

# PROFILE

## N.STALIN

No: 2,1<sup>st</sup> Block, 20<sup>th</sup> Street,

NIT Quarters,

National Institute of Technology, Trichy.

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## EDUCATION

**Doctor of Philosophy (Ph.D.)** in Department of Chemical Engineering (CEESAT), NIT, Trichy

Thesis Title: '**Studies on Performance Analysis of Self Circulating Biogas Plant**'

National Institute of Technology, Trichy. (Completed on 12<sup>th</sup> March 2009) Advisor Prof. H.J.Prabhu

**Master of Technology (M.Tech.)** in Energy Engineering, REC (NIT), Trichy.

(2001-2003). I class with Distinction, 87.3% (8.73 CGPA)

**Bachelor of Technology (B.Tech.)** in Chemical Engineering, Bharathidasan University, Trichy.

(1995-1999). I class, 74.03%

## AWARDS AND HONOURS

- Received and Awarded Certificate of Appreciation for producing 100% results in Process Equipment Design I , Design II and NGE, Process Economics, ECM, PUP subjects in the year 2020-2021.
- Received and Awarded Certificate of Appreciation for producing 100% results in CFD & PUP subjects in the year 2018-2019.
- Received FIRST PRIZE IN BEST PRESENTATION AND PARTICIPATION in the AICTE FDP Conducted by PSG College of Technology, Dec 2017, Coimbatore.
- Received **BEST PAPER** Award in the international conference conducted by Pondicherry Engineering Engineering college (Jan 2007), Pondicherry.
- Received Best Teacher Award 2008.
- Received Two times Cash award Rs.5000 for produced 100% result in the semester exam conducted by the DOTE 2007-2008.

## TEACHING EXPERIENCES

- As an Assistant Professor in Anna University Tiruchirappalli from 2<sup>nd</sup> Sep 2009 to Till date  
Subjects Teaching for PG : Advanced Heat Transfer, Optimum Utilization of Heat and Power, Power plant Technology, Nuclear Hydel and other power plants, Renewable Energy System, Cogeneration and waste heat recovery, Fans Blowers and Compressors, Design of refrigeration systems, for M.E.(Thermal)/M.Tech (Energy).  
Heat Transfer, Fluid Mechanics for B.E (PT) students.  
UG: Equipment Design and Drawing II, Design of pressure vessels and piping, Combustion and Furnace Design, Natural Gas Engineering, Petroleum Unit Processes, Process Economics, Energy Conservation and Management  
Lab: Energy Audit Equipment Lab, ASPEN & HYSIS, Pro simulation Lab, Petroleum Product Testing, Process Equipment Design and Drawing II

## RESEARCH EXPERIENCES

Research Associate, **Center for Energy & Environmental Science And Technology (CEESAT), National Institute of Technology, Trichy** from Jan 2003 to May 2006.

## MEMBERSHIP

- Life member in Indian society for Technical Education from 2016
- Life member in Indian Indian Science Congress from 2008
- Member in society of Petroleum Engineers SPE
- Life member in Institution of Engineers India (IEI) from 2010

## PUBLICATIONS

### PAPERS PUBLISHED

### INTERNATIONAL JOURNAL PUBLICATIONS

1. Vivekanadan.R,Dr.Stalin N,” Optimization Of Design Parameters In Shell And Tube Heat Exchanger Using Aspen HYSYS” International journal of advanced research in science, communication and technology (IJARSCT),IF = 7.30 , DOI: 10.48175/IJARSCT-10982 Available online Volume 3, Issue 16, May 2023.
2. Mingming Zhang, Moslem Paidar, **Stalin Narayanasamy**, Azlan MohdZain “ Impact of multiple FSP passes on structure, mechanical, tribological and corrosion behavior of AAA6061/316 stainless-steel reinforced Al matrix composites” International journal of Surface and Coatings, Elsevier, SCI, IF = 4.865, Available online 18 August 2022, 128801. <https://doi.org/10.1016/j.surfcoat.2022.128801>
3. Sundeep.Siddulaa , **N. Stalin** , C R Mahesha “ Triangular and Single Slope Solar Stills: Performance and Yield Studies with Different Water Mass” International journal of Energy Reports,(2022),SCI,IF = 5.13. © 2022 The Authors. Published by Elsevier Ltd.
4. Mohamad Reda A. Refaai, Stalin Narayanasamy, V. Chittaranjan Das, D. V. S. S. V. Prasad, N. Nalini, Subash Thanappan, "Mechanical Properties of Ramie/Hemp Hybrid Composites Influenced by Stacking Arrangement and NaOH Treatment", *Advances in Polymer Technology*, vol. 2022, Article ID 8737669, 9 pages, 2022. <https://doi.org/10.1155/2022/8737669>
5. Lei Zhang, **N. Stalin**, Ngo Tran, Sadok Mehrez, “Development of high-efficient double-layer microwave absorbers based on 3D cabbage-like CoFe<sub>2</sub>O<sub>4</sub> and cauliflower-like polypyrrole” International journal of ceramics, Volume 48, Issue 11, 1 June 2022, Pages 16374-16385. SCI, IF = 4.527. <https://doi.org/10.1016/j.ceramint.2022.02.188>
6. **Stalin, N.**, Shobhanadevi, N. Studies on thermal, structural, and compositional properties of agro-waste jute fiber composite reinforced with cardanol resin. *Biomass Conv. Bioref.* (2021). <https://doi.org/10.1007/s13399-021-01958-0> SCIE, IF = 4.987. <https://rdcu.be/cUirJ>.
7. Chitrakala, G, **Stalin. N** & Mohan, V, “Normally Bypassed Cascaded Sources Multilevel Inverter with RGA Optimization for Reduced Output Distortion and Formulaic Passive Filter Design”, *Journal of Circuits, Systems, and Computers (JCSC)*, vol. 29, no. 2, 2020. Accepted. IF = 2.333 (SCIE and Scopus Indexed) <https://doi.org/10.1142/S021812662050019X>
8. R. Murali, N. Stalin & P. Ravikumar (2019) Performance studies and emission analysis of azolla and corn husk biogas powered dual fuel mode compression ignition engine, *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, 41:22, 2808-2820, DOI: [10.1080/15567036.2019.1576076](https://doi.org/10.1080/15567036.2019.1576076) , SCI, Scopus Indexed, IF = 2.902.
9. Chitrakala, G, **Stalin, N** & Mohan, V, “A Segmented Ladder Structured Multilevel Inverter for Switch Count Remission and Dual-Mode Savvy”, *Journal of Circuits, Systems, and Computers (JCSC)*, vol.

27, no. 14, pp. 1850223 (1-14), Dec. 2018. (SCIE and Scopus Indexed), IF = 2.333.

<https://doi.org/10.1142/S0218126618502237>

10. P.Sudharson, **N.Stalin** 2018 "Design And Performance Evaluation Of Shell And Tube Heat Exchanger In Automotive Engine Using O<sub>3</sub> Filter, Journal of Web Engineering, Vol. 17, No.6 (2018) 2568-2578 July 2018 **SCIE, Scopus Indexed, IF = 1.59**
11. S. Jayanthi, **N. Stalin**, and S. Sutha 2018, "Internet Of Things (IoT) Based Generous Transformational Optimization Algorithm (GTOA) For Hybrid Renewable Energy System Synchronization And Status Monitoring", International Journal of Wireless Personal Communications, <https://doi.org/10.1007/s11277-018-5279-3>, 13 Feb 2018 **SCIE, Scopus Indexed, IF = 1.671**
12. AL. Mayilvahanan, **N. Stalin**, and S. Sutha 2017 "Improving Solar Power Generation And Defects Detection Using A Smart IoT System For Sophisticated Distribution Control (SDC) And Independent Component Analysis (ICA) Techniques", International Journal of Wireless Personal Communications J. Comput. Theor. Nanosci. 2017, Vol. 14, No. 11 5215–5225, 2017. doi:10.1166/jctn.2017.6871. **SCIE, Scopus Indexed, IF = 1.671**
13. S. Jayanthi , **N. Stalin**, and S. Sutha 2017, "Augmented Blossom Fertilization Algorithm Based Optimization for Isolated Power Systems" International Journal of Computational and Theoretical Nanoscience Vol. 14, 5963–5971, 2017. **SCIE, Scopus Indexed, IF = 1.42**
14. AL. Mayilvahanan, **N. Stalin**, and S. Sutha, 2017, "Performance Enhancement of Photovoltaic Systems Using Dynamic Rule Soft Switching Controller Based Maximum Power Point Tracker" International Journal of Computational and Theoretical Nanoscience Vol. 14, 5215–5225, 2017. **SCIE, Scopus Indexed, IF = 1.42.**
15. G. Chitrakala, **N. Stalin** and V. Mohan, 2017, "A Novel Programmed Low Frequency PWM Method for Performance Enhancement of Single-Phase to Single-Phase Cycloconverter" CIIT International Journal Of Digital Image Processing Volume 9, No 2, February 2017 pp. 39-46. **IF 0.652.**
16. V. Mohan, G. Chitrakala, **N. Stalin**, 2017, " A Low Frequency PWM Based Multilevel DC-Link Inverter with Cascaded Sources " International Journal of Asian Journal of Research in Social Sciences and Humanities Vol. 7, No. 1, January 2017, pp. 686-697. **SJIF= 5.161.**
17. N. Shobanadevi, V. Krishnamurthy and **N. Stalin**, 2016 "Voltage Stress Analysis of cascaded Quasi Impedance Source Network Based DC/DC Converter Using SB Control" I J C T A, 9(25), 2016, pp. 633-646. **Scopus Indexed, IF = 8.40.**
18. Shobanadevi Nagarajan, Krishnamurthy Venkatachalapathy, **Stalin Narayanasamy** 2016, " A Simple Boost Shoot through Control for Single phase Quasi ZSI DC-DC Converters Based on Voltage Doubler Rectifier" International Journal of Przegląd Elektrotechniczny, ISSN 0033-2097, R. 91 Nr/2015. **Scopus Indexed, IF =0.38.**
19. Saravanan KK, **Stalin N**, Sree Renga Raja T 2016, "Design and Investigation of Grid Connected Current Source Inverter for Photovoltaic System", International Journal of Advanced Engineering Technology (Anna University recommended Journal: Updated List of Journals 2016), ISSN 0976-3945 vol. 7 no.2 pp.280-284. **Scopus Indexed, IF = 3.43.**
20. N. Shobanadevi, V. Krishnamurthy and **N. Stalin**, 2016 " PISB Control of Single Phase Cascaded Quasi ZSI DC-DC Converter" Middle-East Journal of Scientific Research 24(5): 1700-1707, 2016 ISSN 1990-9233. **Scopus indexed, IF=0.36**

