

1 Name of Faculty Dr. THANIKANTI SUDHAKAR BABU  
 2 Designation Associate Professor  
 3 Nature of Job/Appointment Regular  
 4 Date of Joining 27 - 01-2021  
 5 E-mail Sudhakarbabu\_eee@cbit.ac.in



6 Education Qualifications	Name of the Degree	Class
Ph. D	Doctor of Philosophy (Electrical)	Awarded
PG	M. Tech. (PED)	Distinction
UG	EEE.	First

7 Work Experience

Teaching	8.5 Years (Includes research experience)
Research	8.5 Years
Industry	2 Years--
Others	--

8 Area of Specialization Power Electronics, Renewable Energy Resources

9 Professional Memberships

- Senior Member, IEEE (Membership No: 94012203)
- Member IET; (Membership No: 1100478761)
- Member of IEEE power Electronics Society, Membership number: 94012203
- Member of The institute of research engineers and doctors (theIRED), Membership number: SM10100052558
- Member of International Association of Engineers (IAENG), Membership number: 159698

10 Responsibilities held at Institution Level

- Associate Director R & D
- NBA criteria wise monitoring Committee member
- NAAC Criteria 3 In-charge
- NIRF Criteria 3 In-charge
- College Academic Committee member

11 Responsibilities held at Department Level

- Electrical Drives Lab In-charge
- NIRF Criteria 3 In-charge
- AAA Audit

12 Research Guidance

- Ph.D. Pursuing: 05 (as Co-supervisor)
- Jordan S. Z. Lee – University Tenaga Nasional, Malaysia. Jan 2022 (Ongoing)
- Pradyumna Mallick – Siksha – O – Anusandhan University, Jan 2022 (Ongoing)
- Muheme MI- Student Number: 218098748 – University of Johannesburg, South Africa, Jan 2024 (Ongoing)
- OBE C. T.- Student Number: 223198774 - University of Johannesburg, South Africa, Jan 2024 (Ongoing)
- Mr. Devareddy Harsha – NIT Mizoram, Jan 2025, (Ongoing)

13 Awards Received

1. Received best researcher award for publishing significant number research articles in the year of 2023, by Chatanya Bharathi Institute of Technology, Hyderabad on 13 Dec 2024.
2. Received Institution of Engineers India Young Engineer Award 2023 on 15 Dec 2023 at Shimla.
3. Received **Vice-Chancellors Research Excellence Award 2023** from the Osmania University on 03 Jan 2023 at Osmania University, Hyderabad.
4. Received **best research article** in the 1<sup>st</sup> International Conference on 'Advances in Power, Signal and Information Technology (APSIT) 2021' organized Siksha 'O' Anusandhan (Deemed to be University), Bhubaneswar, India during 08th - 10th October, 2021
5. **Listed among the top 2% of researchers in the world** - electrical & electronics engineering, power, and energy areas, Information provided by Elsevier BV, Stanford

