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| <p><b>Name:</b></p> <p>PURNA CHANDER RAO. PERALA</p>   |  |
| <p><b>Qualification :</b></p> <ul style="list-style-type: none"> <li>• M.Tech (Power Electronics) Pursuing Ph.D.</li> </ul>  |  |
| <p><b>Experience:</b></p> <ul style="list-style-type: none"> <li>• Associate Professor, Department of Electrical Engineering, VCE, Warangal (June' 2006 –till date)</li> <li>• Lecturer, Kakatiya Institute of Technology and Science, Warangal (July' 05- April' 06)</li> <li>• Assistant Professor, Sindhura College of Engineering and Technology, Godhavarikhani, Karimnagar(July'04- June' 05)</li> </ul>   |  |
| <p><b>Area of Interest:</b></p> <ul style="list-style-type: none"> <li>• Power Quality</li> <li>• Power electronic interface for Power Systems and non-conventional energy sources</li> </ul>  |  |
| <p><b>Subjects Taught:</b></p> <p><b>B.Tech:</b> Electrical circuit analysis, Electrical Machines, Power Electronics, Power systems, Control systems, Power Semiconductor drives and Network Theory, HVDC Transmission, FACTS.</p> <p><b>M.Tech:</b> Power Electronic control of DC and AC drives.</p>   |  |
| <p><b>Research Publications:</b></p> <ul style="list-style-type: none"> <li>• “Input voltage feed-forward control for the two switch Buck-Boost DC-DC converter” International Journal of Research in Alternate Energy Sources(IOJETR) held during30<sup>th</sup> Oct- 2015ISSN18:327-343.</li> <li>• “A Simple and Efficient full Bridge Converter with ZCS Technique” International Journal of Research in Alternate Energy Sources(IOJETR) held during30<sup>th</sup> Oct- 2015ISSN18:327-343.</li> <li>• “High Efficiency Isolated Bidirectional AC-DC Converter for a DC Distribution System” National Conference on Developments , Advances &amp;Trends in Engineering Sciences-(NCDATES-2K15) held during 9<sup>th</sup>&amp; 10<sup>th</sup> January 2015.</li> <li>• “A Hybrid system Employing SMES and Photovoltaic Energy with Current-Source Grid Inverter(CSGI) and their Control” International Journal of Research in Alternate Energy Sources(IOJETR), Volume 8,Issue 248,18:327-343;30<sup>th</sup> October 2014.</li> <li>• “High Voltage Boost with an Asymmetrical Full-Bridge Converter”, International Journal of Research in Power Electronics(IOJETR), Volume 8,Issue 148,October 2014.</li> <li>• “A DC- DC Converter with ZVS for High Voltage Gain”, International Review of Applied Engineering Research Volume No.3 2013 ISSN: 2248-9967.</li> <li>• “Interleaved Active-Clamping Converter with constant Frequency and Soft-Switching features” National Conference on Emerging Trends in Renewable Energy and Its Applications 18-19 Jan,</li> </ul> |  |

2013 Page: 115-119.

- Power Factor correction and efficiency improvement of a single phase AC/DC Converter with Enable window control” International Journal IACEECE-2013 22<sup>nd</sup> Sept, 2013 Hyderabad ISBN: 978-93-82702-30-6.

**Grants:**

**Projects guided:**

| S.No | Title  | U.G / P.G / Ph.D | Year |
|------|--|------------------|------|
| 1.   | Modelling and simulation of PhotoVoltaic System with Maximum Power Point Tracking strategy                     | U.G              | 2018 |
| 2.   | PLC Based Automatic Electric Locomotive  | U.G              | 2018 |
| 3.   | Enhancement of Power Quality in aGrid connected dual voltage source inverter                                   | P.G              | 2017 |
| 4.   | Simulation of Hybrid STATCOM with Reactive power compensation and low DC-Link voltage                          | P.G              | 2017 |
| 5.   | Simulation of an Improved Incremental Conductance algorithm for the MPP of a solar PV panel                    | P.G              | 2017 |
| 6.   | Hybrid Active Filter with variable Conductance for harmonic resonance suppression in industrial Power Systems  | P.G              | 2017 |
| 7.   | Simulation of Power converter in grid connected Photovoltaic systems   | U.G              | 2017 |
| 8.   | Reactive Power control of grid connected PV Inverter   | U.G              | 2017 |
| 9.   | Power Quality mitigation using unidirectional AC-DC boost Converter  | P.G              | 2016 |
| 10.  | High Efficiency Isolated Bidirectional AC-DC Converter for a DC Distribution System.                           | P.G              | 2015 |
| 11.  | Design and control of a Photovoltaic Energy and SMES Hybrid system with Current-Source Grid Inverter.          | P.G              | 2015 |
| 12.  | Newly-constructed single phase multilevel Inverter topology for Distributed Energy Resources.                  | P.G              | 2015 |
| 13.  | High Efficiency AC-AC Power Electronic Converter applied to Domestic Induction Heating                         | P.G              | 2014 |
| 14.  | Simulation and performance Evaluation of a Fast Dynamic Control Scheme for capacitor - supported Interline DVR | P.G              | 2014 |
| 15.  | Interleaved active-Clamping Converter with ZVS/ZCS Features  | P.G              | 2013 |
| 16.  | Cascade Dual Buck Inverter with Phase-Shift Control  | P.G              | 2013 |
| 17.  | Simulation of grid connected Hybrid system   | P.G              | 2013 |

