

FACULTY PROFILE

Name of the Staff : **Dr.S.SANKARAKUMAR**
 Official Address with E-mail Id : Assistant Professor (Sr.Grade),
 Department of EEE,
 National Engineering College,
 K.R.Nagar, Kovilpatti – 628 503
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1. Personal Details :

Age : 42
 Date of Birth : 05.02.1982
 Sex & Marital Status : Male & Unmarried
 Citizenship : Indian
 Qualification : M.E.,Ph.D.,

Degree	Programme and Specialisation	Class /CGPA	Month &Year of Passing	Institute/University
Ph.D	Power Electronics		January 2020	Anna University, Chennai
M.E./M.Tech	Industrial Electronics	I Class	April 2006	Maharaja Sayajirao University of Baroda, Gujarat
B.E/B.Tech	Electrical & Electronics Engineering	I Class	April 2003	Manonmaniam Sundaranar University, Tirunelveli

Date of joining : 09.06.08
 Present status : Assistant Professor (Sr.Grade)
 Professional Experience :

Designation	Institution/ Organisation	Period	Nature of Duties
Assistant Professor(Sr.Grade)	National Engineering College	From 10.07.2013 To till date	Academic Activities
Lecturer/Assistant Professor	National Engineering College	09.06.08 to 09.07.2013	Academic Activities
Lecturer	Pandian Saraswathi Yadav Engineering College	2 Yrs	Academic Activities

Courses taught:

Course Title	U.G. or P.G.
Basic Electrical and Electronics Engineering , Electron Devices, Electric Circuits, Electrical Machines –I ,Electrical Machines –II, Power Electronics, Solid State Drives, Electrical Engineering, Design of Electrical Machines, Environmental Science and Engg., Measurements and Instrumentation, Electronic Devices & Circuits, Electromagnetic interference and Electromagnetic Compatibility,	U.G

Power Electronics for Renewable Energy Systems, Protection and Switchgear, Advanced Switchgear, Special Electrical Machines, Fibre Optics and Laser Instruments, Automotive Electrical and Electronics, Earthing Design, Electrical Energy Conservation and Auditing, Electric Vehicle Machines and Drives	
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2. Honors / Awards :

3. Academic Achievements

3.1 Short term Courses / Seminars / Conference/ Workshops organized:

Sl. No	Title	Period	No. of Participants	venue
1.	A two day National Level Inter College Technical Symposium ALTANZIA2k24	2024	126	National Engg. College, Kovilpatti
2.	A two day National Level Inter College Technical Symposium ALTANZIA2k23	2023	390	
3.	One Day National level Workshop and Technical Symposium – ALTANZIA2k22	2022	110	
4.	A two day online workshop on “Smart Protection and Control using Numerical Relays”	2021	64	
5.	A Two Day National level Workshop and Technical Symposium – ALTANZIA2k19	2019	180	
6.	Relay workshop for the symposium participants	2019	20	
7.	PSIM workshop for the symposium participants	2019	20	
8.	A Two Day National level Workshop and Technical Symposium – ALTANZIA2k18	2018	130	
9.	Two day Relay workshop for final year students	2018	20	
10.	Intra College Technical Symposium TESLA’2 k17	2017	60	
11.	Three days workshop on “Hands on Training in Electrical Maintenance”	2015	28	
12.	Hands on Training on Simulation tool for Power Electronics during odd	2015	30	
13.	MNRE Sponsored One Day National Conference ELCON-13	2013	50	
14.	DRDO Sponsored National Workshop FPGA-PED’11	2011	55	
15.	CSIR Sponsored One Day National Level Seminar- RADIE’11	2011	50	
16.	National Level One Day Workshop REHIVE’08	2008	50	

