

Résumé

No:12B, Rajagopal street ,
Nehru Nagar,
Civil Aerodrome post,
Coimbatore-14



Dr. C. Krishnakumar

Academic Profile

2014 Anna University, Chennai

- **Ph.D Under the faculty of Electrical Engineering**
- **Thesis Title** – Mitigation of Conducted-Electromagnetic Interference on DC-DC Converter Topologies

2002 SASTRA University, Tamil Nadu

- **M.Tech - High Voltage Engineering.**
- **Project**–Breakdown Voltage Analysis of Various Electrode Configurations in Air Dielectric Medium.

**1995 Shanmugha Engineering College,
Bharathidasan University, Tamil Nadu**

➤ **B.E. – Electrical and Electronics Engineering**

Significant Contributions and Achievements

- Approved Research Supervisor of Anna University, Chennai
- Published research papers in SCI Indexed journals
- Academic Council Member, Board of studies member for both UG and PG, Chair person, QAC member, in Periyar maniammai University.
- Head of the Electrical and Electronics Engineering department having strength of 560 students and 30 faculty members for 2 years.
- Received a grant of Rs. 50,000 from Ministry of New and Renewable Energy (MNRE), Government of India, to conduct seminar on Renewable hybrid Energy System for Rural Areas.

- Member of result passing board in Periyar centre for distance education
- Advisory Committee member of the Electrical engineering Department in Periyar Centenary Polytechnic College, Vallam.
- National Board of Accreditation coordinator for EEE Department in Karpagam College of Engineering
- Board of studies member for EEE Department in Karpagam University
- Acted as IT Department Incharge in Karpagam college of Engineering
- Co-convener and coordinator for the National level workshops and conferences.
- Maintenance of Electrical Apparatus and System in SASTRA Campus with significant contribution in the complete Electrical Installation of all Electrical Machines Laboratories in the SASTRA- School of Electrical and Electronics Engineering.
- Active Member in the AICTE (All India Council for Technical Education) - R & D funded project “Analysis of Impulse Voltage Distribution in Power Transformer”

*List of
Publications*

International Journals

1. ‘A New random PWM Technique for Conducted-EMI Mitigation on CUK Converter’, Journal of Electrical Engineering Technology, Vol.10, no.3, pp. 916-924, 2015. **(Impact Factor: 0.517)**
2. ‘Analysis of Conducted EMI with Standalone Solar powered DC Motor’, Turkish Journal of Electrical Engineering and Computer Sciences, vol. 21, pp. 1260-1271, 2013. **(Impact Factor: 0.568)**
3. ‘Power Quality Issues on DC-Bus connected Photovoltaic System’, International Journal of Green Energy, vol. 9, no. 1, pp. 39-50, 2012 **(Impact Factor: 2.069)**
4. ‘Random Modulation Schemes for Conducted- EMI Mitigation on SEPIC Converter’, International Review of Electrical Engineering (I.R.E.E), vol. 7, no. 5, pp. 5273-5281, 2012 **(Impact Factor: 1.364)**
5. ‘Simulative Investigations of Conducted EMI Performance on Different Converter Topologies’, Journal of Theoretical and

applied Information Technology (JATIT), vol. 37, no. 1, pp. 70-79, 2012. (**Impact Factor: 0.17**)

6. 'Impact of Variable Switching Frequency over Power loss on Converter topologies', International Journal of Computer Applications, vol. 8, no. 1, pp. 0975-8887, 2010.
7. 'Analysis and Mitigation of Common Mode and Differential Mode Noise on Boost Converters', International Journal of Engineering Science and Technology, vol. 2, no. 9, pp. 4434-4447,2010.
8. 'Analysis and mitigation of conducted EMI in buck boost converter', International Journal of Electronic and Electrical Engineering, vol. 10, no. 3, pp. 13-23,2010.
9. 'Effect of Passive Snubbers on EMI Mitigation of Buck Converters, "International journal of Wisconsin Madison USA"Vol.126, PP 75-84, Mar-2010.

Presentation of Research Papers in International Conferences

1. Diminution of Electromagnetic Interference in Single-Phase DC/AC Inverters using Dithering Method in Dissimilar Range, International Conference on Innovations in Information Embedded and Communication Systems ICIIIECS '15, Karpagam College of Engineering, Coimbatore, pp 1693-1699.
2. Collaborative Control for Reducing Ripple Voltage in Switching Synchronous Buck Converter, International Conference on Emerging Technology ICET-2014, Paavai Engineering College, Namakkal,
3. Analysis of EMI for Various Duty Cycle and the Effects of Passive Snubbers on Buck Converters, International Conference on Intelligent Design and Analysis of Engineering Products, Systems and Computation IDAPSC-10, Sri Krishna College of Engineering, Coimbatore, pp. 56-57.
4. Analysis on suppression of EMI on CUK converter for various duty cycle with passive snubbers, Ninety eighth Indian Science congress (ISC98), SRM university, Chennai, pp. 73-81.
5. Effect of Wave Shape Improvement techniques during impulse voltage testing in Power Transformer, Proceedings 6th

International Conference on Electric & Magnetic Field, 2003.

