

CURRICULAM VITAE

- 1. Name** : **Dr.SP.UMAYAL**
- 2. Qualification** : **Ph.D. Power Systems**
- 3. Date of Birth** : **06.09.1969**
- 4. Sex** : **Female**
- 5. Marital Status** : **Married**
- 6. Husband's Name** : **C.Ragurambabu**
- 7. Residential Address** : **6-1/48, West Street,
Viswanathapuram, Madurai 625014.**
- 8. Phone No.** : **8838498701, 9487181051**
- 9. E-Mail ID** : **umayalbabu@gmail.com**
- 10. Experience** : **29years 6monthsTeaching
1year 6months industry
IQAC co-ordinator for NAAC 3rd Cycle (Received
A+)**
- 11. Research Guidance** : **3 Scholars Completed Ph.D.
20 M.E. student projects completed**
- 12. Membership** : **IE(I) life member
ISTE Life member**
- 13. Any other relevant information:** **Hindi Rashtrabasha Praveen completed. Can
speak,write and read Hindi
Board of Studies member Anna university of
technology, Tirunelveli**
- 14. Details of Qualification as given below:**



Degree	College/University	Year of Passing	Branch / Specialization	Class
Ph.D	AnnaUniversity Chennai	2008	Electrical Engineering/ Power System Optimization	--
M.E.	Thiagarajar college of Engineering, Madurai Kamaraj University	1999	Power System	I st class
B.E.	Thiagarajar college of Engineering, Madurai Kamaraj University	1990	EEE	I st class

15. Title of Ph.D. Thesis : Particle Swarm Optimization technique to solve Stochastic Multi-objective power system optimization problems.

16. Professional Experience (Starting from the present Employment):

Sl.No.	University/College/R&D Organization/ Industry	Designation	Period		Total Years
			From	To	
1.	Vaigai college of Engineering	Professor & HOD	19.01.26	Till date	
2.	P.S.N college of Engineering and technology(Autonomous)	Principal	3.9.24	31.12.25	1 year 3months
3.	P.S.N college of Engineering and technology(Autonomous)	Dean Academic	3.8.22	2.9.24	2 year 1 months
4.	P.S.N college of Engineering and technology(Autonomous)	IQAC coordinator cycle 3	3.6.19	3.8.22	3 year 3 months
5.	VPMM Engineering college for women, Krishnankovil	Principal	17.10.18	6.5.2019	7months
6.	Muthayammal Engineering College Rasipuram	Professor & Dean	24.8.2015	31.5.2018	2 years 9months
7.	ULTRA College of Engg. & tech. for Women Madurai	Professor & VP	7.11.2013	17.3.2015	1 year 5months
8.	Sethu Institute of Technology	Professor & HOD	01.07.2007	26.10.2013	6Years 3months

9.	Sethu Institute of Technology	Assistant Professor & HOD	01.07.2002	30.06.2007	5 Years
10.	Sethu Institute of Technology	Senior Lecturer & HOD	01.07.2000	30.06.2002	2 Years
11.	Sethu Institute of Technology	Lecturer	30.07.1996	30.06.2000	4 Years
12.	TNEB TUTICORIN	Apprentice Trainee	20.04.1991	19.04.1992	1 Years
13.	ONLOAD GEARS	Trainee Engineer	01.11.1992	20.04.1993	6 months
Total Teaching Experience in Engineering College					29 years 6 months
Industrial Experience					1 year 6 months
Total Experience					31 years

17. Research Guidance (No. of Thesis guided/guiding)

(a) Master's Thesis : 20 Guided

(b) Ph.D. Thesis : 3 completed

S.Murugan has completed Ph.D. under my guidance on the topic “Enhancing the performance of transducers by soft computing based signal conditioning techniques”.

P.Manigandan has completed Ph.D. under my guidance on the topic “Performance evaluation of various control techniques for power quality enhancement in solar PV distributed generation”.

CR. Rajesh has completed Ph.D. under my guidance on the topic “Harmonic mitigation techniques for enhancing power system stability using decoupled double synchronous reference frame theory”.

