



Sai SAI RAM INSTITUTE OF TECHNOLOGY

Accredited by NBA and NAAC "A+" | An ISO 9001:2015 Certified and MHRD NIRF ranked institution
NBA Accredited | Accredited by NAAC with 'A+' Grade | An ISO 9001 : 2015 Certified Institution
Sai Leo Nagar, West Tambaram, Chennai - 600 044. www.sairamit.edu.in



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING



Name : **Dr. T. Muthamizhan**

Designation : ASSOCIATE PROFESSOR

Email : muthamizhan.eee@sairamit.edu.in

Qualification : B.E., M.E., Ph.D.,

Specialization : Power Electronics and Drives

Research Interest : Power Electronics, Renewable Energy, Drives and Control.

Experience in years : **Teaching** UG PG **Industry**

No. of Workshop/Conferences/
FDP attended : Workshop Conferences FDP

No. of Workshop/Conferences/
FDP Organized : Workshop Conferences FDP

Professional Membership	Senior Member – IEEE, Fellow – IEI, Member – ISTE, Member - IENG
Publications	National: JOURNAL-0, CONFERENCE-2
	International: JOURNAL 23-,CONFERENCE- 14
	Books - 0
Research Funded Projects	-

Patents	Published – 2, Granted -1
Achievements	<p>Received a cash award of Rs.2000/- from the management of Sri Sai Ram Institute of Technology, for Producing 100% results in Special Electrical Machines in End Semester Examinations/ Anna University November /December 2018.</p> <p>Received a cash award of Rs.2000/- from the management of Sri Sai Ram Institute of Technology, for Producing 100% results in Design of Electrical Machines in End Semester Examinations/ Anna University April / May 2019.</p>
Any Other Information	<ol style="list-style-type: none"> 1. College Level Criterion Coordinator, NAAC. 2. Department Level Coordinator, NAAC 3. Coordinator Conference/FDP. 4. IEEE PES Student Branch Chapter, Advisor 5. Class Committee Chairman, Class Coordinator, etc.

List of Publications:-

Journals

Papers published in International Journals:

1. Sasikala and **T. Muthamizhan**, "Smart Home LPG Application Using GSM Network And Controlling Black-Marketing By RFID Technology", Advances in Parallel Computing, 2020, pp.161-167. (Scopus)
2. **T. Muthamizhan**, D. Silas Stephen and A. Sivakumar, "ANFIS Controller based speed control of High-Speed BLDC Motor Drive", Advances in Parallel Computing, 2020, pp.597-602. (Scopus)
3. Logeswari. N and **Muthamizhan T**, "Optimized Wireless Power Transmission System with Magnetic Coupled Resonance Technique", International Journal of Advanced Science and Technology, Vol. 29, No. 6s, (2020), pp. 1712-1720. (Scopus)
4. **T. Muthamizhan**, N. Logeshwari and E. Maheswari, "Investigations on On-Board Charger with Simultaneous Charging of Low Voltage Battery for Electrical Vehicles", International Journal of Advanced Science and Technology, Vol. 29, No. 6s, (2020), pp. 1721-1730. (Scopus)
5. R. Senthilkumar , **T. Muthamizhan** , Ramaprasad Maharana , P. Saravanan,"Designing and Modeling of Three Phase Inverter using Redundant Leg", R. Senthilkumar , T. Muthamizhan , Ramaprasad Maharana , P. Saravanan, Solid State Technology, Vol. 63 No. 3 (2020) pp.1668 – 1676, IF-0.11
6. **T. Muthamizhan**, R. Senthil kumar , P. Saravanan , Ramaprasad Maharana, "Sensorless Control of Z-Source Inverter Fed Brushless DC Motor Drive Using Hybrid

