Dr:S.SENTHIL KUMAR
ASSISTANT PROFESSOR (Sr.Gr) & HOD (i/c)
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
UNIVERSITY COLLEGE OF ENGINEERING ARIYALUR
KATHANKUDIKADU VILLAGE, THELUR POST, ARIYALUR 621 731
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- **Research Area:**

  POWER ELECTRONICS,

  VLSI DESIGN,

  ANALOG AND DIGITAL DESIGN,

  RENEWABLE ENERGY

- **Educational Qualifications:**

Qualification	Department	Year (From -To)	University	Class
PG Level Advanced Certification Programme in VLSI Chip Design	Centre for Continuing Education,	June 2023 – March 2024	Indian Institute of Science-Bangalore	Distinc -tion
Ph.D	ELECTRICAL	2011 - 2018	Anna University	-
M.E	VLSI DESIGN	2005 - 2007	Anna University	FIRST
B.E	ELECTRICAL AND ELCTRONICS ENGG.	1993 - 1997	Bharathidasan University	FIRST

- **Experience:**

Name of Company / Institutions	Designation of Post	From	To	Relived on	Experience in Year
UNIVESITY COLLEGE OF ENGINEERING ARIYALUR	ASSISTANT PROFESSOR (Senior Grade)	03-09-2014	TILL DATE	-	9 YEARS + 09 MONTHS
UNIVESITY COLLEGE OF ENGINEERING ARIYALUR	ASSISTANT PROFESSOR	03-09-2009	02-09-2014	-	5 YEARS + 02 MONTHS
KONGU ENGINEERING COLLEGE	LECTURER	09-08-2007	02-09-2009	02-09-2009	2 YEARS +1 MONTH

SRI VENKATACHALA -PATHY POLYTECHNIC COLLEGE	LECTURER	14-07-2004	16-07-2005	16-07-2005	1 YEAR
SHRI NATRAJ CERAMIC AND CHEMICAL INDUSTRIES	ELECTRICAL ENGINEER	23-06-2000	20-02-2004	20-02-2004	3 YEARS + 8 MONTHS
ELECTRICITY DEPARTMENT PONDICHERRY	GRADUATE APPRENTICE TRAINEE	28-01-1999	27-01-2000	27-01-2000	1 YEAR
KUMAR & CO	ELECTRICAL ENGINEER	10-09-1997	18-12-1998	18-12-1998	1YEAR + 3 MONTHS

- **NPTEL :**

Sl. No.	Achievement	Organization	Year
1	COMPLETED COURSE ON CONTROL SYSTEM DESIGN	IISC-BANGALORE	2018
2	COMPLETED COURSE ON OPAMP APPLICATIONS DESIGN SIMULATION AND IMPLEMENTATION	IISC-BANGALORE	2018
3	COMPLETED COURSE ON POWER ELECTRONICS	IIT-DELHI	2019
4	COMPLETED COURSE ON PATENT LAW FOR ENGINEERS AND SCIENTISTS	IIT-MADRAS	2019
5	COMPLETED COURSE ON ELECTRICAL MACHINES II	IIT-KHARAGPUR	2020
	SYSTEM DESIGN THROUGH VERILOG	IIT GUWAHATI	2022
6	COMPLETED COURSE ON RTL TO GDS	IIT-DELHI	2023
7	COMPLETED COURSE ON ARM PROCESSOR DESIGN	IIT-KHARAGPUR	2024

- **Awards and Certifications:**

1. Guided the project entitled "REMOTE CONTROL OF TAP CHANGING WELDING TRANSFORMER" which secured second place in regional level and third place in state level competition during the year 2004-2005
2. Passed the national examination for certification of energy manager held in the month of September 2015 and qualified as CERTIFIED ENERGY MANAGER from 1st June 2016
3. Passed the national examination for certification of energy auditor held in the month of September 2022 and qualified as CERTIFIED ENERGY AUDITOR.

