# Curriculum Vitae

Joysun D Souza



| Designation:                       | Assistant Professor<br>Department of Electrical & Electronics Engineering<br>St. Joseph Engineering College, Vamanjoor, Mangaluru                                     |
|------------------------------------|---|
| Permanent<br>Address:              | "Happy Home/ Ave Maria"<br>Devadigara Bettu, Chanthar<br>Brahmavar, Udupi District and Taluk,<br>Karnataka, India<br>Pin: 576213                                      |
| Work Address:                      | Assistant Professor,<br>Department of Electrical & Electronics Engineering,<br>St. Joseph Engineering College, Vamanjoor, Mangaluru<br>Karnataka, India<br>Pin:575028 |
| Current<br>Residential<br>Address: | "Lioma Cote", 2 <sup>nd</sup> cross, Sirlapadpu, Opp. Mahaganapathy<br>temple, Kushekara, Mangaluru, D.K., Karnataka<br>Pin: 575005                                   |
| Phone No.:                         | 8105134858<br>7975751169  |
| Email id:<br>Date of Birth:        | joysun.dsouza@gmail.com<br>02/09/1987   |
| Nationality:                       | Indian  |

#### **Career** Objectives

- To selflessly teach and share my knowledge with the students.
- To be dedicated to my work and contribute my bit in the future growth of the Establishment I work for.
- To make optimum use of my talents and positive nature for my Individual and the Establishment's development.
- To make a mark as a distinguished professional in an Organization.

#### **Personal Qualities**

- Dedicated to the good of his family and the well-being of his Organization
- Good Communication
- Good in English Grammar and Vocabulary
- Quick Learner and Hardworking
- Person interested in understanding concepts
- Good at documentation work

#### Educational Qualification

| Qualificat | Specialization  | University | College/       | Year of   | Remarks |
|------------|-----------------|------------|----------------|-----------|---------|
| ion        |                 |            | School         | Passing   |         |
| Ph.D       | Energy and      | VTU        | Adichunchana   | Currently |         |
|            | Power Systems   |            | giri Institute | Pursuing  |         |
|            |                 |            | of             |           |         |
|            |                 |            | Technology,    |           |         |
|            |                 |            | Chikkamagalu   |           |         |
|            |                 |            | ru, Karnataka  |           |         |
| M. Tech    | Instrumentation | Manipal    | Manipal        | 2011      | 8.68    |
|            | Control         |            | Institute of   |           | CGPA    |
|            | Systems         |            | Technology,    |           |         |
|            |                 |            | Manipal,       |           |         |
|            |                 |            | Karnataka      |           |         |
| B. E.      | Electrical &    | VTU        | Moodlakatte    | 2009      | 58%     |
|            | Electronics     |            | Institute of   |           |         |
|            | Engineering     |            | Technology,    |           |         |
|            |                 |            | Kundapura,     |           |         |
|            |                 |            | Karnataka      |           |         |
| PUC        | РСМВ            | Departmen  | S.M.S. P.U.    | 2005      | 59.16%  |
|            |                 | t of Pre-  | College,       |           |         |

|                  |   | University | Brahmavara,    |      |     |
|------------------|---|------------|----------------|------|-----|
|                  |   | Education, | Karnataka      |      |     |
|                  |   | Karnataka  |                |      |     |
| 10 <sup>th</sup> | - | CBSE       | Little Rock    | 2003 | 84% |
|                  |   |            | Indian School, |      |     |
|                  |   |            | Brahmavara,    |      |     |
|                  |   |            | Karnataka      |      |     |

## Teaching Experience Details

| College                | Department   | Position given | Duration         |
|------------------------|--------------|----------------|------------------|
| St. Joseph Engineering | Electrical & | Assistant      | March 7, 2023 -  |
| College, Vamanjoor,    | Electronics  | Professor      |                  |
| Mangaluru, Karnataka   | Engineering  |                |                  |
| Adichunchanagiri       | Electrical & | Assistant      | July 16, 2012 –  |
| Institute of           | Electronics  | Professor      | Feb 28, 2023     |
| Technology,            | Engineering  |                |                  |
| Chikkamagaluru,        |              |                |                  |
| Karnataka              |              |                |                  |
| Shridevi Institute of  | Electrical & | Lecturer       | July 01, 2011 to |
| Technology, Tumkuru,   | Electronics  |                | June 30, 2012    |
| Karnataka              | Engineering  |                |                  |

## Total Experience

| Experience (in years)                              |   |   |            |  |
|--|---|---|------------|--|
| TeachingResearchIndustryTotal= Teaching + Research |   |   |            |  |
|  |   |   | + Industry |  |
| 13 years   | - | - | 13 years   |  |

## Software Skills

• Matlab, Simulink, S-Functions, Mathworks

• Basic Computer skills like Microsoft Word, Microsoft Excel, Microsoft Power Point, Google Sheets, Google forms etc.

