



# Sai Ram Engineering College

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Sai Leo Nagar, West Tambaram, Chennai - 600 044. www.sairam.edu.in



## Department of Electrical and Electronics Engineering

|                           |  |
|---------------------------|--|
| 1.Name :                  | <b>Dr.R.Dhanasekar</b>   |
|                           |    |
| 2. Designation:           | Associate Professor  |
| 3.Qualification:          | M.E, Ph.D  |
| 4.Area of Specialization: | Power Electronics and Drives   |
| 5.Experience :            | Teaching:<br><b>UG: 19Years</b>  |
| 6.Publication:            |  |
| <b>Journal</b>            | National: 04<br>International:24   |
| <b>Conference</b>         | National:-<br>International:36   |
| 7. FDP                    | Attended: 10<br>Organized:   |
| 8. Workshops              | Attended:10  |
| 9. Webinars               | Attended:15  |
| 10.Online courses         | Attended:15  |
| 11.Research Guidance:     | NIL  |
| 12.Staff Achievements:    | <ol style="list-style-type: none"><li>1. "APPRECIATION FOR FOSTERING AN ECOSYSTEM BRIDGING GOVERNMENT INDUSTRY AND ACADEMIA" Award from DST &amp; TEXAS INSTRUMENTS- INDIA INNOVATION DESIGN CONTEST,2018.</li><li>2. "BEST PAPER AWARD to R. DHANASEKAR in the International Virtual conference on Robotics, Automation, Intelligent Systems and Energy (IVC-RAISE 2020) held at Department of Mechatronics Engineering, Kongu Engineering College, Perundurai.</li></ol> |



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## EXPERIENCE

| Experience in our Institution:             |                     |            |            |                |                   |        |
|--|---------------------|------------|------------|----------------|-------------------|--------|
| Name of the Organization                   | Designation         | Period     |            | Nature of work | Experience        |        |
|  |                     | From       | To         |                | Years             | Months |
| Thangavelu Engineering College             | Lecturer            | 23-06-2006 | 30-06-2009 | Teaching       | 3                 | 0      |
| Mohamed Sathak A.J College of Engineering  | Assistant Professor | 01-07-2009 | 25-03-2011 | Teaching       | 1                 | 8      |
| Sri Sai Ram Institute of Technology        | Associate Professor | 08-06-2011 | 27-08-2025 | Teaching       | 14                | 2      |
| Sri Sairam Engineering College             | Associate Professor | 28-08-2025 | Till Date  | Teaching       | 0                 | 5      |
| <b>Total Experience (as on 31.01.2026)</b> |                     |            |            |                | <b>19.3 Years</b> |        |

## Research Degree

- Ph.D. in Sliding mode controller from Faculty of Electrical Engineering, College of Engineering, ANNA UNIVERSITY, Chennai, Tamilnadu, India (2016 - 2023).
- Title: DESIGN AND DEVELOPMENT OF HIGHER ORDER SLIDING MODE CONTROL FOR DC DRIVES.

## Areas of Specialisation

- POWER ELECTRONICS, DC DRIVES, HIGHER ORDER SLIDING MODE CONTROL

## Membership in Professional Organizations

- Senior member in " Institute of Electrical and Electronics Engineers "(IEEE)
- Life Member in " The Indian Society for Technical Education "(ISTE)

## International Journal Publications

1. **Dhanasekar Ravikumar**, Vijayaraja Loganathan, Ganesh Kumar Srinivasan and Arman Salih Ahmad.: Higher-Order Sliding Mode Control of Buck-Boost Converter fed Permanent Magnet DC Motor . *International Journal on Electrical Engineering and Informatics* - Volume 17, Number 3, September 2025. DOI:10.15676/ijeei.2025.17.3.11
2. Loganathan, V., **Ravikumar, D.**, Manibha, M. P., Kesavan, R., Kusala Kumar, G. R., & Sasikumar, S. (2025). Development of Autonomous Unmanned Aerial Vehicle for Environmental Protection Using YOLO V3. *Engineering Proceedings*, 87(1), 72. <https://doi.org/10.3390/engproc2025087072>.



