

## **CURRICULUMVITAE**



### **Dr. P. SRINIVASA RAO NAYAK**

Assistant Professor Grade-I  
Department of Electrical and  
Electronics Engineering,  
National Institute of Technology,  
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Date of Birth : 05.06.1979

Gender : Male

Nationality : Indian

#### **I. QUALIFICATIONS:**

- B.Tech. (Electrical and Electronics Engineering), Nagarjuna University, Guntur, 2001.
- M.Tech. (Energy Systems), JNTU College of Engineering, Hyderabad, 2006.
- Ph.D. (Electrical and Electronics Engineering), NIT Trichy, Tiruchirappalli, 2014.

#### **II. THESIS TITLE:**

- **Ph.D.:** Design, Implementation and Analysis of a Few Recently Developed Optimization Algorithms for Induction Motor Soft-Starting.
  - **Research Supervisor:** Dr. K. Sundareswaran, Professor (HAG), Dept. of EEE, NIT Trichy.

### III. SPECIALIZATION:

- Electrical and Electronics Engineering, Energy Systems, Power Electronic and Drives

### IV. AREA OF INTEREST:

- Electric Vehicles and Wireless Power Transfer Systems
- Power Electronic Drives
- Power Electronic applications to Renewable Energy
- Non- conventional optimization algorithms

### V. EXPERIENCE:

- Teaching & Research: 15 Years

### VI. EMPLOYMENT DETAILS:

1. Assistant Professor Grade-I, Dept. of EEE, NIT, Tiruchirappalli - 2018-Till date.
2. Assistant Professor – Dept. of EEE, NIT, Tiruchirappalli - 2008-2018.
3. Assistant Professor - Dept. of EEE, JBREC, Hyderabad - 2005 – 2008.

### VII. PROFESSIONAL MEMBERSHIP:

- Life member – ISTE
- Life member- Solar Energy Society of India (SESI)
- Life member - System Society of India (SSB)

### VIII. PATENTS:

Sl.No.	Description	Filing details
1	<i>Name of applicant:</i> NIT, Tiruchirappalli <i>Title:</i> A System with Multiple Transmission Loss Co-efficient for Dynamic Economic Generator Dispatch. <i>Inventors:</i> Sishaj P Simon, K Sundareswaran, <b>P Srinivasarao Nayak</b> , C H Ram Jethmalani	Date of Filing: 10/07/2014  Application No: 3413/CHE/2014
2	<i>Name of applicant:</i> BHEL, Trichy <i>Title:</i> A Battery less Solar Photovoltaic Power Generation System to Supply Electrical Power during all Seasons to the Utilities Throughout the Day. <i>Inventors:</i> Kevin Ark Kumar, Sishaj P. Simon, K. Sundareswaran, <b>P. Srinivasa Rao Nayak</b> , TT Anilkumar, C.H. RamjethMalani & Ratchanniya Samuel	Date of Filing: 25/11/2014  Application No: 1231/KOL/2014

3	Name of applicant: BHEL, Trichy  <i>Title:</i> A system to determine a day-ahead loading pattern of heavy machineries in industries and proactive control of peak load overshoot  <i>Inventors:</i> Muhammad Ehsan Rajith, Sishaj P Simon, K. Sundareswaran, <b>P. Srinivasa Rao Nayak</b> , Rohit Rajan Eapen, M. Senthilkumar, Kevin Ark Kumar	Date of Filing: 19-03-2016  File No.: 201631009629
4	<i>Name of applicant:</i> NIT, Tiruchirappalli <i>Title:</i> A method of differential relay for power transformer protection using DSP processor <i>Inventors:</i> N. P. Padhy, Sishaj P Simon, M. Senthilkumar, K. Sundareswaran, <b>P. Srinivasa Rao Nayak</b>	Date of Filing: 05/04/2016  File No: 201641012033