DC Committee member for

1. P.Ebby Daney (Reg. No. 20117301016)
2. R.Arul Jose (Reg. No. 20117301015)
3. M.Lakshmanan (Reg. No. 20117301011)
4. S.Srinivasan (Reg. No. 20117301007)
5. R.N.Kavitha (Reg. No. 2011130135)

18. Resource person:

- ❖ Chair person for international conference on “Advance manufacturing & automation” Kalasalingam university Krishnankoil on 26th to 28th march 2009.
- ❖ Chair person and judge for paper presentation in technical symposium at Vickramcollege of Engineering on 7th Feb 2006.
- ❖ Chief guest for symposium at VPMM Engineering college for woman on 9.10.09.
- ❖ Judge for paper presentation in technical symposium at KLN College of Engineering on 22nd Sep 2005.
- ❖ Judge for paper presentation in technical symposium in ECE department at sethu institute technology on 22nd feb 2008.

19. Cash awards received for Good results:

S.No.	Degree	Academic year	subject	%results
1	PG	2012-13	Soft computing techniques	100%
2.	PG	2012-13	High voltage DC transmission	100%
3.	PG	2011-12	Special Electrical machines	100%
4.	PG	2011-12	Soft computing techniques	100%
5.	PG	2010-11	Flexible AC Transmission systems	100%
6.	UG	2009-10	Power quality	98%
7.	UG	2008-09	Power system transients	98%
8.	UG	2008-09	Protection and switchgear	94%
9.	UG	2007-08	Power quality	96%
10.	UG	2006-07	High voltage Engineering	95%
11.	UG	2004-05	Protection switchgear	97%
12.	UG	2002-03	Principles of Robotics	100%

20. Courses Attended:

A) QIP Courses Attended:

S.No.	Title	Place	Duration
1.	Control Systems	IIT Bombay	3-7 December 2012
2.	VLSI DSP based Embedded Systems for biomedical applications	IIT Karagpur	9-22 July 2010
3.	Applications of solar energy and earned carbon credits	IIT Delhi	6-12 Feb 2009
4	Applications of MATLAB in Engineering	IIT Kanpur	16-31 may 2006
5.	Instructional design and delivery system	NITTR Chennai	3 rd to 8 th Nov 2008

B) Seminar /Workshops attended:

1. National webinar on IoT Based Automation System on 27th June 2021 Calcutta Institute of Technology, Howrah
2. National webinar on Technological Innovation and Academia Industry Collaboration under Self-Reliant India on 23/07/2020. at mohamedsathak A J college of engineering, Chennai.
3. National webinar on Wind energy conversion technology 30th May 2020 at Dhaanish Ahmed College of Engineering, Chennai.
4. National webinar on FUTURE TECHNOLOGY TOOLS - FOR A PROCESS AUTOMATION ENGINEER 16th June 2020 at Kumaraguru College of Technology, Coimbatore
5. National Workshop on "How to Draft Effective Scientific Publications, Patents and Patent Filing" from 02.07.2020 to 04.07.2020 at Bharat Institute of Engineering and Technology, Chennai.
6. National seminar on salient aspects of new accreditation system on 3rd & 4th Feb 2012 at Sethu Institute of Technology Kariapatti.
7. National programme on technology enhanced learning (IIT Madras) NPTEL workshop on 10.11.12 at Sethu Institute of Technology Kariapatti.
8. AICTE sponsored national seminar on Nano technology perspectives & prospects on 8th & 9th June 2007 at Sethu Institute of Technology Kariapatti
9. RIPE Faculty development programme on 28th & 29th June 2007.
10. AICTE sponsored national seminar on micro sensors development & deployment challenges on 17th & 18th December 2007 at Sethu Institute of Technology Kariapatti
11. Centre for intellectual property rights and trade marks Anna University Chennai at Thiagarajar College of Engineering Madurai on 30th & 31st Jan 2009 in association with the ministry of communication & information technology Government of India & patent office Chennai.
12. Seminar on Energy conservation conducted by NSIC technical service centre, National small scale industries Corporation Ltd. & MADITSSIA on 29th July 2009 at MADITSSIA hall, Madurai.