3.2 Short term Courses / Seminars / Conference/ Workshops Attended:

S. No	Title	Period	No. of Participants	Venue
1.	Trends and Challenges in EV Train Design and Control	19 th - 23 rd June 2023	50	National Institute of technology, Tiruchirappalli
2.	Evolution of Power Electronics for Electric Vehicles Charging Infrastructure (Online)	2 nd to 6 th January, 2023	60	Malaviya National Institute of Technology Jaipur(MNIT), Rajasthan
3.	AICTE – Two Weeks Training Program on Student Learning Assessment	10 th to 23 rd January,2022	120	STTP-PARAKH in collaboration with Construction Industry Development Council (CIDC)
4.	Electrical Power Systems - Design & Analysis using ETAP	24.01.2022 to 03.02.2022	80	MSME - Online Training Program
5.	AICTE Margadarshan FDP on “Technologies for Smart Electrical Power Grid”	24 th to 28 th May 2021	30	Online – National Institute of Technology, Tiruchirappalli
6.	MATLAB training Course on “State flow for Logic Driven System Modeling, Modeling Physical Systems with Simscape, Customized Course”	04 th to 7 th January 2021	60	Online Course organised by Mathworks.
7.	AICTE Margadarshan Scheme, Five days FDP on “Research Opportunities,Challenges in Power Electronics for EV and its impact on Smart Grid”	14 th to 20 th December 2020	50	Online – National Institute of Technology, Tiruchirappalli
8.	AICTE (ATAL) Sponsored Short Term Course on "Power Electronic converters and Controllers for EV and Smartgrid"	18/12/2019 to 22/12/2019	90	Indian Institute of Information Technology Design and Manufacturing (IIITDM), Kancheepuram
9.	QIP STC on "Power Semiconductor Devices for Power Electronic Converters"	23-27 th July 2018	60	IISC, Bangalore
10.	GIAN Course on Multi-Phase Drive and Generation systems for Advanced Industrial Applications	12-16 th February 2018	60	VNIT, Nagpur

11.	AICTE sponsored Two Week FDP on “Recent Trends and Applications on High Voltage Engineering”	06.11.2017 to 19.11.2017	30	National Engineering College
12.	Two Days Training on Protection Relay-P14D	24.10.2017 – 25.10.2017	15	National Engineering College
13.	One Week AICTE sponsored QIP Short term course on “Real – time Simulation for Power Electronics and Power Systems Applications”	10.7.2017 - 14.7.2017	60	IISC, Bangalore
14.	Two weeks Faculty Internship Training (Industrial Knowhow) at EPCOS India PVT LTD, Nasik	16 th May to 26 th May, 2017	7	EPCOS India PVT LTD, Nasik
15.	Three Days Quality improvement Programme on “Technology Enabled Teaching Learning Process” conducted by NITTTR, Chennai.	27.05.2017 – 29.05.2017	60	National Engineering College
16.	One Week AICTE sponsored QIP Short term course on “Pulse width modulation Techniques for voltage source inverters	21.11.2016 - 25.11.2016	60	IISC, Bangalore
17.	National Level Workshop on “Simulation of IEEE Transaction Papers on Multilevel Inverters”	19 th December, 2015	30	Karpagam College of Engineering, Coimbatore
18.	Three Days National Level Workshop on “Formulation of Research and Development Grant Proposals by Scientists	18-20, November, 2015.	35	National Engineering College
19.	Short term course on “Digital Signal Processor Controlled Power Electronic Converters & Drives (DSPEC-2015)”	September 28-30, 2015	60	National Institute of Technology, Warangal
20.	One-day workshop on Innovations in Cable Technology(IICT)	06.05.2015	40	PSG college of Technology, Coimbatore
21.	2 days workshop on Advanced Controller Design for Power Electronic Converters Renewable Energy System using MATLAB & DSPACE	09.09.2014 & 10.09.2014	45	Kongu Engineering College, Erode
22.	Short Term Course on Advanced Solar Energy Technologies	09.05.2014 To 15.05.2014	90	IIT, New Delhi
23.	One day seminar on SCADA and its Recent Trends	18 th April, 2014	30	National Engg. College, Kovilpatti

