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OBJECTIVE

- My goal is to build a sustainable teaching and research career and in the process, help students develop themselves as quality engineers meeting global challenges. I also look forward for opportunities to collaborate with industries in the field of Power Electronics.

ACADEMIC DETAILS

Degree	University	Institute	Year	CPI/%
Doctor of Philosophy (Ph.d)	Anna University, Chennai	Anna University, Chennai	2015	-
Thesis Title:	A Grid Connected Single Phase Multilevel Inverter for Photovoltaic Systems.			
Master of Technology (M.Tech)	Pondicherry University, Pondicherry	Pondicherry Engineering College, Pondicherry	2006	9.01
Post Graduate Specialization:	<i>Electrical Drives and Control</i>		<i>First Class with Distinction</i>	
Bachelor in Engineering (B.E)	Madras University Chennai	K.S.R. College of Engg and Tech Tiruchengodu	1999	70.36
UnderGraduate Specialization:	<i>Electrical and Electronics</i>		<i>First Class</i>	
Intermediate/+2	State Board	R.V.G Higher secondary School Udumalpet	1995	82.5
S.S.L.C	CBSE	Viswadeepthi High School Pollachi	1993	66.8

FIELDS OF INTEREST

- Power Electronics, Electrical Drives, Control Systems, Renewable Energy Systems, Power Quality, Control of Inverters, Electrical Machines.

ACADEMIC ACHIEVEMENTS

- **Gold Medalist** in M.Tech degree Programme for academic year 2004-2006.
- Received **Certificate of Recognition** from ELECRAMA-IEEMA (International Electrical and Electronics Manufactures Association) during project expo at Bangalore.

PROFESSIONAL MEMBERSHIPS

- Member in Institute of Electrical and Electronics Engineers (**MIEEE**).
- Member in Indian Society of Technical Education (**MISTE**).

SOFTWARE SKILLS

Operating Systems	: Ms-dos, Windows
Programming	: C, C++, Python
Technical Packages	: MATLAB, PSIM , Code Composer Studio, PSPICE,PLECS
Toolboxes in Mat lab	: Power systems toolbox, Fuzzy Logic Toolbox, Neural Network toolbox, Control system toolbox, DSP toolbox etc.
Assembly Languages	: 8085, 8051
GUI Tools	: Developer 2000,Visual Basic
RDBMS	: Oracle 8.0
Documentation Tools	: LATEX, MS Office

EXPERIENCE

July 1999 to June 2000	: Arunachalam Sugar Mills (P) Ltd, Triruvannamalai
(From 05.08.1999 to 20.01.2001)	1 year, 6 months and 25 days
Designation	: Electrical Maintenance Engineer.
Responsibilities	: Periodic and Daily Maintenance of 500KVA Diesel Generator Set, Electrical auxiliaries of 70 Tones/Hr, 66 Kg/Cm ² , 485 0c boiler, 2500 KVA, 11KV/400V transformers and all electrical drives in the plant.
June 2000 to Oct 2006	: IFET College of Engineering, Villupuram
	Accredited by National Board of Accreditation (Washington Accord)
(From 25.01.2001 to 05.10.2006)	5 years,4 months,11 days
Designation	: Lecturer (Only Under Graduates).
Subjects Taught	: Electric Circuit Theory, Network Analysis and Synthesis, Control Systems, Transmission and Distribution, Power System Analysis, Advanced Control System, Renewable Energy Sources.
Additional Responsibilities	: Served as Faculty Advisor, Deputy Warden, ISO internal audit member, Class Committee Convenor.
Oct 2006 to April 2008	: Rajeev Gandhi Memorial College of Engg and Tech, Nandyal
	Accredited by National Board of Accreditation (Washington Accord)
(From 09.10.2006 to 30.04.2008)	1 year,6 months,22 days
Designation	: Associate Professor (Both UG and PG).
Subjects Taught	: Control Systems, Advanced Control Theory, Digital Control Systems Transmission and Distribution, Power Electronics, Analysis of Power Electronic Circuits and Renewable Energy Sources,Neural and Fuzzy systems.
Additional Responsibilities	: Power Electronics Lab In charge, Key member in Accreditation Team, TEQIP coordinator for EEE department.