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| 18. | SMES based Excitation system for Doubly-Fed Induction Generator in Wind Power Application                                | P.G | 2012 |
| 19. | Simulation of Zero-Voltage -Switching DC-DC Converter with High Voltage Gain   | P.G | 2012 |
| 20. | A High efficiency single phase AC/DC converter with enabling window control and active input bridge                      | P.G | 2011 |
| 21. | Modeling and simulation of hybrid wind and solar energy system a new rectifier stage topology.                           | P.G | 2011 |
| 22. | Control Strategies for Hybrid Switched Capacitor Converter.  | P.G | 2010 |
| 23. | Seven-level shunt active power filter for High –power Drive systems.   | P.G | 2010 |
| 24. | Double frequency Buck converter.   | P.G | 2010 |
| 25. | Control Strategies for Hybrid Switched Capacitor Converter.  | P.G | 2009 |
| 26. | Adaptive Hysteresis band Current Controlled Shunt Active Power Filter.   | P.G | 2009 |
| 27. | Automatic Voltage Regulator using AC Voltage – Voltage Converter.  | P.G | 2009 |
| 28. | A Zero Voltage Transition PWM Converter with synchronous rectifier   | U.G | 2014 |
| 29. | High Power Bidirectional DC-DC Converter for Aerospace applications.   | U.G | 2013 |
| 30. | Modeling and Control of DSTATCOM for a 3-Phase 4-wire Distribution system.   | U.G | 2012 |
| 31. | Single Phase Soft Switching Power Factor correction Converter.   | U.G | 2012 |
| 32. | A Nonisolated bidirectionalZVS-PWM active clamped dc-dc converter.   | U.G | 2011 |
| 33. | Power line Data Transmission for speed control of AC Motor.  | U.G | 2011 |
| 34. | Design and Simulation of Harmonic Filters.   | U.G | 2010 |
| 35. | Computer Aided Design &Simulation of Synthetic test circuits for 420KV C.B's.  | U.G | 2010 |
| 36. | A Novel method of Load Compensation under Unbalanced & Distorted Voltages.   | U.G | 2009 |
| 37. | Power Quality Enhancement in Distribution system using DSTATCOM.   | U.G | 2009 |
| 38. | Generating Conventional Energy from Non-conventional source and measure the consumed energy using pre-paid Energy meter. | U.G | 2008 |

**Workshops/Seminars/FDP's Organized:**

- Solar PV System Design for Residential Roof-Top applications during 21&22<sup>nd</sup> March,14.
- Coordinator for “High Impact Teaching Skills” and Advanced Mission 10X Program conducted by WIPRO.

**Workshops/Seminars/FDP's Attended:**

1. GIAN Course on "Wide Area Monitoring and Control of Cyber Power System" held during December 26-30, 2017 at the National Institute of Technology Warangal
  2. Short term course on "Application of Metaheuristic Techniques in Smart Power System Operation, Control and Protection" during 1<sup>st</sup>- 6<sup>th</sup> May, 2017 at Burla, Odisha.
  3. STTP on "Hands On: Mathematical Modelling and Software Simulation for Power System Engineering" during 6-15<sup>th</sup> June, 2016 at S.V.NIT, Surat-Gujarat.
  4. Workshop on "Development of Forecasting Models for Finance and Market Data Prediction using Computational Intelligence Techniques" during 19<sup>th</sup>-21<sup>st</sup> December, 2008 at NIT Warangal.
  5. Training program on "Digital Signal Processor applications to modern industrial drives" during 16<sup>th</sup> -28<sup>th</sup> June, 2008 at NIT Warangal.
  6. Workshop on "Recent advances in power systems and power electronics" at SR Engineering College on 24<sup>th</sup> & 25<sup>th</sup> February, 2008.
  7. Workshop on "Recent Trends in Power Electronics and Drives" at Vaagdevi College of Engineering on 3<sup>rd</sup> November, 2007.
- Workshop on "Simulation of electrical systems" on 30<sup>th</sup> & 31<sup>st</sup> January, 2006 at KITS Warangal.

**Conferences Attended:**

- International Conference on "Transformations in Engineering Education" during 16<sup>th</sup>-18<sup>st</sup> January, 2014 at BVBCET, Hubli, Karnataka.
- Pre Conference workshop on "Supporting students for Effective Implementation of Student Centered Learning Technique" held on 16<sup>th</sup> January, 2014 at BVBCET, Hubli, Karnataka.