		<p>University.</p> <p>6. Received <b>GOLD</b> award for the poster presentation on Implementation and design of an autonomous residential DC nano grid at the UNITEN POSTDOC HANGOUT DAY 2019, 30th Sept 2019, Universiti Tenaga Nasional, Malaysia.</p> <p>7. Received award “<b>Young faculty in Engineering 2018</b>” towards exceptional academic records, initiatives and developments in the field of Electrical Engineering by Venus International Foundation, India.</p> <p>8. Received a <b>best research paper award</b> for the article title “Charge controller techniques for solar PV system” in 1st International Conference on Power Engineering, Computing and Control, PECCON-2017, 2-4 March 2017, VIT University, Chennai Campus</p> <p>9. Received <b>research award</b> consecutively for the years 2014, 2015, 2016 contribution towards research publications by VIT University.</p> <p>10. Selected as <b>best associate</b> of project for the month of May 2013 in cognizant technology solutions</p> <p>11. <b>Awarded certificated</b> of appreciation for outstanding contribution towards Hyderabad Innovator Fair organized by CTS national wide, October 2012</p> <p>12. Received <b>best paper award</b> in a national level technical contest (SVITS QUEST 2008) for presenting paper titled “Fuzzy based economic load” organized by Sri Visveswaraya institute of technology and science in the year of 2008.</p> <p>13. Received <b>bestpaper award</b> in a national level student seminar (INNOVITS 2K8) for presenting paper titled “Fuzzy based economic load dispatch of thermal power plant” organized by Vagdevi institute of technology and science, Andhra Pradesh.</p> <p>14. Received 2<sup>nd</sup> prize for paper presentation in the national level technical symposium (Technosance 08) organized by Osmania University, Hyderabad.</p>
14	Courses Handled at Under Graduate / Post Graduate Level.	Electric Circuits-I, Electric Circuits-II, Basic Electrical Engineering, Fundamentals of Electrical Engineering, Electrical Circuits-Lab, Renewable Energy Resources, Advanced Power semiconductor devices, Power Electronics.
15	No. of Papers Published	<p>National Journals – 00</p> <p>National Conference – 01</p> <p>International Journals – <b>186 (SCI Indexed – 125; Scopus Indexed 20)</b></p> <p>International Conference – 36</p>
16	Projects Carried out	<p>1. Received <b>INTERNATIONAL RESEARCH FUND (INTERES) 2024</b> by <b>UNIVERSITI MALAYSIA PERLIS (UniMAP) Malaysia</b> for the project title “<b>Development of Smart Greenhouse Management System using IoT &amp; ML</b>” duration of 2 years worth of 6.5 Lakhs (7250 USD).</p> <p>2. Received <b>INTERNATIONAL RESEARCH FUND (INTERES) 2022</b> by <b>UNIVERSITI MALAYSIA PERLIS (UniMAP) Malaysia</b> for the project title “<b>IoT based smart power quality analyzer</b>” duration of 2 years worth of <b>7 Lakhs (8659 USD)</b>.</p> <p>3. Received funding for the consultancy project titled “<b>Enhancement of the performance of different renewable energy sources using modern techniques</b>” worth of <b>20 Lakhs</b> for the duration of 2 years from Najran University, Saudi Arabia.</p> <p>4. Executive Member of FIST program 2016, sanctioned fund of <b>Rs. 115.0 Lakh (215580 USD)</b> by Department of Science and Technology, Reference number: SR/FST/ETI-420/2016.</p>
17	Patents	<ul style="list-style-type: none"> <li>Published a design patent titled “Solar Powered Mobile Charger” by Dr. Priya Ranjan Satpathy, Dr. Sudhakar Babu Thanikanti, Dr. Pritam Bhowmik Dasagram, Dr. Bharat Singh Bharati, on 26 January 2024, Application number: 388369-001, India.</li> <li>Published a patent titled “Optimized Switching Angle Modulation Scheme For Asymmetrical Cascaded H Bridge Multilevel Inverters” by P Muthukumar, S Jeevananthan, T Sudhakar Babu, L Padma Suresh, S Umamaheswari on 08<sup>th</sup> April 2022, Application Number 202241018086 A, India.</li> <li>Filed a patent under IP Australia, titled “A Process For Reducing</li> </ul>

Execution Time For Compression Techniques”, Patent number: 2021100433, on 31 March 2021.

18 Technology Transfer

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1. Delievered a Keynote Lecture in 2<sup>nd</sup> International Conference on Innovation in Electrical Power Engineering, Communication and Computing Technology ” (from 24-09-2021 to 25-09-2021) organising by Siksha 'O' Anusnadhan (Deemed to be University), Bhubaneswar, Odisha, India. -4
2. Acted as a speaker for International Faculty Development programme on the title "Research Innovations and Emerging Advances in Electrical Engineering" organized by SRM Easwari Engineering College, Ramapuram, Chennai-600089 from 14.06.2021 to 19.06.2021.

19 Invited Speaker

3. Delivered a guest lecture (Two sessions) in one week AICTE sponsored short term training program (STTP) on “Simulation tools for Electrical Engineering and it's real time applications” organized by Kallam Harinath Reddy Institute of Technology, Guntur, Andhra Pradesh, India on 02-07-2021
4. Delivered key note address during one week faculty development program at P V P Siddhartha Institute of Technology, Vijayawada on 07th to 12th December 2020.
5. Acted as a speaker for the AICTE Sponsored One Week Short Term Training Program organized by SVCE, Tirupathi on October 2020.
6. Delivered a keynote speech during International Webinar organized by SRM Eswari Engineering College on September 2020.
7. Delivered a guest lecture as speaker for the one day National Workshop “Power Circuit Design Using PSIM Software- Hands on Training” organized by School of Electrical Engineering, VIT University, Vellore on 07 October 2017.

