**Department of Electrical and Electronics Engineering**

**Half Yearly Research Activity Report (January 2017 -June 2017)**

**1. Research activities of the faculty members:**

Number of faculty in the Department : 35

Number of faculty with Ph. D qualification : 07

Number of faculty pursuing Ph. D : 20

**A). Papers published by the faculty members in National and International Journals**

**National Journal: ------**

**International Journal:**

1. **Dr. K.R.Santha,** Bharathi Thangaraj, “Performance Evaluation of PMSG For Aircraft Applications”, Elsevier Energy Procedia, March 2017.
2. **Dr.K.R.Santha,** P.Manimegalai, M.Sankar, “Speed control of Three phase BLDC Fan Motor using Fuzzy logic controller”, International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering, Vol.6, Special issue 2, March 2017, pp:297-304.
3. **Dr.Nalin Kant Mohanty,** J.Jeffy Felcia Sharon, “Simulation of Switched Reluctance Motor drive for Electric Vehicle Application”, International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering, Vol.6, Special issue 2, March 2017, pp:312-317.
4. **R.Karthikeyan**, V.Sanghavee, “A Symmetric Multilevel Voltage Source Inverter with Reduced Number of Switches”, International Journal of Advanced Research in Electrical , Electronics and Instrumentation Engineering ,Vol. 6,Special Issue 2, March 2017, pp:268 to 275.
5. **S.Kumaravel,** R.Sundaravel, “Control of PMSG based Variable Speed Wind Turbines for Voltage Regulation”, International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering, Vol.6, Special issue 2, March 2017, pp:318-326.
6. **D.Amudhavalli, S.Sudharsanam,** R.Subasri, “Modified Zeta Converter with Power Factor Correction For Arc Welding”, International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering, Vol.6, Special issue 2, March 2017, pp:344-352.
7. **D.S.Purushothaman,** A.Karthikeyakumar, “Speed control of Three phase Induction motor using 13-level cascaded H-Bridge Multilevel Inverter with PID, Fuzzy and ANFIS Controller”, International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering, Vol.6, Special issue 2, March 2017, pp:353-361.
8. **D.S.Purushothaman**, A.Karthikeyakumar, “Comparative Analysis of Control Strategies for 13 level Cascaded H-Bridge Multi level inverter fed induction motor”, CiiT International Journal of Programmable Device Circuits & Systems, Vol.9, No.2, Feb 2017, pp:22-38.
9. Rumana Farheen, **Dr. S.G.Bharathidasan,** ‘State Feedback Speed Control of Permanent Magnet Synchronous Motor for an Electric Vehicle’,, International Journal of Scientific development and Research (IJSDR), ISSN: 2455-2631, Vol.2, Issue 7, 2017, pp. 133-145.

B).**Papers (presented/published) by faculty members in National & International Conferences**

**National Conference:**

1. **Dr KR.Santha,** P.Manimegalai, **M.Sankar, “**Speed control of Three phase BLDC Fan Motor using Fuzzy logic controller”, National Conference on Advances in Electrical & Electronics Engineering, SVCE, March 2017.
2. **Dr.Nalin Kant Mohanty,** J.Jeffy Felcia Sharon, “Simulation of Switched Reluctance Motor drive for Electric Vehicle Application”, National Conference on Advances in Electrical & Electronics Engineering, SVCE, March 2017.
3. **Dr.R.Karthikeyan,** V.Sanghavee, “A Symmetric Multi level voltage source inverter with reduced no of switches”, National Conference on Advances in Electrical & Electronics Engineering, SVCE, March 2017.
4. **S.Kumaravel,** R.Sundaravel, “Control of PMSG based Variable Speed Wind Turbines for Voltage Regulation”, National Conference on Advances in Electrical & Electronics Engineering, SVCE, March 2017.
5. **D.Amudhavalli, S.Sudharsanam,** R.Subasri, “Modified Zeta Converter with Power Factor Correction For Arc Welding”, National Conference on Advances in Electrical & Electronics Engineering, SVCE, March 2017.
6. **D.S.Purushothaman,** A.Karthikeyakumar, “Speed control of Three phase Induction motor using 13-level cascaded H-Bridge Multi level Inverter with PID, Fuzzy and ANFIS Controller”,

National Conference on Advances in Electrical & Electronics Engineering, SVCE, March 2017.