| Sl.<br>No. | Торіс                             | Organization             | Date                                |
|------------|-----------------------------------|--------------------------|-------------------------------------|
| 1.         | VTU-VGST FDP on "Virtual          | Dept. of ECE,            | $28^{th} - 31^{st}$                 |
|            | Instrumentation Essentials        | AIT,                     | May 2014                            |
|            | for Academic and Research         | Chikkamagaluru           | 2                                   |
|            | in Engineering"                   |                          |                                     |
| 2.         | Workshop on "Advanced             | Dept. of E&E,            | 12 <sup>th</sup> -14 <sup>th</sup>  |
|            | Power System Simulation           | AIT,                     | Nov 2014                            |
|            | using Mi-Power Package"           | Chikkamagaluru           |                                     |
| 3.         | Workshop on "Control              | Conducted by IIT,        | $2^{nd} - 12^{th}$                  |
|            | Systems"                          | Kharagpur and            | Dec 2014                            |
|            |                                   | held at MIT,             |                                     |
|            |                                   | Mysuru                   |                                     |
| 4.         | Workshop on "New Model            | Dept. of                 | 19/05/2018                          |
|            | Curriculum for First Year         | Electrical Board at      |                                     |
|            | <b>BE/Btech-CBCS Detailed</b>     | SCEM,                    |                                     |
|            | Syllabus (2018-19) as per         | Mangaluru                |                                     |
|            | Outcome Based                     |                          |                                     |
|            | Education(OBE) format             |                          |                                     |
|            | including Course                  |                          |                                     |
|            | Outcomes(CO) and Bloom's          |                          |                                     |
|            | Taxonomy"                         |                          | d d                                 |
| 5.         | TEQIP sponsored FDP on            | Dept. of E&E,            | $6^{th} - 10^{th}$                  |
|            | <b>"Power Electronic</b>          | NIE, Mysuru              | July 2020                           |
|            | Applications to Renewable         |                          |                                     |
|            | Energy Systems and Energy         |                          |                                     |
|            | Storage Systems"                  |                          | Ath oth A                           |
| 6.         | FDP on " <b>Recent Research</b>   | Dept. of E&E,            | $4^{\text{th}} - 8^{\text{th}}$ Aug |
|            | <b>Developments in Electrical</b> | PESIT,                   | 2020                                |
| 7          | Engineering"                      | Shivamogga               | oord o7th                           |
| 7.         | FDP on " <b>Recent</b>            | Dept. of E&E,            | $23^{\rm rd} - 27^{\rm th}$         |
|            | <b>Developments in Power</b>      | RIT, Hassan              | Nov 2020                            |
|            | Systems"                          |                          | 11th 17th                           |
| 8.         | FDP on " <b>Operational</b>       | Dept. of E&E,            | $11^{\text{th}} - 15^{\text{th}}$   |
|            | Planning in Electrical            | BIET, Davanagere         | Jan, 2021                           |
|            | Distribution Systems"             | Dent of E <sup>9</sup> E | 1 cth 20th                          |
| 9.         | FDP on " <b>Research</b>          | Dept. of E&E,            | $16^{\text{th}} - 20^{\text{th}}$   |
|            | Innovation and Recent             | SJBIT, Bengaluru         | Aug, 2021                           |

#### Workshops/FDP/Conferences/Add-on Course/ Training attended

|          | Trends in Electrical &                            |                                       |  |
|----------|---|---------------------------------------|--|
|          | Electronics Engineering"                          |                                       |  |
| 10.      | FDP on " <b>AI for all</b> "                      | Dept. of CSE,                         | $20^{\text{th}} - 24^{\text{th}}$      |
| 10.      |   | VVCE, Mysuru                          | Sept, 2021                             |
| 11.      | STTP on "Simulation with                          | Dept. of Basic                        | $20^{\text{th}} - 25^{\text{th}}$      |
|          | MATLAB- from device to                            | Sciences, JIS                         | Sept, 2021                             |
|          | circuit"  | College of                            | ~~p~,                                  |
|          |   | Engineering,                          |  |
|          |   | Kalyani, West                         |  |
|          |   | Bengal                                |  |
| 12.      | FDP on "Recent Trends in                          | Dept. of ME,                          | $28^{\text{th}} - 30^{\text{th}}$      |
|          | Applications of AI, ML, IoT                       | RNSIT, Bengaluru                      | Oct, 2021                              |
|          | and Robotics in Mechanical                        |                                       | ,                                      |
|          | Engineering"                                      |                                       |  |
| 13.      | Webinar on "Innovations in                        | Dept. of E&E,                         | 23 <sup>rd</sup> May                   |
|          | <b>Renewable Energy</b>                           | PESIT,                                | 2022                                   |
|          | Resources"  | Shivamogga                            |  |
| 14.      | Add-on Course on "Trends in                       | Dept. of E&E,                         | 8 <sup>th</sup> -11 <sup>th</sup> July |
|          | <b>Programming</b> ( C and C++)"                  | AIT,                                  | 2022                                   |
|          |   | Chikkamagaluru                        |  |
| 15.      | Add-on Course on                                  | Dept. of E&E,                         | $15^{th}-17^{th}$                      |
|          | "MATLAB Programming                               | AIT,                                  | July 2022                              |
|          | and Its Applications in                           | Chikkamagaluru                        |  |
|          | Engineering"                                      |                                       |  |
| 16.      | Add-on Course on                                  | Dept. of E&E,                         | $15^{\text{th}} - 17^{\text{th}}$      |
|          | "Introduction to                                  | AIT,                                  | July 2022                              |
|          | LABVIEW"  | Chikkamagaluru                        | a sth                                  |
| 17.      | Add-on Course on                                  | Dept. of E&E,                         | $15^{\text{th}} - 17^{\text{th}}$      |
|          | "Computer Aided Electrical                        | AIT,                                  | July 2022                              |
| 10       | Drawing"  | Chikkamagaluru                        | 1 Oth 1 5th                            |
| 18.      | FDP on <b>"Application of</b>                     | Dept. of E&E,                         | $12^{\text{th}} - 15^{\text{th}}$      |
|          | Power Electronics in Smart                        | PESIT,                                | September                              |
|          | Grid, Renewable Energy                            | Shivamogga                            | 2022                                   |
|          | <b>Resource and Industrial</b><br><b>Drives</b> " |                                       |  |
| 19.      |   | Dept. of E&E and                      | 16-17                                  |
| 19.      | Communication and AI                              | Dept. of ECE,                         | March 2023                             |
|          | using Matlab"                                     | SJEC, Mangaluru                       | Waren 2023                             |
| 20.      | ISO 9001:2015 Internal                            | SJEC, Mangaluru                       | 24-25 April                            |
| 20.      | Auditor Training                                  | ~~~~, mangarara                       | 2023                                   |
| 21.      | FDP on " <b>Awareness on</b>                      | SJEC, Mangaluru                       | 27-29 April                            |
|          | AICTE Examination                                 |                                       | 2023                                   |
|          | Reforms"  |                                       |  |
| 22.      | International Webinar on "                        | Dept. of EEE,                         | 16 <sup>th</sup> May                   |
| <b>.</b> |   | · · · · · · · · · · · · · · · · · · · |  |