## IX. LIST OF PUBLICATIONS:

### (A) Journals:

S.no	Author(s)	Title of Paper	Journal	Volume (No.)	Page no	Year	Role
1	K.Sundareswaran, <b>P.S.Nayak</b>	Ant colony based feedback controller design for soft-starter fed induction motor drive	<i>Applied Soft Computing, Elsevier.</i> <a href="https://dl.acm.org/doi/10.1016/j.asoc.2011.12.012">https://dl.acm.org/doi/10.1016/j.asoc.2011.12.012</a>	Vol. 12, No. 5	1566-1573	May 2012	Corresponding-Author
2	K.Sundareswaran, Devi V, S. Sankar, <b>PSR Nayak</b> , A. Chandrasekar	Feedback controller Design for a Buck Converter Through Evolutionary Algorithms	<i>Australian Journal of Electrical &amp; Electronics Engineering.</i> <a href="https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&amp;arnumber=6783543">https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&amp;arnumber=6783543</a>	Vol.10, No.4	459-466	2014	Co-Author
3	K.Sundareswaran, <b>P.S.R Nayak</b>	Particle Swarm Optimization Based Feedback Controller Design for	<i>Australian Journal of Electrical &amp; Electronics Engineering.</i> <a href="http://www.ijareeie.com/upload/2016/rapid">http://www.ijareeie.com/upload/2016/rapid</a>	Vol 11, No.1	55-63	March 2014	Corresponding-Author

		Induction Motor Soft-Starting	<a href="#">et/28_pso%20based%20soft%20starting%20of%20induction%20motor.pdf</a>				
4	Kinattungal Sundareswaran, Vadakke Devi, SelvakumarSankar, <b>PanugothuSrinini vasa Rao Nayak</b> , Sankar Peddapati	Feedback controller Design for a Boost Converter Through Evolutionary Algorithms	<i>IET Power Electronics.</i> <a href="https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&amp;arnumber=6783543">https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&amp;arnumber=6783543</a>	Vol. 7, No. 1	1-11	Oct 2013	Co-Author
5	Sundareswaran, K. and <b>Nayak, P.S.R.</b>	Design of Feed Back Controller for Soft-starting Induction Motor Drive System Using Genetic Algorithm	<i>Int. J. Industrial Electronics and Drives , Inder Science Publisher.</i> <a href="https://www.inderscience.com/info/inarticle.php?artid=59229">https://www.inderscience.com/info/inarticle.php?artid=59229</a>	Vol. 1, No. 2,	111– 120	Marc h 2014	Correspon ding- Author
6	K.Sundareswaran, <b>P.S.R.Nayak</b> and A.ChandraSekhar,	Development of an Improved Particle Swarm Optimization(P SO) and its Application to Induction Motor Soft-Starting	<i>International Review of Automatic Control, Praise worthy prize.</i> <a href="https://www.praiseworthyprize.org/jsm/index.php?journal=ireaco&amp;page=article&amp;op=view&amp;path%5B%5D=14117">https://www.praiseworthyprize.org/jsm/index.php?journal=ireaco&amp;page=article&amp;op=view&amp;path%5B%5D=14117</a>	Vol. 7, No. 2	156- 165	Marc h 2014	Correspon ding- Author
7	Kinattungal Sundareswaran and Panugothu Srinivasa Rao Nayak,	Optimization of Induction Motor Soft-Starting through Artificial Immune System	<i>Electrical Power Components and Systems, Taylor &amp; Francis.</i>	Vol. 7,  No. 2		2016	Correspon ding- Author
8	K.Sundareswaran, V. Vigneshkumar, P. Sankar, S.P. Simon, <b>P.S.R. Nayak</b> , and S. Palani	Development of an improved P&O Algorithm Assisted Through a Colony of Foraging Ants	<i>IEEE Transactions on Industrial Informatics</i> <a href="https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&amp;arnumber=7332776">https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&amp;arnumber=7332776</a>	Vol. 12, No.1	187- 200	Febru ary 2016	Co-Author