- Control Strategy For Electric Vehicle Applications", Solid State Technology, Vol. 63 No. 3 (2020), pp. 1656 - 1667, IF-0.11
7. P. Saravanan, Ramaprasad Maharana, **T. Muthamizhan**, R. Senthil kumar, "Performance Improved Medical Signal Filters with Doctor's Assistance System through Augmented Reality for Clinical Investigation", Solid State Technology, Vol. 63 No. 3 (2020) ,pp.1649 - 1655, IF-0.11
 8. Ramaprasad Maharana , P. Saravanan , R. Senthil kumar , **T. Muthamizhan**, "Multiband 8 Element MIMO Antenna Array with Orthogonal Circular Polarization for Sub 6 GHz Cellular Applications", Solid State Technology, Vol. 63 No. 3 (2020) ,pp.1847 - 1851, IF-0.11
 9. E.Maheswari, V.Balaji and **T. Muthamizhan**, "Solar Energy Based Laptop Charger using Quadratic Boost Converter", International Journal of Advanced Science and Technology, Vol. 29, No. 6s, (2020), pp. 1731-1741. (Scopus)
 10. S. Palanikumar, Dr.G.Venkatesan, Dr.S.Solai Manohar, **Dr.T. Muthamizhan**, "Novel Control Scheme for Z-Source Inverter based Wind Energy Conversion Systems", WAFFEN-UND KOSTUMKUNDE JOURNAL, Volume XI, Issue IV, April/2020, pp.60-70, DOI:010.11205.WJ.2020.V11I4.05.100855
 11. **T. Muthamizhan** (2019): A Security Model for Web-Based Fuzzy- Logic Direct Torque Control of Induction Motor Drive, IETE Journal of Research, DOI: 10.1080/03772063.2019.1644971 (SCIE/Scopus)
 12. MD. Aijaz, **T. Muthamizhan**, "An Advanced Model Implementation of Multi Level Vienna Rectifier With Power Quality Added Function", Global Journal of Engineering Education, Vol. 20, No. 3, pp. 266-274, 2018.
 13. **T.Muthamizhan**, A.Sivakumar, "Performance Analysis of Standalone Solar PV Powered Induction Motor Drive using Analog-Circuit based MPPT Algorithm", Journal of Advanced Research in Dynamical and Control Systems, Vol. 10, no.13 Sp. Issue, pp.1637-1648, 2018. (Scopus)
 14. Sivakumar. A, **Muthamizhan.T**, "Harmonic Reduction in Single Boost Converter Fed DC Motor with EMI Input Filter", International Journal of Power Electronics and Drive Systems, pp. 914-920, Vol.9, No.2, June 2018. (Scopus)
 15. **Muthamizhan, T**, "Implementation of hang regulator based power division for a microgrid with disseminated power generations", International Journal of Mechanical Engineering and Technology, 2017. (Scopus)
 16. S. Ravirajan, **T. Muthamizhan**, "Modelling and Digital Simulation of a Standard IEEE - 30 Bus System to Improve Power Quality of Grid with UPQC using MATLAB", Asian Journal of Research in Social Sciences and Humanities Vol. 6, No. 10, October 2016, pp. 830-845. ISSN 2249-7315. DOI : 10.5958/2249-7315.2016.01056.X
 17. **T. Muthamizhan**, "Performance Analysis of Solar Power Optimizer for DC Distribution System ", International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering, Vol. 5, No. 8, pp. 6708-6715, 2016, IF-6.392
 18. **T.Muthamizhan**, Clinton Williams. A, Malikudeen. I, "Simulation Investigation on Photovoltaic-fed Three-Level Boost Converters", International Journal of Applied Engineering Research (IJAER), Volume 10, Number 23 (2015) Special Issues, pp.20911-20916. IF-0.51