C) Faculty Development Programmes attended:

S.no	Title	Place	Date
1.	OBE and NBA Accreditation	NITTTR, Chandigarh	23 rd to 27 th May 2022
2.	Recent advances in EV Technologies series C	Matrusri Engineering college, Hyderabad	14th to 19th June 2021
3.	Recent advances in EV Technologies series B	Matrusri Engineering college, Hyderabad	17th to 22nd May 2021
4.	GREEN TECHNOLOGY AND SUSTAINABILITY	Sathyabama Institute of Science and Technology, Chennai	15th to 19th March 2021
5.	Applications of NI Labview	Nagarjuna college of Engineering and	7th to 12th Dec 2020

		Technology bengaluru	
6.	Assessment in Engineering Education a pedagogical approach	Velammal Institute of Technology Chennai.	14th to 20th Dec 2020.
7.	System Engineering	NIT,Delhi	26th to 30thoct 2020
8.	PLC programming for Industrial applications	NITTTRChandigarh	27th to 31st July 2020
9.	Engineering optimization	NITTTRChandigarh	13th to 17th July 2020
10.	Nanomaterials and devices	NITTTR Chandigarh	25th to 29th May 2020
11.	Modelling and simulation using MATLAB	NITTTR Chandigarh	18th to 22nd May 2020
12.	Research Oriented Project Work	NITTTR Chandigarh	11th to15th May 2020
13.	Academic leadership enhancement in technical instutions	NITTTR Chandigarh	4th to 8th May 2020
14.	Teaching and Learning for Accereditation in Technical Education	NITTTR Chandigarh	27th April 2020 to 1st may 2020
15.	Curriculum Implementation	NITTTR Chandigarh	20th to 24th April 2020
16.	Internet of Things	NITTTR Chandigarh	10th to 14th April2020
17.	Smart grid challenges and opportunities	GovernmentCollege of Engineering coimbatore	29th May to 11th June 2013
18.	Power Quality issues and solution	NIT calicut	11 to 23 june 2007
19.	Neuro fuzzy based industrial automation	Kongu Engineering college Perundurai	15 to 29 march 2004
20.	Neural network and fuzzy logic	RMK engineering College Chennai	22 to 29 June 2003
21.	Applications of neuro fuzzy logic	Kongu Engineering college Perundurai	10 to 23 Nov 2002

21. Guest lectures delivered:

S.No.	Title	Place	Date	Event
1.	Genetic Algorithm and its applications	SACS MAVMM engineering College, Madurai	1.2.2007	Students Association Inaugural Function
2.	Evolutionary computating techniques in optimization	Vikram college of engineering Madurai	26.3.07	Students Association Function

3.	Fuzzy logic applications	Sethu institute of technology	8.12.07	National Workshop
4.	Distributed generation and smart grid	Sreesowdambika college of Engineering, Aruppukottai	7.7.12	Faculty development programme
5.	Electrical machines	M.Kumaraswamy college of Engineeringkarur	23.7.13	Visiting faculty

22. Publications:

A) Conference Publication :

S.No.	TITLE OF THE PAPER	CONFERENCE VENUE	DATE
1	Separable Programming Technique for Stochastic Economic Dispatch	International Conference-ICORD at AnnaUniversityChennai	27-30 December 2002
2.	Stochastic Economic Power Dispatch using Genetic Algorithm	Government college of Technology, Coimbatore	13th - 14th March 2002
3.	Quasi Resonant DC Converters	AnnamalaiUniversity	22nd & 23rd , March 2003
4.	Particles swarm Optimization to Solve Stochastic Economic Power Dispatch	II Sc Bangalore.	26.11.2004 & 27.11.2004
5..	“Stochastic Multi Objective Short Term Hydro Thermal Scheduling using Particle Swarm Optimization”	IIT Chennai	11.12.2005 & 13.12.2005
6.	“PSO to Multi Objective Stochastic optimal Thermal power dispatch including risk measure”	CPRI, Bangalore	20.12.2005 & 22.12.2005
7.	PSO to solve stochastic economic emission dispatch	TCE, Madurai	16th & 17 December 2005
8.	Four Port BidirectionalDC Transformer.	SudersunEnggCollege	5.4.2011& 6.4.2011
9.	Totem-Pole Boost Bridgeless Rectifier with reduced Reduced reverse recovery problems for power factor correction using interleaving Technique.	AlagappaChettiarCollege of Engg& Tech	9.3.2011
10.	Modular Structure Zero Current Switching Switched CapacitorDC- DC Converter for Driver Application	Bannari Amman Institute of Technology	9.3.12