20 No. of Books/Chapter Published with details

**Thanikanti Sudhakar Babu**, Rajasekar Natarajan, “Modeling, analysis development of maximum power extraction techniques” LAP Lambert publications, 2017.

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- WS/ Seminars/ Conferences/ STTPs/ FDPs Organized
- Organized one week Online Short Term Course on “Open Source Applications in Engineering Education” from 18th to 22nd November 2024 in Association with NITTR-Chandigarh.
- Organized 1st International conference on Power Energy and Secure Smart Technologies (ICPEST-2024) as a convener and General Chair during 13-14 December 2024 at Chaitanya Bharathi Institute of Technology, Hyderabad, India.
- One Week Indo-US International Workshop on IoT and ML Based Microgrid & Energy management 19th – 23rd February 2024 , as advisory committee and organizing committee event.
- Organized an International webinar on EMI/EMC in Power Converters under IEEE PES student Branch of CBIT on 15 May 2021.
- Organized a online seminar on “ Advanced Power Converters for future Power Grids” under IEEE PES student Branch of CBIT on 10th March 2021.
- Organized one day value added program on “Silicon carbide devices for high power applications” by V.Chandrasekar, Scientist E, Joint director power electronics division, CDAC Trivendrum on 28 October 2017.
- Organized a one day national level workshop titled “Programming FPGA controller for solar PV applications based LabVIEW” in collaboration with Innovative invader technologies , National Instruments, Bangalore at VIT University, Vellore on 27 October 2017.
- Contributed as faculty organizer in the International conference on “Translational Medical and Imaging, ICTMI-2017” organized by School of Electrical Engineering, VIT University during 29 – 30 August 2017.
- Contributed as faculty organizer in the International conference on “ Innovations in Power and Advanced Computing Technologies (i-PACT)” organized by School of Electrical Engineering, VIT University during 21 – 22 April 2017.
- Contributed as organizing committee member in conducting the “National level science contest for children” held at VIT

21 Details of Short-Term Training Programs/Faculty Development Programs/Seminars/Workshops/Other Trainings (**Attended and/or Organized**).

University, Vellore on 21-22 January, 2017.

- WS/ Seminars/ Conferences/ STTPS/ FDPs Attended
- Attended AICTE Recognized Faculty Development Programme on “Smart Grid and Integration of Distributed Generation Conducted by Electrical Engineering Department, NITTTR Chandigarh from 28/08/2023 to 01/09/2023 (One Week)
- Dr./Mr./Ms. T SUDHAKAR BABU of Chaitanya Bharathi Institute of Technology (A), Hyderabad, has participated in One week online FDP on “Quality Education through OBE” organized by Chaitanya Bharathi Institute of Technology(Autonomous), Gandipet, Hyderabad- 500 075, Telangana, India., in association with IEEE Education Society Student Branch Chapter CBIT during 22nd - 27th January 2024
- Attended Indo-US International Workshop on IoT and ML Based Microgrid & Energy Management from 19th – 23rd February 2024 organized by Department of Electrical and Electronics Engineering, Chaitanya Bharathi Institute of Technology, Hyderabad
- SUDHAKAR BABU THANIKANTI, Associate Professor of CBIT Hyderabad has attended a One-week Online Professional Development Programme on “Recent Advancements in Sustainable Solar Photovoltaic Power Technology” from 15th April to 20th April 2024. The programme was jointly organized by CoE for Renewable Energy and Sustainable Technologies (CREST), Department of Electrical and Electronics Engineering and IEEE PES/PELS Chapter in association with IEEE VCE SB, Vardhaman College of Engineering, Hyderabad
- Attended one day value added program on “Smart wide area monitoring protection using communication control” held on 25 March 2017 at VIT University, Vellore.
- Participated in Three Day National Workshop with Hands on session in “Signal and Image Processing: Practice to Research” organized by School of Electrical Engineering, VIT University, Vellore, during 23 – 25, February 2017.
- Attended Industrial Automated Training in Drive, Motion, Control and Robotics organized by Delta Electronics India from 03 February 2017 to 07 February 2017 at New Delhi.