19. **Muthamizhan T** and Ramesh R., 'PV Powered Fuzzy based Direct Torque Controlled Induction Motor without AC Phase Current Sensor', International Review of Electrical Engineering, Vol.9, No.2. pp.307-314, April 2014. IF-0.91 (Scopus)
20. **Muthamizhan T** and Ramesh R., 'PV Powered Direct Torque Controlled Induction Motor without AC Phase Current Sensors', International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering, Vol.3, Special Issue 2, April 2014, pp. 255-262, IF-6.392.
21. **Muthamizhan T** and Ramesh R., 'Experimental Investigations on PV Powered SVM-DTC Induction Motor without AC Phase Current Sensor', International Journal of Engineering and Technology, Vol 6, No 2, Apr-May 2014, pp. 842-857. ISSN: 0975-4024.IF-0.172 (Scopus)
22. Sivakumar A, **Muthamizhan T**, Gunasekhar N O and Ramesh R, "A Novel Sensorless Speed Control Strategy of Induction Motor Based on Vector Control", International Review of Electrical Engineering, Vol.8, No 4, pp.1211-1217, August 2013. IF-0.91 (Scopus)
23. **Muthamizhan T** and Ramesh R., 'Design and Simulation of PV driven three-phase Induction motor', International Review on Modeling and Simulations, Vol 6, No 2, pp. 412-418, April 2013.IF-0.940 (Scopus)

Books Published:

NIL

Conferences

Papers published in International Conferences:

1. **T. Muthamizhan**, M. J. Kumar, P. Rathnavel, M. Aijaz and A. Sivakumar, "A Photovoltaic fed High Gain Bidirectional DC/DC Converter on EV Charging stations Applications," 2021 2nd Global Conference for Advancement in Technology (GCAT), 2021, pp. 1-6, doi: 10.1109/GCAT52182.2021.9587699. **(Scopus)**
2. N. Mahesh Babu, M. Aijaz and **T. Muthamizhan**, "Fuzzy Logic Controller Based 3-Phase 4-Wire Inverter for Enhancing the Reactive Power Injecting Capability in Asymmetrical Voltage Sag," 2021 2nd Global Conference for Advancement in Technology (GCAT), 2021, pp. 1-6, doi: 10.1109/GCAT52182.2021.9587511. **(Scopus)**
3. Md. Aijaz, **T. Muthamizhan**, T. Venkateswarlu, "An Intelligent Fuzzy Controlled Microgrid Fed by Distribution Generation Sources", Proceedings of International Conference on Power Electronics and Renewable Energy Systems, pp. 467-477, Nov 2021. **(Scopus)**
4. M. Jagadeesh Kumar, **T. Muthamizhan**, P. Rathnavel, G. Ezhilarasan, T. Eswaran, "Performance and Analysis of Voltage Compensation in Transmission Line Using SMES-Based IDVR", Proceedings of International Conference on Power Electronics and Renewable Energy Systems, pp. 613-623, Nov 2021. **(Scopus)**
5. D. Silas Stephen, **T. Muthamizhan**, J Jinu Sophia, "A study on the impact of DC appliances and Direct DC power system in India" 7th Edition of International Conference on Green Technologies for Power Generation, Communication and Healthcare (ICGPC-2021), 22nd May 2021

6. **T. Muthamizhan**, M. Aijaz and T. Venkateswarlu, "Active Shunt Power Filter Using ANN Controller for Wind Turbine - PMSG Interfaced to Grid," 2021 2nd International Conference for Emerging Technology (INCET), 2021, pp. 1-7, doi: 10.1109/INCET51464.2021.9456123 (**Scopus**)
7. **T. Muthamizhan**, P. Saravanan and R. Maharana, "Sensorless Control of Z Source Inverter fed BLDC Motor Drive by FOC - DTC Hybrid Control Strategy Using Fuzzy Logic Controller," 2021 7th International Conference on Electrical Energy Systems (ICEES), 2021, pp. 358-363, doi: 10.1109/ICEES51510.2021.9383752. (**Scopus**)
8. **Muthamizhan T**, Venkatesan G, Simulation Analysis of an On-Board Charger with Simultaneous Charging of Low Voltage Battery for Electric Vehicles, International Conference on Advances and Developments in Electrical and Electronics Engineering (ICADEE 2K20), 6th-7th, Feb 2020
9. Palanikumar S, Venkatesan G, **Muthamizhan T**, "Optimized Control Scheme for Z-Source Inverter based Wind Source Power Conversion Systems", International Conference on Advances and Developments in Electrical and Electronics Engineering (ICADEE 2K20), 6th-7th, Feb 2020
10. A.Sivakumar, **T. Muthamizhan**, M.Rajmal Joshi and S.Sendil Kumar, "Regulation of DC Grid Voltage with Single Phase Bidirectional Converter", 2nd International Conference on Emerging Current Trends in COMputing and Expert Technology (COMET 2K19), 22-23 March 2019, pp.718-724.
11. J.Jothikumar, **T.Muthamizhan**, D.Baskar, "Reduction of harmonic voltage using a series active filter under different load conditions by using MATLAB", 3rd International Conference on Green Technologies for Power Generation, Communication and Instrumentation ICGPC'16 on March 23th & 24th, 2016, pp.7.
12. D.Vijayaragavan, **T.Muthamizhan**, S.Sherine, " Implementation of multi-input DC/DC converter based on the multi winding transformer for renewable energy applications", 3rd International Conference on Green Technologies for Power Generation, Communication and Instrumentation ICGPC'16 on March 23th & 24th, 2016, pp.5.
13. Sivakumar. A, **Muthamizhan.T** and Gunasekhar. N.O, "A Novel Scheme for Sensorless Speed Control of Induction Motor using DSP Controller", DST Sponsored International Conference on Power and Energy System ICPEs'12, pp 50-56, Dec 2012.