11.	Multiphase Multilevel Modular DC-DC Converter for High Current and High Gain	Saranathan college of engineering	17.3.12
12.	A Novel Capacitive Snubber for DC/DC Boost Converters used in Drive Applications	R.M.K.EngineeringCollege	10.3.12
13.	Simulation and Analysis of Cascaded Multilevel Inverter using Wave Shifting Multi carrier Modulation	National engineering college	30.3.12
14.	Design and Analysis of Soft Switched Non Isolated DC-DC Converter	SSN College of Engineering	22.3.12 & 23.3.12
15.	A modified time sharing switching technique for multiple input DC-DC converters by using fuzzy logic controller	K.Ramakrishna college of technology	14.02.13
16.	Photovoltaic high Intensity discharge Street lighting system using fuzzy logic controller	Maria college of engineering and technology	22.03.13
17.	PWM z-source dc- dc converter in ccm for solar application	Bannariamman institute of technology	20.04.13
18.	PWM z-source dc- dc converter in ccm for solar application	AnnaUniversitycoimbatore	27.03.13
19.	A high frequency resonant converter operating above resonance for DC to DC energy conversion	SSN chennai	2.03.13
20.	PV Delta conversion concept using SEPIC converter.	AnnaUniversityMadurai	28.03.13
21.	Solar Based Battery Charging In Vehicles Using Interleaved Boost Converter	RMK Engineering College	18.3.13
22.	Fault detection and identification on smart grid using synchronized measurement unit	IIT Madras	29-30 Dec 2015
23.	Shuffled frog leaping algorithm for handling economic dispatch in optimization with generator Constraints	Jayaramcollege of Engineering and technology	4 th may 2016
24.	Analysis of economic dispatch using ABC algorithm compared with other intelligent techniques	Jayaramcollege of Engineering and technology	4 th may 2016
25.	To solve economic dispatch problem using SLFA	EXCEL College of Engineering and Technology	April 1&2 2016
26.	Monitoring and detection of transmission line fault using DWT	EXCEL College of Engineering and Technology	April 1&2 2016
27.	High Efficiency soft switching isolated AC-DC converter with Fuzzy controller	IIT Madras	24-25 Feb 2018

28.	Load frequency control of two area inter-connected hydro-thermal power system using ANFIS controller	IIT Madras	24-25 Feb 2018
29.	Solar PV integrated UPQC-S for power quality enhancement using modified p-q theory	IIT Madras	24-25 Feb 2018
30.	Load frequency control of hydrothermal system with grey controller considering boiler dynamics.	Easwari Engineering college	1&2 April 2018
31.	Solar PV integrated UPQC using Fuzzy logic controller for a grid connected system	Easwari Engineering college	1&2 April 2018
32.	Design and development of renewable powered E- bike 24th	SSN college of engineering Chennai.	24th Jan 2020
33.	Design and fabrication of electric Go-Kart	SSN college of engineering Chennai.	24th Jan 2020
34.	Single ended primary inductor converter for delta conversion of pv systems	CMR college of Engineering and Technology Hyderabad	7th & 8th January, 2021
35	Multiple input fuzzy controlled DC-DC converter for harvesting renewable energy	SSN college of engineering Chennai.	11 th to 13th Feb 2021

B) Journal Publications:

	Journal Name	Title of Paper	Year/ Vol. / Page
1.	International Engineering and Technology Journal of Advanced Computations	“A comparative study of deterministic and stochastic multi – objective Hydro thermal scheduling using PSO”	2007 Page No : 29 – 35
2.	International Engineering and technology Journal of Electrical Analysis	“Stochastic multi objective generation scheduling by particle swarm optimization technique”	2007 Page No: 41 – 47
3.	Journal of Energy and Environment	“Particle Swarm Optimization Technique for stochastic Multi –objectives Combined Heat and power Dispatch”	2007 Vol.6, May