6. Determination of Electrode Configuration for Low Voltage Impulse Measurement, Proceedings 6th International Conference on Electric & Magnetic Field, 2003.
7. Virtual Instrumentation Based Signal Analysis for fault identification in Transformers, 5th International Conference on Trends in Industrial Measurements and Automation TIMA 2007. January 5, 2007. National Institute of Technology, Tiruchirapalli.

Presentation of Research Papers in National Conferences

1. Collaborative Control For Reducing Ripple Voltage In Switching Dc-Dc Converter, “*II National Conference on Recent Trends in Engineering and Technology*”, Jansons Institute of Technology, Vol.2, page 54, March 22, 2014.
2. Mitigation of conduction EMI on Boost converter using randomized PWM, “ *II National conference on Recent advances in Power electronics and Industrial drives*”, INFO Institute of Engineering, Feb 24,25 2012.
3. Conducted EMI suppression With Mixed Series and Parallel Snubber circuit, “ *Fifth National conference on Cutting Edge Technologies, PCID,*” Bannari Amman Institute of Technology, Sathyamangalam 12th & 13th Mar,2010.
4. Analysis of EMI on Buck Converter with RCD Snubber circuit, “*ETIPS-09*”. Sasurie Engineering College of Engineering, Vijayamangalam. Vol.1, Page.1-8,2009.
5. Identification and Location of Breakdown during Lightning Impulse test in Transformers”, *IEEE National Conference on Recent Trends in Power Systems and Drives*, April 20-21, 2006.SSN College of Engineering, Kalavakkam, Chennai.

*Experience and
Achievements*

18 + Years

**October 2012- till date
Professor**

Jansons Institute of Technology

Job Profile and Major responsibilities

- Head of the Department for ME/PED
- Quality Improvement cell (QIC) Head for EEE Department
- Nodal Officer of Anti Ragging
- Coordinator for Research & Development
- IEEE Students Chapter /Department Coordinator
- Grievances committee In-charge

June 2009-Sep 2012

Periyar Maniammai University

Assistant Professor (SG)

Job Profile and Major responsibilities

- Head of the EEE Department
- Teaching Under Graduate and Post Graduate Courses
- Research Activities and Research Publications
- Chair Person, QAC Member, BOS Member for both U.G and P.G, Question paper verification member for the University Examination board.
- Admission Coordinator for both UG and PG courses.
- Coordinator -Energy auditing for the whole campus.
- Incharge for LED lamps and solar lantern lamps production and assembly units.
- Incharge for the 100 kW Gasifier plant and 60kW Bio methanation plant.
- Coordinator and convener for conducting technical conferences and workshops.
- Convener for the general Audit in the university.
- Open House 2010- Executive member
- ICEGT-2011- Technical committee coordinator
- Staff bank - secretary

**December 2007- May 2009 Karpagam College Of Engineering
Assistant Professor**

- Acted as IT department In charge
- BOS member
- Installation and commissioning of Machines Lab at Karpagam University.
- Teaching Under Graduate and Post Graduate Courses
- Research Activities and Research Publications
- Coordinator and convener for conducting technical conferences and workshops

- NBA coordinator

➤ **Dec 2002-November 2007 SASTRA University
Senior Lecturer/ SEEE- EEED**

- Electrical Maintenance activities pertaining to SASTRA Campus
- Research Activities and Research Publications
- Teaching Under Graduate and Post Graduate Courses
- Laboratory In-charge of H.V. Laboratory

Job profile and Major Responsibilities in Electrical Maintenance Activities of SASTRA Campus and other research jobs include the following:

