

**Department of Electrical and Electronics Engineering  
UCE- Panruti (Deployed from BIT Campus)  
University College of Engineering, Panruti  
Panruti - 607106  
8903678363  
mangaisowmeya@gmail.com**



**Dr. S.P. MANGAIYARKARASI  
Assistant Professor**

➤ **Educational Qualifications:**

Qualification	Department	University/ Institution	Year (From -To)	%	Class
Ph.D	ELECTRICAL	Anna University	2010-2015		
ME	POWER SYSTEMS	Annamalai University	2002-2004	8.5	First class with distinction
BE	EEE	Madurai Kamaraj University/ Alagappa Chettiar College of Engg & Tech, Karaikudi	1992-1996	66	First class
HSC	A GROUP	St. Mary's Mat HSS	1992	84.6	First class
SSLC	MATRIC	St. Mary's Mat HSS	1990	81.8	First class

➤ **Experience:**

Name of Institutions	Designation of Post	From	To	Relived on	Pay scale	Experience in Year
Annai Vellankanni Polytechnic, Panruti	Lecturer	04.06.1997	30.04.1998	30.04.1998	-	<b>0 Y 10M</b>
Dr.NNCE, Tholudur	Lecturer	01.06.1998	30.06.2000	30.06.2000	-	<b>2Y1M</b>
BCET, Karaikal	Lecturer	03.07.2000	10.07.2002	10.07.2002	8000- 275-13500	<b>2Y 0M</b>

<b>Name of Institutions</b>	<b>Designation of Post</b>	<b>From</b>	<b>To</b>	<b>Relived on</b>	<b>Pay scale</b>	<b>Experience in Year</b>
KCET, Cuddalore	Assistant Professor	07.06.2004	24.08.2009	24.08.2009	12000 – 420 -18300	<b>5Y 2M</b>
Anna University, BIT Campus, Tiruchirappalli	Assistant Professor	26.08.2009	17.7.2014	17.7.2014	15600 – 6000- 39100	<b>4Y 10M</b>
University College of Engineering, Panruti	Assistant Professor	18.07.2014	Till date	-	21390 – 6000- 39100	

**Total Years of Teaching Experience:** 21 years

➤ **Research Title:**

Risk Based Voltage Security Assessment and Mitigation in Power System using Hybrid Optimization Algorithm

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

1. Department Cultural coordinator from 21.02.2011 to 17.7.2014 at BIT Campus, Tiruchirappalli.
2. Department Alumni coordinator from 17.9.2012 to 17.07.2014 at BIT Campus, Tiruchirappalli.
3. Convenor for Anti ragging squad team for the academic year 2012 – 2013 at BIT Campus, Tiruchirappalli.
4. College EDUSAT coordinator from 8.7. 2016 to 2018 in University College of Engineering, Panruti.
5. Served as Inspection Committee Member for Affiliation.
6. Served as Chairman for EEE board, Central Valuation, Zone XII, Villupuram.
7. Deputy Warden/ Girls Hostel/ University College of Engineering, Panruti.
8. Doctoral Committee Member for 4 Ph.D students in Anna University

➤ **Professional Activities:**

**a. Conference/Workshop Organized:**

1. A Two day workshop on “Energy Management and Conservation in Modern Buildings” at BIT campus, Tiruchirappalli from 20<sup>th</sup> to 21<sup>st</sup> Dec, 2010.
2. TEQIP II sponsored National Conference on “Issues in Power Quality and Renewable Energy Systems” at BIT campus, Trichirappalli from 29<sup>th</sup> to 30<sup>th</sup> April 2014.
3. Third National Conference on “Drastic Innovations in Energy Thrive” organized by SCOPE, Department of Electrical and Electronics Engineering Student’s Association, University College of Engineering, Panruti on 24<sup>th</sup> March 2016.
4. 5<sup>th</sup> National level Workshop and Symposium organized by the Department of EEE, University College of Engineering, Panruti on 27<sup>th</sup> September 2017.