|     | <b>Renewable Energy &amp; Power</b> | SITAMS, Andhra      | 2023                  |
|-----|-------------------------------------|---------------------|-----------------------|
|     | <b>Electronics : Shaping the</b>    | Pradesh             |                       |
|     | Future"                             |                     |                       |
| 23. | Orientation Program for New         | SJEC, Mangaluru     | 24-26 May             |
|     | Faculty                             |                     | 2023                  |
| 24. | Workshop on "Investor               | SJEC, Mangaluru     | 18 <sup>th</sup> July |
|     | Awareness"                          |                     | 2023                  |
| 25. | Webinar on " Empowering             | SJEC, Mangaluru     | 4 <sup>th</sup> Aug   |
|     | Engineering Excellence              |                     | 2023                  |
|     | through MATLAB And                  |                     |                       |
|     | Simulink"                           |                     |                       |
| 26. | Three days Hands on Training        | SJEC AICTE Idea     | 24-26 Aug             |
|     | on "Battery Modeling and            | lab in association  | 2023                  |
|     | Algorithm development with          | with SJEC Matlab,   |                       |
|     | Simulink"                           | Dept. of            |                       |
|     |                                     | Mechanical Engg.    |                       |
|     |                                     | & Mathworks         |                       |
| 27. | One week National level FDP         | Dept. of CSE,       | 21-25 Aug             |
|     | on " <b>Cloud</b>                   | JNTUK               | 2023                  |
|     | Infrastructure(AWS)"                | University College  |                       |
|     |                                     | of Engineering      |                       |
|     |                                     | Narasaraopet,       |                       |
|     |                                     | Andhra Pradeshin    |                       |
|     |                                     | collaboration with  |                       |
|     |                                     | Brainovision        |                       |
|     |                                     | Solutions Pvt. Ltd. |                       |
| 28. | 7 days FDP on " <b>Recent</b>       | JSPM's Rajarshi     | 3-9 Oct               |
|     | <b>Trends in Renewable</b>          | Shahu Coege of      | 2023                  |
|     | Energy Systems"                     | Engineering,        |                       |
|     |                                     | Pune.               |                       |
| 29. | Workshop on "Patents- Prior         | Dept. of ECE,       | 9 Oct 2023            |
|     | Art Search"                         | SJEC, Mangaluru     |                       |

#### Subjects Taught

| Sl. | Subjects Taught               | Year of  | Number of | UG/PG |
|-----|-------------------------------|----------|-----------|-------|
| No. |                               | teaching | times     |       |
|     |                               |          | taught    |       |
| 1.  | Electric Power Generation     | 2011-12  | 1         | UG    |
| 2.  | Transmission and Distribution | 2011-12  | 1         | UG    |
| 3.  | Control Systems               | 2011-12; |           | UG    |
|     |                               |          | 3         |       |

|     |                               | 2015-16;  |   |    |
|-----|-------------------------------|-----------|---|----|
|     |                               | 2023-24   |   |    |
| 4.  | Switchgear and Protection     | 2011-12   | 1 | UG |
| 5.  | Signals and Systems           | 2012-13 ; |   | UG |
|     |                               | 2013-14;  | 5 |    |
|     |                               | 2014-15;  | C |    |
|     |                               | 2017-18;  |   |    |
|     |                               | 2018-19   |   |    |
| 6.  | Energy Auditing and Demand    | 2012-13   |   | UG |
|     | Side Management               |           | 1 |    |
| 7.  | Field Theory                  | 2012-13 ; |   | UG |
|     |                               | 2013-14   | 2 |    |
| 8.  | Operations Research           | 2012-13 ; |   | UG |
|     |                               | 2013-14;  | 3 |    |
|     |                               | 2014-15   | C |    |
| 9.  | Network Analysis              | 2013-14   | 1 | UG |
| 10. | Electromagnetic Compatibility | 2014-15   | 1 | UG |
| 11. | Basic Electrical Engineering  | 2014-15;  |   | UG |
|     |                               | 2015-16;  | 7 |    |
|     |                               | 2016-17;  |   |    |
|     |                               | 2017-18;  |   |    |
|     |                               | 2018-19;  |   |    |
|     |                               | 2020-21;  |   |    |
|     |                               | 2022-23   |   |    |
| 12. | Logic Design                  | 2015-16   | 1 | UG |
| 13. | Management and                | 2015-16   | 1 | UG |
|     | Entrepreneurship              |           |   |    |
| 14. | Digital System Design         | 2016-17;  |   | UG |
|     |                               | 2017-18;  |   |    |

