. Socrates (2023); A study on mechanical properties of heat treated Fe-Ag-Al alloys. *AIP Conference Proceedings* 12 May 2023; 2747 (1): 020016. <https://doi.org/10.1063/5.0132557>. (Scopus/WOS).
30. G. Mehershilpa, K. Muralidharan, **S. Kaliappan**, Pravin P. Patil, T. Sathish, D. Meganathan (2023); Mechanically constrained single-loop 6-bar chain from double 6R chain. *AIP Conference Proceedings* 12 May 2023; 2747 (1): 040004. <https://doi.org/10.1063/5.0132556>. (Scopus/WOS).

31. S. Kaliappan, T. Mothilal, P. Pravin, B. Raja Bharathi, E. S. Esakkiraj, "Evaluation of Mechanical Behaviour of Multiwalled Nanotubes Reinforcement Particles in Jute-Glass Fibres Hybrid Composites", *Advances in Materials Science and Engineering*, vol. 2023, Article ID 2219460, 7 pages, 2023. <https://doi.org/10.1155/2023/2219460>. (Scopus/Anna University Annexure-1). Impact Factor:2.098 Q2 Journal
32. L. Natrayan, **S. Kaliappan**, S. Chinnasamy Subramanian, Pravin P. Patil, S. D. Sekar, Y. Sessa Rao, Melkamu Beyene Bayu (2023), "Optimization of Activated Carbon Fiber Preparation from Hemp Fiber through Dipotassium Hydrogen Phosphate for Application of Thermal Storage System", *Adsorption Science & Technology*, vol. 2023, Article ID 7228408, 9 pages, 2023. <https://doi.org/10.1155/2023/7228408>. (Science Citation Index /Scopus) **Impact Factor: 4.373 Q2 Journal**
33. S. S. Kumar, M. Jyothirmai, S. Kaliappan and V. Rathiv, "An Application of IoT in Programmed Tidal Energy Observation System," *2023 International Conference on Innovative Data Communication Technologies and Application (ICIDCA)*, Uttarakhand, India, 2023, pp. 868-872, doi: 10.1109/ICIDCA56705.2023.10100013. (Scopus). **Cite Score: 31.2**
34. J. Madhusudhanan, S. Kaliappan, Ravishankar sathyamurthy, R. Saravanan, T. Sathish, D. Prabu, M. Rajasimman, Abdullah A. Al-Kahtani, Elena-Niculina Dragoi (2023), "Influence of nanopores volumes in hydrogen absorption properties of B4C and WC carbide-derived carbon nanomaterials", *International Journal of Hydrogen Energy*, 2023, ISSN 0360-3199, <https://doi.org/10.1016/j.ijhydene.2023.03.318>. (SCI/Scopus). **Impact factor 7.139 Q1 Journal**
35. T. Suman, **S. Kaliappan**, L. Natrayan and D. C. Dobhal (2023), "IoT based Social Device Network with Cloud Computing Architecture," *2023 Second International Conference on Electronics and Renewable Systems (ICEARS)*, Tuticorin, India, 2023, pp. 502-505, doi: 10.1109/ICEARS56392.2023.10085574. (Scopus). **Cite Score: 31.2**
36. R. Josphineleela, **S. Kaliappan**, L. Natrayan and A. Garg (2023), "Big Data Security through Privacy – Preserving Data Mining (PPDM): A Decentralization Approach," *2023 Second International Conference on Electronics and Renewable Systems (ICEARS)*, Tuticorin, India, 2023, pp. 718-721, doi: 10.1109/ICEARS56392.2023.10085646. (Scopus). **Cite Score: 31.2**
37. R. Josphineleela, **S. Kaliappan**, N. L and U. M. Bhatt (2023) , "Intelligent Virtual Laboratory Development and Implementation using the RASA Framework," *2023 7th International Conference on Computing Methodologies and Communication (ICCMC)*, Erode, India, 2023, pp. 1172-1176, doi: 10.1109/ICCMC56507.2023.10083701. (Scopus). **Cite Score: 31.2**
38. L. L. P. Kumar, C. Ahalya, **S. Kaliappan** and A. P. H (2023), "Development of Healthcare Architecture based on Cloud Technology and IoT Applications," *2023 7th International Conference on Computing Methodologies and Communication (ICCMC)*, Erode, India, 2023, pp. 1385-1388, doi: 10.1109/ICCMC56507.2023.10084029. (Scopus). **Cite Score: 31.2**