**International Conference:**

1. **Dr KR.Santha,** Bharathi Thangaraj, “Performance Evaluation of PMSG For Aircraft Applications”, International Conference on Power Engineering, Computing and Control, PECCON-2017, VIT University, Chennai Campus, 2-4, March 2017.
2. **Dr.S.G.Bharathi dasan,** Rumana Farheen, “State Feedback speed control of Permanent Magnet Synchronous motor for an Electric Vehicle”, International conference on soft computing applications to Power systems & Power Electronics (ICPSPE-17) at Sri Chandrasekharendra Saraswathi Viswa Mahavidyalaya, (Sankara University), Kanchipuram, 12th – 13th April 2017.
3. **S.Arulmozhi, Dr.K.Sundararaman,** K V Nirmala, “A Comparison of non-isolated bidirectional DC-DC converter topologies for UPS applications”, TEQIP-II sponsored International Conference on Contemporary Topics in Power Engineering and Aiding Technologies (ICCPEAT’2017), Puducherry, 24th-25th , February, 2017.
4. **C.Venkatesan, K.Sundararaman,** M.Gopalakrishnan, “Grid Integration of PMSG based Wind Energy Conversion system using Variable Frequency Transformer”, IEEE Conference on Intelligent Computing, Instrumentation & Control Technologies(ICICICT – 2017) pp:840-845, Dept. of E & I, Vimal Jyothi Engineering College, Kannur, Kerala, 6th and 7th July 2017.
5. **K.Suganthi**,R.Vaishnavi , **K.Sundararaman, “**A Dual Output Converter with a PFC Bridge- less Buck Front-End", International Conference on Power and Embedded Drive Control(ICPEDC 2017), SSN College of Engineering, Chennai, from 16 - 18th March,2017.
6. **A.Tamizhselvan, S.Sinthamani,** L.Abirami, “Speed control of PMDC motor using three phase boost converter”, 9th International conference on “Trends in Industrial Measurement and Automation” TIMA 2017, pp;193-200, Dept. of IE, MIT, AU, 6th-8th Jan, 2017.
7. **T.Annamalai,** S V Aswin, “Cascading two different inverter Topologies with reduced number of switching Components”, TEQIP-II sponsored International Conference on Contemporary Topics in Power Engineering and Aiding Technologies (ICCPEAT’2017), Puducherry, 24th-25th February, 2017.
8. **T.Annamalai, “**A new multilevel inverter with reduced no of switches based on Modified H Bridge”, TEQIP-II sponsored International Conference on Contemporary Topics in Power Engineering and Aiding Technologies (ICCPEAT’2017), Puducherry, 24th -25th, February, 2017.
9. **D.S.Purushothaman,** A.Karthikeyakumar, “Comparative Analysis of Control Strategies for 13 level Cascaded H-Bridge Multi level inverter fed induction motor”, TEQIP-II sponsored International Conference on Contemporary Topics in Power Engineering and Aiding Technologies (ICCPEAT’2017), Puducherry, 24th-25th February, 2017.

**Technical Article Publication**

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**C). National and International Conferences/ symposiums/ workshops/FDP/Seminar attended by the Faculty members:**