|     |                              | 2018-19; | _ |    |
|-----|------------------------------|----------|---|----|
|     |                              | 2019-20; | 6 |    |
|     |                              | 2020-21; |   |    |
|     |                              | 2021-22  |   |    |
| 15. | Electromagnetic Field Theory | 2016-17; |   | UG |
|     |                              | 2017-18; |   |    |
|     |                              | 2019-20; | 5 |    |
|     |                              | 2020-21; |   |    |
|     |                              | 2021-22  |   |    |
| 16. | Operational Amplifiers and   | 2018-19  | 1 | UG |
|     | LIC's                        |          |   |    |
| 17. | Renewable Energy Sources     | 2019-20; | 4 | UG |
|     |                              | 2022-23; |   |    |
|     |                              | 2023-24  |   |    |
|     |                              | (odd);   |   |    |
|     |                              | 2023-24  |   |    |
|     |                              | (even)   |   |    |
| 18. | High Voltage Engineering     | 2021-22; | 2 | UG |
|     |                              | 2022-23  |   |    |
| 19. | Electrical Estimation and    | 2022-23  | 1 | UG |
|     | Costing                      |          |   |    |
| 20. | Power System Protection      | 2023-24  | 1 | UG |
| 21. | Research methodology and     | 2023-24  | 1 | UG |
|     | Intellectual Property Rights |          |   |    |

## Labs Handled

| Sl.<br>No. | Labs handled | Academic<br>Years | Number of<br>times | UG/PG |
|------------|--------------|-------------------|--------------------|-------|
|            |              |                   | handled            |       |

| 1. | Control Systems Laboratory | 2011-12; |    | UG |
|----|----------------------------|----------|----|----|
|    |                            | 2012-13; |    |    |
|    |                            | 2013-14; |    |    |
|    |                            | 2014-15; | 12 |    |
|    |                            | 2015-16; |    |    |
|    |                            | 2016-17; |    |    |
|    |                            | 2017-18; |    |    |
|    |                            | 2018-19; |    |    |
|    |                            | 2019-20; |    |    |
|    |                            | 2020-21; |    |    |
|    |                            | 2021-22; |    |    |
|    |                            | 2023-24  |    |    |
| 2. | Relay & High Voltage       | 2012-13; |    | UG |
|    | Laboratory                 | 2013-14; |    |    |
|    |                            | 2014-15; |    |    |
|    |                            | 2015-16; |    |    |
|    |                            | 2016-17; | 12 |    |
|    |                            | 2017-18; |    |    |
|    |                            | 2018-19; |    |    |
|    |                            | 2019-20; |    |    |
|    |                            | 2020-21; |    |    |
|    |                            | 2021-22; |    |    |
|    |                            | 2022-23; |    |    |
|    |                            | 2023-24  |    |    |
| 3. | Logic Design Laboratory    | 2012-13; | 2  | UG |
|    |                            | 2013-14; | 2  |    |
| 4. | DC Machines & Synchronous  | 2014-15  |    | UG |
|    | Machines Laboratory        |          | 1  |    |
|    |                            |          |    |    |

| Opamp & LIC's Laboratory        | 2016-17   | 1  | UG   |
|---------------------------------|---|--|--|
| Power Electronics Laboratory    | 2017-18;  | 2  | UG   |
|                                 | 2023-24   |  |  |
| Electronics Laboratory          | 2018-19   | 1  | UG   |
| Basic Electrical Engineering    | 2018-19;  |  | UG   |
| Laboratory                      | 2019-20;  |  |  |
|                                 | 2020-   | 4  |  |
|                                 | 21(odd)   |  |  |
|                                 | 2020-   |  |  |
|                                 | 21(even)  |  |  |
|                                 |   |  |  |
| Prototype Fabrication & Testing | 2022-23;  | 3  | UG   |
|                                 | 2023-24   |  |  |
|                                 | (odd);  |  |  |
|                                 | 2023-24   |  |  |
|                                 | (even)  |  |  |
| Digital System Design Lab       | 2022-23   | 1  | UG   |
| Analog Electronics Circuit Lab  | 2023-24   | 1  | UG   |
|                                 | Electronics Laboratory Basic Electrical Engineering Laboratory  Prototype Fabrication & Testing Digital System Design Lab | Power Electronics Laboratory         2017-18;           2023-24         2018-19           Basic Electrical Engineering         2018-19;           Laboratory         2019-20;           2020-         21(odd)           2020-         21(even)           Prototype Fabrication & Testing         2022-23;           2023-24         (odd);           2020-         21(even)           Digital System Design Lab         2022-23; | Power Electronics Laboratory2017-18;<br>2023-242Electronics Laboratory2018-191Basic Electrical Engineering<br>Laboratory2018-19;<br>2019-20;<br>2020-4Laboratory2019-20;<br>2020-421(odd)<br>2020-<br>21(even)2020-<br>3Prototype Fabrication & Testing<br>(odd);<br>2023-24<br>(even)2022-23;<br>2023-24<br>(even)Digital System Design Lab2022-231 |

## UG / PG Projects/Mini Projects Supervised

| Sl. No. | Title                            | Year    | UG /PG |
|---------|----------------------------------|---------|--------|
| 1.      | Gas Leakage Detection and        | 2011-12 | UG     |
|         | Control                          |         |        |
| 2.      | Development of test kit for fuel | 2012-13 | UG     |
|         | display unit in helicopters      |         |        |
| 3.      | Voice Recognition Wheelchair     | 2013-14 | UG     |
| 4.      | Online Voltage Control of        | 2014-15 | UG     |
|         | Distribution System using        |         |        |