May 2008 to May 2015	: PSNA College of Engineering and Technology, Dindigul Accredited by National Board of Accreditation (Washington Accord)
(From 07.05.2008 to 15.05.2015)	7 years,0 months,9 days
Designation	: Associate Professor (Both UG and PG).
Subjects Taught	: Special Electrical Machines, Electrical Engineering and Control Systems, Solid State Drives, High Voltage DC transmission, Transmission and Distribution , Modeling and Analysis of Electrical Machines, Power Electronics for Renewable Energy Sources, Microcontroller and DSP based system design.
Additional Responsibilities	: Power Electronics Lab In charge, Trainer for SIEMENS Drives Lab, Course coordinator, IEEE student branch counselor, Residential Tutor in hostels.
May 2015 to May 2016	: Karpagam College of Engineering, Coimbatore Accredited by National Board of Accreditation (Washington Accord)
(From 18.05.2015 to 31.04.2016)	0 years,11 months,13 days
Designation	: Professor (UG).
Subjects Taught	: Electromagnetic Theory and Basic Electrical Machines
May 2016 to Till Date	: Dr.Mahalingam College of Engineering and Technology, Pollachi Accredited by National Board of Accreditation (Washington Accord)
(From 12.05.2015 to Till Date)	2 years,5 months,13 days
Designation	: Associate Professor (UG and PG).
Subjects Taught	: Control Systems, Digital Control Systems, Industrial Electronics, Electromagnetic Theory, Network & Signals and Power Electronics

SHORT-TERM CERTIFICATE COURSES

- Freelance 2000 DCS Configuration and Operations in ABB Automation University, Bangalore.
- System modeling and simulation in Pondicherry Engineering College.
- ANN and its Applications to Electrical Engineering in PSNA Engineering College.
- Embedded Systems and Applications in Kongu Engineering College.
- AU power lab in Anna University.
- Entrepreneurship Awareness Programme in RGM College of Engineering and Technology.
- DSP Processors in RGM College of Engineering and Technology, Nandyal.
- Switched Mode Power Converters in National Institute of Technology, Warangal.
- Application of Soft computing techniques to power system operation and control, Andhra University.
- DSP Application to Electrical Drives in National Institute of Technology, Warangal.
- Recent Trends in Energy Engineering and Management, PSNACET, Dindigul.
- National Programme on Technology Enhanced Learning Workshop, IIT, Madras.

- IEEE Student Congress, TCE, Madurai.
- Electromagnetic Interference and Harmonic Reduction Techniques, PSNACET, Dindigul.
- Design and Control of Grid Connected Power Converters, College of Engineering, Trivandraum.
- Renewable Energy Sources & its Control, National Institute of Technology, Suratkal.
- SIEMENS Basic AC drives, PSNACET, Dindigul.
- SIEMENS Basic PLC, PSNACET, Dindigul.
- Power Electronic Application, National Institute of Technology, Warangal.
- Application of Renewable Energy Sources, Indian Institute of Technology, Delhi.
- Foundation Skills in Integrated Product Development, PSG Tech, Coimbatore
- Electric Power System, Indian Institute of Technology Kharagpur.
- Behavioral Skills for Holistic Development, Dr.MCET,Pollachi.

