



Department of Electrical and Electronics Engineering

University College of Engineering Kakinada (Autonomous)

Jawaharlal Nehru Technological University Kakinada

Faculty Achievements (January – June 2025)

Jan-2025

1. **Dr. Venkat Reddy Kota**, Professor & HOD, EEE, was acknowledged and appreciated for his contributions as a reviewer at IEEE INDICON 2024, held at IIT Kharagpur from 19–21 December 2024.
2. Veera Nagi Reddy Varampati, **Dr. Venkata Reddy Kota**, and Ashok Kumar Devarasetty Venkata, Professor & HOD, EEE, published a paper titled “Evaluation of Reduced-Switch Seven-Level Converter-Based UPQC with Hybrid Fuzzy-Feedforward Neural Network Algorithm” in Brazilian Archives of Biology and Technology (Vol. 68: e25240682, 1–20, 2025).
3. Chegireddy Naga Kota Reddy, Sandhya Rani Kunduru, and **Dr. Sai Babu Choppavarapu**, Professor, EEE, published a book chapter titled “Power Electronic Converters for Distributed Energy Storage Systems” in Distributed Energy Storage Systems for Digital Power Systems, Elsevier, 2025, pp. 239–262.
4. **C. Naga Kota Reddy**, K. Sandhya Rani, and **N. Sagar Teja Yadav**, Assistant Professor (C), EEE Dept., published a paper titled “Performance Comparison of FPGA-Based Controllers for Single Phase Square Wave Inverter” in Journal of Computational Mechanics, Power System and Control, Vol. 8, No. 1, Jan 2025, pp. 32–42.

Feb-2025

5. **Dr. Venkat Reddy Kota**, Professor & HOD, EEE, delivered an insightful guest lecture on “Electric Vehicles” at St. Ann’s College of Engineering & Technology on 6–7 February 2025, discussing the future scope of EVs, their impact on the automobile sector, and their role in pollution reduction.



6. Ganesh Pardhu, B. S. S., and **Dr. Venkata Reddy Kota**, Professor & HOD, EEE, published a paper titled “A Novel AOA-Based MPPT Technique for 2S2P Configuration of a Solar PV System Considering Complex Irradiations” in Electrical Engineering (2025): 1–14.
7. Mankumuthi Reddy Nagaraja, **Dr. Ch. Sai Babu**, and Dr. Naga Kota Reddy C, Professor, EEE, presented a paper titled “Reliability Analysis of Dual Active



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Bridge DC-DC Converter for High-Frequency Power Applications” at the 2nd International Conference on Emerging Advances and Applications in Green Energy (ICEAAGE-2025), organized by the EEE Department, PVPSIT, Vijayawada on 25 February 2025.

8. **Dr. K. Ravindra**, Professor, EEE, served as a Session Chair at the 2nd International Conference on Renewable Energy, Green Computing & Sustainable Development (ICREGCSD-2025), sponsored by ISTE and organized by the Department of EEE, CVR Engineering College, Hyderabad, Telangana, on 21-22 February 2025.
9. **Dr. Venkat Reddy Kota**, Professor & HOD, EEE, delivered a guest lecture on “Electric Vehicles” at Pragati Engineering College on 25th February 2025, highlighting the emerging opportunities in the EV sector.

March-2025

10. Bokka Sankara Ganesh, **Dr. N. Sumathi**, Mellam Vamsi Ram, and Vamsee Krishna Teki, Associate Professor, EEE, presented a paper titled “Design and Electric Field Analysis of 33 kV and 66 kV Polymer Insulators for Different Geometrical Configurations by Finite Element Method” at the International Conference on Smart Systems for Applications in Electrical Sciences (2025), held at SIT, Tumakuru on 21-22 March 2025.