|     | Various Voltage Regulating        |           |    |
|-----|-----------------------------------|-----------|----|
|     | Devices                           |           |    |
| 5.  | Production of High Voltage using  | 2014-15   | UG |
|     | Flyback Transformer               |           |    |
| 6.  | Solar Panel Jacket for Generation | 2015-2016 | UG |
|     | of Wireless Power                 |           |    |
| 7.  | A Resistive SFCL For The          | 2015-16   | PG |
|     | Transient Performance             |           |    |
|     | Improvement Of A Micro Grid       |           |    |
| 8.  | Multi mode control strategy for   | 2015-16   | PG |
|     | VAr support by PV inverters in    |           |    |
|     | Distribution Networks             |           |    |
| 9.  | Auto Power Supply Control from    | 2016-17   | UG |
|     | 4 Different Sources : Solar,      |           |    |
|     | Mains, Generator & Inverter to    |           |    |
|     | ensure no Break Power             |           |    |
| 10. | Solar Powered Seven Level to      | 2017-18   | UG |
|     | Nine Level Inverter               |           |    |
| 11. | Modeling and Simulation of Mini   | 2017-18   | UG |
|     | Hydro Power Plant using           |           |    |
|     | MATLAB/SIMULINK                   |           |    |
| 12. | Generation of Electricity using   | 2018-19   | UG |
|     | Underwater Turbine                |           |    |
| 13. | A Fuzzy Logic Based Power         | 2018-19   | UG |
|     | Management System for an          |           |    |
|     | integrated AC-DC Hybrid Micro     |           |    |
|     | grid Model                        |           |    |
| 14. | Fuzzy Logic MPPT Method           | 2019-20   | UG |
|     | based PV System using PI control  |           |    |

|     | and IoT                         |         |    |
|-----|---------------------------------|---------|----|
| 15. | Simulation of an Adaptive Power | 2020-21 | UG |
|     | System with DC Motor type       |         |    |
|     | Dynamic Loads                   |         |    |
| 16. | Optimization of Solar Energy by | 2021-22 | UG |
|     | excess power at home to         |         |    |
|     | substation through IoT          |         |    |
| 17. | Underground Cable Fault         | 2021-22 | UG |
|     | Detection using Arduino         |         |    |
| 18. | Low Tension Circuit Breaker     | 2022-23 | UG |

#### UG Technical Seminars Supervised

| Sl. No. | Title  | Year    |
|---------|--|---------|
| 1.      | Economic and Efficient Voltage Management using    | 2014-15 |
|         | Customer-Owned Energy Storage Systems in a         |         |
|         | Distribution Network with High Penetration of      |         |
|         | Photovoltaic Systems                               |         |
| 2.      | Feasibility study of a Wind-PV-Diesel Hybrid       | 2014-15 |
|         | Power System for a Village                         |         |
| 3.      | A Method to harvest Electrical Energy from Living  | 2014-15 |
|         | Plants   |         |
| 4.      | Blooming Box Energy                                | 2015-16 |
| 5.      | Switching Permanent Magnet Generator for Small     | 2015-16 |
|         | Wind Turbine                                       |         |
| б.      | Energy Storage using Carbon Nanotubes              | 2015-16 |
| 7.      | Adaptive Regenerative Braking for Electric         | 2015-16 |
|         | Vehicles with an Electric Motor at the front axle  |         |
|         | using the State Dependent Ricatti Equation Control |         |

|     | Technique  |         |
|-----|--|---------|
| 8.  | Detection and Location of Faults in Three Phase    | 2015-16 |
|     | Under Ground Power Cable using Wavelet             |         |
|     | Transform  |         |
| 9.  | Generation of Power by Solar Roadways              | 2016-17 |
| 10. | Improvement of PV Cells using Diffractive and      | 2016-17 |
|     | Selective Crystalline Photonics                    |         |
| 11. | Transmission of Wireless Power using Space Solar   | 2016-17 |
|     | Power LEO Satellites                               |         |
| 12. | Drip Irrigation by using Wind Energy               | 2016-17 |
| 13. | The Impulse Breakdown Scale Effect in              | 2017-18 |
|     | Transformer Oil                                    |         |
| 14. | The Impact of Thermal Degradation on Properties    | 2017-18 |
|     | of Electrical Machine Winding Insulation Material  |         |
| 15. | Nano Generators                                    | 2017-18 |
| 16. | Small Scale Power Generation based on Solar        | 2017-18 |
|     | Tracking   |         |
| 17. | House Service Power Supply of Traction Substation  | 2017-18 |
|     | using Single Phase to Three Phase Converter with   |         |
|     | Active Power Filter                                |         |
| 18. | Thermal Energy Production from Closed Geo-         | 2018-19 |
|     | Thermal Reservoirs using Reinjection               |         |
| 19. | Location of Geothermal Power Plant : Suitable      | 2018-19 |
|     | Criteria   |         |
| 20. | Waste Heat Recovery by Thermoelectric Generator    | 2018-19 |
|     | and Solar Panels for Cooling and Heating Effect by |         |
|     | Peltier Module                                     |         |
| 21. | Induction Motor Speed Control using PLC and        | 2018-19 |
|     | SCADA  |         |

| 22. | The Design of an Electric Bicycle : an Overview | 2018-19 |
|-----|---|---------|
| 23. | Design of Geothermal Power Plant using PLC and  | 2018-19 |
|     | SCADA   |         |
| 24. | Designing and Modeling of Airborne Wind Turbine | 2020-21 |
| 25. | Electric Power Grid and Battery Storage for     | 2020-21 |
|     | Brushless DC Motor fed Electric Vehicle         |         |
| 26. | Refrigerator Design using Solar Energy          | 2020-21 |
| 27. | Future Electric Power Grid and Battery Storage  | 2020-21 |
| 28. | Wave Energy Converter Model based on a          | 2020-21 |
|     | Decentralized Hybrid Energy Storage System with |         |
|     | MPPT control algorithm                          |         |
| 29. | SCADA and Substation Automation Systems for the | 2020-21 |
|     | Port of Durban Power Supply Upgrade             |         |
| 30. | Electricity Generation by Hybrid Solar and Wind | 2021-22 |
| 31. | Review on Output Power of Radio Voltaic Nuclear | 2021-22 |
|     | Battery   |         |
| 32. | Wireless Power Transmission                     | 2021-22 |
| 33. | Intelligent Relay Protection of Electric Power  | 2021-22 |
|     | Systems   |         |
|     |   |         |

