



LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING (Autonomous)

L.B.Reddy Nagar, Mylavaram – 521 230, NTR District, Andhra Pradesh, INDIA.

Approved by AICTE, New Delhi & Permanently Affiliated to JNTUK, Kakinada.

Accredited by NAAC with “A” Grade and NBA Tier-1 for ASE, CE, CSE, IT, ECE, EEE & ME.

An ISO 21001:2018, 14001:2015, 50001:2018 Certified Institution.

Research & Development Cell

Date:25-06-2025

Details of R & D Accomplishments during the A.Y.: 2024-25

i.	No. of SCI/ESCI papers	: 07
ii.	No. of Papers in Scopus indexed Journals	: 06
iii.	No. of Papers in Conf. Proceedings indexed by Scopus	: 11
	Total Papers in SCI & Scopus	: 24
iv.	No. of Open Access Journals	: 00
v.	No. of Books/Chapters published	: 03
vi.	No. of Patents Published	: 06
vii.	No. of Research Projects Completed/Ongoing	: 02
viii.	Faculty pursuing Ph.D.	: 00
ix.	No. of Faculty Secured Ph.D.	: 00
x.	No. of Ph.D. Scholars awarded Ph.D.	: 00
xi.	Supervisors and Scholars	: 00

R & D Publications for the A.Y.: 2024-25

(From 1st July 2024 – 30th June 2025)

Details of Publications										
Dept	SC I	ESC I	Scopus -J	Scopus- C	Tot al	UGC/Ope n Access	Book s	Chapter s	Patents- P	Patent s-G
EEE	05	02	6	11	24	-	01	02	05	01

i. SCI/ESCI Papers

SCI Papers: 05

Department of Electrical and Electronics Engineering (EEE):

1. **K. Harinadha Reddy**, “Adaptive extreme learning machine using soft computing fuzzy propositions—Validating operating state of solar energy system”, Applied Soft Computing, [Volume 164, Issue C](#), 111966, October 2024, ISSN: 1568-4946
<https://doi.org/10.1016/j.asoc.2024.111966>. **Q1, Impact Factor: 6.6**
2. **G. Tabita**, P. Umapathi Reddy, “Design of interline hybrid continuous trans-impedance turns ratio controlled tuning power filter: New approach to suppress harmonics in energy system,” Electric Power Systems Research, Volume 238, 111107, October, 2024, ISSN 0378-7796, <https://doi.org/10.1016/j.epsr.2024.111107>. **Q2, Impact Factor: 4.2**
3. **Y. Raghuvamsi**, K.Teeparthi, Vinod Kumar D.M, Imran Abdul, P.Srihari, “Distribution system state estimation using physics-guided deep learning approach”, Electric Power Systems Research, Volume 236, 110922, July, 2024, ISSN: 0378-7796, <https://doi.org/10.1016/j.epsr.2024.110922>, **Q2, Impact Factor: 4.2**
4. Varaprasad Janamala, **P. Sobha Rani**, K. Radha Rani, K. Swarnasri, “Transformative impact of electrical engineering on society, education, academia, and industry: a brief review” Electrical Engineering, <https://doi.org/10.1007/s00202-025-03066-y>, April 2025, Early Access, **Q3, Impact Factor: 1.9**
5. **G. Tabita**, P. Umapathi Reddy “Interline hybrid continuous converter impedance control-based tuning filter: effective harmonic suppression in DG-integrated electrical power grid”, Electrical Engineering, 107, pp. 5501–5510, Nov, 2024, ISSN: 0948-7921, <https://doi.org/10.1007/s00202-024-02815-9>, **Q3, Impact Factor: 1.9**