39. L. Natrayan, V. R. Niveditha, S. Kaliappan, Pravin P. Patil, C. K. Arvinda Pandian, Y. Sessa Rao, P. Murugan (2023), "Optimization Process of Potassium Carbonate Activated Carbon through Jute-Based Core Materials by Using Artificial Neural Network with Response Surface Methodology", *Adsorption Science & Technology*, vol. 2023, Article ID 8674382, 14 pages, 2023. <https://doi.org/10.1155/2023/8674382>. (Science Citation Index /Scopus) **Impact Factor: 4.373 Q2 Journal**
40. L. Natrayan, Yenda Srinivasa Rao, Gayatri Vaidya, Sumanta Bhattacharya, **S. Kaliappan**, Pravin P. Patil, Prabhu Paramasivam (2023) , "Biosynthesis of Iron Oxide Nanoparticles Using Leaf Extract of *Ruellia tuberosa*: Mechanical and Dynamic Mechanical Behaviour Kevlar-Based Hybrid Epoxy Composites", *Bioinorganic Chemistry and Applications*, vol. 2023, Article ID 1731931, 10 pages, 2023. <https://doi.org/10.1155/2023/1731931>. (Science Citation Index Expanded/Scopus/WoS). **Impact Factor:4.724 Q1 Journal**
41. Palaniswamy, V., **Seeniappan, K.** ., Rajasekaran, T. ., & Lakshmaiya, N. . (2023). ENHANCING MRR AND ACCURACY WITH MAGNETIZED GRAPHITE TOOL IN ELECTROCHEMICAL MICROMACHINING OF COPPER: Original scientific paper. *Chemical Industry & Chemical Engineering Quarterly*, 29(3), 201–208. <https://doi.org/10.2298/CICEQ220731027P> (**SCIE, Anna University Journal List and SCOP2US**) **Impact factor 0.925 Q3 Journal**
42. **S. Kaliappan**, Laxmi Biban, D. Prasad, Amir Shaikh, P. Ragupathy, H. Mohammed Ali (2023), "Dielectric and conductance of biochar-based PVA flexible nanocomposite film", *Materials Today: Proceedings*, 2023, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2023.02.445>. <https://www.sciencedirect.com/science/article/pii/S221478532301009X>) (Scopus). **Cite Score: 2.3**
43. **S. Kaliappan**, V. Balaji, N. Mohan Raj, Gori Yatika, L. Natrayan, D Shyam (2023), "Friction stir welding of nylon 6–6 thick plates using biochar colloidal nanoparticle", *Materials Today: Proceedings*, 2023, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2023.03.007>. (<https://www.sciencedirect.com/science/article/pii/S2214785323010489>) (Scopus). **Cite Score: 2.3**
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➤ **PATENT , BOOK CHAPTER & BOOKS:**

| PATENT   |           |                    |       | BOOK CHAPTER | BOOK    |           |
|----------|-----------|--------------------|-------|--------------|---------|-----------|
| National |           | International      |       |              | Applied | Published |
| Applied  | Published | Published /Applied | Grant |              |         |           |
| 1        | 10        | -                  | 15    | 4            | 1       | 18        |