21. Saravanan KK, **Stalin N**, Sree Renga Raja T 2016, "Design of Single-Phase Seven Level Grid-Connected Inverter Using Solar System ", Asian Journal of Research in Social Sciences and Humanities.(Anna University recommended Journal: Updated List of Journals 2016,Accepted for publication in November 2016 Issue). **Scopus Indexed, IF = 0.676.**
22. Saravanan KK, **Stalin N**, Sree Renga Raja T 2016,"Simulation of New Multi-Input Three Level DC-DC Converter", Transylvanian Review. (Anna University recommended Journal: Annexure-I, Accepted for publication). **Scopus Indexed, IF = 0.08.**
23. Saravanan KK, **Stalin N**, Sree Renga Raja T 2016," Performance Analysis on Photo Voltaic System Stability for Grid Connected Load", Brazilian Archives of Biology and Technology –BABT.(Anna University recommended Journal: Annexure-I, **Scopus Indexed, IF = 0.546.**
24. Gajendran T and **Stalin N**, "Purification and flux decline of protein solution using series model through modified cellulose acetate ultra-filtration membrane" Research Journal of Chemistry and Environment, Vol. 19 (6) June (2015) Res. J. Chem. Environ **Scopus Indexed, IF = 0.38.**
25. Mohan, V, **Stalin, N** & Jeevananthan,S, 'A double random pulse width modulation based on discrete carrier frequencies and random pulse position for induction motor drives', International Journal of Applied Engineering Research, vol. 10, no. 51, pp. 479-484, 2015. **Scopus Indexed, IF=1.8233.**
26. V.Mohan, **N.Stalin** and S.Jeevananthan, "A Tactical Chaos based PWM Technique for Distortion Restraint and Power Spectrum Shaping in Induction Motor Drives", Intl. Journal of Power Electronics and Drive System,Vol.5, No.3, pp: 383 - 392, Feb 2015. **Scopus Indexed, IF=1.08.**
27. Saravanan KK , **Stalin N** 2015," Design of three Phase Fifteen level Cascaded Multilevel Inverter using Embedded Controller", International Journal of Applied Engineering Research (Anna University recommended Journal: Annexure-II, Version 2014.2), ISSN 0973-4562 vol.10 no.72 pp.437-443. **Scopus Indexed, IF= 0.15.**
28. Saravanan KK, **Stalin N**, Sathiyaraj S 2015,"Analysis of Fault-Current Limiting Scheme for the Micro grid", International Journal of Applied Engineering Research, ISSN 0973-4562 Vol.10 No.72 (2015), pp.269-274. **Scopus Indexed, IF= 0.15.**
29. Saravanan KK, **Stalin N**, Annandharaj R 2015,"Design and Analysis of Bidirectional Isolated LLC Resonant Converter", International Journal of Applied Engineering Research, ISSN 0973-4562 vol. 10 no.51, pp.330-335. **Scopus Indexed, IF= 0.15.**
30. Elankurisil SA, Saravanan KK, **Stalin N** ,Mahendra Peruman P 2015," Investigation on Full Bridge and Coupled Inductor ZVS DC-DC Converter Fed PMDC Motor", International Journal of Applied Engineering Research ISSN 0973-4562 volume 10, number 9, pp. 24407-24422. **Scopus Indexed, IF= 0.15.**
31. Saravanan KK, **Stalin N**, Jayasuthahar ST 2013,"Review of Renewable Energy Resources in Clean Green Environment", International Journal of Emerging Trends in Electrical and Electronics (IJETEE) vol. 1, issue. 1, pp.54-58. **Scopus Indexed, IF= 3.84.**
32. V.Mohan, **N.Stalin**, S.Jeevananthan, "A Tactical Chaos based PWM Technique for Distortion Restraint and Power Spectrum Shaping in Induction Motor Drives' International Journal of Power Electronics and Drive System (IJPEDS) Vol. 5, No. 3, February 2015, pp. 383~392. **Scopus Indexed, IF= 1.062**
33. Gajendran T and **Stalin N** "Performance studies of polyether sulfone ultra filtration membrane for fruit juice concentration and purification" Research Journal of Biotechnology Vol. 9(12) December (2014) Res. J. Biotech, pp 7-13. **Scopus Indexed, IF= 0.29**

34. M.Kodeeswararamanathan and **N.Stalin** "Mathematical modeling approach for solutions in power consumption issues of Tamil Nadu" Journal of Chemical and Pharmaceutical Sciences JCHPS Special Issue 4: December 2014, pp44-47. **Scopus Indexed, IF=1.421**
35. M.Kodeeswararamanathan and **N.Stalin** "To provide suitable technological menu to avert outages of electric power ridden sectors for improving the economic developments of Tamil Nadu" Journal of Chemical and Pharmaceutical Sciences JCHPS Special Issue 4: December 2014 pp62-64. . **Scopus Indexed, IF=1.421**
36. **Dr.N.Stalin**. Energy Management and Integration of PEM Fuel Cell with UAV for Pharmaceutical Application, International journal Nanobio Pharmaceutical Technology, Elsevier 2014 volume 1, page 52-61. **Scopus Indexed, Elsevier Book chapter.**
37. **Dr.N.Stalin**. Energy Conservation Opportunities in Paper Plant using Combined Heat and Power for Pharmaceutical Application, International journal Nanobio Pharmaceutical Technology, Elsevier 2014 volume 1, page 61-73. **Elsevier Book chapter.**
38. M.Kodeeswararamanathan, **Dr.N.Stalin**. "Grid connected load mismatching situation between power supply and power demand review of the problematic effects and analysis for unique needs in particular reference to Tamilnadu". Applied Mechanics and Materials Vols. 592-594 (2014) pp 2365-2373 © (2014) Trans Tech Publications, Switzerland. **Scopus Indexed, IF= 0.26.**
39. N.Shobanadevi, Dr.V.Krishnamurthi, **Dr.N. Stalin** "Quasi Impedance Source Single Phase Inverter Based FB DC-DC Converter with Zero Voltage Switching" Australian Journal of Basic and Applied Sciences, June 2013, **Scopus Indexed, IF= 0.786**
40. Arun kumar, N. Lakshmi Praba, **Dr. N. Stalin** "A Novel Technique to Detect Macular Edema Based on Motion Patterns" International Journal of Advanced Research in Computer Science Engineering and Information Technology Volume-1 : Issue-1 Jan 2013, **IF= 0.426**
41. Arun Nadh, N. Lakshmi Praba, **Dr. N. Stalin** "Communication system with sensors for monitoring of Induction motors in Domestic and Industrial Environments. International Journal of Advanced Research in Computer Networking, Wireless and Mobile Communications Volume-1: Issue-3 July 2013.pp.1-7.
42. R.Vnaja, N.Lakshmi Prabha, **Dr. N. Stalin**,(2013).Efficient Architecture for SPIHT Algorithm in Image Compression, International Journal of Advanced Research in VLSI Volume-1:Issue-1 JAN 2013,pp.1-7.
43. S. Anju, N. Lakshmi Prabha, **Dr. N. Stalin**,(2013).Smart Building Automation through Wireless Sensor Networks Using Zigbee, International Journal of Engineering Research & Technology (IJERT), Vol. 2 Issue 7, July – 2013.pp.196-200.
44. **Dr.N.Stalin**, Saravanan.K. "Review of Renewable Energy Resources in Clean Green Environment" International Journal of Emerging Trends in Electrical and Electronics (IJETEE), Vol. 1, Issue. 1, March-2013.pp.54-58.
45. **Stalin, N.**; Prabhu. HJ. Effect of Microbial growth on Self circulating biogas plant using carrier materials International ARPN Journal of Engineering and Applied Sciences, Volume 2, September 2007,pp.8-11. **Scopus Indexed, IF= 0.46.**
46. **Stalin, N.**; Prabhu. HJ. Performance test of IC engine using Karanja bio-diesel blending with diesel, International ARPN Journal of Engineering and Applied Sciences, Volume 2, September 2007,pp.32-34. **Scopus Indexed, IF= 0.46.**



47. **Stalin, N.**; Prabhu.H.J. "Performance Evaluation of a Partial Mixing Anaerobic Digester" ARPN International Journal of Engineering and Applied Sciences Volume 2, June, 2007, pp.1-6. **Scopus Indexed, IF= 0.46.**
48. **Stalin, N.**; Sridevi.P (2007). Design of an Evaluation Model for mid-size car segment using a DSS Framework, International Journal of Applied Management and Technology, volume, issue 2, May 2007, pp.32-37. **IF= 0.16.**
49. **Stalin, N.**; Prabhu. HJ. "Performance Evaluations of Self Circulating Biogas Plant, Applied Management and Technology, Volume 5, Issue 1, May 2007, pp.64-75. **IF= 0.16.**
50. **Stalin, N.**; Prabhu. H.J. "Performance Evaluations of partial mixing Digester, International journal of energy research, Volume 5, Issue 1, May 2007, pp.64-75. **Scopus Indexed, IF= 2.598.**

(ii) **National Journals:**

51. N. Shobanadevi<sup>1</sup>, V. Krishnamurthy and **N. Stalin, 2016**, "PISB Control of Single Phase Quasi Impedance Source DC-DC Converter" Indian Journal of Science and Technology, Vol 8(13), 55446, July 2015. ISSN (Online) : 0974-5645. **Scopus, IF= 0.97.**
52. **Stalin, N.** Prabhu. HJ. Design of community bio gas plant for biogas generation Journal of Research & Development, Vol 4, 2006, pp.29 – 33.