4.	National Journal of Institution of Engineers (India), Electrical Division	“Genetic Algorithm application to stochastic thermal power dispatch”	June 2004, vol.85, pp.43 – 48.
5.	CIIT International journal of programmable Device Circuits and systems	Multilevel Modular Switched Capacitor Fed Dc Drive	Feb2012, Vol.4.No.2,Pg 100-103
6.	International Journal of Emerging trends in Engineering and Development	Analysis and Design of Modular Switched-CapacitorDC-DC Converter for Low Power High Current Application	April 2012, Vol.3, Issue 2, Pg 237 - 244
7.	CIIT International journal of programmable Device Circuits and systems	Complementary Switching Multi-Level Inverter Using Wave Shifting Multi Carrier Modulation	April 2012,Vol.4 No.4,Pg 212-217.
8.	Journal of Electrical Engineering	Comparison of current controllers on photo voltaic inverters operating as var compensators	Vol.EE38. No.7 june2012
9.	International Journal of Emerging Technology And Advanced Engineering	Solar based battery charging in vehicles using interleaved boost converter	Vol.3,Issue 4, Apr,2013
10.	International Journal of Scientific & Engineering Research	A three phase five level inverter with coupled inductor using SVPWM	Vol.4,Issue 4, Apr,2013
11.	International Journal of Advanced Information Science and Technology	A Modified-Time-Sharing Switching Technique for Multiple-Input DC–DC Converters by using Fuzzy Logic Controller	Vol.12, No.12, April 2013
12.	International Journal of Emerging Technology And Advanced Engineering	MPPT based photovoltaic high intensity discharge street lighting system using fuzzy logic controller	vol 3,issue 5 pg 137-142
13.	International Journal of Advanced Information Science and Technology	pwm z-source dc- dc converter in ccm for solar application	Vol.12,No.12 pg11-16
14.	CIIT International journal of programmable Device Circuits and systems	A new resonant converter operating above resonance for dc to dc energy conversion	, Vol5, No 4 April2013 pg128-131
15.	CIIT International journal of programmable	Design and implementation of bridgeless sepic rectifier for power factor correction	Vol 5, No 4 April2013 pg156-161

	Device Circuits and systems		
16.	International Journal of Emerging Technology And Advanced Engineering	Solar Based Battery Charging In Vehicles Using Interleaved Boost Converter	Vol 3, Issue 4 April 2013 pg272-277
17.	CIIT International journal of programmable Device Circuits and systems	An interleaved buck converter with PID controller	Vol 5, No 4 April2013 pg144-150
18.	International Journal of Scientific & Engineering Research	A three phase 5-level inverter with coupled inductor using SVPWM	Pg 1220-1224 Feb 2013
19.	International Journal of Electrical and Electronics Engineering	Analysis of faults in transmission line with the help of Discrete Wavelet Transform	Special issue ICCREST-16
20.	International journal of Emerging technology in computer science and electronics	An interactive operation strategy for microgrid cooperated with distribution system	vol.24,issue 8 pp.16-20 may 17
21.	International journal of modern trends in engineering and science	Battery management system for smart grid Environment	Vol 4,issue 6 pp 23-27 2017
22.	CiiT International Journal of Fuzzy Systems. Impact factor 0.441	Solar pv integrated upqc using fuzzy logic controller for a grid connected system	June 2018
23.	Journal of Power Electronics Annexure 1 IF(1.43)	Shunt active filter for multilevel inverter using DDSRF with state delay controller	vol. 18, No.3 pp863-870 may 2018
24.	Journal of Electrical Engineering Annexure – I Impact factor: 0.86	SOGI-Q based control of power quality enhancement in solar PV distributed generation'	Volume 19, edition-4, PP: 240-245 2019
25.	Caribbean Journal of Science Impact factor: 0.2,	Fuzzy controlled solar PV distrbuted generation system interconnected with grid	Volume 53, ISSUE 1 (JAN – APR), Page number: 330- 339. 2019 JAN
26.	Annual technical volume of electrical engineering division of the Institution of Engineers (India)	Modern Electric Bicycle	Tech /P.11/ELDB ATV ELDB14