| **S.**  **No** | **Name of the Faculty Member** | **Conference, FDP, Seminar and Workshop details** | **Place** | **Date** | |
| --- | --- | --- | --- | --- | --- |
|  | **From** | **To** |
| 1 | Dr.KR.Santha | NPTEL Workshop (One Day)  Bridge 2017-Chennai (The Largest Industry-Institute Interaction Event of India) (One Day) | IIT Madras  ICT Academy  ITC Grand Chola,  Chennai | 15/6/2017  1/3/2017 |  |
| 2 | Dr.N.K.Mohanty | National Seminar on Fuzzy set & its applications in Science and Engineering (One Day)  QIP Short Term Course on Applications of Meta-Heuristic Techniques in smart power systems operation, control and protection (7 days) | SVCE  Veer Surendra Sai University of Technology, Burla, Odisha | 14.02.2017  01.05.2017 | 06.05.2017 |
| 3 | R.Karthikeyan | Anna University approved Seven Days FDTP on Control System | Easwari Engineering College , Chennai | 12/6/2017 | 18/6/2017 |
| 4 | Dr.K. Sundararaman | Anna University approved Seven Days FDTP on Soft Computing Techniques | Vellammal Engineering College , Chennai | 12/6/2017 | 18/6/2017 |
| 5 | Dr.Sudhakar K Bharatan | FDP on Expectations and Future of IT Industry | Cognizant Technology Solutions India Pvt. Ltd. MEPZ | 22/10/16 | 22/10/16 |
| [A one day workshop on “Introduction to COMSOL”.](https://www.svce.ac.in/departments/eee/profile/index.php?id=EEE2802011) | Hablis Hotel, Chennai | 5/1/17 | 5/1/17 |
| 6 | Dr.S.G.Bharathidasan | QIP Short Term Course on Nonlinear and Adaptive Control | Centre for Continuing Education  Indian Institute of Science  Bengaluru - 560012 | 12/6/2017 | 18/6/2017 |
| 7 | C.Venkatesan | Anna University approved Seven Days FDTP on EE 6702-Protection and Switchgear | GKM College of Engineering and Technology, Chennai | 22/05/2017 | 29/05/2017 |
| 8 | T.Annamalai | Effective Writing of Engineering Journal Paper and Thesis | SRM University, Chennai | 16/03/2017 | 17/03/2017 |
| 9 | S.Arulmozhi | one day workshop on "Opportunities and challenges in Energy storage systems for building, solar and wind sectors" | CEG campus, Anna University | 04/03/2017 | 04/03/2017 |
| 10 | D.Amudhavalli | Work shop on Application of Soft computing techniques in Electrical Research | St.Joseph Inst of Technology, Chennnai | 25/5/2017 | 26/5/2017 |
| 11 | S.Kumaravel | ----------- | ---------- | --------- | ---------- |
| 12 | N.Shanmugavadivu | Workshop on ARM controller | Pantech ,Chennai | 23/6/2017 | 23/6/2017 |
| 13 | K.Suganthi | FDP on EE 6703-special Electrical Machines | Rajalakshmi Institute of Technology | 13/06/17 | 15/06/17 |
| International Conference on Power and Embedded Drive Control(ICPEDC 2017) | SSN College of Engineering, chennai | 17/03/17 | 17/03/17 |
| 14 | S.Sudarsanam | short term course on Fundamentals of Electronic Materials and Devices  short term course on Materials Characterization | NPTEL | January 2017 | April 2017 |
| 15 | M.Ranjith Kumar | Workshop on ARM controller | Pantech ,Chennai | 23/6/2017 | 23/6/2017 |
| 16 | D.S.Purushothaman | 5 days Industrial training in Power Electronics & Drives | VI Micro Systems PVT LTD., Chennai | 12.6.17 | 16.6.17 |
|
| 17 | I.Venkatraman | Anna University approved Seven Days FDTP on Electromagnetic Theory- EE6302 | Kalaignar Karunanidhi Institute of Technology ,Coimbatore | 19/6/2017 | 25/6/2017 |
| 18 | SV. Sreeraj | Solar PV Design and Engineering | Global Sustainable energy Solution New Delhi | 5/6/2017 | 30/6/2017 |
| 19 | V.Mohanraj | Short Term Course on “Non Linear and Adaptive Control Design” | IISC - Bangalore | 12/06/2017 | 16/06/2017 |
| 20 | S S Sethuraman | Effective Writing of Engineering Journal Paper and Thesis | SRM University, CFDP on Electrical Machines hennai | 16/03/2017 | 17/03/2017 |
| 21 | [M Sasikala](https://www.svce.ac.in/departments/eee/profile/index.php?id=EEE7925005) | [FDP on Electrical Machines II](https://www.svce.ac.in/departments/eee/profile/index.php?id=EEE7925005)  International Workshop on Advanced Functional Nanomaterial | COE,Anna University | 15/5/2017  22/3/2017 | 21/7/2017  24/3/2017 |
| 22 | [S.Sinthamani](https://www.svce.ac.in/departments/eee/profile/index.php?id=EEE7122012) | Anna University approved Seven Days FDTP on Embedded and real time systems -EC6703 | [SVCE](https://www.svce.ac.in/departments/eee/profile/index.php?id=EEE7122012) | [13/06/2017](https://www.svce.ac.in/departments/eee/profile/index.php?id=EEE7122012) | [21/06/2017](https://www.svce.ac.in/departments/eee/profile/index.php?id=EEE7122012) |
| 23 | [K.S.Pavithra](https://www.svce.ac.in/departments/eee/profile/index.php?id=EEE7862012) | Anna University approved Seven Days FDTP on Embedded and Realtime Systems-EC6703 | [SVCE](https://www.svce.ac.in/departments/eee/profile/index.php?id=EEE7862012) | [13/06/2017](https://www.svce.ac.in/departments/eee/profile/index.php?id=EEE7122012) | [21/06/2017](https://www.svce.ac.in/departments/eee/profile/index.php?id=EEE7122012) |
| 24 | [S. Anitha](https://www.svce.ac.in/departments/eee/profile/index.php?id=EEE2802011) | [A one day workshop on “Introduction to COMSOL”.](https://www.svce.ac.in/departments/eee/profile/index.php?id=EEE2802011) | COMSOL Training | 15/03/2017 | 15/03/2017 |
| A three day international workshop on Advanced Functional NanoMaterials. | Anna University | 22/03/2017 | 24/03/2017 |
| GIAN course on “Solar Cells - Materials and Modelling” | Madurai Kamaraj University: | 29/05/2017 | 10/06/2017 |
| 25 | [M.Sankar](https://www.svce.ac.in/departments/eee/profile/index.php?id=2015EEE005) | [FDTP on EE6504 Electrical Machines- II](https://www.svce.ac.in/departments/eee/profile/index.php?id=2015EEE005) | [CEG, Anna University](https://www.svce.ac.in/departments/eee/profile/index.php?id=2015EEE005) | [15/5/2017](https://www.svce.ac.in/departments/eee/profile/index.php?id=2015EEE005) | [21/5/2017](https://www.svce.ac.in/departments/eee/profile/index.php?id=2015EEE005) |
| 26 | G.Vinoth Kumar | Workshop on Embedded systems using RASPBERRY Pi Boards (IOT)  Three days Faculty Development on Special Electrical Machines | Jerusalem College of Engineering  Rajalakshmi Institute of Technology | 5/6/2017  13/6/2017 | 6/6/2017  15/6/2017 |
| 27 | C.Kamal | Anna University approved Seven Days FDTP on Control System  Work shop on Application of Soft computing techniques in Electrical Research | Eswari Engineering College , Chennai  St.Joseph Inst of Technology, Chennnai | 12/6/2017  25/5/2017 | 18/6/2017  26/5/2017 |
| 28 | [S.Thamizmani](https://www.svce.ac.in/departments/eee/profile/index.php?id=EEE20163) | [Short Term Course on “Non Linear and Adaptive Control Design”](https://www.svce.ac.in/departments/eee/profile/index.php?id=EEE20163) | [IISC - Bangalore](https://www.svce.ac.in/departments/eee/profile/index.php?id=EEE20163) | [12/06/2017](https://www.svce.ac.in/departments/eee/profile/index.php?id=EEE20163) | [16/06/2017](https://www.svce.ac.in/departments/eee/profile/index.php?id=EEE20163) |
| 29 | M.Rajalakshmi | ---------- | --------- | -------- | --------- |
| 30 | [Tamizhselvan Annamalai](https://www.svce.ac.in/departments/eee/profile/index.php?id=EEE1772008) | [FDP on Embedded systems](https://www.svce.ac.in/departments/eee/profile/index.php?id=EEE1772008) | [Kalasalingam University](https://www.svce.ac.in/departments/eee/profile/index.php?id=EEE1772008) | [15/4/2017](https://www.svce.ac.in/departments/eee/profile/index.php?id=EEE1772008) | [22/4/2017](https://www.svce.ac.in/departments/eee/profile/index.php?id=EEE1772008) |
| 31 | [S.Angala Vaishnavi](https://www.svce.ac.in/departments/eee/profile/index.php?id=EEE201503) | [FDP on Microprocessor and Microcontroller](https://www.svce.ac.in/departments/eee/profile/index.php?id=EEE201503) | St.Joseph Inst of Technology, Chennnai | [30//5/2017](https://www.svce.ac.in/departments/eee/profile/index.php?id=EEE201503) | [6/6/2017](https://www.svce.ac.in/departments/eee/profile/index.php?id=EEE201503) |