3. Jawaharlalnehru, A., Sambandham, T., & **Ravikumar, D.** (2025). Recognizing Human Emotions Through Body Posture Dynamics Using Deep Neural Networks. *Engineering Proceedings*, 87(1), 49. <https://doi.org/10.3390/engproc2025087049>
4. **Ravikumar, D.**, Loganathan, V., Ponnovian, P., Loganathan, V., & Sivalingam, B. (2025). Leveraging RFID for Road Safety Sign Detection to Enhance Efficiency and Notify Drivers. *Engineering Proceedings*, 87(1), 53. <https://doi.org/10.3390/engproc2025087053>
5. Saikumar, K. S., Mutharasan, T., Loganathan, V., **Ravikumar, D.**, Nambi, V. T., & Ezhilarasan, S. K. (2025). Design and Implementation of Novel Dynamic Voltage Restorer Configuration for Electric Vehicle Charging Applications. *Engineering Proceedings*, 87(1), 39. <https://doi.org/10.3390/engproc2025087039>
6. **Ravikumar, D.**, Loganathan, V., Pasumponthangaperumal, N. S. R., Suresh Kumar, M., Ponnovian, P., & Balan, B. E. (2025). Development of Jaw Controlled Wireless Navigation Governing System for Wheelchair to Empower Person with Impaired Upper Limb. *Engineering Proceedings*, 87(1), 10. <https://doi.org/10.3390/engproc2025087010>
7. Loganathan, V., **Ravikumar, D.**, Kusala Kumar, G. R., Sasikumar, S., Maruthappan, T., & Kesavan, R. (2023). Multipurpose Smart Shoe for Various Communities. *Engineering Proceedings*, 58(1), 112. <https://doi.org/10.3390/ecsa-10-16284>
8. Loganathan, V., **Ravikumar, D.**, Devaraj, V., Kannan, U. M., & Kesavan, R. (2023). Development of a Compact IoT-Enabled Device to Monitor Air Pollution for Environmental Sustainability. *Engineering Proceedings*, 58(1), 18. <https://doi.org/10.3390/ecsa-10-15996>
9. Loganathan, V., **Ravikumar, D.**, Saikumar, K. S., & Kesavan, R. (2023). A Highly Efficient Cross-Connected H-Bridge-Style Multilevel Inverter with Lower Power Components. *Engineering Proceedings*, 56(1), 38. <https://doi.org/10.3390/ASEC2023-15296>
10. Thalpathiraj, S., Arunnehr, J., Bharathi, V.C., **Dhanasekar, R.**, Vijayaraja, L., Kannadasan, R., Faheem, M., Khan, A.A.: A novel approach for encryption and decryption of digital imaging and communications using mathematical modelling in internet of medical things. *J. Eng.* 2024, e70038 (2024). <https://doi.org/10.1049/tje2.70038>
11. **D. Ravikumar**, G. K. Srinivasan and M. Rivera, "Performance enhancement of permanent magnet DC motor with sepic converter through higher order sliding surface," in *IEEE Latin America Transactions*, vol. 22, no. 9, pp. 789-797, Sept. 2024, doi: 10.1109/TLA.2024.10670234.
12. **Ravikumar Dhanasekar**, Srinivasan GK, Rivera M (2024), "A novel higher-order sliding mode control for DC-DC boost converter system in PMDC motor exploring mismatched disturbances". *Circuit World*, Vol. 50 No. 2-3 pp. 348–364, doi: <https://doi.org/10.1108/CW-06-2023-0144>
13. Sivakumar S, Logeshwaran J, Kannadasan R, Faheem M, **Ravikumar D.** A novel energy optimization framework to enhance the performance of sensor nodes in Industry 4.0. *Energy Sci Eng.* 2024; 12: 835-859. doi:10.1002/ese3.1657
14. **R. Dhanasekar**, S. Ganesh Kumar, Sliding mode control with higher order strategy for buck converter in the presence of dynamic load, *e-Prime - Advances in Electrical Engineering, Electronics and Energy*, Volume 6,2023,100339, ISSN 2772-6711, <https://doi.org/10.1016/j.prime.2023.100339>.
15. **Ravikumar D**, Loganathan V, Narayanan K, Ravi sankar A, Muthu Govindasamy GS. Intelligent Sensing and Control System for Real-Time Graded Load Shedding. *Engineering Proceedings*. 2023; 56(1):137. <https://doi.org/10.3390/ASEC2023-15978>.
16. K. Kavin Kumar, P. M. Dinesh, P. Rayavel, L. Vijayaraja, **R. Dhanasekar et al.**, "Brain tumor identification using data augmentation and transfer learning approach," *Computer Systems Science and Engineering*, vol. 46, no.2, pp. 1845–1861, 2023.
17. **Dhanasekar Ravikumar** & Ganesh Kumar Srinivasan (2023) Implementation of higher order sliding mode control of DC–DC buck converter fed permanent magnet DC motor with improved performance, *Automatika*, 64:1, 162-177, DOI: 10.1080/00051144.2022.2119499
18. Arunnehr J, Thalpathiraj S, **Dhanasekar R**, Vijayaraja L, Kannadasan R, Khan AA, Haq MA, Alshehri M, Alwanain MI, Keshta I. Machine Vision-Based Human Action Recognition Using Spatio-Temporal Motion Features (STMF) with Difference Intensity Distance Group Pattern (DIDGP). *Electronics*. 2022; 11(15):2363. <https://doi.org/10.3390/electronics11152363>
19. Jawaharlalnehru A, Sambandham T, Sekar V, **Ravikumar D**, Loganathan V, Kannadasan R, Khan AA, Wechtaisong C, Haq MA, Alhussen A, et al. Target Object Detection from Unmanned Aerial Vehicle (UAV) Images Based on Improved YOLO Algorithm. *Electronics*. 2022; 11(15):2343. <https://doi.org/10.3390/electronics11152343>