ESCI Papers: 02

1. **Sobha Rani Penubarthi**, Radha Rani Korrapati, Varaprasad Janamala, Chaitanya Nimmagadda, Arigela Satya Veerendra and Srividya, “Chernobyl Disaster Optimizer-Based Optimal Integration of Hybrid Photovoltaic Systems and Network Reconfiguration for Reliable and Quality Power Supply to Nuclear Research Reactors”, Modelling, Vol. 5, issue 3, pp:1268-1285, pp. 1268-1285, September, 2024, ISSN / eISSN: 2673-3951, <https://doi.org/10.3390/modelling5030065>, **Q2, Impact Factor: 1.5**
2. **Srihari Parri**, Kiran Teeparthi, D. M. Vinod Kumar, “A novel hybrid framework based on decomposition and Y-former model for accurate wind speed forecasting”, Modeling Earth Systems and Environment, Vol. 11, issue 217, April 2025, ISSN: 2363-6211, <https://doi.org/10.1007/s40808-025-02403-1>, **Q2, Impact Factor: 2.9**

ii. Papers Published in Scopus Journals: 6

1. Shaymaa Hussein Nowfal, Vijaya Bhaskar Sadu, Sudhakar Sengan, Rajeshkumar G, Anjaneyulu **Naik R** and Sreekanth K, “Genetic Algorithms for Optimized Selection of Biodegradable Polymers in Sustainable Manufacturing Processes”, Journal of Machine and Computing, Vol. 4, issue 3, pp. 563-574, July 2024, ISSN: **2788-7669**, DOI: 10.53759/7669/jmc202404054, **Q4, Impact Factor: 0.771**
2. Narender M, Karrar S. Mohsin, Ragunthar T, Anusha Papasani, Firas Tayseer Ayasrah and **Anjaneyulu Naik R**, “Machine Learning for Genomic Expression Classification-Based Phenotype Prediction in Topological Data Analysis”, Journal of Machine and Computing, Vol. 4, issue 4, pp. 1152-1157, October 2024, ISSN: **2788-7669**, DOI: 10.53759/7669/jmc202404106, **Q4, Impact Factor: 0.771**
3. Bibhu Prasad Ganthia, Praveen B. M., S. R. Barkunan **A. V. G. A. Marthanda**, N. M. G. Kumar, S. Kaliappan “Energy Management In Hybrid Pv-Wind Battery Storage-Based Microgrid Using Monte Carlo Optimization Technique”, Journal of Mechanics of Continua and Mathematical Sciences, Vol.19, No. 12, pp. 224 – 255, December, 2024, ISSN (Online) : 2454-7190, ISSN (Print) 0973-8975, <https://doi.org/10.26782/jmcms.2024.12.00014>
Q4, Impact Factor: 3.00
4. Saji Krishna Pillai, Vinod Bakka, **J.V. Pavan Chand**, B. Divakar, B.V. Sai Thrinath, G. Mahaboobsubahan “Six-Phase Induction Motor Design and Analysis Using Wind-Driven Optimization”, SSRG International Journal of Electrical and Electronics Engineering, Volume 11, Issue 6, pp. 330-337, June 2024, ISSN: 2348-8379, <https://doi.org/10.14445/23488379/IJEEE-V11I6P133>. **Q4**
5. **Imran Abdul** “Adaptive Frilled Lizard Optimization for Enhancing Distribution Feeder Performance with Renewables and Charging Stations”. International Journal of Intelligent Engineering and Systems, Vol.18, issue 5, pp. 760-770, May, 2025, ISSN: 2185-3118, DOI: 10.22266/ijies2025.0630.53. **Q3**
6. M. Raja Nayak, **Rowthu Padma**, B. Devulal, Prabhakara Sharma Pidatala, B. K. Karunakar Rao & M. Saritha, “Optimal design dimension configuration of high voltage electrodes for 400 KV bus post insulators”, Australian Journal of Electrical and Electronics Engineering, pp. 1-12, Feb 2025, ISSN: 1448837X, <https://doi.org/10.1080/1448837X.2025.2454847>. **Q4, Impact Factor: 1.16**