22

Details of Journal Publications/  
Conferences (National and  
International)

International Journals form the year 2017

2024

- [1]. Sudhakar Babu Thanikanti, T. Yuvaraj, R. Hemalatha, Aljafari, Belqasem, and Nnamdi Nwulu. "Optimizing Radial Distribution System with Distributed Generation and EV Charging: A Spotted Hyena Approach." *IEEE Access* (2024). [\[WebLink\]](https://ieeexplore.ieee.org/abstract/document/10623231)  
<https://ieeexplore.ieee.org/abstract/document/10623231>
- [2]. Aljafari, Belqasem, Priya Ranjan Satpathy, Sudhakar Babu Thanikanti, and Nnamdi Nwulu. "Supervised classification and fault detection in grid-connected PV systems using 1D-CNN: Simulation and real-time validation." *Energy Reports* 12 (2024): 2156-2178.  
<https://www.sciencedirect.com/science/article/pii/S2352484724004992>
- [3]. Satpathy, Priya Ranjan, Balaqasem Aljafari, Sudhakar Babu Thanikanti, Nnamdi Nwulu, and Renu Sharma. "A multi-string differential power processing based voltage equalizer for partial shading detection and mitigation in PV arrays." *Alexandria Engineering Journal* 104 (2024): 12-30.
- [4]. Aljafari, Belqasem, Tareq Kareri, Sudhakar Babu Thanikanti, and Shitharth Selvarajan. "Transformerless high gain DC–DC converter design and analysis for fuel cell vehicles." *Scientific Reports* 14, no. 1 (2024): 19221.
- [5]. Aljafari, Belqasem, Priya Ranjan Satpathy, Sudhakar Babu Thanikanti, and Siva Rama Krishna Madeti. "A reliable GTR-PLC approach for power enhancement and online monitoring of solar PV arrays during partial shading." *Energy* (2024): 131839.
- [6]. Yuvaraj, T., R. Krishnamoorthy, S. Arun, Sudhakar Babu Thanikanti, and Nnamdi Nwulu. "Optimizing virtual power plant allocation for enhanced resilience in smart microgrids under severe fault conditions using the hunting prey optimization algorithm." *Energy Reports* 11 (2024): 6094-6108.
- [7]. Aljafari, Belqasem, Praveen Kumar Balachandran, and Sudhakar Babu Thanikanti. "Mitigation of Mismatch Losses in Solar PV Systems-A Hybrid L-Shape Propagated Array Configuration Approach." *Frontiers in Energy Research* 12: 1432834.
- [8]. Mallala, Balasubbareddy, Mohammad Faridun Naim Tajuddin, and Sudhakar Babu Thanikanti. "Designing a Power Quality Analyzer Using a Field Programmable Gate Array." *Recent Advances in Electrical & Electronic Engineering (Formerly Recent Patents on Electrical & Electronic Engineering)* 17

(2024): 1-14.

- [9]. Yousri, Dalia, Thanikanti Sudhakar Babu, Rupendra Kumar Pachauri, Hatem Zeineldin, and Ehab F. El-Saadany. "A novel argyle puzzle for partial shading effect mitigation with experimental validation." *Renewable Energy* (2024): 120307. Impact Factor: 8.7, **SCI, Q1**  
<https://doi.org/10.1016/j.renene.2024.120307>
- [10]. Suresh, Monica P., T. Yuvaraj, Sudhakar Babu Thanikanti, and Nnamdi Nwulu. "Optimizing smart microgrid performance: Integrating solar generation and static VAR compensator for EV charging impact, emphasizing SCOPE index." *Energy Reports* 11 (2024): 3224-3244. Impact Factor: 5.2, **SCI, Q1**  
<https://doi.org/10.1016/j.egy.2024.02.050>
- [11]. Mallick, Pradyumna, Renu Sharma, Priya Ranjan Satpathy, Sudhakar Babu Thanikanti, and Nnamdi Nwulu. "A Harmony Search Switching Matrix Algorithm for Enhanced Performance of Solar PV Arrays during Non-Uniform Irradiance Scenarios." *IEEE Access* (2024). **SCI, Q1**  
<https://ieeexplore.ieee.org/abstract/document/10445477>, [10.1109/ACCESS.2024.3370839](https://doi.org/10.1109/ACCESS.2024.3370839)
- [12]. Yuvaraj, T., K. R. Devabalaji, J. Anish Kumar, Sudhakar Babu Thanikanti, and Nnamdi Nwulu. "A Comprehensive Review and Analysis of the Allocation of Electric Vehicle Charging Stations in Distribution Networks." *IEEE Access* (2024).
- [13]. Dey, Rijhi, Naiwrita Dey, Rudra Sankar Dhar, Ujjwal Mondal, Sudhakar Babu Thanikanti, and Nnamdi Nwulu. "Advances in controller design of pacemakers for pacing control: A comprehensive review." *Annual Reviews in Control* 57 (2024): 100930.
- [14]. Suresh, A., Belqasem Aljafari, and Sudhakar Babu Thanikanti. "Investigations of the performance of 3D printed micro wind turbine composed of PLA material." *Heliyon* (2024).
- [15]. Naik, Kanasottu Anil, Rayappa David Amar Raj, Thanikanti Sudhakar Babu, and Belqasem Aljafari. "Enhancement of photovoltaic array characteristics and global maximum power using Padovan transform-based image encryption strategy." *International Journal of Circuit Theory and Applications* (2024).
- [16]. Aljafari, Belqasem, Praveen Kumar Balachandran, Devakirubakaran Samithas, Sudhakar Babu Thanikanti, and Nnamdi Nwulu. "Modeling and simulation of renzoku puzzle pattern-based PV array configuration for Partially shaded PV system." *Frontiers in Energy Research* 12: 1335111. **SCI, Q2**  
<https://doi.org/10.3389/fenrg.2024.1335111>