**INTERNATIONAL CONFERENCE**

1. Dr. **N. Stalin**, March 12-13, 2021G." Design and Performance Evaluation of Shell and Tube Heat Exchanger in Automotive Engine Waste Heat Recovery System" International Conference on Recent Technologies and Advanced Materials for Green Energy and Sustainable Environment (RTAMGESE-Online), NIT, Trichy. March 12-13, 2021G.
2. Ms. Jerlin Deno J S, Dr. **N. Stalin**, March 12-13, 2021G." Performance evaluation of bio dispersants in crude oil adsorption" International Conference on Recent Technologies and Advanced Materials for Green Energy and Sustainable Environment (RTAMGESE-Online), NIT, Trichy. March 12-13, 2021G.
3. Ms. Jerlin Deno J S, Dr. **N. Stalin**,CHEMCON 2020 Presented a paper on "Coir pith as Adsorbent" 28/12/2020 the Bhubaneswar Regional Centre of IChE and CSIR – Institute of Minerals and Materials Technology, Bhubaneswar in association with Institute of Chemical Technology.
4. Dr. **N. Stalin**, 2019." Design and Performance Evaluation Automotive Engine Attached with CHP System and O<sub>3</sub> Filter in Engine Exhaust" XIII International Conference on Applied Research in Engineering and Management Sciences, 17<sup>th</sup> August 2019, Bencoolen, Singapore.
5. Dr.N.Stalin " A Novel Programmed Low frequency PWM Method for Performance Enhancement of Single Phase to Single Phase Cycloconverter" 24/02/2017, TEQIP II sponsored International Conference ICCPEAT 2017 conducted by PEC, Pondicherry.
6. KK.Sravanan, **DR.N.Stalin**. "Modelling and Analysis on Photo Voltaic System Stability for Grid Connected Load". 4th International Conference on Engineering Technology and Science, Namakkal, 2017.
7. KK.Sravanan, **DR.N.Stalin**. "Modelling and Simulation Analysis of Power Cables For Matrix Converter Fed Induction Motor Drive (MCIMD)". Modelling and Simulation Analysis of Power Cables For Matrix Converter Fed Induction Motor Drive (MCIMD), 2016.
8. KK.Sravanan, **DR.N.Stalin**. "Simulation of New Multi-Input Three Level DC-DC Converter". International Conference on Innovative Research in Electrical Sciences Nagapattinam, 2016.

9. KK.Sravanan, **DR.N.Stalin**. "Design & Analysis of Bidirectional isolated LLC resonant Converter". International Conference on Innovative Research in Electronics Engineering Sciences 2015 Nagapattinam, 2015.
10. **DR.N.Stalin**. "Energy Conservation Using CHP in Power Systems". International Conference on Green Technology for Environment Pollution Prevention and Control, NIT, Trichy 2014.
11. T.Gajendran, **DR.N.Stalin**. "Studies of flux decline for cellulose acetate/Low cyclic dimer poly sulfone polymer ultra filtration membrane using resistance in series model". International Conference on Green Technology for Environment Pollution Prevention and Control, NIT, Trichy 2014.
12. **DR.N.Stalin**. "Energy Management and Integration of PEM Fuel Cell with UAV for Pharmaceutical Application". Innovations and future research Dimensions on Nanobio Pharmaceutical Technology 7-8 October 2014, Trichy.
13. **DR.N.Stalin**. "Energy Conservation Opportunities in Paper Plant using Combined Heat and Power for Pharmaceutical Application". Innovations and future research Dimensions on Nano bio Pharmaceutical Technology 7-8 October 2014.
14. M.Kodeeswararamanathan, **N.stalin**. "Grid connected load mismatching situation between power supply and power demand review of the problematic effects and analysis for unique needs in particular reference to Tamilnadu". International Conferences NIT Trichy ICGTEPC 2014 volume 1 page 312.
15. **N.Stalin**. "Performance evaluations of thermal power generation". International Conferences NIT Trichy ICGTEPC 2014 volume 1 page 313.
16. Reshma Mohan, N. Lakshmi Praba, **Dr. N. Stalin** "Reduced Power Flip Flop Design For Clock Distribution Networks" March 2013.
17. Sudha, N. Lakshmi Praba, **Dr. N. Stalin** "A Build-In-Self-Test Approach for Error Detection And Data Recovery Architecture In H.264/AVC" April 2013.
18. S.Anju, N. Lakshmi Praba, **Dr. N. Stalin** "Building Lighting Automation Trough Wireless Sensor Network using zigbee" April 2013.
19. Arun Nadh, N. Lakshmi Praba, **Dr. N. Stalin** "Zigbee based wireless sensor Network for the monitoring of Induction Motor Parameters" Feb 2013.
20. Reshma Mohan A S, N. Lakshmi Praba, **Dr. N. Stalin** "Reduced Power Flip Flop Design For Clock Distribution Networks" March 2013.
21. Reshma Mohan A S, N. Lakshmi Praba, **Dr. N. Stalin** "Reduced Power Flip Flop Design For LC Resonant Clock Distribution Networks" Feb 2013.
22. S. Arun kumar, N. Lakshmi Praba, **Dr. N. Stalin** "Automatic System for Macular Edema Detection" Feb 2013.
23. Arun Nadh, N. Lakshmi Praba, **Dr. N. Stalin** "Zigbee based wireless sensor Network for the monitoring of Induction Motor Parameters" Feb 2013.
24. S.Anju, N. Lakshmi Praba, **Dr. N. Stalin** "Building Lighting Automation Trough Wireless Sensor Network using zigbee" March 2013.
25. R.Vanaja, N. Lakshmi Praba, **Dr. N. Stalin** "FPGA Implementation of pipe lined Architecture for SPIHT Algorithm" March 2013.
26. K.K.Saravanan, Ms.S.Rajalakshmi, Dr. N.Stalin, Dr.S.Titus, " NEW ZERO CURRENT TRANSITION PWM DC/DC CONVERTER WITHOUT CURRENT STRESS", IEEE -

International Conference On Advances In Engineering, Science And Management (ICAESM -2012) March 30-31, 2012 Pp.566-570.

27. K.K. Saravanan, Dr.N.Stalin, Ms.S.Rajalakshmi and G. Giftson Samuel," Recent trends in renewable energy resources-HYDROGEN FUEL CELL,"IEEE - International Conference On Advances In Engineering, Science And Management (ICAESM -2012) March 30- 31, 2012, pp.586-589.
28. K.K.Saravanan, Dr.N.Stalin, S.Rajalakshmi, G.Giftson Samuel, POWER ELECTRONICS GENESIS, TRENDS AND IMPROVEMENT,"IEEE - International Conference On Advances In Engineering, Science And Management (ICAESM -2012) March 30, 31, 2012, pp.595-599.
29. Saravanan, K.K; **Stalin.N, Sreerengaraja.T.**; Power Quality and EMC in smart Grid" IEEE international conference on Advances in Engineering and Technology(ICAET – 2011),May 27-28,2011.
30. Saravanan, K.K; **Stalin.N, Sreerengaraja.T.**; Moon a future Renewable Energy Sources" IEEE international conference on Advances in Engineering and Technology(ICAET – 2011),May 27-28,2011.
31. K.K. Saravanan, Dr.T.SreeRanga Raja, Dr.N. Stalin and R. Anandaraj , "Moon - A Future Renewable Energy Source", ISBN 978-1-4507-6433-9 © 2011 Published by the Coimbatore Institute of Information Technology, May 27-28, 2011
32. K.K. Saravanan, Dr.N. Stalin, Dr.T.Sree Ranga Raja and G. Giftson Samuel," Power Quality and EMC in Smart Grid", ISBN 978-1-4507-6433-9 © 2011 Published by the Coimbatore Institute of Information Technology, May 27-28, 2011
33. **Stalin, N.**; Prabhu. HJ. Emission and Economics of Biogas, International conference organized by Kongu Engineering College, Perundurai, Erode.
34. **Stalin, N.**; Subramanian .P. Combined light and Heat AICTE-ISTE sponsored short- term training programme on "Emerging Energy Technologies" conducted by CEESAT, NIT, and Trichy
35. **Stalin,N.**; Combined Heat and Power in NITT hostel" in AICTE- ISTE sponsored short term training Programme on "Emerging trends in Energy Management and Non Conventional Energy" conducted by CEESAT, NIT, and Trichy.
36. **Stalin, N.**; Biogas generation from waste resources" in Rajiv Gandhi Renewable energy day celebration conducted by DRDA, Thanjavur.
37. **Stalin, N.**; "Co- Generation & Energy management in industry" in AICTE-ISTE sponsored Induction training Programme on "Hybrid Energy Systems" conducted at PMCTW, Vallam, Thanjavur.
38. **Stalin, N.**; Prabhu. HJ. "Studies on Performance Evaluation of Self Circulating Biogas Plant, International conference conducted by Pondicherry Engineering College, 2007.
39. **Stalin, N.**; Prabhu. HJ. Energy conservation and management", International conference Organized by AIM, Thanjavur.2007
40. **Stalin, N.**; Prabhu. HJ. COPYRIGHTS, International conference Organized by AIM, Thanjavur.2007
41. **Stalin, N.**; Prabhu. HJ. Bio-gas yield Analysis on Solid Wastes from Potato Processing by Anaerobic Treatment, International Conference organized by SIT, Madurai.