**2) Departmental research activities:**

1. **Symposium, Conferences, Workshop and Guest lecture Conducted:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sl**  **No.** | **Name of the Event** | **Topic** | **Period** | **Funding Agency** | **N/I** | **Convener and Faculty In charge(Expert)** |
| 1 | Workshop | LabVIEW Graphical System Design and DAQ Integration | 24/02/2017 to 25/02/2017 | Self supported | N | Convener:  Dr.KR. Santha  Faculty In-charges:  C.Venkatesan,  D.Amudhavalli &  S.V.Sreeraj |
| 2 | Conference | National Conference on Advances in Electrical and Electronics Engineering | 10/3/2017 | SVCE and Fund from participants | N | Convener:  Dr.KR .Santha  Coordinators:  R.Karthikeyan,  A.Thamizhselvan&  C.Kamal |
| 3 | Workshop | Workshop on Nanoscience and Nano Engineering | 7/3/17 | SVCE and Fund from participants | N | Convener:  Dr.KR .Santha  Coordinators:  Dr.K.B.Sudhakar, Mr.S.Sudharsanam |

**B) Guest lecture delivered:**

| **Sl** | **Name** | **Title and Guest Lecture Details** | **Place and Nature of participation.** | **Date** |
| --- | --- | --- | --- | --- |
|
| 1 | Dr KR.Santha | Introduction to Digital Signal Processing  Special guest and session chair in National conference on Communication, Electronics and Signal processing  A key note speech on ‘Signal processing and Machine learning’ and inaugural address on Self development and opportunities in Engineering | Rajiv Gandhi College of Engg, Sriperumbudur  Velammal College of Engineering, Chennai | 05.04.2017  07.04.2017 |
| 3 | Dr.N.K.Mohanty | Resource Person in FDP on Control Systems (Solution to State Equations) | Easwari Engineering College | 17.6.2017 |
| 4 | Dr.N.K.Mohanty | Resource Person in FDP on Applied Soft Computing | Velammal  Engineering  College | 14.6.2017 |
| 5 | Dr.N.K.Mohanty | Presented a paper titled “Investigations on Super Lift Converter based directive torque control of induction motor drive | Faculty Research Day 2017 , SVCE. | March  2017 |
| **6** | Dr.S.G.Bharathidasan | **Computer Control of Power Systems- An overview–**Guest lecture for EEE students. | DMI College of Engineering, Chennai -Guest Lecturer | March 11, 2017 |
|  |  |  |  | March 15 |
| 7 | Dr.S.G.Bharathidasan | **Smart Grid** in National Conference on Recent trends in Power Electronics and Power System 2017. | DMI College of Engineering, Chennai  Chief Guest |

**C) Completed funded projects in the Department:**

**Intramural**

Intramural Funding for PG project entitled “A symmetric Multilevel Voltage Source Inverter with Reduced Number of Power Switches” to the tune of Rs 10000/- sanctioned to V.Sanghavee of M.E-Power Electronics and Drives (2015-2017) , Mentor - R.Karthikeyan , Associate Professor, EEE.The project has been completed successfully whose utilization certificate and report has been submitted to the office of Dean(Research) on 19/6/2017.One International Journal Publication resulted at the end of project work.

Intramural Funding for UG project entitled “SMART GLOVE TO AID PEOPLE WITH

MOVEMENT DISABILITY” of Rs 8000/- sanctioned to Dinesh.R, Kailash.S,Mohana Krishnan.P Muthiah.M of B.E-Electrical and Electronics Engineering (2013-2017) , Mentor - Anitha.S, Assistant Professor, EEE.The project has been completed successfully whose utilization certificate and report has been submitted to the office of Dean(Research) on 19/6/2017.

**Extramural**

“Performance Analysis of Switched Reluctance Motor Drive for Electric Vehicle Application with DSP” - This project with project ID : PG2017005 has been successfully completed by June 2017 , whose funding agency is Institution of Engineers (India) under R & D scheme (Grant-in-Aid scheme of financial year 2016-2017).The grant is Rs One Lakh.The Principal Investigator is Dr.N.K.Mohanty , Professor , EEE Department and One PG project has been completed under the same title resulting in publication in an International Journal

**D) Projects submitted to Funding Agencies by the Department:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl.No.** | **Name of the Project (Applied month & Year)** | **Funding Agency** | **Period & Amount applied**  **(Rs in Lakhs)** | **Coordinators** |
| 1 | PMSM based Electric vehicle with state feedback controller | Science and Engineering Research Board, New Delhi. | 17.06 | Dr. S.G.Bharathidasan  Dr.K.Sundararaman  Dr V.Ganesh |
| 2 | Electric Vehicle Dynamic Performance improvement using State Feedback Controller | The Institution of Engineers (India) R&D Grant-in-aid Scheme | 0.82 | Dr. S.G.Bharathidasan |
| 3 | Harvesting of renewable energy through a variable frequency transformer | DST-SERB | 39 lakhs | Dr.K.Sundararaman  Dr.S.G.Bharathidasan  Mr.C>Venkatesan |

**E) Research Centre status of the department:** Nodal Research centre of Anna University- Chennai **Number of Ph.D. Scholars associated with EEE Nodal Research Centre of Anna University in part time mode is 26 and in Full Time mode is 1 .**

1. **Number of Approved Mentors - 6**
2. **Ph.D. Mentors**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl**  **No.** | **Name of the Mentor** | **Designation** | **Area of Expertise** | **Number of**  **Candidates** | |
| **Internal** | **External** |
| 1 | Dr.KR.Santha | Professor and Head, EEE, SVCE | Digital signal Processing and VLSI design | 8 | 2 |
| 2 | Dr.Nalinkant Mohanty | Professor, EEE, SVCE | Power Electronics | 2 | 6 |
| 3 | Dr.Sudhakar K Bharatan | Professor, EEE, SVCE | Nano technology and Semiconductors | 5 |  |
| 4 | Dr.K..Sundararaman | Associate Professor, EEE, SVCE | Power Electronics  Control systems | 2 |  |
| 5 | Dr.R.Karthikeyan | Associate Professor, EEE, SVCE | Finite Element Analysis  Special Electrical Machines |  |  |
| 6 | Dr.S.G.Bharathidasan | Associate Professor, EEE, SVCE | Power systems  Smart grid  Renewable Energy systems | 1 | 1 |