- **Additional / Academic Responsibilities at University:**

1. Acting as HOD-in charge of EEE Department from 24-12-2019 to TILL DATE.
2. Acting as Coordinator-Maintenance (Electrical) from 03-10-2012 to TILL DATE.
3. Acting as EDC-cell (Coordinator) from 2021 to TILL DATE.
4. Acting as SPOC of UCEA for Naan Mudhalvan Scheme (Tamil Nadu-govt.)
5. Acted as Executive Warden from 03-10-2012 to 07-08-2014.
6. Served as Project Co-ordinator for the INNOVAUTT club for Ariyalur campus inaugurated by Anna University Tiruchirappalli.
7. Acted as Board of Study Member for B.Voc Programme-SSDE-DDU KAUSHAL Centre at ICED-Bharathidasan University.

- **Sponsored project-Guided:**

S.No	Project Title	SIP-ID	Sponsoring agent	Sponsored amount (Rs.)
1	Battery operated iron box	2122S4462	CENTRE FOR SPONSORED RESEARCH AND CONSULTANCY-ANNA UNIVERSITY	25000

- **Guest lecture:**

S.NO	TITLE	EVENT	DATE	VENUE	MODE
1	Low Power Design in VLSI	ISTE Sponsored national level one day workshop	05-03-11	V.R.S. College of Engineering and Technology, Villupuram	Offline
2	Advanced System Design and Testing	Self –supporting	08-12-12	Angel. College of Engineering and Technology, Tirupur	Offline
3	Electrical Machines -II	Self –supporting	15-09-17	Annai College of Engineering and Technology, Kumbakonam	Offline
4	Analysis and Synthesis of Circuits	Anna University sponsored one week FDP	20-11-17	University College of Engineering Ariyalur , Ariyalur	Offline
5	Simulation of Series and Parallel Resonance Circuits-Practical Session	Anna University sponsored one week FDP	24-11-17	University College of Engineering Ariyalur , Ariyalur	Offline

6	Control Systems	Self –supporting	07-08-18	Annai College of Engineering and Technology, Kumbakonam	Offline
7	Recent Trends in Electro-Machinery	Self –supporting	20-08-18	K.S.K College of Engineering and Technology, Dharasuram	Offline
8	Electrical Machines-I	Self –supporting	16-10-18 & 17-08-18	C.K.K College of Engineering and Technology,Cuddalore	Offline
9	Artificial Intelligence for Agriculture	CSIR sponsored workshop	29-07-19	Vivekanandha College of Technology for Women, Trichengode	Offline
10	Applied mathematical tools in Electrical Engineering	Self –supporting	10-12-19	DDU KAUSHAL Kendra. Bharathidasan University, Khajamalai Campus, Trichy	Offline
11	Workshop on Arduino	Self –supporting	15-07-20	ECE Dept, SRMTRP Engineering College	Online
12	Conservation and judicial Usage of Energy for Future	IEEE Sponsored	27-10-20	Nandha Engineering College, Erode-52	Online
12	Energy Saved is Energy Earned	IIC & Renewable Energy club	25-02-22	Nandha Engineering College, Erode-52	Online
13	Electrical Machines-II	Anna University sponsored one week FDP	29-07-22	University college of Engineering Panruti, Panruti.	Offline
14	An Insight to FPGA & IoT-Design perspectives	IIC Sponsored	14-03-24	Nandha Engineering College, Erode-52	Online
15	Green Electronics for Sustainable Environment	The Institution of Engineers (India)-Tiruchirappalli	29-4-24	M.A.M College of Engineering, Tiruchirappalli-621105	offline

- **Events Conducted at Departmental level**

S.No	Conducted/ Organized	Title	Period
1	National Level one day Workshop	Modelling and Control of Electrical machines & Power Electronics Converters	13 March 2014
2	National Conference	Advanced Computing Technologies on power conversion and Control Systems	16 March 2016