## 2023

- [17]. Yuvaraj, T., T. D. Suresh, Ulagammai Meyyappan, Belqasem Aljafari, and Sudhakar Babu Thanikanti. "Optimizing the allocation of renewable DGs, DSTATCOM, and BESS to mitigate the impact of electric vehicle charging stations on radial distribution systems." *Heliyon* (2023). December 2023, **SCIE**
- [18]. Yuvaraj, T., K. R. Devabalaji, Sudhakar Babu Thanikanti, Belqasem Aljafari, and Nnamdi Nwulu. "Minimizing the electric vehicle charging stations impact in the distribution networks by simultaneous allocation of DG and DSTATCOM with considering uncertainty in load." *Energy Reports* 10 (2023): 1796-1817. November 2023, **SCI**
- [19]. Adhikary, Sarasij, Pabitra Kumar Biswas, Chiranjit Sain, Sudhakar Babu Thanikanti, and Nnamdi I. Nwulu. "Bidirectional converter based on G2V and V2G operation with time of usage-based tariff analysis and monitoring of charging parameters using IoT." *Energy Reports* 9 (2023): 5404-5419. Dec 2023 **SCI**
- [20]. Pachauri, Rupendra Kumar, Mohit Kumar, Sudhakar Babu Thanikanti, Neeraj Kumar Shukla, Piyush Kuchhal, Ahmad Faiz Minai, and Akhilesh Sharma. "Study on Meta-heuristics techniques for shade dispersion to enhance GMPP of PV array systems under PSCs." *Sustainable Energy Technologies and Assessments* 58 (2023): 103353. August 2023, **SCIE**
- [21]. Mallick, Pradyumna, Renu Sharma, Priya Ranjan Satpathy, Sudhakar Babu Thanikanti, and Nnamdi Nwulu. "A Dimension-Independent Array Relocation (DIAR) Approach for Partial Shading Losses Minimization in Asymmetrical Photovoltaic Arrays." *IEEE Access* (2023). 28 June 2023, **SCI**
- [22]. Debnath, Sukanta, Upama Das, Pabitra Kumar Biswas, Belqasem Aljafari, and Sudhakar Babu Thanikanti. "Design and Control of Multicoil Active Magnetic Bearing System for High-Speed Application." *Energies* 16, no. 11 (2023): 4447. 31 May 2023, **SCIE**
- [23]. Paramasivan, Muthukumar, K. Eswaramoorthy, R. A. T. H. I. N. A. M. Muniraj, Padmasuresh Lekshmi Kanthan, Thanikanti Sudhakar Babu, S. Jeevananthan, and Hassan Haes Alhelou. "An Alternative Level Enhanced Switching Angle Modulation Schemes for Cascaded H Bridge Multilevel inverters." *IEEE Access* (2023). June 2023, **SCI**
- [24]. Yuvaraj, T., K. R. Devabalaji, Sudhakar Babu Thanikanti, Vijay Babu Pamshetti, and Nnamdi Nwulu. "Integration of Electric Vehicle Charging Stations and DSTATCOM in Practical Indian Distribution Systems using Bald Eagle Search Algorithm." *IEEE Access* (2023). June 2023, **SCI**
- [25]. Mahafzah, Khaled A., Ali Q. Al-Shetwi, M. A. Hannan, Thanikanti Sudhakar Babu, and Nnamdi Nwulu. "A New Cuk-Based DC-DC Converter with Improved Efficiency and Lower Rated Voltage of Coupling Capacitor." *Sustainability* 15, no. 11 (2023): 8515. May 2023, **SCIE**
- [26]. Das, Upama, Sukanta Debnath, Suraj Gupta, Pabitra Kumar Biswas, Thanikanti Sudhakar Babu, and Nnamdi I. Nwulu. "Active Magnetic Bearing System Using I-Type and U-Type Actuator." *IEEE Access* (2023). June 2023, **SCI**
- [27]. Aljafari, Belqasem, S. Devakirubakaran, C. Bharatiraja, Praveen Kumar Balachandran, and Thanikanti Sudhakar Babu. "Power enhanced solar PV array configuration based on calcudoku puzzle pattern for partial shaded PV system." *Heliyon* 9, no. 5 (2023). May 2023, **SCIE**
- [28]. Aljafari, Belqasem, Praveen Kumar Balachandran, Devakirubakaran Samithas, and Sudhakar Babu Thanikanti. "Solar photovoltaic converter controller using opposition-based reinforcement learning with butterfly optimization algorithm under partial shading conditions." *Environmental Science and Pollution Research* 30, no. 28 (2023): 72617-72640. May 2023, **SCI**