**F) Details of EEE Faculty Pursuing PhD Registered with Anna University in Part-Time (PT) Mode**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **FacultyName** | **Registered on** | **Course Work(CW)** | **CW over** | **Corfirmed** | **Extension** | **SupervisorName** | **SupervisorCollege** |
| C.Venkatesan | July 2013 |  | Yes | Yes |  | Dr.K.Sundararaman | Sri Venkateswara College of Engineering |
| S.S Sethuraman | July 2012 |  | Yes | Yes |  | Dr.KR.Santha | Sri Venkateswara College of Engineering |
| T. Annamalai | January 2012 |  | Yes | Yes |  | Dr. K. Udhaya Kumar | COE- Anna University |
| S Arulmozhi | July 2014 |  | Yes | Yes |  | Dr.KR.Santha | Sri Venkateswara College of Engineering |
| D.Amudhavalli | January 2015 |  | Yes |  |  | Dr.N.K.Mohanty | Sri Venkateswara College of Engineering |
| S. Kumaravel | July 2011 |  | Yes | Yes | Phase 1 | Dr. S.G.Bharathidasan | Sri Venkateswara College of Engineering |
| M. Sasikala | July 2015 |  | Yes |  |  | Dr.Sudhakar K B | Sri Venkateswara College of Engineering |
| N. Shanmugavadivu | January 2015 |  | Yes |  |  | Dr.KR.Santha | SSN College of Engineering |
| A.Tamizhselvan | January 2011 |  | Yes | Yes | Phase 2 | Dr.Raniji S | SSN College of Engineering |
| S Sudharsanam | July 2015 |  | Yes |  |  | Dr.Sudhakar K B | Sri Venkateswara College of Engineering |
| D S Purushothaman | January 2015 |  | Yes |  |  | DR.K R.Santha | Sri Venkateswara College of Engineering |
| M.Sankar | July 2010 |  | Yes | Yes | Phase 3 | Dr.Kumidhinidevi | College of Engineering, Guindy |
| S.Sinthamani | January 2016 | On going |  |  |  | Dr.Sudhakar K B | Sri Venkateswara College of Engineering |
| S. Anitha | January 2016 |  | Yes |  |  | Dr.Sudhakar K B | Sri Venkateswara College of Engineering |
| M.Ranjith Kumar | January 2016 | On going |  |  |  | Dr.Sudhakar K B | Sri Venkateswara College of Engineering |
| I. Venkatraman | July 2016 |  | Yes |  |  | Dr.N.K.Mohanty | Sri Venkateswara College of Engineering |
| K.Suganthi | January 2017 | On going |  |  |  | Dr.K.Sundararaman | Sri Venkateswara College of Engineering |
| C.Kamal | January 2015 |  | Yes | Yes |  | Dr.T.Thyagarajan | MIT , Chrompet |
| M.Rajalakshmi | January 2016 |  | Yes |  |  | Dr.S.Chandramohan | COE- Anna University |

**3) Student Research Activities:**

The Details of Approved Mentors for Post Graduate Course M.E – Power Electronics and Drives is furnished in the following Table

| **Sl. no** | **Name of the Faculty** | **Areas of Research / Field of Interest** |
| --- | --- | --- |
| 1 | [Dr. K R Santha](http://www.svce.ac.in/departments/eee/profile/index.php?id=EEE2951995) | Digital Signal Processing, VLSI, Systems and Control, Asynchronous circuits, Parallel Processing, Power Electronics applications using DSP |
| 2 | Dr.N.K.Mohanty | Power Electronics & Drives, Microcontroller based converters and inverters, PV cell modeling. |
| 3 | Dr. K Sundara Raman | Power Electronics Electrical Machines  Embedded System  System Theory |
| 4 | Dr. [R Karthikeyan](http://www.svce.ac.in/departments/eee/profile/index.php?id=EEE3711997) | Finite Element Analysis  Special Electrical Machines |
| 5 | Dr. Sudhakar K Bharatan | Semiconductor Materials and Devices; Compound Semiconductor; Nanotechnology; Physical Electronics; and VLSI |
| 6 | Dr. [S G Bharathi Dasan](http://www.svce.ac.in/departments/eee/profile/index.php?id=EEE7722004) | Design & Simulation of Conventional and Intelligent Controllers, Electrical Machines Design & Analysis,  Flexible AC transmission systems, Power Electronics in Power System and Smart Grid. |
| 7 | Dr.C.Gopinath | Power Electronics Applications to Power Systems, Power Quality, Renewable Energy Sources, Design and Analysis of Inverters |
| 8 | Mr. [C Venkatesan](http://www.svce.ac.in/departments/eee/profile/index.php?id=EEE7852007) | Power Systems, Integration of Renewable Energy Resources into the Grid, Smart Grid. |
| 9 | Mr. [S S. Sethuraman](http://www.svce.ac.in/departments/eee/profile/index.php?id=EEE0572009) | Power electronics based DC to DC boost converters  , Digital Signal Processing |
| 10 | Mr. [T Annamal](http://www.svce.ac.in/departments/eee/profile/index.php?id=EEE6252009)ai | Renewable Energy -Wind, Solar Power Electronics – Impedance Source Inverter, DC to DC Converter Soft Computing VLSI, Microcontroller |
| 11 | Ms. [S Arulmozhi](http://www.svce.ac.in/departments/eee/profile/index.php?id=EEE7122003) | Power electronics(DC-DC converters)  Control systems(Design of controllers and analysis) |
| 12 | Ms. [D.Amudhavalli](http://www.svce.ac.in/departments/eee/profile/index.php?id=EEE2672010) | Power electronics(inverters, converters and their applications), Renewable energy (Solar, wind) |
| 13 | Mr. [S Kumaravel](http://www.svce.ac.in/departments/eee/profile/index.php?id=EEE8132005) | Renewable Energy, Power system modeling and Distributed generation. |
| 14 | Ms. [S.Sinthamani](http://www.svce.ac.in/departments/eee/profile/index.php?id=EEE33) | Power Electronics, Special electrical machines |
| 15 | Ms.K.S.Pavithra | Electronics, VLSI, ASIC |
| 16 | Mr. Ranjith kumar | Power Electronics and Electrical Machines |
| 17 | M.Sasikala | Nanoelectronics |
| 18 | Mrs.N.Shanmugavadivu | PV based renewable energy, Multilevel inverters. |
| 19 | [M.Sankar](https://www.svce.ac.in/departments/eee/profile/index.php?id=2015EEE005) | Power System, Renewable energy and Power quality |
| 20 | G.Vinoth Kumar | Electrical Drives |
| 21 | S.Angala Vaishnavi | Power Electronics and Electrical Machines |
| 22 | S Sudarsanam | Nanoelectronics |
| 23 | A Tamizh selvan | Digital signal processors, VIENNA Rectifier, FPGA |
| 24 | D S Purushothaman | Power Electronics and Electrical Machines |
| 25 | S.V. Sreeraj | Power Electronics and Electrical Machines |
| 26 | V Mohanraj | Digital signal processors, VIENNA Rectifier, FPGA |
| 27 | S Anitha | Nanoelectronics |
| 28 | I.Venkataraman | Inverters and Renewable Energy systems |
| 29 | C.Kamal | Modeling and control of BLDC machines , Soft computing |
| 30 | M.Rajalakshmi | Renewable Energy systems |
| 31 | Mr.Tamilmani | Renewable Energy systems |
| 32 | K.Suganthi | Power Electronic Converters |
| 33 | Dr.C.Gopinath | Power Quality |