3	National level Technical Project Exhibition	POWERSPEC-2K16	17 March 2016
4	One Week FDP programme	Circuit Theory	20-11-17 to 26-11-17
5	One Day Webinar	SCOPE AND OPPORTUNITIES OF WEBSERVICES IN ELECTRICAL DOMAIN	15th June 2020
6	One Week FDP programme	Electric Drives and Control	17-05-21 to 22-05-21

- **Completed B.E/M.E Projects:**
  a. Number of ME Projects Completed: 2 Nos
  b. Number of BE Project Completed: 32 Nos
- **Patent:**

Title of the invention: INTELLIGENT IMAGING TECHNIQUE FOR PRECISION FARMING.

Application No.202041029267 A

Date of filing of Application: 10/07/2020

Patent Application Publication Date: 31/07/2020

- **Publications :**

International Journals:

1. **S.Senthil kumar**, B.karthikeyan et.al (2015), "Automatic Positioning and Optimal Inclination Angles of Photovoltaic Panels for Maximum Power output", International Journal of Applied Engineering Research, Vol 10,ISSN 0973-4562,PP34779-34784.
2. **S.Senthil kumar**, B.karthikeyan et.al (2015), "Efficient Implementation of ESVPWM for Single Phase H-Bridge Multilevel Inverter", Australian Journal Basic and Applied Science, Vol 9(27),ISSN 1991-8178,PP448-456
3. M.Margabandhu, S.Sendhilnathan, **S.Senthil Kumar**, K.Hirthana (2016), "Experimental Investigation on Heat Transfer rate of Co-Mn Ferrofluid in External Magnetic field", Material Science-Poland, Vol 0048.
4. M.Margabandhu, S.Sendhilnathan,m **S.Senthil Kumar**, K.Hirthana (2016), "Investigation of Structural Morphological and Magnetic properties and Biomedical Applications of Cu^{2+} Substituted Uncoated Cobalt Ferrite Nanoparticles" Brazilian Archives of Biology and Technology, Vol 59.e16161046,PP. 1-10
5. **S.Senthil Kumar**.et.al(2017), "Efficient Implementation of MESVPWM in FPGA for Single Phase Cascaded H-Bridge Multilevel Inverter in VLSI", Journal of computational and theoretical Nanoscience,Vol.14 PP 4634-4640.
6. **S.Senthil kumar** and saravanan (2019), "Enhancing the efficiency of Solar Panel by reducing the environmental temperature",JASC: Journal of Applied Science and Computations, ISSN NO: 1076-5131, Volume VI, Issue III, March/2019,PP1005-1011.

7. S.Karunakaran, B. Poonguzharselvi, **S. Senthil kumar**, et.al(2021). "Power Efficient VLSI Architecture of 4X4 Modified Column Bypassing Multiplier" Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 4, 2021, Pages. 2116 – 2122
8. **S. Senthil kumar**, et.al (2021). "Modelling of MSVPWM for Single Phase H-bridge Five-level Inverter with PV and FPGA Implementation" Solid State Technology Volume: 64 Issue: 2, PP4268-4279.
9. **S. Senthil kumar**, et.al (2024). "Enhancing Grid stability and efficiency in buildings through forecasting and intelligent energy management of distributed energy resources" Electrical Engineering-Springer, https://doi.org/10.1007/s00202-024-02453-1.
10. S.Rajarajacholan, **S.Senthil Kumar** (2016) "Analysis of Buck –Boost Converter with an Auxiliary Resonant Circuit", J Electr. Eng. Technol. ,ISSN 2093-7423, Vol. 11(3),PP 781-789.

- **Conferences**

a. International Conferences:

- Presented a paper titled "Simultaneous Perturbation Learning Rule for Hopfield Neural Networks" in the international conference on Advanced Communication Systems, organized by Department of ECE, Government College of Technology, Coimbatore, from 10-01-2007 to 12-01-2007.