#### **NATIONAL CONFERENCE:**

1. Stalin, N.; Prabhu. HJ. "Sugarcane Leaf – Bagasse Gassifiers for Industrial heating Applications", National Conference conducted by PCET, Coimbatore.



2. Stalin, N.; Prabhu. HJ. Energy conservation using combined Heat and Power a CHP potential in Indian Industries”, National Conference organized by SREC, Coimbatore.
3. Stalin, N.; Prabhu. HJ. Operating Parameters on Biogas production from dairy farm waste water”, National Conference Conducted by SRM University, Chennai.
4. Stalin, N.; Prabhu. HJ. “A system approach to biogas Technology”, National conference Conducted by SIT, Madurai.
5. Stalin, N.; Prabhu. HJ. “Production of L-Asparaginase from corn flour MTCC 1752 – Statistical analysis of parameter”, National Conference Conducted by KEC, Perundurai.
6. Arun Nadh, N. Lakshmi Praba, Dr. N. Stalin “Embedded System with Wireless Sensor Network for the speed and torque Monitoring in Induction Motor” March 2013.
7. Arun kumar, N. Lakshmi Praba, Dr. N. Stalin “Motion Pattern Based Detection of Diabetic Macular Edema” March 2013.
8. Arun kumar, N. Lakshmi Praba, Dr. N. Stalin “A Novel Technique to Detect Macular Edema Based on Motion Patterns” March 2013.
9. Reshma Mohan A S, N. Lakshmi Praba, **Dr. N. Stalin** “Reduced Power Flip Flop Design For Clock Distribution Networks” March 2013.
10. S.Anju, N. Lakshmi Praba, Dr. N. Stalin “Building Lighting Automation Trough Wireless Sensor Network using zigbee” Feb 2013.
11. R.Vanaja, N. Lakshmi Praba, Dr. N. Stalin “FPGA Implementation of pipe lined Architecture for SPIHT Algorithm” Feb 2013.
12. Sudha, N. Lakshmi Praba, Dr. N. Stalin “A Build-In-Self-Test Approach for Error Detection And Data Recovery Architecture In H.264/AVC” March 2013.
13. Sudha, N. Lakshmi Praba, Dr. N. Stalin “A Build-In-Self-Test Approach for Error Detection And Data Recovery Architecture In H.264/AVC” April 2013.
14. Arun Nadh, N. Lakshmi Praba, Dr. N. Stalin “Automatic speed and torque monitoring in Induction motors Using ZigBee and SMS” March 2013.
15. Muthu Kumar, K.;Stalin,N.; Pv Cell based Parallel Connected Diode-Clamped Multi-Level Spwm inverter for industrial Load, MNRE Sponsored National Conference, OEC,Trichy.16-17 July 2010.
16. Muthu Kumar, K.; Stalin, N.; Pv Cell based PWM inverter for Industrial Drives.MNRE Sponsored National Conference, OEC, Trichy.16-17 July 2010.

#### PROJECTS;

| SI.No | TOPIC   | PROJECT ID          | SPONSORED AUTHORITY            | AMOUNT          |
|-------|---|---------------------|--------------------------------|-----------------|
| 1     | <b>Integrated capture and Conversion of CO<sub>2</sub> to Methane</b> | <b>IDEATN007638</b> | <b>MSME<br/>Govt. of India</b> | <b>15 lakhs</b> |

| SI.No | Topic  | Project ID | Sponsoring Authority | Amount and year |
|-------|--|------------|----------------------|-----------------|
| 1     | Reclamation of used engine oil by Lab Scale Method | CHE – 197  | TNSCST               | 7500 & SPS 2022 |
| 2     | Pilot model study for combined                     | EME-1054   | TNSCST               | 7500 & SPS 2022 |

|  |   |  |  |  |
|--|---|--|--|--|
|  | heat and power application in sugar plant |  |  |  |
|--|---|--|--|--|

**PATENT DETAILS: Total Numbers: 3**

**1. Australian Patent – Granted**

|                                   |  |
|-----------------------------------|--|
| Invention Title                   | Inventive optimization tactics to diminish harmonic distortion in component count waned normally bypassed cascaded sources multilevel inverter |
| Patent Application type           | Innovation   |
| Patent Number                     | 2021101990   |
| Application Filing Date           | 2021-04-16   |
| <b>Inventors &amp; Applicants</b> |  |
| G.Chitrakala                      | Professor, Department of Electrical and Electronics Engineering, E.G.S. Pillay Engineering College, Nagapattinam, Tamilnadu-611002, India.     |
| V.Mohan                           | Professor, Department of Electrical and Electronics Engineering, E.G.S. Pillay Engineering College, Nagapattinam, Tamilnadu-611002, India.     |
| N.Stalin                          | Assistant Professor, Department of Petrochemical Technology, UCE-BIT Campus, Anna University, Tiruchirappalli, Tamilnadu-620024, India.        |
| S.Jeevananthan                    | Professor, Department of Electrical and Electronics Engineering, Pondicherry Engineering College, Puducherry, India.                           |

**2. Indian Patent – Published**

|                                   |   |
|-----------------------------------|---|
| Invention Title                   | Design of component count reduced dual-mode segmented ladder-structured multilevel inverter   |
| Publication Number                | 42/2020   |
| Publication Date                  | 16/10/2020  |
| Publication Type                  | INA   |
| Patent Number                     | 202041043814  |
| Application Filing Date           | 08/10/2020  |
| <b>Inventors &amp; Applicants</b> |   |
| G.Chitrakala                      | Associate Professor, Department of Electrical and Electronics Engineering, E.G.S. Pillay Engineering College, Nagapattinam, Tamilnadu-611002, India |
| V.Mohan                           | Professor, Department of Electrical and Electronics Engineering, E.G.S. Pillay Engineering College, Nagapattinam, Tamilnadu-611002, India.          |
| N.Stalin                          | Assistant Professor, Department of Petrochemical Technology, UCE-BIT  |

### 3.Australian patent - Graded

| SL.NO | PATENT TYPE & Patent number    | Title of Invention   | Name of patentees                                     | Year of published |
|-------|--------------------------------|--|---|-------------------|
| 3     | Australian Patent & 2021104665 | A Bat source string succored Serrated H - Bridge Symmetrical MLI for solar PV Grid Integration | Chitrakala.G<br>Mohan.V<br>Stalin.N<br>Jeevanantham.S | 28/07/ 2021       |

### PhD Completed Under My Guidance:

| Sl.No | Name of the Scholar     | Registration Number | Topics  | Year of Completion |
|-------|-------------------------|---------------------|---|--------------------|
| 1     | G.Chitrakala            | 16243597182         | Distortion reduction, components count waning and conduction path curbing options in multilevel inversion.                                    | Dec 2020           |
| 2     | R.Murali                | 1214279744          | Preparation of Bio composite from cashew nut shell and operational emission characteristics of Azolla-Corn husk biogas powered diesel engine. | Oct 2020           |
| 3     | N. Lakshmi Prabha       | 20113012007         | Investigations and performance enhancement of transformer less photo-voltaic inverter   | May 2019           |
| 4     | S.Jayanthi              | 2010S3012003        | Novel optimization techniques and design of high performance isolated power systems for smart grid applications.                              | Dec 2018           |
| 5     | A.L.Mayilvahanan        | 2010S3012004        | Development of novel maximum power point tracking techniques for solar power applications   | Sep 2018           |
| 6     | K.K. Saravanan          | 20113012003         | Design and Investigation of grid connected converter for solar photovoltaic power generation.   | Feb 2018           |
| 7     | N.Sobanadevi            | 20093062006         | Cascaded quasi impedance source network based DC-DC converter and voltage stress analysis using SB control                                    | Feb 2018           |
| 8     | M.Kodeeswara Ramanathan | 20096032003         | Contingency planning to continuous supply in constrained power resources in particular reference to Tamilnadu.                                | Dec 2015           |
| 9     | T.Gajendran             | 2010S6012003        | Performance Studies of polymer membrane materials using modifiers for   | Nov 2015           |

|    |         |             |   |          |
|----|---------|-------------|---|----------|
|    |         |             | fruit juice concentration and protein purification. |          |
| 10 | V.Mohan | 20093012012 | Perform Enhancement of AC-DC-AC converter systems.  | Oct 2015 |