➤ **PATENT:**

➤ **National:**

1. A patent is **Published** in the title of “**CNC Coded Two Axis writing machine**” the Patent Office Journal No. 24/2020 Dated 12/06/2020 with IPR APPLICATION NUMBER of 202041022088 A.
2. A patent is **Applied** in the title of “**A SYSTEM FOR CLEANING TOILETS**” Dated 13/04/2020 with IPR APPLICATION NUMBER of 202041015888.
3. A patent is **Published** in the title of “**Hand Operated Water Pumping Machine**” Dated 19/02/2021 with IPR APPLICATION NUMBER of 202041039149 A.
4. A patent is **Published** in the title of “**A NOVEL METHOD - INTEGRATION OF INTERNAL COMBUSTION ENGINE WITH IOT DEVICE**” Dated 9/07/2021 with IPR APPLICATION NUMBER of 202141028823 A.
5. A patent is **Published** in the title of “**IoT based Automated Toll gate Tax Collection System using Cloud Database**” the Patent Office Journal No. 50/2021 Dated 10-12-2021 with IPR APPLICATION NUMBER of 202141054902 A.
6. A patent is **Published** in the title of “**A research on planning and accident prevention system for surface- vehicles for improving safety and efficiency**” Dated 4-2-2022 with IPR APPLICATION NUMBER of 202141058236 A
7. A patent is **Published** in the title of “**Implementation of advanced CAD CAE tools in engineering education A modern approach to industrial design**” Dated 11-3-2022 with IPR APPLICATION NUMBER of 20221002690 A
8. A patent is **Published** in the title of “**IoT, Artificial Intelligent and YOLOv3 based Infrared Anomaly Detection for Power Equipment**” Dated 25-2-2022 with IPR APPLICATION NUMBER of 202241007572 A.
9. A patent is **Published** in the title “**A Milk Boiling Vessel With A Milk Storage Container**” Dated 08-07-2022 with IPR APPLICATION NUMBER of 202211035107.

10. A patent is Published in the title “**MOBILE PHONE DEPOSIT MACHINE USING IOT & ARTIFICIAL INTELLIGENCE SYSTEM**” Dated 30-09-2022 with IPR APPLICATION NUMBER of 202241054856.
11. A patent is published in the title “**DEVELOPMENT OF BAMBOO FIBER WITH GRAPE STALK CELLULOSE FIBER COMPOSITE MATERIAL USING SMART MANUFACTURING PROCESS FOR HEALTHCARE APPLICATIONS**” Dated 14-03-2023 with IPR APPLICATION NUMBER of 202341017224

➤ **International:**

1. A patent is **granted** in the title of “**An approach to heterogeneous multi design based floor planning aware with thermal power delivery**”, with **8 years** from 22 August 2020 dated 22/08/2020 with APPLICATION NUMBER of 2020101942.
2. A patent is **granted** in the title of “**Design of a collapsible and portable lactation module for mothers**”, with **8 years** from 28 August 2020, dated 28/08/2020 with APPLICATION NUMBER of 2020102046.
3. A patent is **granted** in the title of “**DESIGN AND DEVELOPMENT OF A SMART SUITE FOR ASSISTING THE PREGNANT WOMEN**”, with **8 years** from 9 September 2020 dated 09/09/2020 with APPLICATION NUMBER of 2020102194.
4. A patent is **granted** in the title of “**Continuous energy supply to house hold appliances through uninterrupted power meter**”, with **8 years** from 20 September 2020 dated 20/09/2020 with APPLICATION NUMBER of 2020102346.
5. A patent is **granted** in the title of “**A NOVEL METHOD TO DESIGN A DYNAMO ELECTRIC VEHICLE**”, dated 15/10/2020 with APPLICATION NUMBER of 2020102727.
6. A patent is **granted** in the title of “**A Novel Method to Determine Enhanced Strength of Recycled Concrete based on Micro Filler Technique**”, dated 17/10/2020 with APPLICATION NUMBER of 2020102828.
7. A patent is **granted** in the title of “**ELECTRIC VEHICLE CHARGE MANAGEMENT AND MONITORING SYSTEM BASED ON IOT**”, dated 24/10/2020 with APPLICATION NUMBER of 2020102995.
8. A patent is **granted** in the title of “**AN NOVEL METHOD FOR A SMART CAR - ARTIFICIAL INTELLIGENCE BASED AUTONOMOUS STEERING CONTROL SYSTEM WITH VOICE ASSISTANCE**”, dated 01/11/2020 with APPLICATION NUMBER of 2020103161.
9. A patent is **granted** in the title of “**DESIGN FOR PARABOLIC SOLAR PANEL CONTROL SYSTEM WITH VIPER**”, dated 01/12/2020 with APPLICATION NUMBER of 2020103825.
10. A patent is **granted** in the title of “**REDUCTION OF HEAT FLUX AI WATER NANOFLUIDS USED TO COOL THE ELECTRONIC PANELS**”, dated 11/12/2020 with APPLICATION NUMBER of 2020104017.