		for MPPT in PV System					
9	Anilkumar T.T., Sishaj P Simon, <b>P. Srinivasa Rao Nayak</b> , K. Sundareswaran and Narayana Prasad Padhy,	Pico - Hydel Hybrid Power Generation System with an Open Well Energy Storage	<i>IET Gen. Trans. Dist.</i> <a href="https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&amp;arnumber=7847749">https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&amp;arnumber=7847749</a>	Vol. 11, No.3	740-749	February 2017	Co-Author
10	M. Senthilkumar, Sishaj P Simon, P. Srinivasa Rao Nayak, K. Sundareswaran and Narayana Prasad Padhy	An Empirical Fourier Transform Based Power Transformer Differential Protection	IEEE Transactions on Power delivery. <a href="https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&amp;arnumber=7487026">https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&amp;arnumber=7487026</a>	Vol. 32, No.1	209-218	February 2017	Co-Author
11	K.Sundareswaran, P. Sankar, <b>P.S.R. Nayak</b> , S.P. Simon and S. Palani,	Enhanced Energy Output From a PV system under partial shaded conditions through artificial Bee Colony	<i>IEEE Transactions on Sustainable Energy</i>	Vol. 6, No. 1	198-209	January 2015	Co-Author
12	K.Sundareswaran, <b>P.S.R. Nayak</b> , P. Sankar and V. Vigneshkumar	Inverter Harmonic Elimination Through Flower Pollination Enhanced Genetic Algorithm	<i>International Journal of Advanced Trends in Computer Science and Engineering.</i> <a href="http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.644.7176&amp;rep=rep1&amp;type=pdf">http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.644.7176&amp;rep=rep1&amp;type=pdf</a>	Vol. 3 , No.1	342 - 348	February 2014	Co-Author
13	Ram JC Hemparuva, S.P.Simon, S.Kinattungal, <b>SRN Panugothu</b>	Gravitational Search Algorithm-Based Dynamic Economic Dispatch by estimating Transmission System Losses using A-Loss	<i>Turkish Journal of Electrical Engineering And Computer Science</i> , 2016. <a href="https://dergipark.org.tr/en/download/article-file/431233">https://dergipark.org.tr/en/download/article-file/431233</a>	Vol 24, No. 5	3769-3781	2016	Co-Author

		Coefficients					
14	S. Kumar Murugan, S.Simon, <b>P. Nayak</b> , K.Sundareswaran, N.P. Padhy	Power Transformer Protection using Chirplet Transform	<i>IET Generation, Transmission and Distribution</i> , <a href="https://digital-library.theiet.org/content/journals/10.1049/iet-gtd.2015.1486">https://digital- library.theiet.org/cont ent/journals/10.1049/i et-gtd.2015.1486</a>	Vol.10, no:10	2520- 2530	2016	Co-Author
15	Ram JC Hemparuva, S.P.Simon, K.Sundareswaran, <b>P.S.R. Nayak</b>	Auxilliary Hybrid PSO BPNN based transmission losses estimation in Generation Scheduling	<i>IEEE Industrial Informatics</i> , 2016  <a href="https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&amp;arnumber=7579560">https://ieeexplore.ieee .org/stamp/stamp.jsp? tp=&amp;arnumber=75795 60</a>	Volume 13, no. 4	1692- 1703.	2016	Co-Author
16	Panugothu Srinivasa Rao Nayak; DharavathKishan	Development and Analysis of S/S Resonant Wireless System for Electric-Two Wheeler Battery Charging	International Journal of Electric and Hybrid Vehicles	<u>Vol.</u> <u>10, No.</u> <u>3</u>		2018	First Author
17	<u>Panugothu Srinivasa Rao Nayak</u> ; <u>DharavathKishan</u> ; <u>Pabbathi Annaiah</u>	Investigation of MI between circular spiral coils with misalignments for EV battery charging	IET Science, Measurement & Technology	<u>Volume</u> <u>12,</u> <u>Issue 7,</u>	844 – 850	2018	First Author
18	<u>P. Srinivasa Rao Nayak&amp;Dharavath Kishan</u>	Performance analysis of series/parallel and dual side LCC compensation topologies of inductive power transfer for EV battery	Frontiers in Energy.  <a href="https://link.springer.com/content/pdf/10.1007/s11708-018-0549-z.pdf">https://link.springer.c om/content/pdf/10.10 07/s11708-018-0549- z.pdf</a> .		1-14	2018	First Author

		charging system.					
19	D. Kishan, <b>P. Srinivasa Rao Nayak</b> , B. Naresh Kumar Reddy	Implementation of Identical Spiral Square Inductive Coils for Wireless EV Battery Charging Application	Iranian Journal of Electrical And Electronic Engineering	Accepted for Publication		2019	Co-Author