Papers published in National Conferences:

1. **T. Muthamizhan**, S. Juliana, S. V Kavya, S. Jayashree, "OBC-LDC INTEGRATED POWER UNIT FOR ELECTRIC VEHICLES", 2nd National Conference on Innovative Solutions in Electrical Engineering Science (NCISEES'19), PP.30, 22nd March 2019.
2. **Muthamizhan T**, Avinash Janakiraman V, Hariharan M, Lokendran U, "Bidirectional High Gain DC-DC Converter For Grid Tied Solar Electric Vehicle Applications", 3rd National Conference on Innovative Solutions in Electrical Engineering Science (NCISEES'21), 21st April 2021.

List of Patent :

1. T.Muthamizhan, " VAT- MACHINES : VIRTUAL AUTOMATED TELLER MACHINES", Application No. 202011007303

2. T.Muthamizhan, “INTELLIGENT HYBRID ELECTRIC CONVENTIONAL VEHICLES”, Application No. 202041010651
3. T. Muthamizhan, “HANDY DEVICE FOR FACE IDENTIFICATION”, Design Number: 352040-001, The Patent Office Journal No. 50/2021 Dated 10/12/2021

Workshop / Conferences / FDP Attended:-

- Successfully participated & completed AICTE Training and Learning (ATAL) Academy Online FDP on "Internet of Things (IoT)" from 30-04-2020 to 04-05-2020 at Indian Institute of Information Technology (IIIT Nagpur).
- Received FDP certificate from NPTEL for successfully completing the “Advanced Power Electronics and Control” course. Duration of NPTEL Course is 8 Weeks.
- Two day FDP on “Decision Making Skills” conducted by ICT academy at Vidyasagar Womens college, on 13-06-2019 to 14-06-2019.
- Five day FDP on “Engineering Teaching Pedagogy and Teaching Learning Process” conducted in Sri Sai Ram Engineering College, held from 3.12.2018 to 7.12.2018.
- One day National Level workshop on “Solar Photovoltaic System Design”, Organized by Vels University on 22nd April 2017.
- Faculty development Training Programme on “IC 6601 – Advanced Control System” Organized by Madras Institute of Technology, Anna University, Chennai 600025, during 25 – 31 May 2015.
- One Day National Seminar on “Research Challenges in Micro grid”, Organized by the School of Electrical Engineering (SELECT), VIT Chennai on 9th May 2015.
- Faculty development Training Programme on “EE 6401 - Electrical Machines-I” Organized by Department of Electrical and Electronics Engineering, GKM college of Engineering & Technology, Chennai 600025, during 08 – 15 December 2014.
- Two-day UGC Sponsored Short-Term Course on “Research Methodology, Techniques of Writing Research Articles for SCI journals and Ph.D. Thesis Preparation”, Conducted by Department of Electrical and Electronics Engineering, college of Engineering Guindy, Anna University, Chennai 600025, during 8-9, March 2013.
- One-week CSIR Sponsored Seminar on “Electrical Drives and Embedded Control”, Conducted by Department of Electrical and Electronics Engineering, college of Engineering Guindy, Anna University, Chennai 600025, during 17 – 21, December 2012.
- Undergone Orientation Course, conducted by Empanelled Training Institution, Madras School of Social Work, from 5 to 10, September, 2011.
- Faculty development Training Programme on “ EE 2251 - Electrical Machines-I” Organized by Department of Electrical and Electronics Engineering, college of Engineering Guindy, Anna University, Chennai 600025, during November 30 – December 06, 2009.
- Three-day workshop on “Control Theory & its applications to Practical Problems”, under the aegis of Dr. Kannoth Sukumaran Endowment, Department of Electrical and