27.	International Journal of Engineering and Advanced Technology (IJEAT)	Multilevel Inverter Topology with Reduced Number of Switches	ISSN: 2249 – 8958, Volume-8, Issue-6S3, September 2019
28.	Annual technical volume of electrical engineering division of the Institution of Engineers (India)	A real time solar PV asymmetrical cascaded H bridge inverter with selective harmonic Elimination PWM using Artificial neural network	Volume 5 ,2020,Pg 9-15
29.	Turkish Journal of Computer and Mathematics Education	Single Ended Primary Inductor Converter for Delta Conversion of PV Systems	Vol.12 No.3(2021), 4610-4620
30.	Turkish Journal of Computer and Mathematics Education	Bridgeless SEPIC Power Factor Correction Rectifier in DCM with reduced Losses	Vol.12 No 13 (2021), 5732-5740
31.	Design Engineering	Detection of voltage and frequency variations in power grid with arduino	Year 2021 Issue: 5 Pages: 2446-2452
32	Design Engineering	Complementary Switching Multilevel Inverter with Wave Shift Multi Carrier Modulation Control	Year 2021 Issue: 9 Pages: 844 – 853
33.	International Journal of Mechanical Engineering	27- Level inverter using Multi-Tapped Multi - Winding transformer with single input DC source	Vol. 6 No. 3 December, 2021

23. Duties Carried Over as Head of the Department ;

1. Developed the department from inception
2. Developed the following laboratories:
 - Electrical machines Lab
 - Power Electronics Lab
 - Computer simulation Lab
 - Measurements and control Lab
 - PG power Electronics Lab
3. Obtained ISO certification in year 2000.

4. Obtained NBA certification for the department in the year 2008.

5. MOU signed

S.No	Company Name	Address
1.	Erode District small Industries Association(EEDISSIA)	President EEDISSIA,5/1, SIDCO Industrial Estate Erode.
2.	Namakkal District Small Industries Association (NADISIA)	President,NADISIA,Namakkal
3	R.K.G Ghee Plant	R.K.Ganapathi chettiar,138,Muthur road,Kangayam-638701
4	ALFA Switchgears(I)PVT.LTD.	V.S.Elango, No.27,Moolakarai Road,Nasiyanoor,Erode
5	Shree Gowriamman Industries	P.Thiyagarajan, 4/83-j,Thuraiyur Road,Namakkal
6	MADITSSIA	President MADITSSIA,5/1, SIDCO Industrial Estate Madurai
7	Mcold Transformers	Madurai

6. Convener Department advisory board

7. Consultancy Project: Project Kit designed for measuring the level of ghee in the tank was completed and installed successfully for M/S R.K.G ghee Kangayam

8. Autonomous Syllabus Framing committee Chairman for

1. M.E. PED

2. M.E. PSE

3. EEE

9. Programs organized:

- Convener for Students Technical Symposium every year
- Arrangement of Guest lectures two in a semester
- Convener of national conference –ETPEPS-08
- Convener of national conference –ETPEPS-12
- Department magazine release every semester
- Convener – rural development programme on Tubelight choke winding
- Convener – rural development programme on House wiring.
- Convener – AICTE sponsored seminar in energy conservation and safety held on 29th&30th June 2009.
- Convener – National Franchise Training programme conducted by TNEB, Madurai at college campus.

- **Convener –Faculty development programme on MultiSim software**
- **Convener–Faculty development programme on PLC and SCADA**
- **Convenor–Anna university sponsored faculty development programme on solid state drives.**

24. Institutional Level Responsibilities:

- **Dean Academics**
- **IQAC Co-Ordinatorfor NAAC cycle 3 (Got A+ at PSN college of Engineering and technology)**
- **Audio System incharge**
- **Purchase Committee in charge**
- **Discipline Committee in charge**
- **Timetable Co-ordinator**

25.Passed NPTEL online certification course conducted by IITM Chennai on soft computing technique with 70 marks with ELITE grade in May2018.

26. Passed NPTEL online certification course conducted by IITM Chennai on Accreditation and outcome based education with 91 marks with ELITE GOLD grade(Top5%) in November2024.

27. Passed NPTEL online certification course conducted by IISc bangalore on Teaching and learning in general programme with 79 marks with ELITE Silver grade in September 2025