2. **List of PG projects (Phase-II) carried out by the students in the department as in house project:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl./Roll**  **No.** | **Name of the Student**  **(Reg. No.)** | **Project Title** | **Supervisor Name** |
|
| 1 | L.ABIRAMI  (212715415001) | ANALYSIS OF THREE PHASE BRIDGELESS RECTIFIER FED PMDC MOTOR DRIVE | Mr.A.TAMIZHSELVAN |
| 2 | S.V.ASWIN  (212715415002) | CASCADING TWO DIFFERENT INVERTER TOPOLOGIES WITH REDUCED NUMBER OF SWITCHING COMPONENTS | Mr.ANNAMALAI |
| 3 | T.BHARATHI  (212715415003) | PERFORMANCE AND ANALYSIS OF PERMANENT MAGNET SYNCHRONOUS GENERATOR FOR AIRCRAFT APPLICATIONS | Mr.C.KAMAL |
| 4 | J. JEFFY FELCIA SHARON  (212715415004) | PERFORMANCE AND ANALYSIS OF SWITCHED RELUCTANCE MOTOR DRIVE FOR ELECTRIC VEHICLE APPLICATION USING DSP | Dr .NALIN KANT MOHANTY |
| 5 | A.KARTHIKEYAKUMAR  (212715415005) | COMPARATIVE ANALYSIS OF CONTROL STRATEGIES FOR 13 LEVEL CASCADED H-BRIDGE MULTILEVEL INVERTER FED INDUCTION MOTOR | Mr.D.S. PURUSHOTHAMAN |
| 6 | P.MANIMEGALAI  (212715415006) | SPEED CONTROL OF THREE PHASE BLDC FAN MOTOR USING FUZZY LOGIC CONTROLLER | Dr.KR.SANTHA |
| 7 | K.V.NIRMALA  (212715415007) | A COMPARISON OF NON-ISOLATED BIDIRECTIONAL DC-DC CONVERTER TOPLOGIES FOR UPS APPLICATIONS | Mrs.S.ARULMOZHI |
| 8 | RUMANA FARHEEN.N  (212715415008) | STATE FEEDBACK CONTROL SPEED CONTROL OF PERMANENT MAGNET SYNCHRONOUS MOTOR FOR AN ELECTRIC VEHICLE | Dr.S.G.BHARATHI DASAN |
| 9 | V.SANGHAVEE  (212715415009) | A SYMMETRIC MULTILEVEL VOLTAGE SOURCE INVERTER WITH REDUCED NUMBER OF SWITCHES | Dr.R.KARTHIKEYAN |
| 10 | R.SUBASRI  (212715415010) | MODIFIED ZETA CONVERTER WITH POWER FACTOR CORRECTION FOR ARC WELDING | Mrs.D.AMUDHAVALLI |
| 11 | R.SUNDARAVEL  (212715415011) | CONTROL OF PMSG BASED VARIABLE SPEED WIND TURBINES FOR SYSTEM VOLTAGE REGULATION AND POWER OSCILLATION DAMPING | Mr .S.KUMARAVEL |