**b. Invited Lectures/Talks:**

1. Delivered a Technical lecture in the topic “Stability Analysis” in the Anna University sponsored FDP on “Control Systems” at UCE, Pattukkottai on 15<sup>th</sup> May 2015.
2. Delivered a Technical lecture on the topic “Transient Response in AC circuits” in the Anna University sponsored FDP on EE6201- Circuit Theory at UCEP, Panruti on 14<sup>th</sup> Dec 2015.
3. Delivered a lecture on the topic “Synchronous Machines” in the Anna University sponsored FDP on EE6312- Design of Electrical Machines conducted by University College of Engineering, Dindugul on 19<sup>th</sup> December 2015.
4. Delivered a Technical lecture on the topic “Voltage Stability in Power Systems” in the National Conference organized by St. Annes College of Engineering and Technology, Panruti on 26 Feb 2016.
5. Delivered Valedictory Address in the paper presentation context conducted at VRS college of Engineering and Technology, Arasur on 17<sup>th</sup> March 2016.
6. Jury member in the paper presentation context conducted at IFET college of Engineering, Villupuram on 27<sup>th</sup> Aug 2016.

7. Delivered a technical lecture on the topic “Voltage and Reactive Power control” in Anna University sponsored FDP at UCE, Tirukuvalai on 21<sup>st</sup>December 2016.
8. Delivered a technical lecture on the topic “Design of DC Machines” in CK College of Engineering on 27<sup>th</sup> Jan 2017.
9. Delivered a technical lecture on the topic “Design of Electrical Machines” in Krishnasamy College of Engineering and Technology on 11<sup>th</sup> March 2017.
10. Delivered a lecture on the topic “Transients in RL, RC and RLC Circuits” in the Anna University sponsored FDP on EE8251- Circuit Theory conducted by University College of Engineering, Ariyalur on 21<sup>st</sup> November 2017.
11. Delivered a technical lecture on the topic “Advances in Electromagnetic Fields” in Idhaya Engineering College for Women on 09<sup>th</sup> August 2019.
12. Delivered a technical lecture on the topic “Electromagnetic Theory in Advanced Technology” in the webinar conducted by Dept of ECE, M.A.M school of Engineering, Trichirappalli on 5<sup>th</sup> August 2020.
13. Paper Presentation Chair Person in the IEEE Second International Conference on “ Power, Energy, Control and Transmission Systems” conducted by Sri Sairam Engineering College, Chennai on 10<sup>th</sup> and 11<sup>th</sup> December 2020.
14. Delivered a technical lecture on the topic “Trends in Transmission and Distribution” conducted by Sri Sairam Engineering College, Chennai on 15<sup>th</sup> March 2021.

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

1. ISTE sponsored national seminar on “Recent Advances Growth and Achievements in Modern Engineering” organized by the Department of EEE, Sri Manakula Vinayagar Engineering College during 26<sup>th</sup> and 27<sup>th</sup> NOV 2004. (02 days)

2. FDP on Total Quality Management organized by KCET, Cuddalore on 18<sup>th</sup> DEC 2004
3. A two day workshop on “Embedded Engineering Solutions for Automation” organized by Department of Electrical and Electronics Engineering Anna University of Technology Trichirapalli on 14<sup>th</sup> & 15<sup>th</sup> OCT 2010 (02 days)
4. A two day workshop on “Soft Computing Techniques in Power Electronics Systems” organized by Department of Electrical and Electronics Engineering Anna University of Technology Trichirapalli on 02<sup>nd</sup> & 03<sup>rd</sup> FEB 2011 (02 days)
5. One week TEQIP sponsored FDP titled “ Emphasis on Smart Operations and control of Power Markets using power electronic components” organized by the Dept of EEE, PEC, from 19<sup>th</sup> to 23<sup>rd</sup> Nov,2012. (5 days)
6. AICTE sponsored FDP titled “Analysis, Operation and Control of Restructured Power Market” organized by the Department of EEE, PEC, from 27<sup>th</sup> May to 7<sup>th</sup> June 2013. (15 days)
7. FDP for TEQIP II Institutions on “EC 2253- Electromagnetic Fields” at Anna University, Chennai from 23<sup>rd</sup> to 27<sup>th</sup> July 2013.(5 days)
8. One week TEQIP II sponsored FDP on “Recent Trends in Renewable and Non Renewable Energy sources” conducted by the Dept of Petrochemical Technology at Anna University BIT Campus, Trichirapalli from 26.8.13 to 1.9.2013.(5 days)
9. FDP on “Smart Teaching for the NET Generation” (Basic and Advanced Pedagogy) conducted by NITTTR from 9.12.2013 to 23.12.2013. (15 days)
10. Anna University sponsored one day Hands on Training in “ETAP software and its applications” held at University College of Engineering, Arni on 27.2.15.
11. One week Anna University sponsored FDTP on “EE6603- Power System Operation And Control”, organized by the Dept of EEE, University College of Engineering, Thirukkuvallai from 21<sup>st</sup> to 27<sup>th</sup> Nov,2016.(07 days)
12. AICTE sponsored Two week FDP titled “Smart Grid and Internet of Things (IOT): The Future Energy Delivery System ” organized by the Department of EEE, Sri RamaKrishna Engineering College, Coimbatore from 27<sup>th</sup> November to 10<sup>th</sup>December 2017. (15 days)