(B) Conferences

Sl.No.	Author(s)	Title of Abstract/Paper	Title of the Proceedings	Venue	year	Role
1	K.Sundareswaran, <b>P.Srinivasarao Nayak</b> , Ch DurgaVenkatesh	Induction Motor Starting Dynamic optimization Using Random Search method	Second International Conference on Advances in Control and Optimization of Dynamical Systems (ACODS)	IISC Bangalore	2012	Co-Author
2	K. Sundareswaran, <b>P. Srinivasarao Nayak</b> , ChDurgaVenkatesh and Hariharan B	Optimal Placement of FACTS Devices using Probabilistic Particle Swarm Optimization	IEEE PES International Conference on Innovative Smart Grid Technologies (ISGT)	Kollam, Kerala	2011	Co-Author
3	K. Sudaeswaran, Hariprasad B, P. Sankar, <b>P.Srinivasa Rao Nayak</b> and S. Sankar	A Voltage Constrained Time Sharing Switching Scheme for Dual Input Buck Converter	IEEE International conference on Power Electronics, Drives and Energy Systems (PEDES)	CPRI, Bangalore	2012	Co-Author

4	K. Sundareswaran, P.Sankar, and <b>P.Srinivasa Rao Nayak</b>	Analysis on the Failure of Dynamic Braking of Capacitor-Run Induction Motor Supplied from Half- Controlled Converter	EEE International conference on Power Electronics, Drives and Energy Systems (PEDES)	CPRI, Bangalore	2012	Co-Author
5	K. Sundareswaran, S.Sankar, <b>P.Sriniva sa Rao Nayak</b>	Feedback controller Design for a Buck-boost Converter through Evolutionary Algorithms	EEE International conference on Power Electronics, Drives and Energy Systems (PEDES),Dec. 2012.	CPRI, Bangalore	2012	Co-Author
6	K. Sundareswaran, Kuruvinashetti Kiran, VarshaPadhee, P Sankar, <b>P. Srinivasa Rao Nayak</b> ,AbhilashMa hadevan	Buck-Boost Converter Controller Design Using Bacterial Foraging	IEEE Multi- conference on Systems and Control (IEEEEMSC), Aug. 2013.	Hyderabad	2013	Co-Author
7	K. Sundareswaran, Kuruvinashetti Kiran, Hariprasad.B, P Sankar, <b>P. Srinivasa Rao Nayak</b>	Output Voltage Controller of Dual Input Buck-Boost Converter	IEEE PES International Conference on Innovative Smart Grid Technologies (ISGT)	Bangalore	2013	Co-Author
8	K. Sundareswaran, Kuruvinashetti Kiran, P Sankar, V. Vignesh Kumar, <b>P. Srinivasa Rao Nayak</b>	Output Voltage Control and Power Management of a Dual Input Buck-Boost Converter Employing P and O Algorithm	Third International conference on Advances in Controls and Optimization in Dynamical Systems.(IFAC), March 2014.	IIT Kanpur	2014	Co-Author



9	K. Sundareswaran, Kuruvinashetti Kiran, P Sankar, V. Vignesh Kumar, <b>P. Srinivasa Rao Nayak</b>	Optimization of Dual Input Buck Converter Control Through Genetic Algorithm	Third International conference on Advances in Controls and Optimization in Dynamical Systems.(IFAC)	IIT Kanpur	2014	Co-Author
10	K. Sundareswaran, Kuruvinashetti Kiran and <b>P. Srinivasa Rao Nayak</b>	Application of Particle Swarm Optimization for Output Voltage Regulation of Dual Input Buck-Boost Converter	Second International conference on ICGCCEE-14,	Coimbatore, Tamil Nadu.	2014	Co-Author
11	Dharavath Kishan, <b>P.S.Nayak</b>	Wireless Power Transfer Technologies For Electric Vehicle Battery Charging- A State Of The Art	SCOPEs- 2016	Centurion University, Odisha.	2016	Co-Author
12.	K. Sundareswaran, V. Vigneshkumar, Sishaj P Simon, P Srinivasa Rao Nayak	Gravitational search algorithm combined with P&O method for MPPT in PV systems	Thirteenth IEEE international India Conference (INDICON 2016)	Trivindrum, India	2016	Co-Author
13.	K. Sundareswaran, V. Vigneshkumar, Sishaj P Simon, P Srinivasa Rao Nayak	Cascaded Simulated Annealing/Perturb and Observe method for MPPT in PV systems	IEEE international conference on Power Electronics Drives and Energy Systems (PEDES 2016)	Bangalore, India	2016	Co-Author
14.	P SrinivasaRao Nayak, Rufzal T A	Design of feedback controller employing	International conference on electrical and electronic	Singapore	2017	First Author

