

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



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	9.5 Years (Includes research experience)
Research	9.5 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 1st 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

		University.
		6. Received GOLD 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.
		7. Received award " Young faculty in Engineering 2018 " towards exceptional academic records, initiatives and developments in the field of Electrical Engineering by Venus International Foundation, India.
		8. Received a best research paper award 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
		9. Received research award consecutively for the years 2014, 2015, 2016 contribution towards research publications by VIT University.
		10. Selected as best associate of project for the month of May 2013 in cognizant technology solutions
		11. Awarded certificated of appreciation for outstanding contribution towards Hyderabad Innovator Fair organized by CTS national wide, October 2012
		12. Received best paper award 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.
		13. Received bestpaper award 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.
		14. Received 2 nd prize for paper presentation in the national level technical symposium (Technosance 08) organized by Osmania University, Hyderabad.
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	National Journals – 00 International Journals – 220 (SCI Indexed – 125; Scopus Indexed 95) National Conference – 01 International Conference – 36
16	Projects Carried out	1. Received INTERNATIONAL RESEARCH FUND (INTERES) 2024 by UNIVERSITI MALAYSIA PERLIS (UniMAP) Malaysia for the project title " Development of Smart Greenhouse Management System using IoT & ML " duration of 2 years worth of 6.5 Lakhs (7250 USD). 2. Received INTERNATIONAL RESEARCH FUND (INTERES) 2022 by UNIVERSITI MALAYSIA PERLIS (UniMAP) Malaysia for the project title "IoT based smart power quality analyzer" duration of 2 years worth of 7 Lakhs (8659 USD) . 3. Received funding for the consultancy project titled " Enhancement of the performance of different renewable energy sources using modern techniques " worth of 20 Lakhs for the duration of 2 years from Najran University, Saudi Arabia. 4. Executive Member of FIST program 2016, sanctioned fund of Rs. 115.0 Lakh (215580 USD) by Department of Science and Technology, Reference number: SR/FST/ETI-420/2016. • 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. • 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 th April 2022, Application Number 202241018086 A, India. • Filed a patent under IP Australia, titled "A Process For Reducing
17	Patents	

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 2nd 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.
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

19 Invited Speaker

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.

- 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 NITTTR-Chandigarh.
- Organized 1st International conference on Power Energy and Secure Smart Technologies (ICPEST-2024) as a convenor 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.

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Details of Journal Publications/
Conferences (National and
International)

International Journals from the year 2017

- [1]. Mallala, Balasubbareddy, Rajasekhar Reddy Manyam, Jagriti Saini, Mohammad Faridun Naim Tajuddin, and Sudhakar Babu Thanikanti. "IoT enabled smart power quality analysis in three phase electrical systems with practical implementation." Scientific Reports 15, no. 1 (2025): 39665.
- [2]. Mallala, Balasubbareddy, Mohammad Faridun Naim Tajuddin, and Sudhakar Babu Thanikanti. "Design of Power Quality Analyzer Using a Field Programmable Gate Array." Recent Advances in Electrical & Electronic Engineering 18, no. 8 (2025): 1321-1334.
- [3]. Yuvaraj, T., M. Thirumalai, T. D. Suresh, Thanikanti Sudhakar Babu, and Mohammad Khishe. "Dynamic Optimization of Solar DG and Shunt Capacitor Placement to Mitigate the Impact of EV Charging Stations on Power Distribution Network." Results in Engineering (2025): 106804.
- [4]. Muthukumar, P., Sudhakar Babu Thanikanti, G. Flora, R. Anand, and Belqasem Aljafari. "Advanced AI-enabled technologies for sustainable biohydrogen production and environmental stewardship." International Journal of Hydrogen Energy 148 (2025): 150045.
- [5]. Dhananjaya, Mudadla, Devendra Potnuru, Ramesh Devarapalli, Malleswara Rao K. Durga, and Thanikanti Sudhakar Babu. "Bidirectional Step-Up Multi-Input Converter with Improved Voltage Gain for DC Microgrids." IEEE Latin America Transactions 23, no. 8 (2025): 675-686.
- [6]. Satpathy, Priya Ranjan, Vigna Kumaran Ramachandaramurthy, Renu Sharma, Sanjeevikumar Padmanaban, Sudhakar Babu Thanikanti, and Siva Rama Krishna Madeti. "A Charge Redistribution Ladder Architecture for Voltage Equalization and Enhanced Performance of Partially Shaded PV Arrays." IEEE Transactions on Industry Applications (2025).
- [7]. Aljafari, Belqasem, Vijay Babu Pamshetti, and Sudhakar Babu Thanikanti. "Maximizing techno-economic-environmental benefits of renewable energy allocation with smart inverter in distribution system: A two-layer stochastic optimization framework." International Journal of Green Energy 22, no. 8 (2025): 1436-1453.
- [8]. Satpathy, Priya Ranjan, Belqasem Aljafari, Sudhakar Babu Thanikanti, and Mohammad Khishe. "Dwarf Mongoose Optimization-Based Reconfiguration for Enhanced Power Generation in Partially Shaded Photovoltaic Arrays." Results in Engineering (2025): 105599.
- [9]. Das, Upama, Sukanta Debnath, Suraj Gupta, Pabitra Kumar Biswas, Sujit Kumar Biswas, and Thanikanti Sudhakar Babu. "Design, simulation and testing of U-type actuator-based single-coil active-