20. Loganathan V, **Ravikumar D**, Kesavan R, Venkatesan K, Saminathan R, Kannadasan R, Sudhakaran M, Alsharif MH, Geem ZW, Hong J. A Case Study on Renewable Energy Sources, Power Demand, and Policies in the States of South India—Development of a Thermoelectric Model. *Sustainability*.2022; 14(14):8882. <https://doi.org/10.3390/su14148882>
21. Vijayaraja, L., **Dhanasekar, R.**, Balaji, M., Ganesh Kumar, S. (2023). Evaluation of Performance on 81-Level Switch-Ladder Inverter Using Minimum Components. In: Nath, V., Mandal, J.K. (eds) *Microelectronics, Communication Systems, Machine Learning and Internet of Things. Lecture Notes in Electrical Engineering*, vol 887. Springer, Singapore. [https://doi.org/10.1007/978-981-19-1906-0\\_4](https://doi.org/10.1007/978-981-19-1906-0_4)
22. Venkatesan C, Kannadasan R, **Ravikumar D**, Loganathan V, Alsharif MH, Choi D, Hong J, Geem ZW. Re-Allocation of Distributed Generations Using Available Renewable Potential Based Multi-Criterion-Multi-Objective Hybrid Technique. *Sustainability*. 2021; 13(24):13709. <https://doi.org/10.3390/su132413709>
23. Srinivasan GK, Rivera M, Loganathan V, **Ravikumar D**, Mohan B. Trends and Challenges in Multi-Level Inverter with Reduced Switches. *Electronics*. 2021; 10(4):368. <https://doi.org/10.3390/electronics10040368>
24. **R. Dhanasekar**, L. Vijayaraja, J.K. Periasamy, D. BharathyPriya, S. Ganesh Kumar, S. Thalpathiraj, Development of mobile car black box with synchronous action of vehicle control unit and android mobile using berlinite material, *Materials Today: Proceedings*, Volume 46, Part 9, 2021, Pages 3607-3613, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2021.01.632>.
25. S. Yuvaraja, M. Syed Abdul Salam, L. Vijayaraja, Rupa Kesavan, **R. Dhanasekar**, A novel PWM scheme for grid-tied inverter in micro-grid with enhanced power quality using silicon cells, *Materials Today: Proceedings*, Volume 46, Part 9, 2021, Pages 4298-4304, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2021.03.129>.
26. L. Vijayaraja, **R. Dhanasekar**, R. Premkumar, J.K. Periasamy, Rupa Kesavan, S. Ganesh Kumar, Silicon made switches for the development of low cost asymmetric 25 level inverter, *Materials Today: Proceedings*, Volume 46, Part 9, 2021, Pages 3601-3606, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2021.01.631>.