		cuckoo search algorithm for induction motor soft starting	conference(ICEEE)			
15.	P SrinivasaRao Nayak,Rufzal T A	Fire fly algorithm based soft starting scheme for induction motor drives	ICCPEAT	Pondichery, India	2017	First Author
16	<b>P. Srinivasa Rao Nayak</b> , Kishan Dharavath,	Design and Analysis of SS Resonant IPT System with Computed Mutual Inductance through FEM Model	Proceedings of IEEE International Conference on Power Instrumentation Control and Computing	Kerala, India	2018	First Author
17	<b>P. Srinivasa Rao Nayak</b> , Kishan Dharavath, Radhakrushna Dey, K. Sundareswaran and Sishaj P Simon	Performance Evaluation of Square Coupled Coils at Different Misalignments for Electric Vehicle Battery Charging	Proceedings of 4th International Conference on Vehicle Technology and Intelligent Transport Systems (VEHITS)	Portugal.	2018	First Author
18	Dharavath Kishan, <b>P. Srinivasa Rao Nayak</b> , Saraswathi B, D. V. Nair, H. Sudheer	Estimation of Mutual Inductance between Identical Spiral Circular Inductive Coils for Wireless EV Battery Charging	Proceedings of IEEE International Conference on Electrical, Communication, Electronics, Instrumentation and Computing (ICECEIC)	Chennai, India	2019	Co-Author
19	<b>P. Srinivasa Rao Nayak</b> , and T. A. Rufzal.	Performance analysis of feedback controller design for	International Conference on Power, Instrumentation, Control and		2018	First Author

		induction motor soft-starting using bio-inspired algorithms.	Computing (PICC)			
20	<b>Srinivasa Rao Nayak Panugothu,</b> Peddanna Gundugallu, K Kamalpathi, B Krishna Naick	Analysis of mutual inductance between multi-single coupled coils at square structure using fem	ICECIE(IEEE)	Kaula lumpur, Malasiya,	2019	First Author
21	<b>Srinivasa Rao Nayak Panugothu,</b> Peddanna Gundugallu , T Manikandan, Damalla Ekalavya and Sishaj P Simon	Analysis of Mutual Inductance Between Rectangular Structured Wireless Coupled Coils with Different Misalignments Using Finite Element Modeling	NPEC	NIT Trichy	2019	First Author

**X. SPONSORED PROJECTS:**

Sl.No.	Title of the Project	Amount in Lacs.	Funding Agency	Period (year)	Remarks (Completed/ Ongoing)
1.	Design and Optimization of FeedBack Controller for Boost Type DC-DC Converter Using Artificial Immune System	8.34	CPRI Bangalore	3	Completed

2.	Design and Development of Multi Input 10kVA Online UPS	15	BHEL Trichy	4	Completed
3.	Design, Development and Analysis of Bio-Inspired Control Strategies for Stand Alone Solar Powered LED Lighting Systems	44.74	MHRD Communication SCSP/TSP	4	Completed
4.	Smart Maximum Demand Control Through Modern Algorithms	1	Central Workshop Southern Railways (Golden Rock Workshop) Trichy	1	Completed
5.	Implementation and Analysis of coupled coils at different structures with misalignments for WPT EV Battery charging	28.46	DST- SERB	3	On going
6.	Design, Implementation and Analysis of Wireless power transfer system and PV System for battery charging of passenger e-Bus	32.40	CPRI Bangalore	2	On going

## **XI. RESEARCH GUIDANCE:**

### **(i). List of Ph.D. Scholars:**

<b>I. No.</b>	<b>Name of the Ph.D. Research Scholar</b>	<b>Research Area</b>	<b>Batch/Year of Admission</b>	<b>Status</b>
1.	Dharavath Kishan Roll No:407114056	Design, Implementation and Analysis of Resonant Inductive power transfer system for EV battery charging applications	February 2015 Full-Time	Completed

2.	Gundugallu Peddanna Roll No:407116051	Power electronics, WPT System	January 2017 Full-Time	On going
3.	K. Kamalpathi Roll No.07117052	Power electronics, WPT System	January 2018 Full-Time	On going
4.	Annaselvaraj B Roll No:407118001	Power electronics, WPT System	July 2018 Project Category	On going