April-2025

11. **Dr. Venkat Reddy Kota**, Professor & HOD, EEE, participated in a Two-Day Awareness Session on Quantum Science & Technology held on 26-27 April 2025 at JNTUK, Kakinada, organized in association with QETCI and NQM, focusing on the latest advancements in quantum technologies.
12. K. R. K. V. Prasad, **Dr. Ravindra Kollu**, Alajingi Ramkumar, and Adireddy Ramesh, Professor, EEE, published a paper titled “A Multi-Objective Strategy for Optimal DG and Capacitors Placement to Improve Technical, Economic, and Environmental Benefits” in International Journal of Electrical Power & Energy Systems, Vol. 165 (2025): 110491.
13. **Dr. C. Naga Kota Reddy**, Assistant Professor (C), EEE Dept., successfully participated in the Management Development Programme on "How to Excel in Case Research & Case Writing" held at XIME, Bangalore on 3-4 April 2025, enhancing his academic excellence and research proficiency.
14. **Smt. J. Jyotsna**, Assistant Professor (C), EEE Dept., showcased remarkable sports achievements during JNTUK's Sports Day 2025, securing Runner-Up positions in Chess, Tennikoit Doubles, and Carrom Doubles.



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May-2025

15. Ravisankar Kampara, Kamaraju Viriyala, and **Dr. Srinivasa Rao Rayapudi**, Professor, EEE, published a paper titled “Finite Control Set Model Predictive Control Based D-STATCOM for Power Quality Improvement in Distribution System” in Energy Systems, Vol. 16, pp. 555–571 (2025).
16. **Dr. Shanmukha Naga Raju Vonteddu**, Assistant Professor (C), EEE Dept., was awarded a Ph.D. from the University of Petroleum and Energy Studies (UPES), Dehradun, Uttarakhand. His thesis, titled “Optimized Control Strategies for Hybrid Energy Storage and ANN-Based Driving Prediction Techniques for Energy Management System in Electric Vehicles,” was guided by Dr. Prasanthi Kumari Nunna (UPES) and Dr. Ravindra Kollu (JNTUK).
17. **Dr. Ajay Babu Bathula, Mrs. Vijaya Bhanu Karri, Mrs. Jyothsna Jakkula, Ms. Joshi Rani Kothapalli**, and Mr. S. Sudhakar Rasamsetti, Assistant Professor (C), EEE Dept., were granted a U.K. Design Patent for “Microgrid Controller Unit with AI-Powered Load Balancing” (Application No. 6445533, Filed: 19 May 2025; Granted: 27 May 2025).

June-2025

18. Veera Nagi Reddy Varampati, **Dr. Venkata Reddy Kota**, Reddy Ganesh, Aditya Agnihotri, PB Edwin Prabhakar, T. Anuradha Devi, and Kandi Bhanu Prakash, Professor & HOD, EEE, presented a paper titled “Enhancement of Power Quality for Grid Connected Hybrid PV-Wind Power Supply System with 3DOF-PID Controllers” at the 2025 International Conference on Computing Technologies & Data Communication (ICCTDC), IEEE, pp. 1–7.
19. Cheepati Kumar Reddy, T. Mariprasath, Marco Esteban Rivera Abarca, and **Dr. M. Nageswara Rao**, Professor, EEE, published a book titled “Designing Control Strategies for Harmonic Power Filters to Improve the Power Quality in Distribution Networks: Harmonic Power Filters Design” through CRC Press, 2025.



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20. **V.S.N.K.Chaitanya, N. Sagar Teja Yadav, C. Naga Kota Reddy, K. Vijaya Bhanu**, and **J. Jyothsna**, Assistant Professor (C), EEE Dept., published a paper titled “Electric Field Distribution in Polymer Insulators under Icing Conditions: A Numerical Perspective” in Journal of Technology, Vol. 13(5), pp. 706–711, 2025.
21. **N. Sagar Teja Yadav, V.S.N.K.Chaitanya, C. Naga Kota Reddy, K. Vijaya Bhanu**, and **J. Jyothsna**, Assistant Professor (C), EEE Dept., published a paper titled “Performance Analysis of a Five-Level NPC Inverter Using Hybrid PWM Technique” in Journal of Technology, Vol. 13(5), pp. 712–719, 2025.
22. **Dr. Chegireddy Naga Kota Reddy** and **Mr. Nammi Sagar Teja Yadav**, Assistant Professor (C), EEE Dept., were granted a U.K. Design Patent for “Sleek Solar-Powered Street Light Design with Built-in Sensors” (Application No. 6447008, Filed: 25 May 2025; Granted: 13 June 2025).