## Internship Program guided

| Sl. No. | Title                           | Year    | UG /PG |
|---------|---------------------------------|---------|--------|
| 1.      | 220 / 66 kV Hassan Receiving    | 2015-16 | PG     |
|         | Station                         |         |        |
| 2.      | Intelligent Hybrid Power Source | 2018-19 | UG     |
| 3.      | An Overview of JSW Steel        | 2018-19 | UG     |
|         | Works Limited                   |         |        |
| 4.      | Hindustan Aeronauticals Limited | 2018-19 | UG     |

| 5.  | Smart Water Tank Pump            | 2018-19 | UG |
|-----|----------------------------------|---------|----|
|     | Switcher                         |         |    |
| б.  | Equipment study and Electrical   | 2018-19 | UG |
|     | Maintenance                      |         |    |
| 7.  | Study on Process of Polyfiber    | 2019-20 | UG |
|     | Manufacturing & Thermal Power    |         |    |
|     | Plant in Grasim Industries       |         |    |
|     | Limited, Harihara                |         |    |
| 8.  | Embedded System                  | 2019-20 | UG |
| 9.  | Electrical Measuring Instrument  | 2019-20 | UG |
| 10. | Industrial Automation            | 2019-20 | UG |
| 11. | Electric Power Distribution      | 2019-20 | UG |
| 12. | A study on Blower Motor Design   | 2020-21 | UG |
|     | and Manufacturing Process        |         |    |
| 13. | Solar Manufacturing Equipment    | 2020-21 | UG |
|     | Appliances                       |         |    |
| 14. | Exploring the Landscape of       | 2020-21 | UG |
|     | Machine Learning and AI at the   |         |    |
|     | edge of Industrial Automation    |         |    |
| 15. | Hybrid Electric Vehicle          | 2020-21 | UG |
| 16. | Study on Embedded System         | 2020-21 | UG |
| 17. | Manufacturing of Electric        | 2021-22 | UG |
|     | Generators at Kirloskar Electric |         |    |
|     | Company Limited                  |         |    |
| 18. | Distribution Transformer         | 2021-22 | UG |
| 19. | Electrical Control Panels        | 2021-22 | UG |
| 20. | PV Plant Design                  | 2021-22 | UG |
| 21. | Python and Machine Learning      | 2022-23 | UG |
| 22. | Power Distribution               | 2022-23 | UG |

| Sl. No. | <b>Title of Research Paper</b> | Publication details               |
|---------|--------------------------------|-----------------------------------|
| 1.      | A New Micro grid Fault         | Volume 1 Issue 5 in International |
|         | Current Limiter for            | Journal of Science & Engineering  |
|         | Transient Performance          | Development Research (IJSDR) in   |
|         | Improvement                    | May 2016                          |
| 2.      | A New Technique to             | Volume 1 Issue 5 in International |
|         | Control Wireless               | Journal of Science & Engineering  |
|         | Underwater Power               | Development Research (IJSDR) in   |
|         | Transmission                   | May 2016                          |
| 3.      | Efficiency Enhancement         | Volume 1 Issue 5 in International |
|         | of PV Array using Grid-        | Journal of Science & Engineering  |
|         | Connected Inverter             | Development Research (IJSDR) in   |
|         |                                | May 2016                          |
| 4.      | A Design and Analysis of       | Volume 1 Issue 6 in International |
|         | Hybrid Energy System           | Journal of Science & Engineering  |
|         |                                | Development Research (IJSDR) in   |
|         |                                | June 2016                         |
| 5.      | Design and                     | Volume 1 Issue 6 in International |
|         | Implementation of              | Journal of Science & Engineering  |
|         | Transformer Static             | Development Research (IJSDR) in   |
|         | Differential Relay with        | June 2016                         |
|         | Harmonic Blocking for          |                                   |
|         | Power System Protection        |                                   |
| 6.      | Types of VAr Control           | Volume 1 Issue 9 in International |
|         | Modes for photovoltaic's       | Journal of Science & Engineering  |
|         |                                | Development Research (IJSDR) in   |
|         |                                | September 2016                    |
| 7.      | Development of Power           | Volume 2 Issue 4 in International |
|         | System Protection and          | Journal of Science & Engineering  |
|         | Control by Advanced            | Development Research (IJSDR) in   |
|         | Numerical Relay                | April 2017                        |

#### Academic Responsibilities

| Framed Lab Manuals           |          |  |
|------------------------------|----------|--|
| Basic Electrical Engineering | I/II Sem |  |
| Analog Electronics           | III sem  |  |
| Control Systems              | VI Sem   |  |
| Relay and High Voltage       | VII Sem  |  |