1. **List of UG projects carried out by the students in the department :**

| **Sl./Roll**  **No.** | **Name of the Students** | **Project Title** | **Supervisor Name** |
| --- | --- | --- | --- |
|
| 1 | AKASH D , AKSHAY G S , HARI HARA SUDHAN V , KARN ACHARYA | Automation of effortless Horticulture using a Sensor and Actuator based Mesh Network | Dr. Sudhakar K Bharathan |
| 2 | ARCHANA S , BALA GANESH D ,  DHARMA KRISHNAN S , ELANGO R | Single stage AC/DC single inductor multiple output LED driver | Dr.K.Sundararaman |
| 3 | ASHWINI D   DIVIAH R A B   GANESH RAM S | Design and prototype implementation of Switch Mode Power Supply for ESP (Electrostatic Precipitator) | Dr.K.Sundararaman |
| 5 | LOGESWARAN L , PARVEZ PS PRAVEEN R  PRAVEEN KUMAR D | An Interline Dynamic voltage restorer for power quality improvement in Grid connected WECS | Mr.C.Venkatesan |
| 6 | ANANTHA KRISHNAN R , BAALA SHUBRAMANIYAN S HARI GOVINDAN G R   NAVANEETHAN G | Solar powered CUK converter VSI controlled BLDC motor for water Pumping Application | Ms.K.Suganthi |
| 7 | ABHINAV RAJAGOPALAN   ALAGESWARAN V , NAREN SRIVATSAV G , DHAMOTHARAN S | power optimizer for MPPT solar PV system | Mr.A.Tamizhselvan |
| 8 | BALAJI R   CHOCKALINGAM S   KRITHIKA RAMESHBABU | V/F Control of Induction motor with front end CUK Converter | Mr.A.Tamizhselvan |
| 9 | DHANUSHYA , EUREKA S   GIRIDHARAN N   NANTHITHA V | Simulation and implementation of interleaved boost converter for the micro WECS | S.S.Sethuraman |
| 10 | KAUSTHUB BARADVAJ M   KOUSHIK M | CLASSIFICATION OF OPERATING CONDITION OF AN EQUIPMENT USING CONVOLUTIONAL NEURAL NETWORK AND SUPPORT VECTOR MACHINE | Dr.R.Karthikeyan |
| 11 | KARTHIK K R  MOHAMED FAIZAL K  NAHYAN AHMED R | Automatic oil Filling of Engines and data logging | Ms.S.Sasikala |
| 12 | DINESH R , KAILASH S  MOHANA KRISHNAN P MUTHIAH M | Smart Glove to Aid People with Movement Disability | Ms.S.Anitha |
| 13 | HASHVANTH M ,LOGESH N U MANIKANDAN B MAHALAKSHMI P | A BL-CSC converter fed BLDC motor drive with power factor correction | Mr.D.S.Purushothaman |
| 14 | ASHWIN BALAJI H MICHEAL RAJ V MURALITHARAN R  NANTHA KUMAR M | Fabrication of different electrods for solar cell | Ms.S.Sinthamani |
| 15 | HARIPRASATH K  KEERTHANA S  NANDINI J | Intelligent control strategy for peak demand management | Mr.SV.Sreeraj |
| 16 | ABINESH K   DHINESH S   JANARTHANAN S NAVANEETHAN G | Multi-Level cascaded DC-Dc converter for Photovolatic Applications | Ms.Angalavaishnavi |
| 17 | DEEPAK PRIYADHARSHAN P G GANESH KUMAR A KUMARAGURU KANNAN N HARSHA VARDHINI R | Comparison of fast MPPT technique for solar power tracking | Mrs.Amudhavalli |
| 18 | BHARGAVRAM CHILUKURI  HEZRON JAZER C POOJA S PREETI K | Microfabrication of thin flim solar cell using RF/DC Sputtering | Dr.KR. Santha |
| 19 | RASHMI SHREE V RENE JOSHILDA G VAISHNAVI DEVI J | PiAgrarian - An Automated agricultural robot with plant disease detection | Dr.KR. Santha |
| 20 | SMILESH P R SRINIVASH B SUBRAMANIAM G VISHAG B | Microfabrication of Cuo/Zno solar cell on glass substrate using sol-gel method | Dr.Sudhakar.K.Bharatan |
| 21 | VASANTHAN N VIGNESH N YOGESH S PIPADA | State Feedback Control of Induction Machine. | Dr.S.G.Bharathidasan |
| 22 | SATHYA NARAYANAN SA SHREENITHI L YAZHINI S | Transmission line fault diagnostics using phasor measurement units | Dr.S.G.Bharathidasan |
| 23 | SESHA SAI HARSHITHA S SHARATH M V  VANKADHARI SAINATH VISHNU VIKASH S | Adaptive cruise control | Ms.S.Arulmozhi |
| 24 | POOJA R S RAAGUL S SURYA VIKRAM V  VISALI M | fabrication of Cuo and Zno solar cell using DC Sputtering | Mr.S.Sudharsanam |
| 25 | RAM PRAKAASH K,, SATHIYAN S SATHYA M | Dc micro-grid for residential loads | Dr.M.Gopalakrishnan |
| 26 | RIVENDHARAN M VIGNESH E VIGNESHWARAN J SURENDHAR R | Five level dual buck full bridge Inverter | Mr.T.Annamalai |
| 28 | NIRMAL K NISHANTH S | Design and construction of anthropomorphic robotic arm using wireless network | Mr.D.S.Purushothaman |
| 29 | SHWITAAN SREENIVAS R ZOHEB AHASAN RANJITH G SURIYA PRAKASH R | Voice command projector control system | Mr.V.Mohanraj |
| 30 | PRAVEEN SHEETHAL K B SANJAY V SANJITH S SWATHI B U | Performance and evaluation of permanent magnet claw pole alternator for high speed applications | Mr.A.Deepak |
| 31 | PRIYADARSHINI S S PRIYANKA K RAGUL KUMAR K SUGANYA R | Cogging torque analysis of PMSG for high speed applications | Mr.A.Deepak |
| 32 | RAKSHITH M TAMILSURYA A  VIJAY D VINAYAK G | simutaneous localization and mapping using microsoft kinect & ROS | Mr.Suresh Kumar |
| 33 | PAVITHRA LAKSHMI S SIVASAKTHI V RAKESH BALAJI S VIDHYA K | Bridgeless SEPIC PFC converter for low THD | Mr.I.Venkatraman |
| 34 | NITIN PRASHANH V  RANJITH KUMAR R R  SAILESH SRIVATSAN S R SENTHIL KUMAR R R | A DC-DC Converter for renewable energy application with high voltage gain and reduced ripple content | Mr.M.Sankar |
| 35 | RAJA GOPAL P  RAJA RAJAN S  SANDEEP M  SIVAKUMAR R | Cogging torque reduction in permanent magnet brushless DC motor by shaping of stator teeth | Mr.C.Kamal |