Scopus indexed Conference Proceedings: 11

1. **K. Ramalingeswara Prasad**, S. Vijaya Madhavi, A.V. Satyanarayana, Madhavi Mallam, **J. Sivavara Prasad**, Jami Venkata Suman, "Design and Management of an Integrated Solar-Wind Conversion System Using DFIG", *International Conference on Advances in Modern Age Technologies for Health and Engineering Science (AMATHE)*, Shivamogga, India, **IEEE Xplore**, pp. 1-6, July 2024, DOI:10.1109/AMATHE61652.2024.10582223, <https://ieeexplore.ieee.org/document/10582223>
2. S. Vijaya Madhavi, **K. Ramalingeswara Prasad**; Bankaru Sonia; Madhavi Mallam; Jami Venkata Suman; K.B. Anusha, "Intelligent Fault Detection and Shading Analysis in Photovoltaic Arrays: A Fuzzy Logic Approach for Enhanced Performance and Reliability", *International Conference on Computational Intelligence for Green and Sustainable Technologies (ICCIGST)*, Vijayawada, India, **IEEE Xplore**, 2024, pp. 1-6, DOI:10.1109/ICCIGST60741.2024.10717520 <https://ieeexplore.ieee.org/document/10717520/>
3. Karthik, Vivek Veeraiah, **G. Nageswara Rao**, Priyanka Torne, Aradhana Sahu, Arpit Namdev, "Developing Advanced Security Frameworks for IoT Devices in Connected Healthcare Ecosystems", *4th International Conference on Technological Advancements in Computational Sciences (ICTACS)*, Tashkent, Uzbekistan, **IEEE Xplore**, pp. 1836-1842, Nov 2024, DOI: 10.1109/ICTACS62700.2024.10840685 <https://ieeexplore.ieee.org/document/10840685>
4. **Pangedaiah. B**, Shiva V, Kamashi D, Venkat Sandeep V, "IoT Integrated dynamic wireless charging system for electric vehicle with authentication and billing", E3S Web of Conferences, International Conference on Power Generation and Renewable Energy Sources (ICPGRES-2024), 564, 02003, Sep 2024, <https://doi.org/10.1051/e3sconf/202456402003>
5. **Pangedaiah. B**, Naga Supriya T, Venu Madhav V, Sai Durga Prasad K, "IoT Gas Pipe Leakage Detector using Solar Based Robot", E3S Web of Conferences, International Conference on Power Generation and Renewable Energy Sources (ICPGRES-2024), 564, 05003, Sep 2024, <https://doi.org/10.1051/e3sconf/202456405003>
6. Dankan Gowda V, Ratidev Samal, Premkumar Reddy, **A.V G.A. Marthanda**, Ravikiran Kamath Billady, P.V. Rajlakshmi, "A Novel Framework for AI-Driven, Cloud Integrated Energy-Efficient IoT Solutions in Smart Homes", *8th International Conference on Electronics, Communication and Aerospace Technology (ICECA)*, Coimbatore, India, **IEEE Xplore**, pp. 327-332, Dec 2024, doi: 10.1109/ICECA63461.2024.10800957, <https://ieeexplore.ieee.org/document/10800957/>

7. S. Farook, B.V. Sai Thrinath, S. Muthukaruppasamy, P. Ponmurugan, V. Kamatchi Kannan, **J.V. Pavan Chand**, “An Grid-Integrated Electric Vehicles with Hybrid Energy Storage for Optimal Power Management”, *IEEE International Conference on Information Technology, Electronics and Intelligent Communication Systems (ICITEICS)*, Bangalore, India, **IEEE Xplore**, 2024, pp. 1-6, doi: 10.1109/ICITEICS61368.2024.10625399. <https://ieeexplore.ieee.org/document/10625399>
8. Ch. Naga Sai Kalyan, Bhurugu Sravanthi, B. Srikanth Goud, **K.S.L. Lavanya**, G. Srikar, Hima Bindu Eluri, “Improving the Load Frequency Control of a Renewable Energy Penetrated Dual Area Power System with a 2DOFPID Controller”, *IEEE 1st International Conference on Green Industrial Electronics and Sustainable Technologies (GUEST)*, Imphal, India, **IEEE Xplore**, October 2024, pp. 1-6, DOI:10.1109/GUEST62955.2024.10959861. <https://ieeexplore.ieee.org/document/10959861>
9. **G. Tabita** and P. Umapathi Reddy, “Modelling of Harmonic Filter—Improvement of Power Quality Indices Under Non-linear Loads: A Case Study”, In: R. Venkata Rao and J. Taler (eds.), *Advanced Engineering Optimization Through Intelligent Techniques*, Springer, Singapore, **Lecture Notes in Electrical Engineering**, Vol. 1226, Oct 2024, https://doi.org/10.1007/978-981-97-4654-5_12
10. D. Ganesh, P. Sudarsanam, **T. HimaBindu**, J. Suresh Babu, B.V. Sai Thrinath, S. Reddy Sai, “Application of Deep Learning Mathematical Approaches for Image Correctness”, *Second International Conference on Intelligent Cyber Physical Systems and Internet of Things (ICoICI)*, Coimbatore, India, **IEEE Xplore**, August 2024, pp. 776-781, DOI:10.1109/ICoICI62503.2024.10696248, <https://ieeexplore.ieee.org/document/10696248>
11. Ch.Naha Sai Kalyan, P.Gopi, P.Joshi, **T.Himabindu**, M.Bajaj, “Fruit Fly Algorithm Optimised Degree of Freedom Controller for the Dynamical Stability of the Renewable Energy Penetrated Multi Area Power System”, *E3S Web of Conferences, International Conference on Power Generation and Renewable Energy Sources (ICPGRES-2024)*, 564, 01001, Sep 2024, <https://doi.org/10.1051/e3sconf/202456401001>