11. A patent is **granted** in the title of “**Analyzing patient health information based on IoT sensor with AI for improving patient assistance in the future direction**”, dated 06/01/2021 with APPLICATION NUMBER of 2021100048.
12. A patent is **granted** in the title of “**IOT BASED SOLAR ENERGY DETECTION WITH CRESCENT DUNES**”, dated 12/01/2021 with APPLICATION NUMBER of 2021100172.
13. A patent is **granted** in the title of “**A METHOD FOR THE MANUFACTURE OF THE BIO DEGRADABLE BOTTLE FROM THE POLY LACTIC ACID RESIN THROUGH THE APPLICATION OF THE INJECTION BLOW MOULDING PROCESS**”, dated 23/02/2021 with APPLICATION NUMBER of 2021100989.
14. A patent is **granted** in the title of “**ELECTRIC HYBRID POWER SOURCE FOR VEHICLES USING WEIGHTLESS INTERNAL COMBUSTION**”, dated 02/05/2021 with APPLICATION NUMBER of 2021102319.
15. A patent is **granted** in the title of “**ARTIFICIAL INTELLIGENCE BASED ENGINE EMISSIONS WITH EBP ON PERFORMANCE ASSESSMENT**”, dated 08/07/2021 with APPLICATION NUMBER of 2021103986.

➤ **BOOK CHAPTER PUBLISHED :**

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- **Kaliappan S. (Velammal Institute of Technology, Chennai, India)**, Raj Kamal M. D. (Velammal Institute of Technology, Chennai, India), Balaji V. (Loyola Institute of Technology, India), Socrates S. (Velammal Institute of Technology, Chennai, India) and Andrii Kondratiev (O.



M. Beketov National University of Urban Economy, Ukraine)  
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2. Introduction to Two-Dimensional Inviscid Incompressible Flow

➤ **BOOK PUBLISHED – With ISBN Number:**

1. Dr. S. Kaliappan Book title is **Basic concepts of AI and Robotics** with ISBN No 978-93-90203-87-1 at 2023.
2. Dr. S. Kaliappan Book title is **Material Science and Engineering** with ISBN No 978-93-90203-30-7 at 2023.
3. Dr. S. Kaliappan Book title is **Fluid Mechanics An Introduction** with ISBN No 978-93-90203-31-4 at 2023.
4. Dr. S. Kaliappan Book title is **Python Programming** with ISBN No 978-93-91987-46-6 at 2022.
5. Dr. S. Kaliappan Book title is **C programming and Data Structures** with ISBN No 978-93-95211-41-3 at 2022
6. Dr. S. Kaliappan Book title is **Heat Power Engineering** with ISBN No 978-93-92992-70-4 at 2022.
7. Dr. S. Kaliappan Book title is **Industrial Engineering and Management** with ISBN No 978-93-92992-54-4 at 2022.
8. Dr. S. Kaliappan Book title is **Total Quality Management** with ISBN No 978-93-92992-65-0 at 2022.
9. Dr. S. Kaliappan Book title is **Production and Operation Management System** with ISBN No 978-93-94002-10-4 at 2022.
10. Dr. S. Kaliappan Book title is **Robotics** with ISBN No 9789391987831 at 2022.
11. Dr. S. Kaliappan Book title is **GE6152 Engineering Graphics** with ISBN No 9788195377183 at 2021.
12. Dr. S. Kaliappan Book title is **GE6253 Engineering Mechanics** with ISBN No 9788195377190 at 2021.
13. Dr. S. Kaliappan Book title is **ME6301 Engineering Thermodynamics** with ISBN NO 9788195377176 at 2021.
14. Dr. S. Kaliappan Book title is **ME6502 Heat and Mass Transfer** with ISBN No 9788195377145 at 2021.
15. Dr. S. Kaliappan Book title is **Kinematics of Machinery** with ISBN No 9789390967919 at 2021
16. Dr. S. Kaliappan Book title is **Manufacturing Technology –II** by Maruthi publications at 2020.
17. Dr. S. Kaliappan Book title is **Engineering Graphics** by Maruthi publications with ISBN No 9789393836106 at 2019.
18. S. Kaliappan Book title is **Engineering Practices Lab Manual** by Maruthi publications 2017