- ✓ Visual Inspection, Insulation Resistance Withstand Test, Oil Sample Test of 1 MVA, 11.69kV/ 433V, Dyn11 Distribution Transformer and its accessories.
- ✓ Installation of 1 MVA Distribution Transformer based on Load Demand in the Campus in addition to existing 750 kVA Transformer to meet the demand of 1.3 MVA.
- ✓ Maintenance of 2 Nos. 125 kVA Diesel Generator and 1 No. 250 kVA Diesel Generator sets including maintenance of Lead Acid Batteries.
- ✓ Laying and Termination of 11.69KV, 3 Core, XLPE Incomer Cable from H-Pole to Transformer.
- ✓ Supervision and Maintenance of L.V. Bus duct.
- ✓ Testing and Maintenance of VCB Panel.
- ✓ Design and Engineering of Lighting Fixture and Accessories for all newly developed blocks in SASTRA Campus.
- ✓ Research activities and publication of papers in reputed International and National forums in the following fields:
 - Electrode Configuration and its Analysis in High Voltage Systems
 - Impulse Testing, Analysis and Wave shape Improvement
 - Transformer Winding Fault Diagnosis Using Frequency Response Analysis and Simulation with LABVIEW.
- ✓ Handled unique courses to cater to practical industry requirements such as:
 - High Voltage Engineering
 - Power Generation, Operation and Control
 - Switchgear and Protection
 - Transmission and Distribution
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➤ **Nov 1997– July 2001** **GE– MEELSA, Saudi Arabia**
General Electricals (GE), Middle East Engineering Limited Saudi Arabia, a part of the world renowned GE Group is a joint venture between General Electric and Ali Abdullah Al-Tamimi Company, the only authorized service center for repair and overhaul of GE Power Generation equipment in the Kingdom of Saudi Arabia and the Middle East. It has been providing a unique service, both Shop & Field based, to customers in the area since 1976. GE is an equal opportunity employer, offering a great work environment, challenging career opportunities, professional training and competitive compensation.

Electrical Engineer – Service

➤ **Riyadh Power Plant (PP 7), Riyadh**

- The project involves extension of an additional phase in the existing Power Plant and the scope of the project work includes installation and Interconnection Wiring of MARK-5 Turbine Control Panels and other Turbine Auxiliary Panels.

➤ **Jeddah Power Plant, Jeddah**

- The project involves extension of an additional phase in the existing Power Plant with additional Generator Control Panel (GCP).

➤ **Gizan Power Plant, Gizan**

- The project involves installation of Vibration Analyzers for Generators, Cable Installation and Interconnection Wiring including Testing of Vibration Sensors.

➤ **Military Radar Station, Abha**

- The project involves retrofitting, overhauling and installation of Generators, Cable Installation and Interconnection Wiring.

➤ **Habshan Project, Abudhabi**

- The project involves retrofitting, overhauling and installation of Turbine- Generator System, Cable Installation and Interconnection Wiring.

➤ **Najran Power Plant, Najran**

- The project involves major overhauling of Frame 7 Gas Turbine.

➤ **Riyadh Power Plant, Riyadh**

- This is a Gas Conversion Combined Cycle Power Plant and involves installation of Fuel Module, Cable Installation and Interconnection Wiring.

Job profile in Service and Installation of Power Plant activities including the following:

- Major Overhauling of Frame 5 and Frame 7 GE Gas Turbines.
- Testing of Power Transformer and Instrument Transformers including Polarity and Ratio Tests, Oil Filtration Test.
- Testing of 13.8kV Generator Circuit Breaker including Milli-Volt Drop Test, Insulation Resistance Withstand Voltage Test, Checks on Operating Duty of Operating Mechanism.
- Testing of 5 kV Turbine Starting Motor such as Insulation Resistance Withstand Test, Associated Panel Power Frequency Voltage Withstand Test and other Loop/ Wiring checks. Tests.
- Cable Hi-Pot Testing for HV Cables.
- Testing of Cooling Motor.
- Control Wiring checks and Overhauling of Lube Oil Pump Motor.
- Air Filter Control Wiring and Timer Circuit Verification checks.
- Installation and Calibration of Generator Thermocouples.
- Installation, Testing and Wiring Checks of Vibration Analyzer Panel Board.
- Relay Characteristic Curves Testing using Current Injection Test Kit.
- Interconnection and Wiring Diagram Loop Checking for Turbine System and Accessories in Field and Control Room.
- MV and MCC Panel Testing including Withstand Voltage Test, Power Frequency Voltage Withstand Test, Loop Checking and Interconnection checking.

➤ **Oct 1997– Oct 1997 Kontakt Electric Trading Co,
Chennai**

Marketing Engineer

- Marketing a wide range of Electrical Equipment and Accessories which include the following:
 - D.C. Motors and A.C. Motors (5kW- 50kW)
 - Switchgear Accessories such as Thermal Overload and Lock Out Relays, Local Push Button Switches, T-O-C Switches and cable Termination accessories.
 - 1.1kV PVC Grade Aluminum Power and Control Cables.
- Bagged Major/ Key Orders from reputed clients namely:
 - M/S Ennore Thermal Power Station (ETPS), Chennai
 - M/s Ashok Leyland, Chennai.