24.	Hands on Training in PSIM	9 th and 10 th August 2013	50	CIT, Coimbatore
25.	3 Days Work Shop on Implementation of Soft Computing Techniques Using	18 th to 20 th October 2012	70	National Engg. College, Kovilpatti
26.	DRDO sponsored Two Day National Level Seminar on Energy Efficient Artificial Intelligennt Drives-Recent Trends and perspective-EEDRTP'12	14 th & 15 th September 2012	50	National Engg. College, Kovilpatti
27.	DRDO sponsored Two Day National Level Seminar on Soft Computing and its Applications to Electrical Engineering-SCTAEE'11	5 th and 6 th August 2011	50	National Engg. College, Kovilpatti
28.	CSIR Sponsored One day Seminar on Recent Advancement in the field of Dielectrics allied to high	18 th February 2011	55	National Engineering College, Kovilpatti
29.	MHRD & IIT Bombay Sponsored Five days workshop	20.12.10 to 24.12.10	75	Sardar Patel Institute of Tech,Mumbai
30.	Two Days Workshop on Graphical System Design for Engineering Applications using LABVIEW	25.11.2010 & 26.11.2010	60	National Engg. College, Kovilpatti
31.	AICTE Sponsored Two days Seminar on Artificial Intelligence based Power system Restoration –AIPSR'10	13.05.10 to 14.05.10	50	National Engineering College, Kovilpatti
32.	One day Seminar on Recent Trends in Renewable power Generation	08.01.10	40	National Engineering College, Kovilpatti
33.	AICTE Sponsored SDP on Advanced Machines For Electric Propulsion Systems	16 th To 29 th 2009 14 Days	80	Arunai Engineering College, Thiruvannamalai
34.	AICTE Sponsored SDP on Recent Trends and Developments in Design, Operation and Testing of EHV	06.07.09 to 20.07.09	60	VNS Institute of technology, Bhopal
35.	DRDO Sponsored Seminar on Artificial Intelligence Based Electrical Machines & Drives-AIEMD'09	19 th & 20 th February 2009,2 Days	50	National Engg. College, Kovilpatti
36.	Two days Seminar on Emerging Research Trends in Power Electronics & Power systems-ERTPEPS'08	16.10.08 to 17.10.08	40	National Engineering College, Kovilpatti
37.	One day workshop on Modern Trends in Power Electronics	23.08.08	50	Franics Xavier EnggCollege,

38.	Two day workshop on Micro Teaching	18.07.2008 & 19.07.08	50	National Engineering College, Kovilpatti
39.	Recent Advances In Power Electronics & Drives	15 th To 17 th March 2007,3 Days	60	Thiagarajar College of Engineering, Madurai

Industrial Training:

S. No	Name of the Industry	Period	Area
1.	Ohm Energy Management Systems PVT Ltd., Sriperumbudur	29 th January – 02 nd February 2024	MV/LV Switchgear panels, Control Relay panels, MV/LV Bus ducts, Fabricated panels
2.	Enthu Technology Solutions Private Limited, Coimbatore	07.02.2023 to 11.02.2023	Product development, consultancy services, and End to End IoT Solutions development for Smart city,
3.	VIPE Equipments, Chennai	21.02.22 to 25.02.2022	Silica Gel Breather, various types of Temperature Indicator Meter, Marshalling
4.	Calibre Telecom Services India PVT LTD	08.03.2021 to 12.03.2021	Power Modules, Telecom Products
5.	Easun-MR tap Chngers (P) Ltd,Thiruniravur, Chennai	26.11.2018 to 30.11.2018	OLTC manufacturing
6.	L&T Rubber Processing Machinery, Chennai	09.11.2017	Tyre machinery
7.	EPCOS India Pvt.Ltd, Nasik (A TDK group of company)	16.05.2017 to 26.05.2017	LV & MV capacitors, Power factor Controllers, PFC panels, Anti-resonance detuned harmonic filter reactors etc.,

Online Courses Attended:

S.No	Title of the Course	Name of organizer	Month & Year
1.	Design Thinking - A Primer	NPTEL Course, IIT Madras	Jul-Aug 2023 (4 week course) Elite Silver
2.	Digital Protection of Power System	NPTEL Course, IIT Madras	Jan-Mar 2024 (8 Week Course)
3.	DC Micro Grid and Control Systems	NPTEL Course, IIT Roorkee	July-Sep 2022, (8 Week Course) – Elite
4.	Introduction to Smart Grid	NPTEL FDP Course, IIT Madras	July-Sep 2021, (8 Week Course) – Elite
5.	Electrical Machines	NPTEL Course, IIT Madras	Jan-April 2021, (12 Week Course) – Elite
6.	Power Electronics	NPTEL Course , IIT Delhi	July-October 2019(12 Week Course) – Elite Silver + Topper
7.	Basic Electronics	NPTEL Course , IIT,Bombay	Jan-April 2018 (12 Week Course) – Elite
8.	Introduction to Research	NPTEL Course , IITM Madras	Jan-Feb 2016 (10 hours course) -

9.	Motors and Motor Control Circuits	Coursera - University of Colorado Boulder	5 Weeks Course
10.	Photovoltaic solar energy	Coursera -École Polytechnique	3 Weeks Course May 18, 2020
11.	Introduction to Power Electronics	Coursera - University of Colorado Boulder	3 Weeks Course September 15, 2020
12.	Electric Utilities Fundamentals and Future	Coursera – University of Colorado Boulder	5 Weeks Course July13, 2020
13.	Wind Energy	Coursera – University of Denmark	5 Weeks Course July , 2020
14.	Introduction to Electronics	Coursera – Gerogia Institute of Technology	3 Weeks Course September 15, 2020

3.3 Membership in Professional bodies :

Name of Society	Grade of Membership
Indian Society of Technical Education(ISTE)	LifeTime(LM49970)

Research Achievements :

International Journal Publications

S.No	Title of the Paper	Name of the Journal	Vol.No & Page No.	Month & Year
1.	Hybrid technique for optimizing charging-discharging behaviour of EVs and demand response for cost-effective PV microgrid system	Journal of Energy Storage (SCI) (IF-8.9) ISSN: 2352-152X	Volume 96, 15	August 2024
2.	Design of Single Input Dual Output DC–DC Converter for Electric Vehicle Application	Mathematical Problems in Engineering (Scopus Indexed)	Volume 2023 pp.1–13	November 2023
3.	Performance estimation of chaos embedded gravitational search algorithm for power converter applications.	Journal of Electrical Engineering (Annexure-I, ISSN. 1582-4594)	23, vol.19, no.4, pp. 202-211	August 2019
4.	Evolutionary algorithm based selective harmonic elimination for three-phase cascaded H-bridge multilevel inverters with optimized input sources	Journal of Power Electronics (ISSN 1598-2092) (SCI) (IF-1.3)	20, pp.1172–1183	June 2020
5.	Power Quality Analysis and Monitoring of EEE Department in Academic Institution	International Journal of Innovative Technology and Exploring Engineering (Scopus	ISSN: 2278–3075 (Online), Volume-9 Issue-6, Page No. 224-229.	April 2020,

		Indexed)		
6.	Power Quality Analysis Of Various Electrical Equipments In An Educational Institution	International Journal of Scientific & Technology Research (Scopus Indexed)	ISSN 2277-8616 VOLUME 9, ISSUE 04, Page No. 2434-2439.	April 2020

National Journal Publications

S.No	Title of the Paper	Name of the Journal	Vol.No & Page No.	Month & Year
1.	P.S.Diwakar, S.Sankarakumar “Investigation of Inter-turn Fault in Transformer Winding under Impulse Excitation”,	International Journal of Computer Applications, No.4	PP. 0975 – 8887, (ISBN: 973-93- 80878-84-0), (Others)	2014