|             |             |                   |                 |                  |
|-------------|-------------|-------------------|-----------------|------------------|
| <b>STTP</b> | <b>FDTP</b> | <b>CONFERENCE</b> | <b>WORKSHOP</b> | <b>TECHNICAL</b> |
|-------------|-------------|-------------------|-----------------|------------------|

|           |          |           |          |           |              |           |              | SYMPOSIUM |
|-----------|----------|-----------|----------|-----------|--------------|-----------|--------------|-----------|
| Organized | Attended | Organized | Attended | Organized | Participated | Organized | Participated | Organized |
| 1         | 3        | 5         | 6        | 2         | 4            | 4         | 3            | 5         |

➤ **SHORT TERM TRAINING PROGRAMME (STTP) - ORGANIZED:**

1. Organized a six days **virtual SHORT TERM TRAINING PROGRAMME (STTP)** Sponsored by **AICTE** titled ‘**Assessment in Engineering Education- A Pedagogical Approach**’ at **Velammal Institute of Technology**, Chennai-601204, in three slots, Slot-1 from 16.11.2020 to 21.11.2020, Slot-2 from 14.12.2020 to 19.12.2020 & Slot-3 from 04.01.2021 to 09.01.2021.

➤ **FACULTY DEVELOPMENT TRAINING PROGRAMME - ORGANIZED:**

1. Organized a seven days **Faculty Development Training Programme** approved by **Anna University** titled ‘**Engineering Thermodynamics**’ at **Velammal Institute of Technology**, Chennai-601204, from 17-06-2014 to 24-06-2014.
2. Organized a seven days **Faculty Development Training Programme** sponsored by **Anna University** titled ‘**Gas Dynamics and Jet Propulsion System**’ at **Velammal Institute of Technology**, Chennai-601204, from 01-12-2014 to 08-12-2014.
3. Organized a seven days **Faculty Development Training Programme** approved by **Anna University** titled ‘**Heat and Mass Transfer**’ at **Velammal Institute of Technology**, Chennai-601204, from 19-05-2017 to 29-05-2017.
4. Organized a seven days **Faculty Development Training Programme** approved by **Anna University** titled ‘**Power Plant Engineering**’ at **Velammal Institute of Technology**, Chennai-601204, from 21-05-2018 to 28-05-2018.
5. Organized a six days **Faculty Development Training Programme** approved by **Velammal Institute of Technology** titled ‘**Engineering Mechanics**’ at **Velammal Institute of Technology**, Chennai-601204, from 05-12-2019 to 10-12-2019.

➤ **FACULTY DEVELOPMENT TRAINING PROGRAMME - ATTENDED:**

1. Attended a Faculty Development Programme at **College of Engineering, Gundy, Anna University** on **COMPUTATIONAL FLUID FLOW AND HEAT TRANSFER**, from 30-05-2005 to 04-06-2005.
2. Attended a Faculty Development Programme at **College of Engineering, Gundy, Anna University** on **GAS DYNAMICS AND JET PROPULSION**, from 07-06-2010 to 13-06-2010.
3. Attended a Faculty Development Programme at **Er. Perumal Manimekalai College of Engineering, Hosur**, sponsored by **Anna University of Technology Coimbatore** on **COMPUTATIONAL FLUID DYNAMICS**, from 30-11-2010 to 04-12-2010.
4. Attended a Faculty Development Programme at **Velammal Institute of Technology Chennai** Sponsored by **AICTE-ISTE** in **CAREER ADVANCEMENT BY TECHNICAL TEACHING SKILLS AMPLIFICATION**, from 07-05-2018 to 12-05-2018.

5. Attended a Faculty Development Programme at **R.M.K Engineering College** on **Finite Element Analysis** , from 03-12-2018 to 15-12-2018.
6. Attended a Faculty Development Programme at **Vel Tech High Tech Dr.Rangarajan Dr. Sakunthala Engineering College, Avadi** on **Advances in Computational Fluid Dynamics (CFD)** , from 18-06-2019 to 22-06-2019.