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Faculty Achievements (July-September 2025)

July-2025

1. **Dr. Venkata Reddy Kota**, Dr. B. N. Kommula, Dr. A. Afzal, Dr. M. Asif, and Dr. L. T. Hui have published a paper titled “Grid Integration of PV Systems With Advanced Control and Machine Learning Strategies” in the reputed journal IEEE Access (Volume 13, pp. 138820–138833, 2025) doi: 10.1109/ACCESS.2025.3593044.
2. Veera Nagi Reddy Varampati, **Dr. Venkata Reddy Kota**, Reddy Ganesh; Ashok Kumar D. V; Aditya Agnihotri, P. B. Edwin Prabhakar have presented and published a research paper titled “Enhancement of Power Quality for Grid Connected Hybrid PV-Wind Power Supply System with 3DOF-PID Controllers” in the Proceedings of the 2025 International Conference on Computing Technologies & Data Communication (ICCTDC), published by IEEE (pp. 1–7, 2025) doi: 10.1109/ICCTDC64446.2025.11158994.
3. Dr. A. R. Kumar, Dr. A. N. Babu, and **Dr. S. Sivanagaraju** have published a paper titled “Enhancing System Profitability in a Wind-Associated System by Incorporation of PHS and Fuel Cell in the Power Market” in the esteemed journal Wind Engineering (July 2025) doi:10.1177/0309524X251361299.
4. R. Kampara, Dr. K. Viriyala, and **Dr. R. Srinivasa Rao** have published a paper titled “Finite Control Set Model Predictive Control Based D-STATCOM for Power Quality Improvement in Distribution System” in the reputed journal Energy Systems (Volume 16, pp. 555–571, 2025),doi:10.1007/s12667-023-00587-y.
5. Bhukya Baddu Naik, Dr. Padmanabha Raju Chinda, **Dr. R.Srinivasa Rao**, and Dr. Swarupa Rani Bondalapati have published a paper titled “Congestion Management of Power Transmission Line with Advanced Interline Power Flow Controller” in the journal Journal of Mechatronics, Electrical Power, and Vehicular Technology (Volume 16, Issue 1, pp. 52–68, 2025) doi:10.55981/j.mev.2025.795.
6. **Dr. K. Ravindra**, Professor and Director IQAC, **Smt. J. Jyothsna**, Assistant Professor (C), and **Sri N. Sagar Teja**, Assistant Professor (C), have attended the IEEE Power Electronics Society sponsored Ph.D. Summer School on “Designing Reliable Control Circuits for Power Converters” held from July 19th to July 23rd, 2025 at IIT Hyderabad.



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7. **Mr. Venkata Narayana Lakamana**, **Ms. Vijaya Bhanu Karri**, and **Dr. Ajay Babu Bathula**, Assistant Professors (C) from the University College of Engineering Kakinada, JNTUK, participated in a 40-hour Online Faculty Development Program on “Emerging Trends in DC Microgrids: IoT Integration to Blockchain Technologies,” organized by the E & ICT Academy NIT Warangal in collaboration with G. Narayanamma Institute of Technology & Science, held from 23rd June to 2nd July, 2025.
8. **Mr. Venkata Narayana Lakamana** has secured a patent for the design titled “Energy-Efficient LED Bulb Design with Adjustable Luminosity” (Application No. 6456074)
9. All teaching faculty from the EEE Department, University College of Engineering, Kakinada (A), JNTUK, participated in a 40-hour Offline Faculty Development Program on “Leveraging OBE for Continuous Quality Improvement in Engineering Education,” organized by the E & ICT Academy NIT Warangal in association with Jawaharlal Nehru Technological University Kakinada (Spoke Academy), held from 28th July to 2nd August, 2025.
10. **Dr. Shanmukha Naga Raju Vonteddu**, Assistant Professors (C), University College of Engineering Kakinada, JNTUK, completed a Faculty Development Programme on “Foundations of Artificial Intelligence: Concepts, Techniques, and Applications,” conducted by IIT Roorkee in collaboration with GIET University, held from 9th to 13th July, 2025.