**(ii). List of M.Tech Scholars**

S. No.	Institute	Year	Name of the Student	Title of the Project
1.	NITT	2009-10	L.Lileendra Kumar	1. Transient Analysis of Grid Connected PV Generation System
2.			Krishna Murthy CH	2. Modeling and Simulation of Load connected PV Inverter
3.				3. Design and Implementation of HAWT With Battery Charge Controller Circuit
3.			M.Venkatesh naik	4. Variable Speed Drive Modeling and Control of Wind Turbine
4.		5. Design and Implementation Of Cuk Buck-Boost Converter		
4.		M.Sreekanth	6. A New Solar Energy Conversion Scheme Implemented Using Grid –Tied Single Phase	
5.			7. Matlab Simulation of MPPT Control For Panels Connected To DC-Dc Converter	
5.		2010-11	Paparao .K	8. Modeling And Simulation of a PV Charge Control System Using SEPIC Converter
6.				9. Design And Implementation of A PV Charge Control System Using SEPIC Converter
6.			K. Subrahmanyam	10. Three Phase Bidirectional AC-DC Converter With Constant Power Factor
7.		11. One Cycle Controlled Bidirectional DC-AC Converter With Constant Power		
7.		2011-12	Ashishranjanrout	12. Design And Implementation of an Analog PID Controller Using Conventional Methods for Output Voltage Regulation In Boost Type DC-DC Converter

				13. Design And Implementation of an Analog PID Controller Using Conventional Methods for Output Voltage Regulation In Buck Type DC-DC Converter
8.			AvinashAtla	14. Study of Variable Speed Domestic Fan Behavior With A Faulty Speed Regulator 15. A New Scheme for Dynamic Braking of Capacitor –Run Induction Motors
9.	<b>NITT</b>	2012-13	N. Ravi	16. Studies on Control Aspects of Washing Machine Motors 17. Power Transfer and Stability Enhancement by Simultaneous AC/DC Power Flow in EHV Transmission Line
10.			G.Venkatesh	18. Application of Conventional Controller Design Methods of Feedback Controller for Buck – Boost type DC-DC Converter 19. Maximum Power Point Tracking of Solar PV Systems Under Partial Shading Condition Using Optimization Techniques
11.		2013-14	Srinivasa Reddy G	20. Design and Implementation of Dual Input converter inverter fed single phase capacitor run induction motor drive 21. Design and Implementation of Dual Input converter inverter fed motor drive system incorporating solar charge controller
12.				Bondu Vijaya Kumar
13.			Duggineni Giribabu	
14.				2014-15

15.			Ayoob.V.P	28. Application of Firefly algorithm for illumination control of LED lighting system
				29. Application of harmony search algorithm for illumination control of LED lighting system
16.	NITT	2015-16	KattaVenkateswarlu	30. Electric vehicle route optimization under different electricity price profiles using particle SWARM optimization
17.				31. Electric vehicle route optimization under different electricity price profiles using ANT colony optimization
		Bukke Vishnu Bharath	32. Power quality analysis of inverter based power source for ARC welding process	
18.		2016-17	Utkarsha Barate	33. Design and Analysis of EV Battery Charge Control for Dual Side LCC Compensated IPT System.
				34. Design and Analysis of Series-Series and Dual Side LCC Compensation Topologies for Inductive Power System.
19.		2017-18	Radhakrushna Dey	35. Performance analysis of different coupled coil structures with misalignments for wireless EV battery charging
20.	2018-19	Akash Kumar	36. performance of mutual inductance between multi-transmitter and receiver coil using FEM.	
			37. Implementation and investigation of MI between circular shape multi and single coil pad.	
21.	NITT	2018-19	Damalla Ekalavya	38. Implementation and Analysis of PV and grid power based H-bridge inverter for high frequency load applications.
				39. Modelling and analysis of mutual inductance between rectangular structured coupled coils with different misalignments for WPT system.
22.		2019-2020	N Laxman	40. Design and Simulation of Dual input Buck-Boost type DC-DC Converter for battery charging application in EV'S.

**(ii). List of B.Tech. Projects:**

<b>Sl.No.</b>	<b>Title of the Project</b>	<b>Year of Submission</b>
1.	Data Allocation to Hybrid Memory With Fire fly Algorithm	2016
2.	Solar Fed Regulated Power Supply for Small DC Applications	2015
3.	Design and Analysis of Solar Fed Induction Motor System	2015
4.	Analysis of PI Controller Design for Solar Charger System Using PSO	2014
5.	Optimal Tuning of PI Controller for Speed Control of DC Motor Drive Using Adaptive Particle Swarm Optimization Technique	2014
6.	Hardware Implementation of Data Prefetching Using Various Techniques	2013
7.	ACO-Based Optimal Energy Control of Induction Motor Drive in Pumping Application	2012
8.	Harmonic Elimination in a Single Phase Inverter Through Particle Swarm Optimization	2012
9.	Boost PFC Converter Using Dual Mode Control Scheme	2011