➤ **CONFERENCE/ WORKSHOP-ORGANIZED:**

3. Organized a one day workshop titled '**The Automobile Workshop**' at **Velammal Institute of Technology**, Chennai-601204 on 10/02/2012.
4. Organized a one day workshop titled '**Computational Fluid Dynamics**' at **Velammal Institute of Technology**, Chennai-601204 by **Airmak Aerospace Technologies, Chennai** on 13.08.2012.
5. Organized two days' workshop titled '**Material Outreach Program (MOP)**' on '**Automotive Materials Science and Technologies**' at **Velammal Institute of Technology**, Chennai-601204 by **IIT Bombay – Padarth & EXPERTSHUB**, from 16-08-2013 to 17-08-2013.
6. Organized a one day workshop titled '**Utkraanti 17**' in association with **IIT Madras** at **Velammal Institute of Technology**, Chennai-601204 by **Wingfotech** on 1-2nd September 2016.
7. Organized one day International Conference titled '**International Conference on Automation and Computing Technologies (ICACT'18)**' at **Velammal Institute of Technology**, Chennai-601204 by **EEE , ECE & Mechanical Engineering Department**, on 17-03-2018.
8. Organized two days International Conference titled '**International Conference on research Advancements & Challenges in engineering Sciences (ICRACE'20)**' , at **Velammal Institute of Technology**, Chennai-601204 jointly organized by the CSE, IT,ECE,EEE, H&S and Mechanical Engineering Department on 06<sup>th</sup> & 07<sup>th</sup> March 2020.

➤ **CONFERENCE/ WORKSHOP-PARTICIPATED:**

1. Presented a paper titled '**Parametric studies on the impact of piston velocity profile on the performance of single cylinder diesel engine**' in National Conference on '**Emerging Trends in Industrial Automation (ETIA-2010)**' organized by the Department of Mechanical Engineering, **Velammal Engineering College**, Chennai-66 on 26-03-2010.
2. Presented a paper titled '**Performance Analysis of a Single Cylinder Diesel Engine Using CFD**' in '**International Conference on Advances in Mechanical Engineering (ICAME-2015)**' organized by Department of Mechanical Engineering, **University College of Engineering Villupuram (ANNA UNIVERSITY)**.
3. Presented a paper titled '**Parametric Studies of the Performance of A Single Cylinder Diesel Engine-Review**' in Indo-Brazil Bilateral International Conference on Advanced Materials and Manufacturing - **ICAMM 2015** organized by the Department of Mechanical Engineering, **Cape Institute of Technology**, Levenjipuram – 627114 on March 27-28, 2015.
4. Presented a paper titled '**Analysis of an Innovative Connecting Rod by Using Finite Element Method**' in '**National Conference on Contemporary Research in Advanced Material Science**' (CRAMS

2016) organized by Department of Mechanical Engineering, at **Karpaga Vinayaga College of Engineering & Technology**, Kanchipuram

5. Participated in **one day** workshop on **'RESEARCH EXCELLENCE –RSE 2012'** organized by the Department of Mechanical and Aeronautical Engineering, **GKM College of Engineering & Technology**, Chennai-600063 on 11-05-2012.
6. Participated in **2 Weeks 'ISTE Workshop on Computational Fluid Dynamics'** under the National Mission on Education (MHRD) through ICT conducted by **IIT Bombay** at **National Institute of Technology**, Tiruchirapalli-620 015, from 12-06-2012 to 22-06-2012.
7. Participated in **3 days** Short Term Course on **'Applications of Finite Element Method in Academic and Industrial Research'** conducted by **Department of Mechanical Engineering , National Institute of Technology**, Tiruchirapalli-620 015 under the sponsorship of **TEQIP Phase-II** , from 06-06-2013 to 08-06-2013.

➤ **TECHNICAL SYMPOSIUM -ORGANIZED:**

1. Organized one day National Level Technical Symposium - **AVIATOR-2K10** at **SAMS College of Engineering and Technology, Chennai**.
2. Organized one day National Level Technical Symposium – **EKALAIVA 2K13, 2K14, 2K15, 2K16 & 2K18** at **Velammal Institute of Technology, Chennai-601204**.