SHORT-TERM COURSES CONDUCTED

- Conducted five days workshop on **"Advances in power electronics"** from Feb. 13th to 17th 2008 and delivered a lecture on topic **"Neural Network :Issues and Challenges in Power electronics"**.
- Organized National Conference on **"Advances in Power electronics and Drives"** on July 29th at RGM-CET,Nandyal.
- Organized **"International Conference on Power Energy and Control (ICPEC 2012)"** at PSNA College of Engineering and Technology, Dindigul. (Feb 8th – Feb 10th 2012 at PSNACET).
- Organized **"Students Transition and Elevation Programme (STEP-2013)"** at PSNA College of Engineering and Technology, Dindigul,Sponsored By IEEE GOLD - Madras Section on 31st Aug 2013.
- Conducted two days workshop on **"Control of Industrial Drives"** on 11th and 12th Jan 2015 and delivered a lecture on topic **"Basics of Sinamics G120 Drive"**.
- Conducted two days workshop on **"Programming in MATLAB/SIMULINK for Electrical Engineers"** on 21th and 22nd Sep 2015.
- Conducted two days workshop on **"Simulation of IEEE Transaction Papers on Multilevel Inverters"** on 19th Dec 2015.
- Conducted two days workshop on **"Simulation of IEEE Transaction Papers on Industrial Electronics"** on 24th and 25th Jan 2018.

INVITED TALKS

- Delivered Guest Lecture on the topic **"Simulation of Power Electronic Circuits Using MATLAB/SIMULINK"** at **Sethu Institute of Technology** Kariapatti, Madurai.
- Delivered Invited Talk on **"Modeling and Simulation of Power Converters"** at **Adithiya College of Engineering and Technology** Coimbatore.

- Conducted One Day Hands on training and Workshop on "**Simulation of Power Converters using Simulation Packages**" at **M.Kumarasamy College of Engineering Karur**.
- Conducted One Day Hands on training and Workshop on "**Power Converter Simulations**" at **Karpagam University Coimbatore**.
- Delivered Guest Lecture on the topic "**Multilevel Inverters**" at **S.B.M College of Engineering and Technology Dindigul**.
- Delivered Guest Lecture on the topic "**Power Electronics For Photovoltaic Systems**" at **Karpagam University Coimbatore**.
- Delivered Guest Lecture on the topic "**Role of Power Electronic Converters in Distributed Generation and Microgrid**" at **TRP Engineering College Trichy**.
- Delivered Guest Lecture on the topic "**Sensorless Control of Induction motor drives**" at **Karpagam College of Engineering Coimbatore**.
- Delivered Guest Lecture on the topic "**Power Quality Issues and its Solutions**" at **PSNA College of Engineering and Technology Dindigul**.
- Delivered Guest Lecture on the topic "**Controller Design for Power Converters**" at **Anna University Trichy Campus**.

PROJECTS GUIDED

A 500 watts MOSFET based Uninterrupted Power Supply.	(UG)
An Embedded Controller based Prepaid Energy meter and billing system.	(UG)
An simulation of Multilevel Inverters with fixed and Variable frequency carrier waves.	(UG)
A Novel carrier for full bridge inverter for PWM inverters and its implementation.	(UG)
Implementation of PWM Switching Schemes for Three phase inverters using TMS320F2812 DSP	(UG)
Simulation of Bidirectional DC-DC conveter for HV applications	(UG)
Modeling and control of three phase self excited induction generator connected to grid.	(PG)
Multistring Five level Inverter with Advanced PWM schemes for PV applications.	(PG)
A novel MPPT algorithm for PV array using Evolutionary Programming.	(PG)
Modeling and Simulation of WECS.	(UG)
A Novel Single Phase Multilevel Inverter for Photovoltaic Applications.	(PG)
Hybrid Modulation Switching Strategy for Grid Connected Photovoltaic Systems.	(PG)
A novel single phase cascaded H bridge inverter with reduced Power Electronic switches.	(PG)
Investigations on capacitor voltage balancing techniques for multilevel inverter.	(PG)
Implementation of Cascaded H bridge inverter using H bridge units	(UG)
Design and Implementation of capacitor clamped five level inverter	(UG)
A step up multilevel inverter for grid connected solar photovoltaic system	(PG)
Design and Implementation of Single Stage Boost Inverter for PV applications	(PG)
Implementation of Boost Multilevel Inverter with reduced power electronic switches	(PG)
Design and Development of Transformer-less PV inverter	(PG)

TECHNICAL PUBLICATIONS-(JOURNALS)