## International Conference Publications

1. S. Vetrivel, S. G. Kumar, L. Vijayaraja and R. Dhanasekar, "A Reduced Switch Series Topology 15-level and 27level Multilevel Inverter," *2025 IEEE Energy Conversion Congress & Exposition Asia (ECCE-Asia)*, Bengaluru, India, 2025, pp. 1-7, doi: 10.1109/ECCE-Asia63110.2025.11112446.
2. R. Dhanasekar, A. V, H. S and V. R, "Evolution of Wheelchair Technologies: A Review of Past and Present Innovations with Proposed IoT-Integrated Concepts for the Future," *2025 International Conference on Computing and Communication Technologies (ICCCT)*, Chennai, India, 2025, pp. 1-6, doi: 10.1109/ICCCT63501.2025.11019119.
3. R. Dhanasekar, P. P, V. L, B. S and A. M. S, "Innovative Crack Detection Approach Using UAV-Based Imaging Technology," *2025 International Conference on Computing and Communication Technologies (ICCCT)*, Chennai, India, 2025, pp. 1-6, doi: 10.1109/ICCCT63501.2025.11018973.
4. R. Dhanasekar, B. B. Evangeline, M. Shanmathi and A. Suvedha, "IoT Enabled Optimization of Peltier Based Atmospheric Water Generation Techniques for Sustainable Water Harvesting," *2025 8th International Conference on Trends in Electronics and Informatics (ICOEI)*, Tirunelveli, India, 2025, pp. 444-449, doi: 10.1109/ICOEI65986.2025.11013345.
5. R. Dhanasekar, A. S, L. Vijayaraja, S. G. Kumar and M. Rivera, "Control of Cuk Converter Fed Brushless DC Motor Drive System," *2024 IEEE Silchar Subsection Conference (SILCON 2024)*, Agartala, India, 2024, pp. 1-6, doi: 10.1109/SILCON63976.2024.10910610.
6. R. Dhanasekar, L. Vijayaraja, R. Premkumar, D. B, S. K. E and N. V, "E-bike using wireless charging and split battery with renewable energy," *2024 International Conference on Power, Energy, Control and Transmission Systems (ICPECTS)*, Chennai, India, 2024, pp. 1-5, doi: 10.1109/ICPECTS62210.2024.10780388.
7. R. Dhanasekar, L. Vijayaraja, C. Rithika, S. Avanthika, S. Thalpathiraj and R. Premkumar, "Navigating Emerging Technologies: A Comprehensive Review of 5G and the Evolving Landscape of 6G Communication," *2024 International Conference on Communication, Computing and Internet of Things (IC3IoT)*, Chennai, India, 2024, pp. 1-6, doi: 10.1109/IC3IoT60841.2024.10550305.
8. Dhanasekar, R., Vijayaraja, L., Sakthi Vel Murugan, L., Santhosh Balaji, S.V., Srigiridharan, R., Subha, P. (2024). Modernized Speed Regulation Technique of DC Motor Through Arduino. In: Dassan, P., Thirumaaran, S., Subramani, N. (eds) *Intelligent Computing, Smart Communication and Network Technologies. ICICSCNT 2023. Communications in Computer and Information Science*, vol 1970. Springer, Cham. [https://doi.org/10.1007/978-3-031-75957-4\\_15](https://doi.org/10.1007/978-3-031-75957-4_15).
9. R. Dhanasekar, L. Vijayaraja, R. Premkumar, T. M. Pragadeesh, M. Yogeshwaran and V. Vijayaselvam, "Wireless Autonomous Drone Charging Hub: Revolutionizing Unmanned Aircraft Connectivity," *2023 Intelligent Computing*