**PHD SCHOLARS DOING UNDER MY GUIDANCE:**

| Sl.No | Name of the Scholar | Registration Number | Guide/Co guide |
|-------|---------------------|---------------------|----------------|
| 1     | Mrs.R.Srilasri      | 18232591333         | Guide          |
| 2     | Mr.R.Vivekanandan   | 21145597141         | Guide          |

**Details of past Experience**

| Name and address of the Institution / Organization | Post held           | Period of service |            |
|--|---------------------|-------------------|------------|
|  |                     | From              | To         |
| ANNA UNIVERSITY- BIT,TIRUCHIRAPPALLI               | ASSISTANT PROFESSOR | 02-09-2009        | Till Date  |
| SONA COLLEGE OF TECHNOLOGY,SALEM                   | ASSISTANT PROFESSOR | 21-03-2009        | 31-08-2009 |
| KONGU ENGINEERING COLLEGE,ERODE                    | LECTURER            | 27-06-2007        | 20-03-2009 |
| PERIYAR MANIAMMAI COLLEGE OF TECHNOLOGY FOR WOMEN  | SENIOR LECTURER     | 01-06-2006        | 26-06-2007 |
| NIT ,TRICHY  | RESEARCH ASSOCIATE  | 02-01-2003        | 31-05-2006 |
| PSB POLY TECHNIC,CHENNAI                           | LECTURER            | 01-06-1999        | 21-06-2001 |

**BOOK AUTHORED**

| Sl.No | Title of the Book                              | Authors   | Publishers               | Year and Month of Publications |
|-------|--|---|--------------------------|--------------------------------|
| 1     | ASPEN HYSIS STEADY STATE TRAINING MANUAL       | Dr N Stalin & Dr M Rengasamy                      | Petrochemical Technology | July 2016                      |
| 2     | Energy and Environmental Engineering           | Dr N Stalin<br>Dr.M.Arulmozhi,<br>Dr.M Rengasamy, | Petrochemical Technology | ISBN:9788192112862<br>Nov 2014 |
| 3     | Energy and Environmental Engineering Text Book | Dr.P.Subramanian<br>Mr.N.Stalin                   | REC Trichy<br>CEESAT     | Jan 2006                       |

**Book Chapters Authored: 2 Nos**

| Sl.No | Book Title                        | Paper Title   | Authors of the Chapter | Book Chapter Authored | Publishers | Month and year of Publications |
|-------|-----------------------------------|---|------------------------|-----------------------|------------|--------------------------------|
| 1     | NANOBIO PHARMACEUTICAL TECHNOLOGY | Energy Conservation Opportunities in Paper Plant using Combined Heat and Power for Pharmaceutical Application | Dr .N. Stalin          | Dr. P. Selvamani      | ELSEVIER   | July 2014                      |
| 2     | NANOBIO PHARMACEUTICAL TECHNOLOGY | Energy Management and Integration of PEM Fuel Cell with UAV PA  | Dr. N. Stalin          | Dr. P. Selvamani      | ELSEVIER   | July 2014                      |

**M.Tech PROJECTS GUIDED**

| S.NO | REGISTER NO. | NAME            | NAME OF PROJECT TITLE  | YEAR   |
|------|--------------|-----------------|--|--------|
| 01   | 01109548006  | GOVINDARAJ B    | ENERGY MANAGEMENT AND INTEGRATION OF PEM FUEL CELL WITH UAV                                    | Apr-11 |
| 02   | 01109548002  | ANN RUFUS A     | ENERGY AUDIT OF ELECTRICAL UTILITIES IN INDIA CEMENTS LTD                                      | Apr-11 |
| 03   | 01110548020  | THANGAPANDIAN M | STUDY AND PERFORMANCE ANALYSIS OF FANS AND BLOWERS   | Oct-11 |
| 04   | 01110548011  | RAJKUMAR G      | ENERGY SUBSTITUTION USING RENEWABLE ENERGY SOURCES   | Oct-11 |
| 05   | 01110548012  | RAMARAJIV R     | STUDY AND PERFORMANCE ANALYSIS OF WATER HEAT RECOVERY SYSTEM USING RECUPERATOR AND REGENERATOR | Oct-11 |
| 06   | 01110548010  | RAJIV V         | STUDY OF EMERGING ENERGY TECHNOLOGY  | Oct-11 |
| 07   | 01110548010  | RAJIV V         | ENERGY AUDITING NATIONAL COOPERATIVE SUGAR MILLS LIMITED                                       | Jul-12 |
| 08   | 01110548011  | RAJKUMAR G      | ENERGY AUDITING IN PERFORMANCE CHEMICALS AND LUBRICANT PLANT                                   | Jul-12 |
| 09   | 01110548012  | RAMARAJIV R     | PERFORMANCE ANALYSIS OF THERMAL UTILITIES IN NCTPS   | Jul-12 |
| 10   | 810011527002 | ANANTHAKUMAR S  | EFFECT OF FEED HEATING SYSTEM ON POWER PLANT EFFICIENCY  | Dec-12 |

|    |               |                 |  |        |
|----|---------------|-----------------|--|--------|
| 11 | 810011527010  | GOWTHAM D       | STUDY AND DESIGN OF IKW SOLAR POWER PLANT  | Dec-12 |
| 12 | 810011527 017 | VIJAYABHASKAR J | STUDY AND DESIGN OF 2KW SOLAR AND WIND HYBRID POWER SYSTEM                                 | Dec-12 |
| 13 | 810011527015  | PAVENTHAN M     | STUDY ON REDUCTION IN AUXILLARY POWER CONSUMPTION BY USING VARIABLE FREQUENCY DRIVES (VFD) | Dec-12 |
| 14 | 810011527010  | GOWTHAM D       | ELECTRICAL ENERGY AUDIT IN ADIPARASAKTHI ALLOY STEELS (P) LTD                              | Jul-13 |
| 15 | 810011527 017 | VIJAYABHASKAR J | ELECTRICAL AND THERMAL AUDIT IN DOSHIBA JSW TURBINE AND GERATOR (P) LTD                    | Jul-13 |
| 16 | 810011527015  | PAVENTHAN M     | UTILISATION OF RENEWABLE ENERGY BY USING SOLAR PUMBING SYSTEM IN TPS-I EXPANSION           | Jul-13 |
| 17 | 810011527002  | ANANTHAKUMAR S  | ENERGY EXERGY ANALYSIS OF 210 MW BOILER IN THOODUKUDI POWER STATION                        | Jul-13 |

#### CONFERENCES/WORKSHOPS/SEMINAR/ SHORT TERM REFRESHER COURSE ATTENDED

| S.NO | NAME OF THE PROGRAMME   | TYPE OF PROGRAMME               | DATE                     | VENUE  |
|------|---|---------------------------------|--------------------------|--|
| 1.   | Two Weeks Professional Training On Chemical Process Engineering – ASPEN HYSYS at Institute Of ChemE Design And Development, Coimbatore.   | Industrial Training, Coimbatore | 03/07/2023 to 17/07/2023 | Institute Of ChemE Design And Development, Coimbatore. |
| 2.   | 4-Week Faculty Induction/Orientation Programme For “Faculty In University/College/Institute Of Higher Education” at Teaching Learning Centre, Ramanujan College, University of Delhi. | PMMMNMTT                        | 23/04/2023 to 22/05/2023 | Online   |
| 3.   | 1-Week Faculty Development Programme on “ ACADEMIC RESEARCH WRITING” at Teaching Learning Centre, Ramanujan College, University of Delhi.   | PMMMNMTT                        | 27/03/2023 to 02/04/2023 | Online   |
| 4.   | 2-Weeks Refresher Course On “Managing Online Classes And Cocreating MOOCS 24.0” at Teaching Learning Centre, Ramanujan College, University of Delhi.                                  | PMMMNMTT                        | 11/03/2023 to 25/03/2023 | Online   |
| 5.   | Curriculum Development Processes Conducted by Curriculum Development  | NITTTT, Chandigarh              | 25/04/2022 to 29/04/2022 | Online   |