- [29].Naik, P. Lakshman, H. Jafari, T. Sudhakar Babu, A. Anil, S. Venkata Padmavathi, and D. Nazarpour. "Enhancement of Power Quality in Grid Integrated System using DC-link Voltage PI Controlled VSC based Statcom." *Iranian Journal of Electrical and Electronic Engineering* 19, no. 2 (2023): 2439-2439. June 2023, **SCIE**
- [30].Senthilkumar, S., V. Mohan, R. Deepa, M. Nuthal Srinivasan, T. Senthil Kumar, S. B. Thanikanti, and N. Prathap. "A Review on MPPT Algorithms for Solar PV Systems." *International Journal of Research-GRANTHAALAYAH* 11, no. 3 (2023): 25-64., SCOPUS
- [31].Fathy, Ahmed, Dalia Yousri, Thanikanti Sudhakar Babu, Hegazy Rezk, and Haitham S. Ramadan. "An enhanced reconfiguration approach for mitigating the shading effect on photovoltaic array using honey badger algorithm." *Sustainable Energy Technologies and Assessments* 57 (2023): 103179. June 2023, **SCIE**
- [32].Dhananjaya, M., B. Krishna Chaitanya, Thanikanti Sudhakar Babu, Devendra Potnuru, Belqasem Aljafari, Ramani Kannan, and Tarun Kumar Lohani. "Design of multi-input single output DC-DC converter with preserved output voltage under source-fault." *IET Power Electronics* (2023). April 2023, **SCIE**
- [33].Pydikalva, Padmavathi, Sudhakar Natarajan, Belqasem Aljafari, Karthik Balasubramanian, and Sudhakar Babu Thanikanti. "PV-Fed Micro-Inverter with Battery Storage for Single Phase Grid Applications." *Electric Power Components and Systems* 51, no. 11 (2023): 1051-1074., **SCI**
- [34].Jana, Suman, Pabitra Kumar Biswas, Thanikanti Sudhakar Babu, and Hassan Haes Alhelou. "An improved parametric method for selecting different types of tesla transformer primary coil to construct an artificial lightning simulator." *IEEE Access* (2023). **SCI**
- [35].Satpathy, Priya Ranjan, Belqasem Aljafari, Sudhakar Babu Thanikanti, and Siva Rama Krishna Madeti. "Electrical fault tolerance of photovoltaic array configurations: Experimental investigation, performance analysis, monitoring and detection." *Renewable Energy* (2023). **SCI**
- [36].Gupta, Suraj, Pabitra Kumar Biswas, Sukanta Debnath, Anumoy Ghosh, Thanikanti Sudhakar Babu, Hossam M. Zawbaa, and Salah Kamel. "Metaheuristic Optimization Techniques used in controlling of an Active Magnetic Bearing System for High-Speed Machining Application." *IEEE Access* (2023). **SCI**
- [37].Aljafari, Belqasem, Priya Ranjan Satpathy, Sudhakar Babu Thanikanti, and Hassan Haes Alhelou. "A zero switch and sensorless reconfiguration approach for sustainable operation of roof-top photovoltaic system during partial shading." *IET Renewable Power Generation* (2023). **SCIE**
- [38].Gupta, Suraj, Pabitra Kumar Biswas, Belqasem Aljafari, Sudhakar Babu Thanikanti, and Sajal K. Das. "Modelling, simulation and performance comparison of different membership functions based fuzzy logic control for an active magnetic bearing system." *The Journal of Engineering* 2023, no. 2 (2023): e12229. **SCIE**
- [39].Fathy, Ahmed, Dalia Yousri, Thanikanti Sudhakar Babu, and Hegazy Rezk. "Triple X Sudoku reconfiguration for alleviating shading effect on total-cross-tied PV array." *Renewable Energy* (2023). **SCI**
- [40].Thanikanti, Sudhakar Babu, Praveen Kumar, S. Devakirubakaran, Belqasem Aljafari, and Ilhami Colak. "A dynamic mismatch loss mitigation algorithm with dual input dual output converter for solar PV systems." *Solar Energy Materials and Solar Cells* 251 (2023): 112163. **SCI**
- [41].Belqasem Aljafari, Pandia Rajan Jeyaraj, Aravind Chellachi Kathiresan, Sudhakar Babu Thanikanti "Electric vehicle optimum charging-discharging scheduling with dynamic pricing employing multi agent deep neural network: *Computers and Electrical Engineering* 105 (2023) 108555, **SCIE**
- [42].Maximizing techno-economic-environmental benefits of renewable energy allocation with smart inverter in distribution system: a two-layer stochastic optimization framework B Aljafari, VB Pamshetti, SB Thanikanti *International Journal of Green Energy*, 1-18, **SCIE**
- [43].Aljafari, Belqasem, Rupendra Kumar Pachauri, Sudhakar Babu Thanikanti, and Bamidele Victor Ayodele. "Innovative Methodologies for Higher Global MPP of Photovoltaic Arrays under PSCs: Experimental Validation." *Sustainability* 15, no. 15 (2023): 11852. **SCIE**
- [44].Ali, Hossam Hassan, Mohamed Ebeed, Ahmed Fathy, Francisco Jurado, Thanikanti Sudhakar Babu, and Alaa A. Mahmoud. "A New Hybrid Multi-Population GTO-BWO Approach for Parameter Estimation of Photovoltaic Cells and Modules." *Sustainability* 15, no. 14 (2023): 11089. **SCIE**
- [45].Babu, NV Phanendra, P. Suresh Babu, Saptarshi Roy, T. Sudhakar Babu, and Anil Bharadwaj. "A Synchrophasor-Based Line Protection for Single Phase-Ground Faults." *Journal of Electrical Engineering & Technology* 18, no. 3 (2023): 1693-1704. **SCIE**