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- and Control for Engineering and Business Systems (ICCEBS), Chennai, India, 2023, pp. 1-6, doi: 10.1109/ICCEBS58601.2023.10448574.
10. J. Arunnehr, S. Thalpathiraj, R. Dhanasekar, P. Subramanian, L. Vijayaraja and R. Premkumar, "Chord Craft: Exploring Musical Frontiers with Machine Learning," 2023 *International Computing and Control for Engineering and Business Systems (ICCEBS)*, Chennai, India, 2023, pp. 1-6, doi: 10.1109/ICCEBS58601.2023.10449065.
  11. R. Dhanasekar, L. Vijayaraja, A. Divya, P. Keerthana, S. Thalpathiraj and V. Venkatesh, "IoT-Based Sleep Apnea Monitoring for Timely Detection and Prevention," 2023 *International Conference on Self Sustainable Artificial Intelligence Systems (ICSSAS)*, Erode, India, 2023, pp. 1363-1368, doi: 10.1109/ICSSAS57918.2023.10331831.
  12. V. L., J. N S, D. R, M. M P, V. V and R. Kesavan, "Sustainable Smart Homes Using IoT for Future Smart Cities," 2023 *4th International Conference on Smart Electronics and Communication (ICOSEC)*, Trichy, India, 2023, pp. 365-369, doi: 10.1109/ICOSEC58147.2023.10276371.
  13. R. Premkumar, L. Vijayaraja, R. Dhanasekar, G. Saimahalakshmi, K. Bhagyashree and S. Rakesh, "Winter Thermal Suit with AutoTemperature Control," 2023 *5th International Conference on Inventive Research in Computing Applications (ICIRCA)*, Coimbatore, India, 2023, pp. 1612-1616, doi: 10.1109/ICIRCA57980.2023.10220637.
  14. L. Vijayaraja, R. Dhanasekar, R. Premkumar, M. V, S. K and R. Kesavan, "IoT based Modern Poultry House with Enhanced Accuracy," 2023 *2nd International Conference on Edge Computing and Applications (ICECAA)*, Namakkal, India, 2023, pp. 1302-1306, doi: 10.1109/ICECAA58104.2023.10212155.
  15. L. Vijayaraja, R. Dhanasekar, K. Harini, T. Hemapriya, S. Subhasri and R. Kesavan, "Performance Analysis of Electric Vehicle using BLDC Motor Drive," 2023 *7th International Conference on Intelligent Computing and Control Systems (ICICCS)*, Madurai, India, 2023, pp. 1832-1836, doi: 10.1109/ICICCS56967.2023.10142305.
  16. R. Dhanasekar, V. L, H. H. B, M. Kumar U, M. R. R S and R. Kesavan, "Implementation of PV based solar water cooler with enhanced chiller performance using Peltier module," 2022 *International Conference on Computer, Power and Communications (ICCCP)*, Chennai, India, 2022, pp. 518-522, doi: 10.1109/ICCCP55978.2022.10072212.
  17. L. Vijayaraja, R. Dhanasekar, S. K. Sanadhan, T. Vishal, V. Kannan and R. Kesavan, "Design of multilevel inverter with its study on different configurations and applications," 2023 *International Conference on Computer Communication and Informatics (ICCCI)*, Coimbatore, India, 2023, pp. 1-6, doi: 10.1109/ICCCI56745.2023.10128380.
  18. R. Dhanasekar, L. Vijayaraja, C. S. Mirthulaa, P. P. Narenthira Sai Raam, B. Naveen and C. Vignesh Kumar, "A Review on the Analysis of 5G Technology and its Impact on Humans," 2023 *International Conference on Computer Communication and Informatics (ICCCI)*, Coimbatore, India, 2023, pp. 1-6, doi: 10.1109/ICCCI56745.2023.10128501.
  19. R. Premkumar, L. Vijayaraja, R. Dhanasekar, R. Kesavan, S. Sreevaragi and M. Swetha, "Energy Generation from Bio-Waste using Normal and Chemical Decomposition Technique to Meet Power Demand in Urban Areas," 2022 *3rd International Conference on Electronics and Sustainable Communication Systems (ICESC)*, Coimbatore, India, 2022, pp. 137-145, doi: 10.1109/ICESC54411.2022.9885310.
  20. R. Dhanasekar, L. Vijayaraja, N. Roshanraj, R. Ashok Kumar, R. Kaviyarasu and M. V. Srinishanth, "Automated Pedestrian Opening by Weight Calculation and Sound Sensing based Traffic Light Control System for Pedestrian Safety," 2022 *7th International Conference on Communication and Electronics Systems (ICES)*, Coimbatore, India, 2022, pp. 185-191, doi: 10.1109/ICES54183.2022.9835795.
  21. L. Vijayaraja, R. Dhanasekar, R. Kesavan, D. Tamizhmalar, R. Premkumar and N. Saravanan, "A Cost Effective Agriculture System based on IoT using Sustainable Energy," 2022 *6th International Conference on Trends in Electronics and Informatics (ICOEI)*, Tirunelveli, India, 2022, pp. 546-549, doi: 10.1109/ICOEI53556.2022.9776726.
  22. R. Dhanasekar, L. Vijayaraja, V. Kanakasri, S. Raadha and T. Swami, "Future of Electric Transportation: A Qualitative Study on How Decarbonization Can be Improved by Effective Analysis," 2022 *6th International Conference on Trends in Electronics and Informatics (ICOEI)*, Tirunelveli, India, 2022, pp. 154-162, doi: 10.1109/ICOEI53556.2022.9776933.
  23. L. Vijayaraja, S. Sivarajeswari, R. Dhanasekar, R. Premkumar, D. Tamizhmalar and R. Kesavan, "Design of Thirteen Level Inverter suitable for Solar Farms," 2022 *International Conference on Computer Communication and Informatics (ICCCI)*, Coimbatore, India, 2022, pp. 1-5, doi: 10.1109/ICCCI54379.2022.9741026.
  24. D. R, V. L, K. V. N, P. S, P. C. K and R. A, "An Overview of EV Batteries and Study Analysis on Charging Methodology," 2022 *International Conference on Computer Communication and Informatics (ICCCI)*, Coimbatore, India, 2022, pp. 1-6, doi: 10.1109/ICCCI54379.2022.9740935.
  25. R. Dhanasekar, L. Vijayaraja, S. S. Isha, K. Vanitha and S. Reshma, "Concept of Thermal Management to Minimize the Scaling Down of Electric Vehicle Driving Reach," 2022 *6th International Conference on Intelligent*