**XII. ADMINISTRATIVE EXPERIENCE:**

<b>Sl. No.</b>	<b>Post Held</b>	<b>Function</b>	<b>Duration Period</b>
1.	B. Tech VIII sem project evaluation coordinator	Evaluation of UG Projects	From:02-01-2009 To:30-06-2009
2.	Admission Coordinator (Ph.D & M. Tech)	Centralized MS/Ph.D. Admission	From:02-07-2008 To:30-06-2009
3.	B. Tech VIII sem project evaluation coordinator	Evaluation of UG Projects	From:05-01-2010 To:30-06-2010
4.	Admission Coordinator (Ph.D & M.Tech)	Centralized MS/Ph.D. Admission	From:02-07-2009 To:30-06-2010



5.	Comprehensive viva-voice for VII sem B.Tech coordinator	Evaluation of UG Projects	From:03-07-2009 To:31-12-2009
6.	Procurement coordinator	Purchase of lab equipment's and furniture's	From:04-01-2011 To:31-05-2011
7.	EEE Association Faculty advisor	Motivating and accompanying the students for extra-curricular activities	From:08-07-2010 To:30-06-2011
8.	M. Tech III sem class committee chair person	Department academic activities	From:08-07-2010 To:31-12-2010
9.	NBA coordinator	Document preparation of academic and administration	From:08-07-2011 To:30-06-2012
10.	Budget procurement	Preparation of department budget equipment furniture's and other items.	From:08-07-2010 To:30-06-2011
11.	VIII sem class committee chair person	Department academic activities	From:04-01-2012 To:30-06-2012
12.	EEE Association Faculty advisor	Department academic activities	From:04-07-2012 To:30-06-2013
13.	VIII sem class committee chair person	Department academic activities	From:02-01-2013 To:28-06-2013
14.	V sem class committee chair person	Department academic activities	From:02-07-2012 To:31-12-2012
15.	Comprehensive viva-voice for VIIsem B.Tech coordinator	Evaluation of UG Projects	From:06-01-2015 To:15-06-2015
16.	B.Tech VIIIsem project evaluation coordinator	Evaluation of UG Projects	From:02-01-2013 To:28-06-2013
17.	UG lab modernization committee	Maintenance of Lab for smooth functioning of the Lab & Classes	From:08-06-2014 To:31-05-2016
18.	Coordinator for faculty workload and timetable	Time Table Preparation	From:08-06-2014 To:31-05-2016

19.	Comprehensive viva-voice for VII sem B.Tech coordinator	Evaluation of UG Projects	From:08-07-2016 To:31-12-2016
20.	B.Tech VIII sem evaluation coordinator project	Evaluation of UG Projects	From:08-01-2016 To:15-06-2016
21.	B.Tech VIII sem project valuation coordinator	Evaluation of UG Projects	From:10-01-2017 To:15-06-2017
22.	Coordinator for faculty workload and timetable	Time Table Preparation	From:01-07-2016 To:30-06-2017
23.	EEE Association Faculty advisor	Motivating and accompanying the students for extra-curricular activities	From:01-07-2016 To:30-06-2017
24.	Temporary faculty recruitment committee	Conduction of written test and interview	From:15-06-2017 To:15-06-2018
25.	Admission Coordinator (PhD & MS)	Centralized MS/Ph.D. Admission	From:15-06-2017 To: 15-06-2020
26	Warden, NITT Hostels	Jasper, Ruby, Pearl, Emerald, MM – II (North)	From:22-02-2018 To: 22-01-2020
27	Associate Dean	Academic-PG Program	From:22-01-2020 To: Till date

### **XIII. INVITED / GUEST LECTURES DELIVERED:**

<b>Sl. No.</b>	<b>Details of Guest Lectures Delivered</b>
1.	Delivered a Guest Lecture on “Electric Vehicles and power quality” at Vellore Institute of Technology, Vellore on 7-8 <sup>th</sup> March, 2019.