**4. Details of PG Students’ participation in workshop ,Conference, Symposium, Seminar, Short term course and publications .**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl. No.** | **Name** | **Name of the Conference / Journal / Workshop** | **Venue** | **Date** |
| 1 | J. JEFFY FELCIA SHARON | National Conference on Advances in Electrical and Electronics Engineering | Department of Electrical and Electronics Engineering  Sri Venkateswara College of Engineering,  Sriperumbudur | 10/03/2017 |
| 2 | V.SANGHAVEE |
| 3 | R.SUNDARAVEL |
| 4 | R.SUBASRI |
| 5 | K.V.NIRMALA |
| 6 | P.MANIMEGALAI |
| 7 | A.KARTHIKEYAKUMAR |
| 8 | L.ABIRAMI |
| 9 | S.V.ASHWIN | \  International Conference ICCPEAT 2k17 | Department of Electrical and Electronics Engineering  Pondicherry Engineering College, Pondicherry | 24/2/2017 and 25/2/2017 |
| 10 | K.V.NIRMALA |
| 11 | A.KARTHIKEYAKUMAR |
| 12 | T.BHARATHI | International Conference PEKKON 2k17 | VIT - Chennai | 2/3/2017  to 4/3/2017 |

**5. Details of Students’ participation in workshop ,Conference, Symposium, Seminar, Short term course and publications – UG**

| **SL.NO** | **NAME OF THE STUDENT** | **YEAR** | **ACHIEVEMENT PARTICULARS** |
| --- | --- | --- | --- |
| I/II/III/IV |
| 1 | HARISH A | III | COMPUTATIONAL INTELLIGENCE |
| 2 | ASHWIN S | III | COMPUTATIONAL INTELLIGENCE |
| 3 | SAKTHI SUNDARAM S | III | NANOSCIENCE AND NANOENGINEERING |
| 4 | S.AKASH | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 5 | V.AKASH | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 6 | ASHWIN S | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 7 | BALASUBRAMANIAN VS | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 8 | BALASUBRAMANIAN S | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 9 | BHARADWAJ S | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 10 | G.BHARATHRAJ | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 11 | BHARAT SINGH | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 12 | DEEPAK KUMAAR | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 13 | N.DAMODARAN | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 14 | JIROSHAN | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 15 | A.KABILAN | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 16 | LAKSHMINARAYANAN | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 17 | D.MADHUSTI | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 18 | MANISHANKAR | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 19 | H.MEHTAJ BANU | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 20 | NANDINI ANANTHAN | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 21 | RAJESH KUMAR R | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 22 | RAM KESHAV M | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 23 | TS ROJA | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 24 | SHAKTHI SUNDARAM | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 25 | SHANMATHI RV | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 26 | SRINIVASAN R | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 27 | SUNANDHITHA V | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 28 | SWATHI J | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 29 | SWATHI S | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 30 | VARUN KV | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 31 | VENKATA KRISHNA KUMAR V | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 32 | VIGNESH MS | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 33 | SHOBAN BABU K | III | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 34 | NANDINI | IV | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 35 | SABARI NATHAN | IV | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 36 | SWEITHAN SRINIVASH | IV | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 37 | SIVA SAKTHI | IV | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 38 | VIGNESH E | IV | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 39 | YAZHINI | IV | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 40 | RAJARAJAN | IV | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 41 | RANJITH G | IV | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 42 | SURIYA PRAKASH | IV | LabVIEW GRAPHICAL SYSTEM DESIGN |
| 43 | ASHUTOSH SRIDHAR | II | DATA ANALYTICS |
| 44 | AFZAL AHAMED C | II | INTERNET OF THINGS |
| 45 | GIRIDHAR. S | II | INTERNET OF THINGS |
| 46 | AJAY KUMAR | II | SWARM ROBOTICS |
| 47 | B.K. DEEPAK | II | INTERNET OF THINGS |
| 48 | ARAVIND GANANASEKAR | II | INTERNET OF THINGS |
| 49 | NAVEEN KUMAR K.H. | II | CLOUD BASED ROBOTS |
| 50 | P.LAKSHMI SRINIDHI | II | NETWORKING |
| 51 | SWATHI J | III | NANOSCIENCE AND NANOENGINEERING |
| 52 | SAKTHI SUNDARAM S | III | SVCE/RESEARCH DAY/III PRIZE |

**Research cell(s) /area(s) of research in the department:**

Power Systems and High Voltage Engineering

* Power Systems Optimization ,Power system stability, protection and control
* High Voltage Engineering ,Transmission lines
* Modern Rectifiers and resonant Converters
* Solid state AC and DC drives

Physical Electronics

* Electromagnetics
* Electronic Devices
* Nanotechnology
* Optoelectronics
* Microelectromechanical Systems
* Power Electronics for Renewable Energy Systems

Communications and Signal Processing

* Digital signal processing
* Digital Image processing
* Remote sensing
* Communication systems
* Theory and Algorithms
* Wireless networks

Computer Architecture and Digital systems

* Digital and Analog VLSI Design
* Embedded System Design
* Advanced power semiconductor devices
* Programming with VHDL

**Consultancy work in the department:**

Conducting laboratory course for AMIE (SVCE is one of the AMIE nodal centers for laboratory courses)VI