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- Computing and Control Systems (ICICCS)*, Madurai, India, 2022, pp. 184-189, doi: 10.1109/ICICCS53718.2022.9788396.
26. L. Vijayaraja, R. Dhanasekar, K. Narmadha, S. Snega, V. Kanakasri and S. Raadha, "An Analysis on Generation of Power from Various Clean Energy and Capacity to Meet the Power Demand," *2022 6th International Conference on Intelligent Computing and Control Systems (ICICCS)*, Madurai, India, 2022, pp. 216-225, doi: 10.1109/ICICCS53718.2022.9788272.
  27. R. Dhanasekar, C. M. R. M, L. Vijayaraja, S. G. Kumar and M. Rivera, "Design of Higher Order Converter for PiezoElectric Energy Harvesting Applications," *2021 IEEE International Conference on Automation/XXIV Congress of the Chilean Association of Automatic Control (ICA-ACCA)*, Valparaíso, Chile, 2021, pp. 1-7, doi: 10.1109/ICAACCA51523.2021.9465296.
  28. L. Vijayaraja, V. Nandhinipriya, R. Dhanasekar, S. G. Kumar and M. Rivera, "Simulation and Experimentation of 57-Level Inverter," *2021 IEEE International Conference on Automation/XXIV Congress of the Chilean Association of Automatic Control (ICA-ACCA)*, Valparaíso, Chile, 2021, pp. 1-8, doi: 10.1109/ICAACCA51523.2021.9465284.
  29. A low cost and user friendly vehicle crash alert system using Arduino, L Vijayaraja<sup>1</sup>, R Dhanasekar<sup>1</sup>, R Magesh Krishna<sup>1</sup>, M Mahidhar<sup>1</sup>, D Prakash<sup>1</sup> and P Shashikumar<sup>1</sup>, Published under licence by IOP Publishing Ltd IOP Conference Series: Materials Science and Engineering, Volume 1055, International Virtual Conference on Robotics, Automation, Intelligent Systems and Energy (IVC RAISE 2020) 15th December 2020, Erode, India
  30. Multilayer electromagnetic wave absorber by a dielectric material in direct to home system, S Snega<sup>1</sup>, K Narmadha<sup>1</sup>, R Yuvashree<sup>1</sup>, M Arunkumar<sup>1</sup>, R Dhanasekar<sup>1</sup>, L Vijayaraja<sup>1</sup> and Rupa Kesavan, Published under licence by IOP Publishing Ltd, IOP Conference Series: Materials Science and Engineering, Volume 1055, International Virtual Conference on Robotics, Automation, Intelligent Systems and Energy (IVC RAISE 2020) 15th December 2020, Erode, India
  31. A cloud-based user recommender and e-governing system for public welfare, Rupa Kesavan<sup>1</sup>, K Meenakshi<sup>2</sup>, L Vijayaraja<sup>3</sup>, R Dhanasekar<sup>3</sup>, P Dhilip Prasad<sup>3</sup> and E Sim Stewart Itchiro, Published under licence by IOP Publishing Ltd, IOP Conference Series: Materials Science and Engineering, Volume 1055, International Virtual Conference on Robotics, Automation, Intelligent Systems and Energy (IVC RAISE 2020) 15th December 2020, Erode, India
  32. R. Dhanasekar, S. G. Kumar and M. Rivera, "Improved Speed Control of BLDC Motor using Luo converter By Sliding Mode Control," *2019 IEEE CHILEAN Conference on Electrical, Electronics Engineering, Information and Communication Technologies (CHILECON)*, Valparaiso, Chile, 2019, pp. 1-6, doi: 10.1109/CHILECON47746.2019.8987981.
  33. R. Dhanasekar, S. G. Kumar and M. Rivera, "Third Order Sliding Mode Control of Buck Converter Fed Permanent Magnet DC Motor," *2018 IEEE International Conference on Automation/XXIII Congress of the Chilean Association of Automatic Control (ICA-ACCA)*, Concepcion, Chile, 2018, pp. 1-4, doi: 10.1109/ICA-ACCA.2018.8609812.
  34. L. Vijayaraja, B. Gokulnath, S. S. Ganapathy, R. Dhanasekar and R. Kesavan, "Modified SEPIC Converter Based PV Inverter for Power Quality Improvement," *2018 International Conference on Computation of Power, Energy, Information and Communication (ICCPEIC)*, Chennai, India, 2018, pp. 280-285, doi: 10.1109/ICCPEIC.2018.8525223.
  35. R. Dhanasekar, Vaishalee, I. Akshaya, I. Shruthi, I. Thirupurasundari and L. Vijayaraja, "Improved Source End Power Factor Enhancement of BLDC Motor Using Bridgeless-Landsman Converter," *2018 International Conference on Computation of Power, Energy, Information and Communication (ICCPEIC)*, Chennai, India, 2018, pp. 147-152, doi: 10.1109/ICCPEIC.2018.8525195.
  36. R. Dhanasekar, S. G. Kumar and M. Rivera, "Sliding mode control of electric drives/review," *2016 IEEE International Conference on Automatica (ICA-ACCA)*, Curico, Chile, 2016, pp. 1-7, doi: 10.1109/ICA-ACCA.2016.7778466.