- Presented a paper titled "Analysis of Buck-Boost converter with an Auxiliary Resonant Circuit" in the international conference on Recent Trends in Electronics, Communication and Computation Technologies, organized by Department of ECE, Sri Ramanathan Engineering College, Tirupur, from during 05-03-2015 to 06-03-2015.

- Presented a paper titled " Intelligent LDR Positioning Based Solar Tracking Systems Using microcontroller AT89S51" in the international conference on Innovations and Research in Marine Electrical and Electronics Engineering, organized by Department of EEE(Marine), AMET University, during 10-04-2015 to 11-04-2015

b. National Conferences:

- Presented a paper entitled "Remote controlled Tap changing Welding Transformer" in DRDO sponsored national conference on Control Communication and System Engineering held on 14-09-2012 at Tamilnadu College of Engineering, Coimbatore

- **List of Seminar / Short Term Course /FDP/ Workshop attended: (Within India)**

1. Completed the industrial Automation Training course in PLC and SCADA held from 16-06-2003 to 21-06-2003 at Prolific Systems And Technologies Pvt. Ltd.
2. Participated in the orientation programme in "Microcontrollers" organized by Elumalai Polytechnic College, Villupuram from 17-12-2004 to 18-12-2004.
3. Participated in the VLSI Education Workshop organized by National Institute of Science and Technology, Berhampur from 19-10-2005 to 23-10-2005.
4. Participated in the National seminar on embedded systems, organized by SASTRA University Thanjavur, from 26-10-2006 to 28-10-2006.
5. Participated in the TEQIP sponsored FDP on Embedded systems, organized by EEE Department, Government College of Technology, Coimbatore. from 22-01-2007 to 24-01-2007.
6. Participated in the TEQIP sponsored Tribal Development Programme "Assembling Practice of low Power LED Lighting System", organized by ECE Department, Government College of Technology, Coimbatore. from 26-04-2007 to 28-04-2007.
7. Participated in the CSIR Sponsored National seminar on "Modern Trends in Instrumentation and Controls for Industrial Automation", organized by Dept. of Mechanical Engineering, Kongu Engineering College ,Erode, from 22-05-2008 to 23-05-2008.
8. Participated in the CSIR Sponsored seminar on "Research Issues in Image Processing", organized by Department of EEE, Kongu Engineering College , Erode, from 20-06-2008 to 21-06-2008.
9. Participated in the CSIR Sponsored National seminar on "PLC based Industrial Applications", organized by Department of EIE, Kongu Engineering College, Erode, from 24-07-2008 to 25-07-2008.
10. Participated in Workshop on "FPGA based System Design Using ALTERA EDA Tool", organized by Department of ECE, Kongu Engineering College, Erode, on 21-11-2008 .
11. Participated in the DST Sponsored seminar on "Wavelets for Data and Information Analysis", organized by Department of EEE, Kongu Engineering College, Erode, from 01-12-2008 to 03-12-2008.
12. Participated in the MHRD-AICTE Sponsored SDP on "Recent Research on Fuzzy Logic and Neural Networks", organized by Department of EEE and Mathematics, NITT, Trichy, from 21-06-2010 to 03-06-2010.
13. Participated in the two days workshop on "Networking Simulator Tools", organized by Department of ECE, Anna University, Trichy, from 17-07-2010 to 18-07-2010.
14. Participated in the two days workshop on "Embedded Engineering Solutions for Automation", organized by Department of EEE, Anna University, Trichy, from 14-10-2010 to 15-10-2010.
15. Participated in the two days national seminar on "Research Issues on PID Controllers and Soft computing Techniques" conducted by Department of Instrumentation and

control Engineering held on 17-02-2012 and 18-02-2012 at Tamilnadu College of Engineering, Coimbatore.