August-2025

11. **Dr. Venkata Reddy Kota**, Professor and Head of EEE, UCEK (JNTUK), attended the Nurturing Future Leadership Program at IIM Visakhapatnam from 11th to 15th August 2025. The program, organized under the Malaviya Mission Teacher Training Program by the Ministry of Education, Government of India.
12. A. V. Ravi Kumar, Dr. A. V. N. Babu, and **Dr. S. Sivanagaraju** have published a paper titled “Profitability Enhancement of a Hybrid System Including Thermal-Wind-CAES-Fuel



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Cell with Incorporation of Imbalance Cost” in the reputed journal Energy & Environment (August 2025) doi: 10.1177/0958305X251367091.

13. Cheepati Kumar Reddy, E. Parimalasundar, K. Suresh, Marco Rivera, **Dr. M. Nageswara Rao**, and Aravind Pitchai have published a paper titled “Design of a Novel Shunt Active Harmonic Compensator with AUV-PQ-SRF Reference Current Extraction, OSV-MPC and SMC Techniques” in the prestigious journal Scientific Reports (Volume 15, Article No. 28773, 2025).
14. **Dr. Shanmukha Naga Raju Vonteddu**, Assistant Professors (C), University College of Engineering Kakinada (JNTUK), successfully completed a Faculty Development Programme on "Foundations of Artificial Intelligence: Concepts, Techniques, and Applications" conducted by IIT Roorkee in association with GIET University, from 9th to 13th July 2025.
15. **Dr. Shanmukha Naga Raju Vonteddu**, Assistant Professors (C), EEE Department, University College of Engineering (A), JNTUK, participated in a Faculty Development Program on IoT with Drone conducted by E & ICT Academy IIT Kanpur from 5th to 16th August 2025.
16. **Mr. V.S.N.K. Chaitanya**, Assistant Professor (C), EEE Department, University College, participated in the AICTE Training and Learning (ATAL) Academy Faculty Development Program held at R.V.S. College of Engineering and Technology from 25th to 30th August 2025. The program focused on "Wireless Power Transfer with Renewable Energy and IoT Integration", aimed at advancing innovations in electrical engineering.

September-2025

17. **Prof. K. Venkata Reddy**, Head of the Department of Electrical and Electronics Engineering, attended the INYAS Mid-Year Meeting 2025 held at Vellore Institute of Technology in September 2025, which brought together academicians, researchers, and industry experts to discuss emerging trends in science, technology, and innovation.
18. R. N. Mankumuthi, **Dr.Ch.Saibabu and Dr. C.Naga Kota Reddy**, have presented and published a paper titled “Enhancing Power Conversion Efficiency with Feedforward Controlled Triple Active Bridge DC–DC Converter” in the Proceedings of the 2025 Third International Conference on Cyber Physical Systems, Power Electronics and Electric Vehicles (ICPEEV), Hyderabad, India, 2025, pp. 1-6, doi: 10.1109/ICPEEV67897.2025.11291317.
19. **Sri V.S.N.K. Chaitanya**, Assistant Professor (C), successfully completed a 6-day online FDP on “Role of Artificial Intelligence and Machine Learning in Smart Grids” held from 22nd to 29th September 2025, organized by IIT Patna under the AICTE-ATAL Academy.
20. **Sri V.S.N.K. Chaitanya**, Assistant Professor (C), also successfully completed the 8-week NPTEL course on “Advances in UHV Transmission and Distribution” offered by IISc Bangalore.