- *"Dynamic Power Management System employing single stage Power Converter for Standalone Solar PV Applications."* **IEEE Transactions on Power Electronics**, Vol 33, Issue 12, pp-10352 - 10362 (2018).
- *"Single phase nine level inverter using single DC source supported by capacitor voltage balancing algorithm",* **IET Power Electronics**, 2018, vol. 11, Issue.4, pp. 2319 - 2329 (Impact Factor 2.267- Annexure-I).
- *"Single-phase fifteen-level grid-connected inverter for photovoltaic system with evolutionary programming based MPPT algorithm",* **Solar Energy**, 2014, vol. 105, pp. 314-329 (Impact Factor 3.541- Annexure-I).
- *"Experimental Validation of a Cascaded Single Phase H-Bridge Inverter with a Simplified Switching Algorithm",* **Journal of Power Electronics**, 2014, vol. 14, no. 3 pp. 507-518 (Impact Factor 0.746- Annexure-I).
- *"Generalised hybrid switching topology for a single-phase modular multilevel inverter",* **IET Power Electronics**, 2014, Vol 7, Issue 10 pp 2472-2485 (Impact Factor 1.318- Annexure-I).
- *"Dynamic Performance Analysis for Different Vector-Controlled CSI-Fed Induction Motor Drives.",* **Journal of Power Electronics**, 2014, vol. 14, no. 5 pp. 989-999 (Impact Factor 0.746- Annexure-I).
- *"Single Phase Cascaded Grid Connected Multilevel Inverter for Interfacing Renewable Energy sources with micro grid"* **ASME Journal of Solar Energy Engineering**, Vol.135, Issue 5, Oct 2015, (Impact Factor 1.934- Annexure-I).
- *"Simulation of FPGA controlled Single Stage Boost Inverter for the Applications of Grid Connected Photovoltaic System"* **Simulation SAGE Publications**, Vol.93, Issue 12, June 2017, (Impact Factor 0.720- Annexure-I).
- *"A Novel Single Phase Cascaded h-bridge inverter with reduced power electronic switches.",* **International Journal of Research in Engineering and Technology**, 2014, vol. 7, no. 3 pp. 502-514.
- *"A Novel Carrier for Pulse width Modulation based Full Bridge Inverter",* **i-manager Journal of Electrical Engineering**, Oct 2007, Volume 1 No.2 pp 64 -69.
- *"A Novel Single Phase Cascaded h-bridge inverter with new cell configuration and reduced power electronic components with low THD.",* **International Journal of Research in Engineering and Technology**, 2014, vol. 7, no. 3 pp. 523-530.
- *"A Novel Asymmetrical Single-Phase Multilevel Inverter Suitable for Hybrid Renewable Energy Sources.",* **Circuits and Systems** 7, no. 06 (2016): 932.
- *"A Modified Asymmetrical Single-Phase Multilevel Inverter Topology for Enhanced Power Quality."* **Middle-East Journal of Scientific Research** 24, no. 4 (2016): 1004-1015.
- *"Comparative Study of Three Phase Grid Connected Photovoltaic Inverter Using PI and Fuzzy Logic Controller with Switching Losses Calculation"* **International Journal of Power Electronics and Drive System (IJPEDS)** 7, no. 2 (2016): 543-550.
- *"Transient and Steady State Analysis of Modified Three Phase Multilevel Inverter for Photovoltaic System"* **International Journal of Power Electronics and Drive System (IJPEDS)** 8, no.1 (2017): 31-39.
- *"An Improved Switching Topology for Single Phase Multilevel Inverter with Capacitor Voltage Balancing Technique"* **Journal of Power Electronics**, 2017, vol. 17, no. 1 pp. 115-126.