➤ **FACULTY OUTSIDE PARTICIPATION:**

1. Given **lecture** in **Engineering Thermodynamics** in **Faculty Development Training Programme** at Velammal Institute of Technology on 18-06-2014.
2. Given **lecture** in **Gas Dynamics and Jet Propulsion System** in **Faculty Development Training Programme** at Velammal Institute of Technology on 05-12-2014.
3. Given **lecture** in **Heat and Mass Transfer** in **Faculty Development Training Programme** at Velammal Institute of Technology on 20-05-2017.
4. Given motivational talk for CADD INDIA Employees on their annual meet on 02-04-2018.
5. Given **lecture** in **Power Plant Engineering** in **Faculty Development Training Programme** at Velammal Institute of Technology on 25-05-2018.
6. Given **Guest lecture** in **Heat and Mass transfer** at **J.N.N Institute of Engineering** on 18-08-2018.
7. Attended CADDAspire event organized by CADD CENTER on 24<sup>th</sup> August 2018.
8. Given **lecture** in **Engineering Mechanics** in **Faculty Development Training Programme** at Velammal Institute of Technology on 10-12-2019.
9. Served as an **External Evaluator** for valuation of paper at various Universities like **Anna , Dr.M.G.R University, Bharath University, Sathyabama University , St.Peter's University & AMET University** etc.,
10. Served as an **External Evaluator** for Practical Examinations at various Universities like **Anna , Dr.M.G.R University, Bharath University** etc.,

11. Served as a **Resource Person for Question Paper Setting** for the **Dr.M.G.R University, Bharath University & AMET University & Saveetha University** .
12. Acted as a **Chief Superintendent (CS)** for **University Theory Examination** conducted by **Anna University**, academic year 2014-15.
13. Served as **SQUAD** for **University Theory & Practical Examination** conducted by **Anna University**.
14. Served as **Anna University Representative (AUR)** for **University Theory Examination** conducted by **Anna University**.
15. Served as a **Resource Person for Interview panel member** for selection of faculty at **AMET University**.
16. Acted as a **Judge** for **Paper presentation** of **Third National Level Technical Symposium** held at **GOJAN School of Business & Technology**, Chennai-52.
17. Acted as a **Judge** for **Paper presentation** of **National level technical symposium** held at **T.J.S. Engineering College**, Puthuvayal, Chennai.

➤ **PROFESSIONAL MEMBERSHIP:**

1. Life member in **Indian Society for Technical Education** (LM 42717).
2. Life member in **International Association of Engineers** (IAENG) (216948).
3. A fellow member in **Universal Association of Mechanical and Aeronautical Engineers (UAMAE)** of **INSTITUTE OF RESEARCH ENGINEERS AND DOCTORS (theIRED)** (SM10100060657) from 30/01/2019 to 30/01/2022.
4. Member in **Society of Automotive Engineers INDIA (SAEINDIA )** Membership No 7230410311 from 1<sup>st</sup> July 2023 to 30<sup>th</sup> June 2023.

➤ **AWARD :**

In **InSc awards-2021**, I was selected for “**Young Researcher Award**” for my research journal of title “**Numerical Investigation of Sinusoidal and Trapezoidal Piston Profiles for an IC Engine** ” , Which is published in the **Journal of Applied Fluid Mechanics**.

**GOOGLE .SCHOLAR ID:**

<https://scholar.google.com/citations?hl=en&user=iMRnKOkAAAAJ>

**WEB OF SCIENCE RESEARCHER ID :** [AAI-5212-2020](https://publons.com/researcher/3347884/dr-s-kaliappan/)

<https://publons.com/researcher/3347884/dr-s-kaliappan/>

**RESEARCH GATE :**

<https://www.researchgate.net/profile/Kaliappan-Seeniappan/publications>

**SCOPUS ID:**

<https://www.scopus.com/authid/detail.uri?authorId=57189892434>

**Vidwan ID:**

<https://vidwan.inflibnet.ac.in/profile/268209>

**ORCID ID:**

<https://orcid.org/0000-0002-5021-8759>