Electronics Engineering, College of Engineering Guindy, Anna University, Chennai 600025, during 16 -18, October 2008.

- Faculty development Training Programme on “Design of Electrical Apparatus” Organized by Department of Electrical and Electronics Engineering, college of Engineering Guindy, Anna University, Chennai 600025, during 19 -25, May 2008.
- Short Term course on “Modelling and Analysis of Electrical Machines” Organized by Department of Electrical and Electronics Engineering, college of Engineering Guindy, Anna University, Chennai 600025, during 09 -11, August 2007.
- Two day Workshop on, “Virtual Instrumentation”, Organized by Department of Electrical and Electronics Engineering, college of Engineering Guindy, Anna University, Chennai 600025, during 24 -25, January 2007.
- Two day Faculty development Programme on “Networks and Systems”, Organized by IEEE Madras Section at IIT Madras, during 28-29, April 2007.
- Two day Workshop on, “Microcontroller Based System Design”, Organized by Department of Electrical and Electronics Engineering, college of Engineering Guindy, Anna University, Chennai 600025, during 1-2, December 2006

Workshop / Conferences / FDP Organized:-

Faculty Development Program

1. Coordinator, 5 days online Faculty Development Programme on “Innovation in Electric Vehicles, Energy Storage and Smart Grid Interaction ” from 13th December' 21 to 17th December 21, in Sri Sai Ram Institute of Technology, Chennai 600 044.
2. Coordinator, 5 days online Faculty Development Programme on “Renewable Energy Technologies, Integration to the Power Grid and e-Vehicle ” from 28th March' 20 to 1st April' 20, in Sri Sai Ram Institute of Technology, Chennai 600 044.

Conference (National)

1. Organizing Secretary, 4th National Conference on "Innovative Solutions in Electrical Engineering Science (NCISEES'22)", in Sri Sai Ram Institute of Technology, Chennai 600 044, on 30th March 2022.
2. Organizing Secretary, 3rd National Conference on "Innovative Solutions in Electrical Engineering Science (NCISEES'21)", in Sri Sai Ram Institute of Technology, Chennai 600 044, on 21st April 2021.
3. Organizing Secretary, 2nd National Conference on "Innovative Solutions in Electrical Engineering Science (NCISEES'19)", in Sri Sai Ram Institute of Technology, Chennai 600 044, on 22nd March'19.
4. Coordinator, National level Conference on "Smart Engineering Technologies ", in G K M College of Engineering & Technology, Chennai 600 063, on 17-04-15 & 18-04-15

Seminar/Guest Lecture

1. Organized Guest Lecture on "Smart Grid Control and Operation with Electric Vehicle", in Sri Sai Ram Institute of Technology, Chennai 600 044, on 29th October 21.
2. Organized one day Guest Lecture on “Recent Advancements in Smart Grid Technologies” on 07.03.2019 in Sri Sairam Institute of Technology, Tambaram.
3. Organized one day National workshop on SCADA in association with Cartel Automation Systems, Tambaram in Bharath University, Tambaram.

4. Organized Seminar on SOLAR ENERGY IN INDIA in Association with TEDA in Bharath University, Tambaram

Special Lectures Delivered

- A lecture on the topic, “Permanent Magnet DC Motor” in the Anna University, Chennai sponsored FDP, “Electrical Machines-I” held at GKM College of Engineering & Technology, Chennai - 600063.