|    |   |                                  |                          |   |
|----|---|----------------------------------|--------------------------|---|
|    | Centre Department from 25/04/2022 to 29/04/2022 (One Week) at NITTTR, Chandigarh  |                                  |                          |   |
| 6. | Participated in the Online Training Programme on “Heating, Ventilation and Air Conditioning” Conducted by this Institute from 21.03.2022 to 25.03.2022 (One Week) | NITTTR Chennai                   | 21.03.2022 to 25.03.2022 | Online  |
| 7. | Five day online FDP AICTE FDP on "Inculcating Universal Human Values in Technical Education"  | AICTE sponsored                  | 3/01/2022 to 07/01/2022  | AICTE online  |
| 8. | Two Weeks - Industrial Training Programme on plastics processing and Testing  | CIPET Madurai sponsored          | 10-22 June 2021          | CIPET Madurai Online Mode                           |
| 9. | AICTE Training And Learning (ATAL) Academy Online FDP on "Green Technology & Sustainability Engineering   | AICTE                            | 15/03/2021 to 19/03/2021 | School of Energy & Environmental Management.        |
| 10 | AICTE Training And Learning (ATAL) Academy Online FDP on "Energy Storage"   | AICTE                            | 22/02/2021 to 26/02/2021 | Malaviya National Institute of Technology Jaipur.   |
| 11 | AICTE Training And Learning (ATAL) Academy Online FDP on "Alternate Fuels   | AICTE                            | 08/12/2020 to 12/12/2020 | University College of Engineering, Anna University. |
| 12 | Three Weeks Industrial Training on Mechanical Engineering Applications in Telecom Industry  | BSNL Trichy sponsored            | 08/06/2020 to 26/06/2020 | BSNL, Trichy  |
| 13 | 12 weeks equal to 2 weeks NPTEL online course on Non Conventional Energy Resources  | IIT Madras                       | Jan-Apr 2020             | IIT Madras  |
| 14 | 14 days Faculty Development Program on Innovations & Entrepreneurship   | EDII Ahmadabad, DST, NSTEDB, GOI | 25/11/2019 to 07/12/2019 | EGS Pillay Engg College, Nagapattinam               |
| 15 | Industrial Visit The Travancore Cochin-chemicals Ltd, Kerala  | Industrial Visit                 | 15/09/2019 to 17/09/2019 | The Travancore Cochin-chemicals Ltd, Kerala         |
| 16 | Waste to Energy Conversion  | IIT Roorkee,                     | Feb-April 2019           | Nptel online  |
| 17 | Two weeks faculty development programme on " Application of Nano Technology in Solar Systems"   | MHRD                             | 26/11/2018 to 08/12/2018 | NIT, Trichy   |
| 18 | AICTE Sponsored FDP for students  | AICTE                            | 27/08/2018 to            | PEC, Chennai  |

|    |   |                                       |  |   |
|----|---|---------------------------------------|--|---|
|    | Induction Programme   |                                       | 29/08/2018   |   |
| 19 | ME- 6502 Heat and Mass Transfer   | CFR Chennai sponsored                 | 18 – 24 June 2018                                  | UCE Villupuram                                |
| 20 | IC – 6501 – Control Systems   | CFR Chennai sponsored                 | 15 – 21 May 2018                                   | UCE – BIT campus, Trichy                      |
| 21 | Potential and challenges for integrating renewable energy for smart city implementation | AICTE Sponsored FDP                   | 3-16 Dec 2017                                      | PSG College of Technology, Coimbatore         |
| 22 | Implications of Chemical and Biological Sciences in Biotechnology (ICBSB-16)            | TEQIP II Sponsored FDP                | 22 <sup>nd</sup> June to 5 <sup>th</sup> July 2016 | BIT, Trichy                                   |
| 23 | Advanced technologies for societal applications (ATSA'16)                               | TEQIP II Sponsored FDP                | 6 <sup>th</sup> to 19 <sup>th</sup> June 2016      | BIT, Trichy                                   |
| 24 | Process Instrumentation Dynamics and Control  | FDP                                   | 14 <sup>th</sup> to 20 <sup>th</sup> Dec 2015      | Anna University, Chennai                      |
| 25 | Thermal Engineering Applications for Sustainable Improvement                            | FDP                                   | 15 <sup>th</sup> to 28 <sup>th</sup> June 2015     | BIT, Trichy                                   |
| 26 | Nanotechnology Applications in Engineering and Technology                               | TEQIP II Sponsored FDP                | 6 <sup>th</sup> to 19 <sup>th</sup> May 2015       | BIT, Trichy                                   |
| 27 | Comprehensive Approach of Biotechnological Application                                  | TEQIP II Sponsored FDP                | 16 <sup>th</sup> to 29 <sup>th</sup> April 2015    | BIT, Trichy                                   |
| 28 | Quality Initiatives in Technical and Higher Educational Institution                     | National Workshop                     | 22 <sup>nd</sup> to 24 <sup>th</sup> Oct 2013      | Engineering Staff College of India, Hyderabad |
| 29 | Numerical Method and Optimization Techniques in Mechanical Engineering                  | TEQIP II Sponsored FDP                | 19 <sup>th</sup> to 26 <sup>th</sup> Aug 2013      | BIT, Trichy                                   |
| 30 | ME 2251-Heat and Mass Transfer  | FDP                                   | 17 <sup>th</sup> to 24 <sup>th</sup> Dec 2012      | BIT, Trichy                                   |
| 31 | Energy Conservation and Management  | TEQIP Sponsored Orientation Programme | 4 <sup>th</sup> to 17 <sup>th</sup> June 2012      | NIT, Trichy                                   |
| 32 | ISTE FDP on Heat Transfer   | ISTE Sponsored FDP                    | 29 <sup>th</sup> Nov to 10 <sup>th</sup> Dec 2011  | IIT, Mumbai                                   |
| 33 | National Seminar on Swarm Intelligence  | AICTE Sponsored National Seminar      | 19 <sup>th</sup> to 20 <sup>th</sup> Dec 2007      | Kongu Engineering College,                    |
| 34 | Energy Conservation Measures for Measuring and Processing Industries                    | Short Term Course                     | 10 <sup>th</sup> to 14 <sup>th</sup> Dec 2007      | NIT, Trichy                                   |
| 35 | Multiphase Flow and Process Industries  | Workshop                              | 24 <sup>th</sup> March 2007                        | NIT, Trichy                                   |
| 36 | Recent Advancement in Logistics and Supply Chain Management                             | Short Term Course                     | 12 <sup>th</sup> to 16 <sup>th</sup> March 2007    | NIT, Trichy                                   |
| 37 | Fuzzy Systems   | Workshop                              | 24 <sup>th</sup> to 25 <sup>th</sup> Feb           | NIT, Trichy                                   |

|    |  |  |  |                                 |
|----|--|--|--|---------------------------------|
|    |  |  | 2007   |                                 |
| 38 | Recent Advancements in Environmental Engineering                       | Short Term Course                            | 19 <sup>th</sup> to 23 <sup>rd</sup> Feb 2007      | NIT, Trichy                     |
| 39 | Recent Advances in Environment Safety and Energy Management            | Training Programme                           | 5 <sup>th</sup> to 9 <sup>th</sup> Feb 2007        | NIT, Trichy                     |
| 40 | What Every Engineer should know about Telecommunication and Networking | Workshop                                     | 3 <sup>rd</sup> Feb 2007                           | NIT, Trichy                     |
| 41 | Finite Element Method for Engineers                                    | Workshop                                     | 1 <sup>st</sup> and 2 <sup>nd</sup> Feb 2007       | NIT, Trichy                     |
| 42 | Laser Materials Processing   | Workshop                                     | 9 <sup>th</sup> and 10 <sup>th</sup> Jan 2007      | NIT, Trichy                     |
| 43 | 94 <sup>th</sup> Indian Science Congress                               | Training Programme                           | 3 <sup>rd</sup> to 7 <sup>th</sup> 2007            | Indian Science Congress Kolkata |
| 44 | Recent Advances and Challenges of Biotechnology Processes              | Workshop                                     | 15 <sup>th</sup> and 16 <sup>th</sup> Dec 2006     | NIT, Trichy                     |
| 45 | Instrumental Methods of Thermal Analysis and Data Interpretation       | Training Programme                           | 25 <sup>th</sup> Nov 2006                          | NIT Trichy                      |
| 46 | Global Business and Policy Modeling                                    | International Conference                     | 21 <sup>st</sup> and 22 <sup>nd</sup> Sep 2006     | AMIM, Thanjore                  |
| 47 | Safety Hazard and Risk Assessment in Process Industries                | Workshop                                     | 15 <sup>th</sup> July 2006                         | NIT, Trichy                     |
| 48 | Molecules of Living Things   | AICTE Sponsored Staff Development Programme  | 19 <sup>th</sup> June to 3 <sup>rd</sup> July 2006 | PMCTW, Thanjavur                |
| 49 | Hybrid Energy Systems  | AICTE Sponsored Induction Training Programme | 29 <sup>th</sup> May to 11 <sup>th</sup> June 2006 | PMCTW, Thanjavur                |
| 50 | Renewable Energy-Energy of the Future                                  | Workshop                                     | 20 <sup>th</sup> Aug 2005                          | NIT, Trichy                     |
| 51 | Small Hydro Power Projects   | Workshop                                     | 22 <sup>nd</sup> and 23 <sup>rd</sup> April 2005   | NIT, Trichy                     |
| 52 | Environment Awareness and Pollution Impact                             | AICTE National Conference                    | 27 <sup>th</sup> Nov 2004                          | NIT, Trichy                     |
| 53 | Emerging Energy Technologies   | Training Programme                           | 17 <sup>th</sup> to 28 <sup>th</sup> May 2004      | NIT, Trichy                     |
| 54 | National Seminar on Copy Rights  | National Seminar                             | 23 <sup>rd</sup> April 2004                        | Annamalai University.           |

## 15. CONFERENCES/WORKSHOPS/SEMINAR ORGANISED

1. Conducted 2 weeks INDUCTION PROGRAMME – SCHEDULE FOR I YEAR UG (FROM 08.11.2021 TO 20.11.2021),UCE-BIT Campus, Trichy.