13. Anna University sponsored Two weeks FDP on “Electrical Machines II” at University College Of Engineering, Panruti from 28.11.2018 to 11.12.2018 .
14. MHRD sponsored Two Week Online Workshop on “ Comprehensive E-Learning to E-training guide for Administrative work” organized by TLC, Ramanujan College, University of Delhi from 25.5.2020 to 5.6.2020
15. 3 Week Online Industrial Training Programme on Communication and Network Technologies” organized by RGMTC, BSNL, Chennai from 8.6. 2020 to 26.6.2020.
16. MHRD sponsored Two Week Faculty Development Programme on “ Managing Online Classes and co-creating MOOCs 3.0” organized by TLC, Ramanujan College, University of Delhi from 25.7.2020 to 10.8.2020

➤ **Publications :**

**a. Books:**

1. Dr.T.SreeRenga Raja, R.Thanigaiselvan, S.P.Mangaiyarkarasi, “Basic Electrical and Electronics Engineering” for Anna University, Tiruchirappalli Mechanical Tamil Medium students.
2. Dr. S.P. Mangaiyarkarasi, “Electrical Machines-I Lab Manual” for IV sem Anna University, Electrical and Electronics Engineering students. (ISBN 978-81-927169-7-8).
3. Dr. S.P. Mangaiyarkarasi, A. Abdulkalam Ajath, A. Maswoodhur Rahman “Electrical Machines-II” for IV sem Anna University, Electrical and Electronics Engineering students, Sri Krishna Hitech Publishing Company Pvt Ltd. (ISBN 978-81-942257-7-2).
4. Dr. S.P. Mangaiyarkarasi, A. Manimaran, A. Shanthi “Electrical Machines-I” for III sem Anna University, Electrical and Electronics Engineering students, Charulatha Publishing Company Pvt Ltd. (ISBN 978-81-942257-7-2).
5. Dr. S.P. Mangaiyarkarasi, R.Sugashini published Book Chapter titled “ A Review on Hybrid AC/DC Microgrid Frequency Control and Energy Management” in “Recent Challenges in Science, Engineering and

Technology”, published by Krishna Publication House (ISBN: 978-81-947388-5-5)