## 2022

- [46].Pamshetti, Vijay Babu, Shailendra Singh, A. K. Thakur, S. P. Singh, T. Sudhakar Babu, Nishant Patnaik, and G. Hari Krishna. "Cooperative Operational Planning Model for Distributed Energy Resources with Soft Open Point in Active Distribution Network." *IEEE Transactions on Industry Applications* (2022).
- [47].Saiprakash, Chidurala, Alivarani Mohapatra, Byamakesh Nayak, Thanikanti Sudhakar Babu, and Hassan Haes Alhelou. "A Novel Benzene Structured Array Configuration for Harnessing Maximum Power from PV Array under Partial Shading Condition with Reduced Number of Cross Ties." *IEEE Access* (2022).
- [48].Babu, N. V., P. Suresh Babu, Saptarshi Roy, T. Sudhakar Babu, and Anil Bharadwaj. "A Synchrophasor-Based Line Protection for Single Phase-Ground Faults." *Journal of Electrical Engineering & Technology* (2022): 1-12.
- [49].Naik, Kanasottu Anil, Rayappa David Amar Raj, Chepuri Venkateswara Rao, and Thanikanti Sudhakar Babu. "Generalized cryptographic image processing approaches using integer-series transformation for solar power optimization under partial shading." *Energy Conversion and Management* 272 (2022): 116376.
- [50].Aljafari, Belqasem, Siva Rama Krishna Madeti, Priya Ranjan Satpathy, Sudhakar Babu Thanikanti, and

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