## University Responsibilities

| Sl.<br>No. | Nature of Work        | Place                 | Year           |
|------------|-----------------------|-----------------------|----------------|
| 1.         | External Deputy Chief | G.E.C., Hassan        | Dec 2015/Jan   |
|            | Superintendent        |                       | 2016;          |
|            |                       |                       | May/June       |
|            |                       |                       | 2018           |
|            |                       | JNNCE, Shivamogga     | Sep 2022       |
|            |                       | BIT, Mangaluru        | May/June       |
|            |                       |                       | 2024           |
| 2.         | Flying Squad member   | Mysuru region         | Dec 2018 / Jan |
|            | for VTU exams         |                       | 2019           |
| 3.         | Lab Internal Examiner | A.I.T.,               | 2016-2023      |
|            |                       | Chikkamagaluru        |                |
|            |                       | SJEC, Mangaluru       | 2023 onwards   |
| 4.         | Lab External Examiner | R.I.T., Hassan        | 2014-2019;     |
|            |                       |                       | 2023           |
|            |                       | M.C.E., Hassan        | 2014;          |
|            |                       |                       | 2021;          |
|            |                       |                       | 2022           |
|            |                       | J.N.N.C.E.,           | 2016-2019      |
|            |                       | Shivamogga            |                |
|            |                       | SJCE, Mangaluru       | 2017           |
|            |                       | Canara Engineering    | 2017           |
|            |                       | College, Bantwal      |                |
|            |                       | P.E.S.I.T.,           | 2019           |
|            |                       | Shivamogga            |                |
|            |                       | P. A. College of      | 2023           |
|            |                       | Engineering,          |                |
|            |                       | Mangaluru             |                |
|            |                       | Srinivas Institute of | 2024           |

|    |                       | <b>—</b> • •         | <b>ر</b> ۱  |
|----|-----------------------|----------------------|-------------|
|    |                       | Technology,          |             |
|    |                       | Mangaluru            |             |
|    |                       | Shree Devi Institute | 2024        |
|    |                       | of Technology,       |             |
|    |                       | Mangaluru            |             |
|    |                       | SDMIT, Ujire         | 2024        |
| 5. | Semester theory exams | VTU Valuation        | 2014-2022   |
|    | subjects Valuator and | Center at Mysuru,    |             |
|    | Moderator             | UBDT, Davanagere,    |             |
|    |                       | AIT,                 |             |
|    |                       | Chikkamagaluru,      |             |
|    |                       | GEC, Hassan          |             |
|    |                       | Dayanand Sagar       |             |
|    |                       | College of Engg.,    |             |
|    |                       | Bengaluru            |             |
|    |                       | MCE, Hassan          |             |
|    |                       | SJEC, Mangaluru      | Since 2023  |
|    |                       | NITTE University,    | 2023-24     |
|    |                       | Karkala              |             |
| 6. | VTU theory exams      | SIET, Tumkur         | 2011-12     |
|    | Invigilator           | AIT, Chikkamagaluru  | 2012-2023   |
|    |                       | SJEC, Mangaluru      | 2023onwards |
| 7. | Paper Setter          | VTU theory Exams     | 2017-2023   |
|    |                       | MCE, Hassan          | 2020;       |
|    |                       |                      | 2024        |
|    |                       | SSIT, Tumkuru        | 2017        |
|    |                       | NITTE University,    | 2023        |
|    |                       | Karkala              |             |
|    |                       | SJEC, Mangaluru      | 2023onwards |

## AIT College Responsibilities

| Sl. | Activity                                 | Year       |
|-----|--|------------|
| No. |  |            |
| 1.  | Jyana Vigyana Mela Co-ordinator of E&E,  | 2013-14;   |
|     | AIT, Chikkamagaluru                      | 2015-16    |
| 2.  | News Letter Co-ordinator of E&E, AIT,    | 2015-2018  |
|     | Chikkamagaluru                           |            |
| 3.  | HR Co-ordinator for E&E students, AIT,   | 2015-2017  |
|     | Chikkamagaluru                           |            |
| 4.  | dhi (HERAIZEN) Co-ordinator of E&E, AIT, | Since 2016 |
|     | Chikkamagaluru                           |            |

| 5. | NIRF co-ordinator for E&E, AIT,        | 2019    |
|----|--|---------|
|    | Chikkamagaluru                         |         |
| 6. | Grievance Redressal Committee Member   | 2021-22 |
| 7. | NAAC Committee Member (Criteria 2) for | 2021-22 |
|    | E&E, AIT, Chikkamagluru                |         |
| 8. | Energy Audit Co-ordinator              | 2021-22 |

#### Department of Electrical & Electronics Engineering, AIT Responsibilities

| Sl. No. | Activity                                 | Year       |
|---------|--|------------|
| 1.      | Project Co-ordinator for Final Year B.E. | 2016-17    |
|         | students                                 |            |
| 2.      | Technical Seminar Co-ordinator for Final | 2014-15;   |
|         | Year B.E. students                       | 2021-22    |
| 3.      | Timetable Co-ordinator                   | Since 2015 |
| 4.      | Feedback Analysis Co-ordinator           | 2012-2016  |
| 5.      | Branch Fest Co-ordinator                 | 2012-13;   |
|         |  | 2014-15;   |
|         |  | 2021-22    |
| 6.      | Soft Skills Classes Co-ordinator         | 2015-16    |
| 7.      | Result Analysis Co-ordinator             | 2015-16;   |
|         |  | 2016-17    |
| 8.      | Department Meeting Co-ordinator          | Since 2012 |
| 9.      | Parent Teacher Association Co-ordinator  | 2021-22    |
|         |  | 2022-23    |
| 10.     | Energy Conservation Day Rally Co-        | 2022-23    |
|         | ordinator                                |            |