3.4 International Conference Publications

S.No	Title of the Paper	Name of the Conference	Organizer	Month & Year
1.	Fire Fighting Robotic Vehicle using Arduino	2022 3rd International Conference on Electronics and Sustainable Communication Systems (ICESC)	Hindusthan Institute of Technology. Coimbatore, India	17-19, August 2022
2.	Design of Earthing Grid using ETAP	IEEE sponsored - 6th International Conference on Trends in Electronics and Informatics (ICOEI)	SCAD college of Engg. And Tech, Cheranmaha devi Tirunelveli	28-30 April 2022
3.	Density Based Traffic Light Control using Arduino and IR sensors with spike and Emergency Protection (Best Paper Award)	9 th International Conference on Contemporary Engineering and Technology 2021	Prince Shri Venkateshwar Padmavathy Engineering College	April 2021
4.	Load Flow Analysis, Short Circuit Analysis and Relay Protection and ETAP	9 th International Conference on Contemporary Engineering and Technology 2021	Prince Shri Venkateshwar Padmavathy Engineering College	April 2021
5.	Modeling and Tracking of Maximum Power Point in Solar Cells using P&O Algorithm	IEEE sponsored 2 nd International conference on Electronics, Communication and Aerospace Technology (ICECA 2018)	RVS Technical Campus, Coimbatore	March 2018
6.	Design Optimization	IEEE international	St.Xavier’s	March 2019

	of 3 phase squirrel cage induction motor using evolutionary algorithm	conference on Recent Advances in Energy efficient computing and communication	Catholic College of Engineering, Nagercoil	
7.	Performance analysis of multicarrier sine PWM based cascaded H-Bridge Multilevel inverter	IEEE international conference on Trends in Electronics and Informatics(ICOEI 2018)	SCAD college of Engg. And Tech, Cheranmaha devi	May 2018
8.	Optimal Design of Grading Ring and Analysis of Electric Field of 800kV Bushing “Analysis of Electric field of 800kV UHVDC Bushing”	<i>DRDO sponsored IEEE International Conference on Innovations, Information, Embedded and Communication systems (ICIIECS'15</i> Karpagam College of Engineering, Coimbatore.		19 th and 20 th March 2015
9.	Optimal Design of Grading Ring and Analysis of Electric Field of 800kV UHVDC Bushing”,	<i>IEEE International Conference on Electrical, Computer and Communication Technologies(IEEEICECCT)</i> SVS College of Engineering, Coimbatore.		5-7 th , March 2015
10.	Ageing Analysis of Insulating Oil under various Atmospheric conditions”	<i>IEEE International Conference on Circuit, Power and Computing Technologies-2014(ICCPCCT-2014)</i> , Noorul Islam University, Kumaracoil, Kanyakumari District.		20 th & 21 st March 2014
11.	Investigation of Interturn Fault in Transformer Winding under Impulse Excitation	International Conference on Innovations in Intelligent Instrumentation, Optimisation and Signal Processing ICIIOS'13,Karunya University, Coimbatore		March2013
12.	A high Efficiency Synchronous Power Converter for Photovoltaic Applications	International Conference on Advances in Engg. Science & Management-ICAESM-2012,		March 2012

National Conference Publications

S.No	Title of the Paper	Name of the Conference & Organizer	Month & Year
1.	Charecterisation of Enamelled Copper Wire with Carbon Nano Tubes	National Conference on New and Renewable Energy	February 2011

3.4 Additional Responsibilities held :

- i. One of the Tutor and Class incharge for IV EEE Students.
- ii. Department Exam Wing Incharge
- iii. EEE Association Incharge
- iv. Smart Protection and Control Lab Incharge

- v. Department Budget file incharge
- vi. Department Result Analysis file incharge
- vii. Electrical Maintenance Incharge & Asst.(2011-2017)
- viii. Institution of Engineers(I) Staff Chapter Incharge (till 2023)
- ix. ICT academy Department Level Incharge (till 2022)
- x. Industry Institute Partnership Cell (IIPC) – Department member (till 2023)
- xi. National Accreditation and Assessment Council – Report preparation committee Member for the Department - 2020
- xii. Time Table Committee Asst.(2011-2014)
- xiii. Electrical Workshop Asst.-2019
- xiv. Anna University Magazine- Report preparation committee Member for the Department
- xv. NBA, Anna University, AICTE Report Preparation Committee Member-2018
- xvi. Staff Recruitment Process Asst. in the year 2009-2011
- xvii. NCC Care Taker in the year 2008
- xviii. Staff club Executive Committee Member in the year 2012-13