**b. International Journals:**

1. S P Mangaiyarkarasi, T SreeRenga Raja,; “Novel Analytical Study on Voltage Instability Mitigation Using Multiple Severity Functions by Optimal Placement of SVC in N-2 Contingency Analysis Using Gravitational Search Algorithm” WSEAS Transactions on Power Systems, ISSN/E-ISSN : 1790-5060 / 2224-350X, Volume 9, 2014, Art. #41, pp. 408-417.
2. S P Mangaiyarkarasi, T SreeRenga Raja,; “Optimal Location and Sizing of Multiple Static VAR Compensators for Voltage Risk Assessment Using Hybrid PSO-GSA Algorithm”, Arabian Journal for Science and Engineering, Vol. 39, Issue. 11, pp. 7967-7980, 2014,ISSN/E-ISSN : 1319-8025/2191-4281, DOI: [10.1007/s13369-014-1339-5](https://doi.org/10.1007/s13369-014-1339-5)
3. S P Mangaiyarkarasi, T SreeRenga Raja,; “PSO based Optimal Location and Sizing of SVC for Novel Multiobjective Voltage Stability Analysis during N – 2 Line Contingency”, Archives of Electrical Engineering. Volume 63, Issue 4, Pages 535–550, ISSN (Online) 2300-2506, DOI: [10.2478/ace-2014-0037](https://doi.org/10.2478/ace-2014-0037), December 2014.
4. M.Karthikeyan, T.SreeRenga Raja, S.P.Mangaiyarkarasi., “ An Effective Biogeography Based Algorithm for Power System Optimization” International Journal of Applied Engineering Research, ISSN: 0973-4562, Vol.10, No.51, pp.342-347,2015
5. Dr. S P Mangaiyarkarasi, Dr. T SreeRenga Raja,; “A Novel Approach for Optimal Location and Sizing of Multi-Type FACTS Devices For Multi- Objective Voltage Stability Optimization Using Hybrid PSO-GSA Algorithm”, International Journal Of

Advanced Engineering Technology, Vol.VII, Issue II,pp. 623-627, E- ISSN : 0976-3945, April-June 2016.

6. R.Sivasankari, Dr.S.P.Mangaiyarkarasi., “Minimization of Real Power Generation” UGC approved journal PARIPEX- Indian Journal of Research , December 2018.
7. R.Sugashini, Dr. S P Mangaiyarkarasi, “Compensation of Active and Non Active Power Using SVC and Capacitive Grid Connected Inverter” Journal of Applied Science and Computations, ISO: 7021-2008certified Journal, Vol.VI, Issue 3, ISSN:1076-5131, March 2019.
8. M.Gnanaprakash, Dr. S.P Mangaiyarkarasi, “Voltage Stability Assessment and Enhancement of Distribution System Using STATCOM” Journal of Applied Science and Computations, ISO: 7021-2008certified Journal, Vol.VI, Issue 3, PP279-289, ISSN: 1076-5131, March 2019.
9. Sriram K and Dr.S.P.Mangaiyarkarasi, “Short Term Load forecasting of a Power System Using Plant Growth Algorithm” International journal of Engineering Research and Development, volume 14,issue 9 pp. 58-60, September 2018.
10. Sriram K and Dr.S.P.Mangaiyarkarasi, “Grey Wolf Optimization algorithm based Economic Load Dispatch” Journal of Applied Science and Computations, volume 6, issue 3 pp. 1216-1223, March 2019.
11. Dr.S.P.Mangaiyarkarasi, “Design of FOPID controller for 7 Level multi-inverter integrated with closed loop boost converter system” International Journal of Engineering Research and Applications (IJERA), vol. 10, Issue 8, pp. 19-24, Aug 2020

➤ **Conferences**

**a. International Conferences:**



1. S.P. Mangaiyarkarasi, "Multi-objective, Multi-FACTS devices for under voltage severity assessment using hybrid PSO-GSA algorithm" in the International Conference on Emerging Trends in Electrical, Electronics and Communication Systems held at Bharathidasan Institute of Technology, Tiruchirappalli on 24th Sep 2016.
2. S.P. Mangaiyarkarasi, "Enhancement of power Flow and Voltage Stability using UPFC" in the 4<sup>th</sup> International Conference on Engineering, Technology and Science held at Muthayammal Engineering Institutions, Rasipuram on 31<sup>st</sup> March 2017.
3. S.P. Mangaiyarkarasi, R.Sivasankari "Dynamic Response of Multimode PSR Flyback Converter by Using ARDUINO" in the International Conference held at University College of Engineering, Panruti, during 28th Feb & 01st March 2018.
4. S.P. Mangaiyarkarasi, M.Gnanaprakash "Optimal redispatch of generation for congestion management using PSO" in the International Conference held at University College of Engineering, Panruti during 28 Feb & 01 March 2018.
5. S.P. Mangaiyarkarasi, K.Sriram "Optimal Power Flow Using Group Leader Algorithm" in the International Conference on Innovations in Engg, Tech And Science held at K. Ramakrishna College of Engineering, Samayapuram held on 13<sup>th</sup> March 2018.
6. S.P. Mangaiyarkarasi, R.Sivasankari "Short term load forecasting of a power system using Plant Growth Algorithm" in the International Conference on Innovations in Engg, Tech And Science held at K. Ramakrishna College Of Engineering, Samayapuram held on 13<sup>th</sup> March 2018.
7. S.P. Mangaiyarkarasi, "Security Enhanced Election Processing for Information Storage" in the International Conference on Recent Trends in Science, Engineering and Technology , organized by CK College of Engg and Tech on 9.3.2019.
8. Dr. S.P Mangaiyarkarasi, M.Gnanaprakash, "Voltage Stability Assessment and Enhancement of Distribution System Using STATCOM" International