- *"Design and Simulation of Five Levels Active Neutral point Clamped Inverter"* **Journal of Energy and Environmental Sustainability**, 2017, Vol.4, pp 25-30
- *"Cascaded H-bridge Multilevel Inverter for Photovoltaic Applications"* **Journal of Energy and Environmental Sustainability**, 2017, Vol.4, pp 20-24

CONFERENCES

- *"Techniques to compensate stator resistance variations at low frequency for sensorless induction motor drives,"* paper was presented at National conference on Process Identification, control and diagnosis (NCPICD-2005), Anna University (Madras Institute of Technology), PP. 156-163, December 2005.
- *"On-line Stator and Rotor resistance estimation using artificial neural networks for induction motor drives,"* paper was presented at 6th National conference on Technological Trends, (NCTT-2005), College of Engineering, Trivandrum, Kerala. PP. 41-47, November 2005.
- *"A DSP based implementation of sensorless Induction motor drives using TMS320F2812"* paper was presented at the India International conference on power electronics (IICPE-IEEE2006), Organized by numeric power systems Chennai. PP 148-154, December 2006. **Published in IEEE Explore.**
- *"A Novel Carrier for Pulse width Modulation based Full Bridge Inverter"* was presented at National Conference in Advances in power electronics and Drives (APED-2007), Rajeev Gandhi Memorial college of Engineering and Technology, Nandyal on 29th July 2007.
- *"A closed loop position control of BLDC motor using DSP"*, was presented at National Conference in Advances in power electronics and Drives (APED-2007), Rajeev Gandhi Memorial college of Engineering and Technology, Nandyal on 29th July 2007.
- *"Solar powered single stage boost inverter with ANN based MPPT algorithm."* was published in Communication Control and Computing Technologies (ICCCCT), 2010 IEEE International Conference on. IEEE, 2010. **Published in IEEE Explore.**
- *"A new single-phase PV fed five-level inverter topology connected to the grid."* was published in Communication Control and Computing Technologies (ICCCCT), 2010 IEEE International Conference on. IEEE, 2010. **Published in IEEE Explore.**
- *"An Improved High Performance Three Phase AC-DC Boost Converter with Input Power Factor Correction"* paper was presented at IET-UK International conference on Information and communication Technology in Electrical Sciences (ICTES 2007), Chennai Dec 20-22, pp221-228. **Published in IEEE Explore.**
- *"Control of grid connected PV cell distributed generation system"* Paper was presented at TENCON 2008 - 2008 IEEE Region 10 Conference at University of Hyderabad, Andhra Pradesh. **Published in IEEE Explore.**
- *"A novel MPPT scheme for solar powered boost inverter using evolutionary programming"*, In Recent Advances in Electrical, Electronics and Control Engineering (ICONRAEECE), International Conference on, IEEE, pp. 346-351. **Published in IEEE Explore.**
- *"Solar powered single stage boost inverter with neural network based MPPT algorithm"* paper was presented at International conference on Advances in energy conversion technologies ICAECT 2010 conducted at Manipal institute of technology Manipal, Karnataka.

- *"A novel single phase cascaded H bridge inverter with reduced power electronic switches."* paper was presented at 3rd International conference on Competency building strategies in Business and Technology for sustainable development conducted at Sri Ganesh School of Business Management, Salem, Tamilnadu, India.
- *"THD minimization using hybrid modulation switching strategy for grid connected photovoltaic systems."* paper was presented at International conference on Trends in Technology for convergence "TITCON-2014" conducted at AVS Engineering College in association with University of OULU Finland, Salem, Tamilnadu, India.
- *"A novel single phase cascaded multilevel inverter for Hybrid renewable Energy sources."* paper was presented at 2nd International conference on Advanced Computing and Communication Systems "ICACCS 2015" conducted at Sri Eshwar College of Engineering, Coimbatore, Tamilnadu, India. **to be Published in IEEE Explore.**

ADDITIONAL INFORMATION

- Maintaining website www.kaliasgoldmedal.com for student community.
- 224 Citations for my publications with 9 h-index for details see [Google Scholars](https://scholar.google.com/citations?user=...)
- Research Gate Score is 15.67 to verify see [Research Gate](https://www.researchgate.net/profile/...)
- Reviewer in IEEE Transactions of Industrial Electronics, IEEE Transactions of Power Electronics IET, Hindawi, ASME & Elsevier Journals.
- PhD Guided:01, Ongoing:04.