OTHERS

1. Varaprasad Janamala, **Sobha Rani P**, Radha Rani K, K Swarnasri, Nagaraja Kumari Ch,Norazlianie Sazali,Kumaran Kadirgama,Mohd FairushamGhazali, A.S. Veerendra," Design and Performance Evaluation of Solar Photovoltaic Systems for Net Zero Energy Goals in Academic Institutions" Journal of Advanced Research in Fluid Mechanics and Thermal Sciences XX, Issue X (2023) XX-XX, ISSN: 2289-7879, **Q3, Impact Factor: 0.282**
2. Dr. D. R. V. A. Sharath Kumar , Amit Mishra , G. Muthupandi , **J. Sivavara Prasad** , Dr. Tejal Upadhyay, "An In-depth Analysis and Performance of Existing Techniques for Ethereum Smart Contract Vulnerability Detection" J. Electrical Systems, August 2024, ISSN :1112-5209 , <https://journal.esrgroups.org/jes/article/view/7160>, **Q4, Impact Factor: 0.180**
3. Viji Vinod V.J. Chakravarthy , N. Jayashri , V. Bala Dhandayuthapani , G.A. Shabeen Taj , **A.V.G.A. Marthanda** "Advancing Cloud Resource Management for Bio-inspired VM Placement with Harmony Search Algorithm" Frontiers in Health Informatics, <https://healthinformaticsjournal.com/index.php/IJMI/article/view/1207>
4. K.Gangadhar ,**P.Deepak Reddy**, "Modeling The Impact Of Vehicle-To-Grid System On Electric Power Quality", Computer Research And Development (ISSN NO:1000-1239) VOLUME 25 ISSUE 5 2025.
5. Dr.V.Srikanth, **Dr.M.S.Giridhar**, Dr.Rashmi BH, J.V.Madhuri, Dr.H.Thangappan, "Sustainable Waste Management Through Blockchain and Internet of Things Integration in Industrial Zones", International Journal of Environmental Sciences, ISSN: 2229-7359 Vol. 11 No. 8s, 2025, <https://www.theaspd.com/ijes.php>.
6. **Dr.M.S.Giridhar**, Shaik Nazma Parveen , Arumalla Prem Kumar, Goddeti Jogi Narasimha Rao Ramavath Sai Virat Naik 5 "Hybrid Renewable Energy System With Load Balancing Using Arduino", Technische Sicherheit, Volume 25, Issue 4, May 2025
ISSN NO: 1434-9728/2191-0073
<https://drive.google.com/file/d/1ncXnvM7sFhbtMhowI7TFLE2mlxvpIrkN/view>
7. **Dr.M.S Giridhar**, Addagarla Vanela , N.Laya Vardhan, T.Geethanjali,,P.Babu5 "Iot-Enhanced Smart Energy Meter With Dual Node Monitoring, Cloud Data Integration, Billing And Alert System For Theft Attempts", Technische Sicherheit, Volume 25, Issue 4, May 2025
ISSN NO: 1434-9728/2191-0073
https://drive.google.com/file/d/1fl35s2A97ew9TT5OLMSKEZRVn3vN1vV_/view
8. Radha Rani K. **Sobha Rani P**,Swarnasri K,Varaprasad Janamala, "Enhanced mother optimization algorithm-based optimal reconfiguration to accommodate emerging electric vehicle demand", Journal of King Saud University – Engineering Sciences (2025) 37:7
<https://doi.org/10.1007/s44444-025-00008-8>, May 2025.