## Book chapters contribution

1. Dhanasekar, R., Vijayaraja, L. and Ganesh Kumar, S. (2023). Control Techniques in Sustainable Applications. In *Power Converters, Drives and Controls for Sustainable Operations* (eds S. Ganesh Kumar, M.R. Abarca and S.K. Patnaik). <https://doi.org/10.1002/9781119792918.ch21>
2. Vijayaraja, L., Dhanasekar, R. and Ganesh Kumar, S. (2023). An Inspection on Multilevel Inverters Based on Sustainable Applications. In *Power Converters, Drives and Controls for Sustainable Operations* (eds S. Ganesh Kumar, M.R. Abarca and S.K. Patnaik). <https://doi.org/10.1002/9781119792918.ch9>



# SAI RAM ENGINEERING COLLEGE

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Sai Leo Nagar, West Tambaram, Chennai - 600 044. [www.sairam.edu.in](http://www.sairam.edu.in)



## Current Sponsored Projects

1. "AUTOMATED PESTICIDES CONTROLLER FOR THE ADVANCEMENT OF SMART GREEN SYSTEM", funded by MSME (December 2023 - -). **Project Cost:700000.00.**

## Sponsored Projects Completed

1. "Water absorbing pavements by using porous concrete", funded by TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY (December 2021 - April-2022). Project Cost:7500.00.
2. "Learning of Braille Language", funded by Innovation and Entrepreneurship Development Centre (2018 - 2019). Project Cost:100000.00.
3. "Automatic wireless drone charging station", funded by TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY (December 2024 - April-2025). Project Cost:7500.00.

## Special Representations

1. Reviewer in Electric Power Components and Systems
2. Reviewer in IEEE Latin America Transactions
3. Reviewer in Journal of Dynamic Systems, Measurement, and Control
4. Reviewer in Bulletin of Electrical Engineering and Informatics
5. Reviewer in International Journal of Applied Power Engineering
6. Reviewer in International Journal of Power Electronics and Drive Systems (IJPEDS)
7. Reviewer in Scientific Reports
8. Reviewer in International Journal of Industrial Electronics, Control and Optimization
9. Reviewer in Aerospace Journal (MDPI)
10. Reviewer in Mathematics Journal (MDPI)
11. Reviewer in Processes Journal (MDPI)

## Honours

3. "BEST PAPER AWARD to R. DHANASEKAR AND S. GANESH KUMAR in the international conference NCCS 2020" given by The Institutions of Electronics & Telecommunication Engineers & Indian Society for VLSI Education, from INDIA (2020).
4. "BEST PAPER AWARD to L. VIJAYARAJA, R. DHANASEKAR, M. BALAJI and S. Ganesh Kumar in SECS 2020" given by The Institutions of Electronics & Telecommunication Engineers & Indian Society for VLSI Education, from INDIA (2020).
5. "APPRECIATION FOR FOSTERING AN ECOSYSTEM BRIDGING GOVERNMENT INDUSTRY AND ACADEMIA" Award from DST & TEXAS INSTRUMENTS- INDIA INNOVATION DESIGN CONTEST,2018.
6. "BEST PAPER AWARD to R. DHANASEKAR in the International Virtual conference on Robotics, Automation, Intelligent Systems and Energy (IVC-RAISE 2020) held at Department of Mechatronics Engineering, Kongu Engineering College, Perundurai.
7. "Evaluator for Innovation contest", Department of School Education and Literacy, Ministry of Education, Government of India -2023-2024.
8. Mentor for the WINNING TEAM OF SMART INDIA HACKATHON,2023,conducted by AICTE, MINISTRY OF EDUCATION, with cash prize of 1 lakh.
9. Award from ATL TINKERPRENUER for most consistent and Active Mentor.
10. Mentor for the WINNING TEAM OF SMART INDIA HACKATHON,2024,conducted by AICTE, MINISTRY OF EDUCATION, with cash prize of 1 lakh.