2. Organized Two day National level webinar entitled on “Dynamic Simulation Applications in Chemical Processing Industries” on 14 & 15 th September 2021 at 11.00 AM to 12.00 PM.
3. Conducted 2 weeks induction Training programme for first year from 11/11/2020 to 22/11/2020.UCE-BIT Campus, Trichy.
4. Organized one day National level webinar entitled on “Overview of Pressure Equipments in Oil and Gas Industries” on 10/07/2020 at 3.00PM to 4.00 PM.
5. organized a national level symposium titled “PECONOVA 2018” on 15<sup>th</sup> October 2018 by the Association of Petrochemical Technologists and IChE students’ chapter.
6. Conducted 2 weeks induction Training programme for first year from 3/09/2018 to 09/09/2018.UCE-BIT Campus, Trichy.
7. Organised TEQIP II Sponsored Equipment Design Software Training for Engineers (EDSTE 2017) at Department of Petrochemical Technology, Anna University, Trichy from 25/07/2017 to 31/07/2017.
8. Organised TEQIP II Sponsored International Conference on Trends and Innovations in Chemical & Pharmaceutical Technologies at Anna University -BIT Campus, Trichy from 02-02-2017 to 04-02-2017.
9. Organised TEQIP II Sponsored Equipment Design Software Training for Engineers (EDSTE 2016) at Department of Petrochemical Technology, Anna University, Trichy from 22/02/2016 to 29/02/2016.
10. Organised TEQIP II Sponsored International Conference Energy and Environmental Engineering, Department of Petrochemical Technology, Anna University -BIT Campus, Trichy from 06/11/2014 to 07/11/2014.
11. Organized TEQIP II Sponsored workshop on PECONOVA 2014, Department of Petrochemical Technology, Anna University -BIT Campus, Trichy on 21/03/2014.
12. Organized TEQIP II Sponsored Recent Trends in Renewable and Non Renewable Energy Sources (RANRES-2013), Department of Petrochemical Technology, Anna University -BIT Campus, Trichy from 26/08/2014 to 01/09/2013.
13. Organised MNRE,CSIR SPONSORED National Conference on Recent Trends in Renewable Energy Sources for Sustainable Development, Department of Petrochemical Technology, Anna University -BIT Campus, Trichy from 22/02/2011 to 23/02/2011.
14. Organised workshop on Role of Renewable Energy in Energy Conservation (REEC-2010), Development, Department of Petrochemical Technology, Anna University -BIT Campus, Trichy from 14/12/2010 to 15/12/2010.
15. Participated and organized one day National conference on “**Environment Awareness and Pollution Impacts**” conducted by CEESAT, NIT, Trichy.
16. Participated one day workshop on “**Instrumentation for Thermal Analysis**” conducted at CEESAT, NIT, and Trichy.
17. Organized one day exhibition on “**Solar home appliances**” for the ladies Clubs of Trichy conducted at CEESAT, NIT, and Trichy.
18. Organized one day Workshop on “**Renewable Energy Gadgets** “in the Rajiv Gandhi Renewable Energy Day on 20-08-2006 Conducted at Periyar Maniammai College of Technology for Women, Vallam, Thanjavur.

19. Organized the two weeks AICTE-ISTE sponsored short term training Programme on “**Emerging Energy Technologies**” conducted by CEESAT, NIT, Trichy.

#### **PROJECT ASSOCIATED TO M.Tech Students**

- Development of 200kw Wooden log Thermal mode Gasifier
- Development of 500kw Rice husk Fluidized bed Gasifier.
- Development of 300kw Char coal Gasifier and their performance evaluation.
- Studies and performance evaluation of Thermal equipments.
- Steam injection in all combustion reaction.
- Development of Solar Water Heater.
- Development of Solar air Dryer and Solar Chimney , Solar still, their performance
- Performance evaluation of PV panels and solar concentrating collectors
- Design and construction of solar passive architecture.
- Solar Electric power generation, Solar Cooker, Solar Funnel,
- Smokeless Rocket Stove.

#### **EXPERIENCE IN PRODUCT DEVELOPMENT:**

##### **Developed products**

1. Ground nut Roaster- 50% of fuel saving was achieved
2. Boiler Insulation – 10% of efficiency was improved.
3. Steam injection – 10% of efficiency was improved.
4. Gasifier –
  - a. Wooden Log – 200 kW thermal was developed.
  - b. Rice husk – 150 kW thermal
  - c. Char Coal, Poultry,- 200 kw thermal
5. Solar and Wind related projects- solar dryer, Solar Cookers, Solar collectors, solar ovens, solar chimneys.
6. Extraction of energy from pongam oil.
7. Bio energy projects – Design and development of self circulating bio gas plant.

#### **EXPERIENCED IN MAINTENANCE ACTIVITIES**

**Maintenance Work for all the Gadgets are given below is taken responsibility for**

##### **PRETI**

|     |                                       |   |         |
|-----|---------------------------------------|---|---------|
| 1.  | Wind energy actuated pumps (300W)     | - | 4 Nos.  |
| 2.  | Solar water heating system (500 LPD)  | - | 2 Nos.  |
| 3.  | Solar water heating system (1000 LPD) | - | 2 Nos.  |
| 4.  | Solar water pumping system (900W)     | - | 3 Nos.  |
| 5.  | Solar Street lights                   | - | 4 Nos.  |
| 6.  | Solar lanterns (12W)                  | - | 50 Nos. |
| 7.  | Solar-still                           | - | 1 No.   |
| 8.  | Improved Chullahs                     | - | 2 Nos.  |
| 9.  | A 20 kW Thermal Gasifier (cooking)    | - | 1 No.   |
| 10. | A 100 kW Electric Gasifier            | - | 1 No.   |

|     |   |   |                   |
|-----|---|---|-------------------|
| 11. | Briquetting Machine                             | - | 350 - 550 kg/hour |
| 12. | Solar Air-Heating                               | - | 50 M <sup>2</sup> |
| 13. | Solar Power Plant                               | - | 4.05 kV           |
| 14. | Solar Powered TV with VCR                       | - | 1 No.             |
| 15. | Solar Powered Refrigerator (Under installation) |   |                   |
| 16. | Wood Sizing Equipment for Gasifier              | - | 1 No.             |
| 17. | Biomass Gasifier 100 kW                         | - | 1 No              |
| 18. | Biomass Gasifier 200 kW                         | - | 1 No              |
| 19. | Biogas Plant 25 m <sup>3</sup> Cow Dung based   | - | 1 No              |
| 20. | Biogas Plant 25 m <sup>3</sup> Night Soil based | - | 1 No              |
| 21. | Biogas Plant 15 m <sup>3</sup> Cow Dung based   | - | 1 No              |
| 22. | Biogas Plant 2 m <sup>3</sup> Canteen Waste     | - | 1 No              |

**INTERACTION WITH OUTSIDE WORLD /Chief Guest Addressed & Guest Lecture Given:**

1. Chief guest addressed in AICTE Sponsored Two Days National Conference on 'ELECTRIC VEHICLES CHARGING INFRASTRUCTURE'. Chaitanya Bharathi Institute of Technology (CBIT), Proddatur. Andrapredesh, 09 & 10 May 2022.
2. Presented a topic "Energy Efficient Biomass Conversion Technology for Power Generation" in the AICTE FDP on 20/12/2021 Monday 9.30am to 11.00 am at Department of Electrical and Electronics Engineering, Anna University, UCE-BIT Trichy.
3. Presented a topic on Effective solid waste conversion and disposal method using energy efficient Reactors on 20/12/2021 from 2.00 pm to 4.00 pm conducted by Kongunadu College of Engineering, Thottiam, Namakkal.
4. Presented a topic on "7 points of successive People" in the Induction Programme conducted by Mahindra Engineering College Namakkal on 15/12/2021 10 am to 11.am through online.
5. Presented a topic on "Energy Conservation: Opportunities & Challenges in Oil and Gas Industries", 11.3.2021, IEI Technical Webinar by Tiruchirappalli Local Centre, under CHDB.
6. Presented a topic on "Research Methodology" in the AICTE ATAL FDP through online Saithanya Bharathi Institute of Technology Andhra Pradesh on 30/12/2020 10 am to 12 noon.
7. Presented a topic on "Energy Conservation Opportunities in Industries and Home Appliances", 27/12/2020, IEI Technical Webinar by Thanjavur Local Centre, on celebration of Energy Conservation day.
8. Presented a topic on "Research Methodology" in the AICTE ATAL FDP through online Saithanya Bharathi Institute of Technology Andhra Pradesh on 16/12/2020 10 am to 12 noon.
9. Presented a topic on "Research Methodology" in the AICTE ATAL FDP through online Saithanya Bharathi Institute of Technology Andhra Pradesh on 02/12/2020 10 am to 12 noon.
10. Presented a paper in the AICTE FDP "Efficient Conversion Of Organic Waste - System Approach To Bio Gas Generation From Waste Resources" 14/10/2020 Wednesday 9.30am to 11.00 am at Department of Petrochemical Technology, UCE-BIT Trichy.
11. Chief guest Addressed and Presented a lecturer on "Energy Conservation and their Importance in life" Rararajan CBSE school, Karaikudi on 10/10/2020.