Details of Books/Chapters for the Academic Year 2024-25

Sl.	Authors	Title of the Book/Chapter	Publisher	Publish ed Month & Year	ISBN
Department of EEE: 03 (Books: 01 & Chapters: 2)					
1.	Dr.Ch.Nagaraja Kumari Dr.J.Varaprasad Dr.K.Radha Rani Dr.P.Sobha Rani Dr.D.Suresh Babu	Book Electric Circuit Design	Scientific International Publishing House	July 2024	ISBN: 978-93-6132-433-8
2.	Srikumar Kotni, Nageswara Rao Gudipudi, Ananda Kumar Annavarapu, Moshherani	Book Chapter Review of effects on the power grid from plugging in electric vehicles and renewable energy sources	Elsevier	July 2024	ISBN: 9780443289552 DOI: https://doi.org/10.1016/B978-0-443-28955-2.00002-0
3.	B.V. Sai Thrinath & S. Farook, T. Penchalaiah, J.V. Pavan Chand, P. Venkatesh, Gujjala Murali	Book Chapter Advanced control strategy for grid-connected DFIG systems using TSK-fuzzy controllers	Taylor & Francis	July 2024	ISBN: 978-1-032-90173-2 DOI: 10.1201/9781003559092-47

Details of Patents for the Academic Year 2024-25

Sl.	Patent Title	Applicants/ Inventors	Patent No.	Filed Date	Published Date
EEE -06					
1.	Economic Aspect Designing of Prototype Laboratory Multi Phase Induction Machine and Validation	Batchalakuri Jyothi Kadapa Harinadha Reddy	546035	19/10/2020	IPR, Indian Grant 26/07/2024
2.	IOT-Based Intelligent Energy Management for Hybrid Electric Vehicles using Machine Learning Algorithms	1)Saranya N 2)S.Lalli 3)Dr. Jitesh Pati Tripathi 4)Dr.Manasi Vyankatesh Ghamande 5)Dr. Vijay Kumar Tiwari 6)Dr. Rajanish Kumar Shukla 7) Dr. K. Ramalingeswara Prasad 8)Joshua Daniel S 9)Dr.S.Subhalakshmi 10)Dr.Kusuma Rajasekhar 11)Ms.Sunantha D	202441058815	02/08/2024	IPR, Indian published 09/08/2024
3.	Intelligent Energy Management System for Smart Grids with Demand Response and Energy Storage Integration	Dr. Penubarthi Sobha Rani	202441093097	28/11/2024	IPR, Indian published 06/12/2024
4.	Design And Fabrication of Hybrid Dryer	1)Dr.Timmidi Naagadurga 2)Dr.Jayashri N Nair 3) Dr.G.Nageswara Rao 4)Dr.K. Sai Sarath 5)Dr.Lanka Ramesh 6)Dr.KaturuBala Prasad 7)Dr.B.Sreenivasa Raju 8)Dr.Gopidesi Radha Krishna 9)Dr.P.Rajeswari	202441048345	24/06/2024	IPR, Indian published 05/07/2024

Sl.	Patent Title	Applicants/ Inventors	Patent No.	Filed Date	Published Date
5.	High Frequency Gan-Based Dynamic Wireless power transfer system for Electric Vehicles	1.Mr. B.V.Sai Thrinath 2. Dr.B. Meghya Nayak 3.Mr. G.Naveen 4.Mr J.V.Pavan Chand 5. Dr.M.Ramprasad Reddy 6.Mr B.V. Bhargavi 7. Dr. S.Farook 8.Mr M.Venkatesh 9. Mr S. Usman Basha 10.Mr S.Srikanth Naik	202541045339	10/05/2025	IPR, Indian published 30/05/2025
6.	Three-Phase Bidirectional Meter Interconnected to the Grid with Monitoring of Electrical Energy Generation from a Panel-Microinverter Set	1)Dr.T.Arun Srinivas 2)Dr. N M G Kumar 3) Mr.Parri Srihari 4)Dr. C. S. Sundar Ganesh 5)Mr. Kiran M R 6)Dr.T. Babu	202441050903	03/07/2024	IPR, Indian published 12/07/2024