## Patents Published

1. R. Dhanasekar , S. Ganesh Kumar (2023), "IMPLEMENTATION OF HIGHER ORDER SLIDING MODE CONTROL OF DC-DC BUCK CONVERTER FED PERMANENT MAGNET DC MOTOR WITH IMPROVED PERFORMANCE" Application Number: 202341064079 (Published on Oct 2023).
2. KAUSHIK V N , GURU SHARAN G M, ANANDAN R, DHANASEKAR R. (2023), "HANDHELD SANITIZING DEVICE USING COLD PLASMA WITH AN ACTUATOR FOR SANITIZING DIFFERENT SURFACES" Application Number: 202341015903 (Published on March 2023).



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3. VIJAYARAJA L, DHANASEKAR R, K. PALANIKUMAR, DHINAKARAN M S DINESH KUMAR R, JOAHNAS MATHEW SAJI,VIJAY S (2020), "A DEVICE AND METHOD FOR ASSISTING IN SELF-LEARNING OF THE BRAILLE LANGUAGE TO VISUALLY IMPAIRED END USERS " Application Number: 202041045084 (Published on Oct 2020).
4. ARUN KUMAR S, THALAPATHIRAJ S,BALIKA J CHELLIAH, M.S. ANTONY VIGIL,BANUPRIYA S,DHANASEKAR R (2020), "ID TRACKING TO 4-G,5-G MOBILE WITH INTELLIGENT SECURITY USING DEEP,MACHINE LEARNING PROGRAMMING " Application Number: 202041024065 (Published on June 2020).
5. LOGANATHAN VIJAYARAJA, DHANASEKAR R, KANAKASRI V, RAADHA S, ASHOK KUMAR R., KAVIYARASU R, RUPA KESAVAN (2023), "'NIRBHAVI' - A TOY TO EDUCATE THE SAFE TOUCH AND UN-SAFE TOUCH WITH THREE DIFFERENT LANGUAGES" Application Number: 202341053861 (Published on Sept 2020).
6. DHANASEKAR RAVIKUMAR, VIJAYARAJA L, SHANMATHI M, SOMESH D, DHANUSHKUMAR S,ROSHNI T, HELANA CHRISTY D, SANTHOSH S (2024) "A Device to Empower Children with Interactive Socio-Geographical Adventures through a 3D Globe Game"Application Number: 202441097259 (Published on Dec2024).
7. LOGANATHAN VIJAYARAJA,DHANASEKAR R, HEMAPRIYA T,KESAV SANADHAN S, HARINI K,NITHESWARAN K, GOKUL RAJ K, RUPA KESAVAN (2024) "Smart Agriculture Device for Crop Growth Prediction, Monitoring and Storage Management "Application Number: 202441097275 (Published on Dec2024).
8. R. DHANASEKAR,LOGANATHAN VIJAYARAJA,KANAKASRI V,,KEERTHANA M, SHARAVANAN S M (2024) "'EXSO-BOT'- ENHANCED EXOSKELETON WITH ADVANCED CONVERTER AND MICROPROCESSOR CONTROL FOR MOBILITY "Application Number: 202441030836 (Published on April 2024).
9. LOGANATHAN VIJAYARAJA,DHANASEKAR R,S KESAV SANADHAN,KANNAN V VISHAL T, (2024) "A NOVEL CONFIGURATIONS OF MULTILEVEL INVERTER WITH LOW COMPONENTS COUNT FOR GREEN ENERGY INTEGRATION" Application Number: 202441030371 (Published on April 2024).

## Patents Granted

1. M. Ramamurthy, Alagu Thillaivanan, DHANASEKAR R, VIJAYARAJA L "'DESIGN OF HEAD LIGHT FOR ELECTRIC VEHICLE" Application Number: 350661-001 (Granted on Jan 2023).