- magnetic-bearing." *Mechanics Based Design of Structures and Machines* 53, no. 5 (2025): 3484-3500.
- [10]. Yuvaraj, T., M. Thirumalai, M. Dharmalingam, Sudhakar Babu Thanikanti, and Sanjeevikumar Padmanaban. "Smart energy management for revenue optimization and grid independence in an Indian RDS." *Energy Conversion and Management: X* 26 (2025): 100955.
 - [11]. Syed, Ahmad, Xiaoqiang Guo, Sudhakar Babu Thanikanti, and Mohammad Khishe. "A new H6 neutral point clamped transformerless photo voltaic inverter." *Scientific Reports* 15, no. 1 (2025): 10387.
 - [12]. Kanchana, Kadirvel, Tangirala Murali Krishna, Thangaraj Yuvaraj, and Thanikanti Sudhakar Babu. "Enhancing Smart Microgrid Resilience Under Natural Disaster Conditions: Virtual Power Plant Allocation Using the Jellyfish Search Algorithm." *Sustainability* (2071-1050) 17, no. 3 (2025).
 - [13]. Babu, Chava Hari, Hariharan Raju, Yuvaraj Thangaraj, Sudhakar Babu Thanikanti, and Benedetto Nastasi. "Optimizing power and energy loss reduction in distribution systems with RDGs, DSVCs and EVCS under different weather scenarios." *Sustainable Energy Technologies and Assessments* 75 (2025): 104219.
 - [14]. Mallala, Balasubbareddy, Mohammad Faridun Naim Tajuddin, Sudhakar Babu Thanikanti, and Rajasekhar Reddy Manyam. "Experimental Analysis using IoT based Smart Power Quality Analyser System with Remote Data Access and GSM Alerting Mechanism." *IEEE Access* (2025).
 - [15]. Jamaludin, Mohd Nasrul Izzani, Mohammad Faridun Naim Tajuddin, Tarek Younis, Sudhakar Babu Thanikanti, and Mohammad Khishe. "Hybrid salp swarm maximum power point tracking algorithm for photovoltaic systems in highly fluctuating environmental conditions." *Scientific Reports* 15, no. 1 (2025): 650.
 - [16]. Aljafari, Belqasem, Yaswanth Kumar Alapati, Koganti Srilakshmi, Praveen Kumar Balachandran, and Sudhakar Babu Thanikanti. "An optimized neural network-honey badger based control technique for a hybrid solar PV and battery energy storage fed unified power quality conditioner." *Journal of Energy Storage* 106 (2025): 114818.

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- [17]. 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>
- [18]. 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>
- [19]. 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.
- [20]. Aljafari, Belqasem, Tareq Kareri, Sudhakar Babu Thanikanti, and Shitharth Selvarajan. "Transformer-less high gain DC–DC converter design and analysis for fuel cell vehicles." *Scientific Reports* 14, no. 1 (2024): 19221.
- [21]. 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.
- [22]. 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.
- [23]. 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.
- [24]. 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.
- [25]. 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>
- [26]. 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>
- [27]. 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)
- [28]. 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).
- [29]. 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.
- [30]. Suresh, A., Belqasem Aljafari, and Sudhakar Babu Thanikanti. "Investigations of the performance of 3D

- printed micro wind turbine composed of PLA material." *Heliyon* (2024).
- [31]. 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).
- [32]. 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>

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- [34]. 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**
- [35]. 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**
- [36]. 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**
- [37]. 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**
- [38]. 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**
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- [40]. 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**
- [41]. 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**
- [42]. 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**
- [43]. 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**
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- [46]. 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
- [47]. 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**
- [48]. 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**
- [49]. 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**
- [50]. 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**

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- [52]. 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**
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