➤ **Oct 1996– Oct 1997 Public Works Department, Thanjavur
Engineer- Trainee**

Handled diverse maintenance and installation activities in the following:

- Installation and Maintenance of 1 MVA, 11.69kV/433V Distribution Transformer and carrying out tests such as Insulation Resistance Withstand Voltage Test, Oil Sample BDV testing.
- HT Panel installation, maintenance and testing including Contact Resistance Measurement, replacement of busbar during maintenance taking into account various duration factors.
- Installation of Straight-through Cable Jointing.
- Maintenance of 100kVA D.G. Set.
- Design and Installation of Lighting Schemes and Lighting Accessories.
- Supervision of Air Conditioning System.

➤ **June 1995– Sep 1996 Shanmugha College of Engineering Lecturer**

- **Teaching Under graduate students**
- Incharge of Machines lab

*Seminars
Organized and
Attended*

ORGANIZED.

- Convened Two day workshop on Electric Circuit Simulation using ORCAD PSPICE, at JIT from 30/01/14 to 1/01/14.
- Convened five day short term course on Labview Graphical Programming, at JIT from 19/01/13 to 23/01/13.
- Convened one day Enrichment of Engineering Technology Program on C++ An Industrial Approach, at JIT on 28/02/2013.
- Convened Two day National conference on Renewable and Hybrid Energy Systems for Rural areas, 26/11/09 to 27/11/09.
- Convened one day National conference on Innovations in Modern Power Converters, at PMU on 25/12/09.
- Convened one day National conference on EMI issues in PWM Inverter, at PMU on 26/3/11.

ATTENDED

- 3 days National seminar on Modeling and Control Of Renewable Energy Power Plants for Efficient And Quality Power Generation from 19-08-2010 to 21-08-2010 at K.S.R.College Of Technology, Thiruchencode.
- Two days National seminar on Neural Networks and its Applications.
- National Workshop on Embedded system design with FPGAs
- National conference on Innovations in Information Technology

ORGANIZED.

Symposium/Workshops and Special Training Courses

- One day workshop on LATEX software for the faculty members of JIT, conducted by IIT Bombay.
- One day National level workshop on “Application of Embedded Systems & VLSI Design in Electrical Engineering”.
- One day National level workshop on “Industrial Automation”.
- Convened one day student’s symposium “Grid’09”.
- Convened one day student’s symposium “CATAEE’10”
- Convened 3 days training course on “National Franchisee Training Programme (TNEB, Madurai)” from 06-2011

ATTENDED

- 13 days workshop on “Effective teaching/ Learning of Computer Programming” from 28-06-2010 to 10-07-2010, organized by Indian Institute of Technology, Bombay.
- 5 days course on “Lab View and its Applications” from 02-11-2009 to 06-11-2009 organized by National Institute of Technical Teachers Training & Research, Chennai.
- 14 days workshop on “Future Electrical Energy Requirement and Energy Management” from 31-05-2010 to 13-06-2010, organized by Kalaignar Karunanidhi Institute of Technology, Coimbatore.
- Industrial Internship at M/s W.S. Test Systems Ltd., Bangalore, 11th-23rd June 2004, sponsored by SASTRA, Thanjavur.
- Special training in Spectronic ACB’S Maintenance & Repairs Conducted by GE MEELSA, Saudi Arabia.
- Short Term Course at UNISAFE, Dubai on “Advanced Fire Fighting”.

Membership in Professional Bodies

- **Associate Member of Institution of Engineers (AMIE), Institution of Engineers.**
- Member of the **Science and Information Organization (The SAI)**
- Member of **International Association of Computer Science & Information Technology (IACSIT)**, Singapore. Membership ID: 80348621
- Member of **CSTA (ACM Computer Science Teachers Association).**
- Member of **Science Alert, New York.**
- Member of **International Association of Engineers (IAENG).** Membership ID: 141446
- Member of **Science and Engineering Institute (SCIEI).**

Membership ID: 20140409001

Reviewership in Journals

- Reviewer of **International Journal of Green Energy, Association of Energy Engineers, Taylor & Francis Publications.**
- Reviewer of **International Journal of Electronics (IJE), Taylor & Francis Publications.**
- Reviewer of **International Journal of Energy and Power Engineering, Science publishing group Publications.**
- Reviewer of **Global Journal of Researches in Engineering (GJRE), Open Association of Research, USA.**

Software Languages/ Packages

- Windows Office and associated Packages.
- Electrical packages such as MATLAB, PSPICE and LABVIEW for Virtual Instrumentation

Personal Details

- Date of Birth : 24th May 1973
- Father's Name : M.R. Chittibabu
- Languages known : English, Tamil, Telugu, Malayalam and Urdu
- Marital Status : Married
- Passport No. : F 4643088 (DOI: 2-9-2005; DOE: 1-9-2015)

I hereby declare that the details given above are true to the best of my knowledge and belief.

(Dr. C. Krishnakumar)