12. presented an invite lecturer on "Energy Efficient Biomass Energy Conversion Technology in AICTE Sponsored Short Term training Program on Prospectus and Challenges in Biofuels and Bio Energy (STTP-PCBB 2019) presented on 15.11.2019.
13. Presented a lecturer on " Energy Conservation Opportunities in Industries and House Hold Application" The Institution of Engineers (India) , thanjavur on 25/06/2019.
14. Chief guest Addressed and Acted as Panel Expert in the national Conference on Emerging Trends in Engineering and Technology on 30/08/2018 conducted by Parisutham Institute of Technology and Science, Thanjavur.
15. Chief Guest Addressed and presented a topic on Energy Conservation Opportunities in Industries and Household in The Institution of Engineers (India), BHEL, Trichy on Tuesday 23<sup>rd</sup> May 2017.
16. Guest Speaker and presented a talk on Renewable Energy Resources for sustainable Environment in the TEQIP II sponsored Workshop on Future Perspectives on Clean Energy and Clean Water conducted by Department of Chemical Engineering, NIT, Trichy, 2017.
17. Guest Lecturer in Chemical Engineering, Energy Conservation and Energy Optimization, AAMEC Koyilvanni, Thanjavur 2017.
18. Presented a lecturer on " Energy Conservation Oppertunities in Industries and House Hold Application" The Institution of Engineers (India) ,Tiruchirappalli on 25/06/2019.
19. Guest Speaker and presented a talk on Solar Panel efficiency improvement and evaluations 21/04/2017 at EGS Pillay Engg College IEI sponsored Workshope on Challenges and oppertunities in Power Electronics Research.
20. Guest Speaker and presented a talk on Energy Conservation using CHP TEQIP II Sponsored FDP COMSES 2016 in Anna University-BIT, EEE, Trichy in 2016.
21. Chaired the Technical Session, TEQIP II National Conference NCGET 2016, Department of Petrochemical Technology, Anna University-BIT, Trichy.
22. Guest Speaker and presented a talk on Energy Conservation Using Renewable Energy Sources, FDP on RENEWABLE ENERGY for SUSTAINABLE FUTURE, AVC College of Engineering, Mayiladudurai in 2015.
23. Guest Speaker and presented a talk Energy Optimization in Materials Manufacturing TEQIP II Sponsored Two Weeks FDP on ARMETA 2015, Department of Physics, BIT, Trichy.
24. Guest Speaker and presented a talk on Importance of RES in MNRE Sponsored One Day Seminar on Renewable Energy Sources, OEC, Trichy 2011.
25. Resource Person for Ministry of Environment and Forest Sponsored Two Day Workshop on Climate change, Disaster Management and Awareness on Water Pollution, OEC, Trichy.
26. Presented a paper on "**Combined light and Heat**" in AICTE-ISTE sponsored short- term training programme on "Emerging Energy Technologies" conducted by CEESAT, NIT, and Trichy.
27. Presented a paper on "**Combined Heat and Power in NITT hostel**" in AICTE- ISTE sponsored short term training programme on "Emerging trends in Energy Management and Non Conventional Energy" conducted by CEESAT, NIT, and Trichy.
28. Presented a paper on "Biogas **generation from waste resources**" in Rajiv Gandhi Renewable energy day celebration conducted by DRDA, Thanjavur.

29. Presented a paper on “**Co- Generation & Energy management in industry**” in AICTE-ISTE sponsored Induction training Programme on “**Hybrid Energy Systems**” conducted at PMCTW, Vallam, Thanjavur.

**B.Tech Project under the guidance of Dr.N.Stalin, Assistant Professor, Department of Petrochemical Technology, Anna University - BIT Campus, Tiruchirappalli – 620024.**

**Academic Year : 2016-2017**

| S. NO. | Register No. | Name of the Student    | Title of the Project   | Company Name                                |
|--------|--------------|------------------------|--|---|
| 1      | 810013239016 | JEEVITHA MEEGA SELVI M | Manufacture of caustic soda by membrane cell process   | DCW limited, Chennai                        |
| 2      | 810013239018 | KAMATCHI RAJA K        | Coprocessing of Non-edible oil (Jatropha oil) with high speed diesel to increase cetane number | Chennai Petroleum corporation limited       |
| 3      | 810013239038 | SANGEETHKUMAR R        | Manufacture of ethyl acetate by Esterification process   | In-House Project                            |
| 4      | 810013239043 | SYED SHAHID THILAVAR A | Production of cumene   | Hindustan Organic Chemicals Limited, Kerala |
| 5      | 810013239304 | KIRUBAKARAN S          | Recovery of propylene from propylene mixture   | Hindustan Organic Chemicals Limited, Kerala |
| 6      | 810013239306 | PRAKASH V              | Production of Acetone from cumene  | Hindustan Organic Chemicals Limited, Kerala |

**Academic Year : 2015-2016**

| S. NO. | Register No. | Name of the Student | Title of the Project                                      | Company Name                                 |
|--------|--------------|---------------------|---|--|
| 1      | 810012239007 | ELAMURUGAN D        | Recovery of valuable products from reduced crude oil      | Chennai Petroleum corporation limited        |
| 2      | 810012239016 | MAHESWARI K         | A study on manufacture of hydrocinnamaldehyde             | In-House Project                             |
| 3      | 810012239025 | MURALIDHARAN A      | A study of Terephthalic acid                              | In-House Project                             |
| 4      | 810012239034 | SABESAN S           | Production of Acetone from Cumene                         | Hindustan Organic Chemicals Limited, Kerala  |
| 5      | 810012239043 | SRIDHAR G           | Manufacture of Hydrochloric Acid by Membrane cell Process | The Travencore Cochin chemicals Ltd., Kerala |

|   |              |               |   |                  |
|---|--------------|---------------|---|------------------|
| 6 | 810012239052 | VINOTHKUMAR S | Manufacture of Tertiary amyl methyl ether   | In-House Project |
| 7 | 810012239308 | TAMILMOZHY U  | A study of Manufacture of ethyl acetate by esterification and design of distillation column and condenser | In-House Project |

**Academic Year : 2014-2015**

| S.No | Register No. | Name of the Student | Title of the Project  | Company Name                                     |
|------|--------------|---------------------|---|--|
| 1    | 810011239007 | Deenadayalan .S     | Desulphurization of Naphtha   | Mangalore Refinery and Petrochemicals Limited    |
| 2    | 810011239015 | Gokul.S             | A study on manufacture of Ethanolamines                                     | In-House Project                                 |
| 3    | 810011239023 | kishore kumar A     | Manufacture of Liquid chlorine by liquefaction process                      | The Travancore -Cochin Chemicals Ltd.,           |
| 4    | 810011239031 | Nithinraja R        | Manufacture of Crude terephthalic acid by modified amoco process            | In-House Project                                 |
| 5    | 810011239039 | Sakthi.C            | Manufacture of ammonia synthesis gas from LNG                               | The Fertilizers and Chemicals Travancore limited |
| 6    | 810011239047 | Subramani.R         | A study on manufacture of hydrocinnamaldehyde                               | Cetex Petrochemicals Ltd.,                       |
| 7    | 810011239055 | Vilvijayan.A        | A study on manufacture of ethyl ether from ethyl alcohol by dehydrogenation | In-House Project                                 |

**Academic Year : 2013-2014**

| S.No | Register No. | Name of the Student | Title of the Project                    | Company Name                      |
|------|--------------|---------------------|---|-----------------------------------|
| 1    | 01110153015  | Jayaseeli S         | A Study on Recovery of LPG from VDU Gas | Chennai Petroleum Corporation Ltd |

**Academic Year : 2012-2013**

| S.No | Register No. | Name of the Student | Title of the Project                                   | Company Name                                 |
|------|--------------|---------------------|--|--|
| 1    | 01109153006  | Arun Kumar G        | Manufacture of Ammonia from Steam Reforming of Naphtha | Madras Fertilizers Ltd                       |
| 2    | 01109153021  | Gugan P             | Recovery of Ammonium Sulphate by Purge Incineration    | The Fertilizers and Chemicals Travancore Ltd |

**Academic Year : 2011-2012**

| S.No | Register No. | Name of the Student | Title of the Project                               | Company Name                      |
|------|--------------|---------------------|--|-----------------------------------|
| 1    | 01108153035  | Sakthi Maneeshaa R  | A Study on Petroleum Refinery Sour Water Stripping | Chennai Petroleum Corporation Ltd |

**Academic Year : 2010-2011**

| S.No | Register No. | Name of the Student | Title of the Project  | Company Name                                 |
|------|--------------|---------------------|---|--|
| 1    | 01107153003  | Abdul Sathar M      | Manufacture of Caustic Soda By Membrane Process                                 | DCW Ltd.                                     |
| 2    | 01107153027  | Karthikraja A       | Study on Manufacture of Ethyl Benzene   | In-House Project                             |
| 3    | 01107153019  | Hareesh N           | Manufacture of Isopropyl Alcohol By Direct Hydration                            | In-House Project                             |
| 4    | 01107153504  | Kamalakannan P      | Study on Manufacture of Nylon 6,6   | In-House Project                             |
| 5    | 01107153053  | Suriyakala M        | Manufacture of Acetone by Catalytic Dehydrogenation of Isopropanol              | In-House Project                             |
| 6    | 01107153011  | Balaji R            | A Study of Hydrogenation Section of Anone Plant in FACT- Petrochemical Division | The Fertilizers and Chemicals Travancore Ltd |

**Extracurricular Activities**

- Coordinator MSME, Coordinator Cooperative Society, Coordinator SPE, Association of Petrochemical Technology.
- Event Coordinator Silver Tongue and Tamil Speech FIESTA 2009-2020.
- Exam cell Co-coordinator 2013, TANCET Exam coordinator (2010 – 2014)
- Worked as a Deputy Director Library Development – Anna University, Trichy.
- Coordinator M.Tech Energy Engineering 2010 to 2013 - Anna University Trichy.
- TEQIP Department Coordinator, Cultural coordinator, Sports coordinator – AUT.
- Worked as Warden Men's hostel,
- Manam Club (service to the poor students) coordinator.
- External Examiner for CECRI, NITT, IIT Hyderabad, NIT Calicut (Mechanical Engg).