#### SJEC College Responsibilities

| SI.<br>No.      | Activity   | Year                    |  |
|-----------------|--|-------------------------|--|
| 1.              | Prizes and Awards Committee – TIARA 2023   | 2022-23                 |  |
| 2               | Faculty in charge  | 2022.22                 |  |
| 2.              | Student Welfare Group Faculty in charge  | 2022-23;                |  |
| 1               | Editing and Proof reading of Question papers   | 2023-24<br>2022-23      |  |
| <u>4.</u><br>5. | Editing and Proof reading of Question papers   |                         |  |
| 5.              | Technova 2023 – Department Project Exhibition<br>Coordinator                           | 2022-23                 |  |
| 6.              | Faculty Member for CII Mangaluru District<br>Panels and taskforce for the year 2023-24 | 2023 - 24               |  |
| 7.              | Admission Publicity Team Faculty in charge   | 2022-23                 |  |
| 8.              | IS/ISO 9001:2015 Quality Management System   | 2022 23<br>2023 onwards |  |
| 0.              | Internal Auditor   | 2023 011 wards          |  |
| 9.              | Editing and Proof reading of Semester exam question papers                             | 2023 onwards            |  |
| 10.             | Admission help Desk Committee Faculty in charge  | 2023 onwards            |  |
| 11.             |  |                         |  |
| 12.             |  | 2023-24                 |  |
| 13.             | Resource Person for DCET for Diploma students  | 2023-24                 |  |
| 14.             |  | 2023                    |  |
| 15.             |  | 2023-24                 |  |
| 16.             | Faculty Coordinator of Electoral Literacy Club   | 2024                    |  |
| 17.             | Chairperson of Safety Committee for<br>Graduation Day – 2023                           | 2023-24                 |  |
| 18.             | •  | 2024                    |  |
| 19.             | · ·  | 2024                    |  |
| 20.             | AICTE 360 degree feedback co-ordinator   | 2022-23;<br>2023-24     |  |
| 21.             | Mentor for 2 <sup>nd</sup> sem students  | 2023-24                 |  |
| 22.             | AICUF Staff Incharge   | 2024                    |  |
| 23.             | Hospitality, Food & Refreshment Committee  | 2023-24                 |  |
|                 | Member for NBA Visit   |                         |  |
| 24.             | Faculty co-ordinator for Kalashristi 2024 –  | 2023-24                 |  |

|     | eastern Singing(duet & Group)                 |         |
|-----|---|---------|
|     | Interdepartmental Competition                 |         |
| 25. | Faculty Co-ordinator for Valorant(Game) for   | 2023-24 |
|     | Tiara – 2024                                  |         |
| 26. | Technova 2024 – Department Project Exhibition | 2023-24 |
|     | Coordinator                                   |         |
| 27. | Master of Ceremonies for College Day 2024     | 2023-24 |
| 28. | Green Room(Boys) faculty incharge for College | 2023-24 |
|     | Day & Technite                                |         |

#### Department of Electrical & Electronics Engineering, SJEC Responsibilities

| Sl. No. | Activity  | Year         |
|---------|---|--------------|
| 1.      | Mini Project Co-Teacher in charge for 6 <sup>th</sup>       | 2022-23      |
|         | sem students  |              |
| 2.      | Class Advisor for 8 <sup>th</sup> sem students              | 2022-23      |
| 3.      | Mentor for 6 <sup>th</sup> sem students                     | 2022-23      |
| 4.      | Summer Internship -1 for 3 <sup>rd</sup> sem Lateral        | 2022-23      |
|         | entry students co-ordinator                                 |              |
| 5.      | Mentor for 1 <sup>st</sup> year students                    | 2023-24      |
| 6.      | Preparation of UG scheme and syllabus for                   | 2022-23;     |
|         | 2022 scheme from 3 <sup>rd</sup> to 8 <sup>th</sup> sem and | 2023-24      |
|         | Preparation of UG scheme and syllabus for                   |              |
|         | 2021 scheme from 5 <sup>th</sup> to 8 <sup>th</sup> sem     |              |
| 7.      | Preparation of Minor degree                                 | 2023-24      |
| 8.      | Class Advisor for final year students                       | 2023-24      |
| 9.      | BOE Internal Member   | 2023 onwards |
| 10.     | Internship Co-ordinator for 5 <sup>th</sup> sem students    | 2023-24      |
| 11.     | NBA Co-ordinator  | 2023-24      |
| 12.     | NAAC Co-ordinator   | 2023-24      |
| 13.     | ISO Co-ordinator  | 2023-24      |

| 14. | Resource Person for Hands on session on LTspice software for 3 <sup>rd</sup> sem EEE students | 2023-24 |
|-----|---|---------|
| 15. | Mentor for final year students  | 2023-24 |
| 16. | EELs Co-ordinator   | 2024-25 |
| 17. | KSCST Co-ordinator  | 2024-25 |
| 18. | ISO Co-ordinator  | 2024-25 |
| 19. | Internship Co-ordinator   | 2024-25 |

## Professional Membership

| Name of Society                           | Grade of Membership   |
|---|-----------------------|
| Indian Society for Technical<br>Education | Life Member- LM 78520 |
| The Institution of                        | M-1684655             |
| Engineers(India)                          |                       |
| IS/ISO 9001:2015 Quality                  | ISO Internal Auditor  |
| Management System                         |                       |

#### Professional References

| Sl.<br>No. | Name         | Designation & Details              | Mobile No. |
|------------|--------------|------------------------------------|------------|
| 1.         | Mr. Suhas K. | Assistant Professor, Dept. of ECE, | 7760241946 |
|            |              | M.I.T., Manipal                    |            |
| 2.         | Mrs. Kavitha | Assistant Professor, Dept. of E&E, | 9900792668 |
|            | K. M.        | A.I.T., Chikkamagaluru             |            |



Joysun D'souza

Assistant Professor Dept of E&E AIT, Chikkamagaluru