Conference on COMPUTING Information Electronics and Electrical Engineering (ICCIEEE'19) at Idaya Engineering College for Women on 08 March 2019.

9. S.P. Mangaiyarkarasi, M.Gnanaprakash, "Optimal Setting of FACTS Devices using BAT Optimization Algorithm for Congestion Management problem in Derugulated Power System" in the International Conference on Research and Development in Science, Engineering and Technology (ICRDSET-2021) organized by St. Anne's College of Engineering and Technology, Panruti on 5<sup>th</sup> March 2021.

10. S.P. Mangaiyarkarasi, K.Sriram "Group Leader Optimization Algorithm based optimal reconfiguration of Distribution Feeder for loss reduction" in the International Conference on Research and Development in Science, Engineering and Technology (ICRDSET-2021) organized by St. Anne's College of Engineering and Technology, Panruti on 5<sup>th</sup> March 2021.

11. Dr. S.P Mangaiyarkarasi, M.Gnanaprakash, "Multi Objective Management of A Renewable Micro-Grid with Grid connected and Island mode of operation" International Conference on Sustainable Development in Technology for 4<sup>th</sup> Industrial Revolution (ICSdTIR 2021) organized by Port City International University, Chattogram, Bangladesh on 13<sup>th</sup> March 2021.

**b. National conference:**

1. S.P. Mangaiyarkarasi, "ASA for intelligent control of Power Systems" in the National Seminar held at Sri Manakula Vinayagar College of Engineering and Technology on 26<sup>th</sup> Nov 2004.

2. S.P. Mangaiyarkarasi, "Reactive power optimization using PSO algorithm" in the National conference held at Sri Ranganathar Instiute of Engg and Tech, Coimbatore on 16<sup>th</sup> Feb,2013.

3. S.P. Mangaiyarkarasi “Multi-objective Optimization for Voltage Stability Analysis using PSO algorithm” in the National conference held at St.Michael College of Engg and Tech, Kalayarkoil on 16<sup>th</sup> March, 2013.
4. S.P. Mangaiyarkarasi “Reactive Power Optimization using PSO-GSA algorithm for Voltage Stability Analysis” in the National conference held at Annai College of Engineering, Kumbakonam on 6<sup>th</sup> April, 2013.
5. S.P. Mangaiyarkarasi “Risk Index Based under Voltage Contingency Assessment” in the National conference held at University College of Engineering, Patukottai on 8<sup>th</sup> April, 2015.
6. S.P. Mangaiyarkarasi, “Enhancement of power flow and voltage stability using IPFC” in the National Conference held at University College of Engineering, Panruti, on 24<sup>th</sup> march 2016.
7. S.P. Mangaiyarkarasi, K.Sriram “Photovoltaic energy management system with energy storage and load scheduling for sensitive loads” in the National Conference held at St.Annes College of Engineering and Technology, Panruti on 23<sup>rd</sup> March 2018.

➤ **Completed B.E/M.E Projects:**

- a. Number of ME Projects Completed: 15 Nos
- b. Number of BE Project Completed: 24 Nos
- c. Ph.D Guidance: 3 candidates ongoing
- d. Doctoral Committee Member for 4 Ph,D students in Anna University.

**Membership of Scientific and Professional Societies:**

Life Member of Indian Society of Technical Education (LM 29277- ISTE)