**XIV. LIST OF WORKSHOPS ORGANIZED:**

<b>Title of Activity</b>	<b>Level of Event (International/ National/ Local)</b>	<b>Date (s)</b>	<b>Role</b>	<b>Venue</b>
One day workshop on “Application of Biologically Inspired Algorithms for Power System and Power Electronics Engineering” Under the Self-Financed Category	National	28 <sup>th</sup> July 2012	Coordinator	NIT Trichy
One Day Workshop on Fuzzy Systems and Applications Under the Self-Financed Category	National	13th July 2013	Coordinator	NIT Trichy
Three Day Conclave On Academic Enhancements in Electrical Engineering (Power System and Power Electronic Streams) Under TEQIP-II	National	8th -10th November 2013	Coordinator	NIT Trichy
One Day Workshop On Particle Swarm Optimization, Applications and Implementation on a Microcontroller Under self finance category	National	8th March 2014	Coordinator	NIT Trichy
Two Day Workshop On Implementation of Firefly Algorithm in SCILAB and $\mu$ -Controller Under self finance category	National	10-11th October 2014	Coordinator	NIT Trichy
One-week Workshop On Recent Developments in Electrical Power Engineering Under TEQIP II	National	29 <sup>th</sup> Aug – 3 <sup>rd</sup> Sept 2016	Coordinator	NIT Trichy

**XV. PARTICIPATION IN WORKSHOPS**

<b>Date (s)</b>	<b>Title of Activity</b>	<b>Level of Event (International / National/ Local)</b>	<b>Role (Participant/ Speaker/ Chairperson, Paper presenter, Any other)</b>	<b>Event Organized by</b>	<b>Venue</b>
8 <sup>th</sup> – 9 <sup>th</sup> August	Right to Information Act, 2005 and Role of Information Officer	National	Participant	NIT-Trichy	NIT-Trichy
12 <sup>th</sup> – 14 <sup>th</sup> November 2008	National Workshop on Power Electronics	National	Participant	NIT-Trichy	NIT-Trichy
1. 20 Nov 2008	Awareness programme On Intellectual property Rights	National	Participant	NIT-Trichy	NIT-Trichy
21 <sup>st</sup> – 27 <sup>th</sup> August 2008	Instructional Design and Delivery system	National	Participant	NIT-Trichy	NIT-Trichy
15 <sup>th</sup> – 27 <sup>th</sup> June 2009	Engineering practices On Fuzzy Logic, Neural Networks and Hybrid Intelligent Systems	National	Participant	NIT-Trichy	NIT-Trichy
29 Apr 2009	Patent Information	National	Participant	Bharathidasan University	Bharathidasan University
04 May 2009	Power Electronic Simulation – SEQUEL	National	Participant	NIT-Trichy	NIT-Trichy
12-22 Dec 2011	Solar Photovoltaic's: Fundamentals, technologies and Application	National	Participant	NIT-Trichy	NIT-Trichy

3-4 Feb 2012	Supercritical Technology for power sector	National	Participant	ESCI Hyderabad	ESCI Hyderabad
22-23 June 2012	PIC Micro controller applications in Power electronics circuits	National	Participant	NIT-Trichy	NIT-Trichy
05 Jan 2013	MSP 430 Microcontroller Based System Design”	National	Participant	NIT-Trichy	NIT-Trichy
16 Dec 2012	Resonant and soft switching power conversion and three more topics	National	Participant	PEDES-2012 Bangalore	PEDES Bangalore
28-29 April 2015	Conclave on academic reforms(CAR-2015)	National	Participant	NIT-Trichy	NIT-Trichy
17 Sep 2019	Supporting Student learning and wellbeing crafting the new millennial	National	Participant	Ideal river view resort	Tanjore
23-25 Feb 2019	Faculty development Programmed (FDP)	National	Participant	NIT-Trichy	NIT-Trichy

## **XVI. OUTREACH**

- 1.DC member at VIT VELLORE
- 2.DC member at Anna University, Trichy

## **XVII. INNOVATIVE TEACHING/LEARNING:**

1. FEM Simulation of square, circular and rectangular coil in Ansys Maxwell for calculating Mutual Inductance.
2. Prepared power points presentations for wireless charging station for charging of electric vehicles.
3. Development of lab prototype wireless power transfer system for battery charging.

**XVIII. INVOLVEMENT IN LABORATORY DEVELOPMENT:**

1. In-charge of the e-Mobility Research Laboratory from 2015 to till date.
2. In-charge of the Center for Intelligence electrical systems laboratory from 2014 to till date.

**Dr. P. SRINIVASA RAO NAYAK**

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