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Faculty Achievements (October-December 2025)

October-2025

1. Arubolu L., **Dr. K.Ravindra** and **Dr.M.Ramalinga Raju** published a research paper titled “Optimal Allocation of Renewable Energy Sources and Power Filters in Unbalanced Distribution Systems with Nonlinear Loads under Load Growth Condition” in Frontiers in Energy Research, Vol. 13, Article 1664533. DOI: 10.3389/fenrg.2025.1664533.
2. **Sri V. S. N. K. Chaitanya**, Assistant Professor (C), successfully completed a six-day online Faculty Development Programme (FDP) on “Advanced Power Converter Technologies for Next-Generation Electric and Hydrogen Fuel Cell Vehicles,” conducted from 13th to 18th October 2025. The programme was organized by the AICTE–ATAL Academy at NIT Manipur.
3. **Dr.Shanmukha Naga Raju Vonteddu**, Assistant Professor (C), successfully completed a six-day online Faculty Development Programme (FDP) on “Advanced Power Converter Technologies for Next-Generation Electric and Hydrogen Fuel Cell Vehicles,” conducted from 13th to 18th October 2025. The programme was organized by the AICTE–ATAL Academy at NIT Manipur.

November-2025

4. Parameswarudu, Yadala Pavankumar, Patibandla Anilkumar, and **Dr.K. Ravindra** published a research paper titled “Design and Identification of an Optimal Approach for Modelling a Hybrid Renewable Energy System” in Engineering Research Express, Vol. 7, No. 4, Article 045350. DOI: 10.1088/2631-8695/ae14b5.
5. **Sri V. S. N. K. Chaitanya**, Assistant Professor (C), successfully completed the 8-week NPTEL course “Accreditation and Outcome Based Learning” offered by IIT Kharagpur and earned the Gold + Elite certification.
6. **Sri. N. Sagar Teja Yadav**, Assistant Professor (C), Department of Electrical and Electronics Engineering, published a patent titled “Three-Level Neutral-Point Clamped (NPC) Inverter with Multi-Mode Synchronized Pulse Width Modulation (PWM) Schemes” (Application No. 202541103967) in November 2025.

December-2025

7. **Dr. K. Venkata Reddy**, Professor and Head, Department of EEE, JNTU Kakinada, participated in the ANRF PAIR Project on “Innovative Strategies Empowering Sustainable Livelihoods: AI-Driven Smart Approaches for Poly Generation, Innovative Farming, and Biopharmaceutical Research,” held on 12th December 2025 in collaboration with Vellore Institute of Technology (VIT).
8. Chakka Bapi Ayyappa Raju, Sanjoy Debbarma, **Dr. R. Srinivasa Rao**, and Liza Debbarma published a research paper titled “Enhancing Frequency Support Utilizing Smart Transformers in RES-Dominated Power Systems Integrated with Fractional Order Controller” in Results in Engineering, Article 108649. DOI: 10.1016/j.rineng.2025.108649.
9. **Dr. C. Naga Kota Reddy**, Ms. K. Sandhya Rani, Mr. Md. Khaja Gouse Mohiddin, and **Dr. Ch. Sai Babu**, published a research paper titled “Experimental Implementation of a Pre-Charge



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Circuit at eFuse to Control and Limit Inrush Currents of Automotive ECUs” in Engineering Letters (IAENG) 33, no. 12.

10. **Sri. N. Sagar Teja Yadav** and **Sri. L. V. Narayana**, Assistant Professors (C), Department of Electrical and Electronics Engineering, actively participated in the Workshop on “Cyber Security of Power Grids” held from 23rd to 26th December 2025 at the Indian Institute of Science (IISc), Bangalore.