16. Participated in Two days National Workshop on “Research Methodology for Engineering and Management”, organized by Department of EEE & ECE, Kongu Engineering College, Erode, from 31-08-2012 to 01-09-2012.
17. Participated in the AICTE Sponsored two weeks FDP on “Avenues for Advanced Research in Modern Power Electronics and Hybrid Energy Systems”, organized by Department of EEE, Government College of Technology, Coimbatore, from 15-05-2013 to 28-05-2013.
18. Participated in the TEQIP Sponsored short term course on “Low Power controller Design UsingMSP-430 Microcontroller”, organized by Department of EEE, NIT, Trichy, from 20-05-2014 to 21-05-2014.
19. Participated in Two week ISTE workshop on Control systems, organized by Indian Institute of Technology, Kharagpur, from 02-12-2014 to 12-12-2014.
20. Participated in one day workshop on ETAP software and its applications, organized by University College of Engineering Ariyalur, , on 03-03-2015.
21. Presented a paper entitled “Enhancing the Efficiency of Solar Panel by reducing the Environmental Temperature” in the national workshop on Recent Advances in Engineering Materials and Chemical Sciences, organized by University College of Engineering Villupuram, , on 26-02-2016
22. Participated in the TEQIP Sponsored short term course on “Role of Power Electronics in Power Engineering”, organized by Department of EEE, NIT, Trichy, from 04-03-2016 to05-03-2016.
23. Participated in the short term course on “Photovoltaic Module Interconnection Schemes and MPPT Implementation”, organized by Department of EEE, NIT, Trichy, from 27-05-2016 to 28-05-2016.
24. Participated in FDP on “Graphical System Design Platform-Labview for Engineering Applications”, organized by School of EEE, SASTRA University, Thanjavur from 30-05-2016 to 04-06-2016.
25. Participated in FDP on “VLSI Design Flow from Front End to Back End”, organized by School of EEE, SASTRA University, Thanjavur, from 13-06-2016 to 18-06-2016
26. Participated in FDP on “EE-6603- Power System Operation and Control”, organized by University College of Engineering Thirukkuvalai, , from 21-11-2016 to 27-11-2016.
27. Participated in FDP on “MA-6351- Transforms and Partial Differential Equations”, organized by University College of Engineering Ariyalur, , from 25-05-2017 to 31-05-2017.
28. Participated in FDP on “ARM Processor for Power Electronics”, organized by School of Electrical Engineering, VIT University , Vellore from 13-10-2017 to 15-10-2017.
29. Participated in AICTE sponsored FDP on “Digital Energy Network: Internet of things and Smart Grid Technologies”, organized by Department of Electrical and Electronics Engineering, Coimbatore Institute of Technology ,Coimbatore from 29-12-2017 to 11-01-2018.

30. Participated in 3 days FDP on “Innovation & Entrepreneurship Development” organized by Programme Monitoring Office at University College of Engineering Villupuram from 18-07-2019 to 20-07-2019.
31. Participated in one week faculty development programme on “Sustainable Energy Technologies”, organized by Department of Electrical and Electronics Engineering, BIT Campus in association with Institute of Engineers (India),Tiruchirappalli local centre from 28-07-2020 to 01-08-2020.
32. Participated in Two weeks faculty development programme on “Future Automation of power system protection in Indian power sector”, organized by Department of Electrical and Electronics Engineering, BIT Campus in association with Anna University from 26-11-2021 to 09-12-2021.
33. Participated in Two weeks faculty development programme on “Entrepreneurships & Start-up’s”, jointly organized by Anna University and EDII-Ahmedabad from 28-02-2022 to 12-03-2022.
34. Participated in 5days online FDP on “Inculcating Universal Human Values in Technical Education”, organized by AICTE from 06-06-2022 to 10-06-2022.
35. Participated in one week “capacity building programme-Innovation Mentor” organized by Government College of Engineering Srirangam, Trichy from 12-09-2022 to 16-09-2022.