# List of Publications

**Patent Granted:** 12 Nos. (*Indian*)

**2024:**

1. Patent No: **522237**, dated 08th March 2024 granted for "Solar Induction Heating System using High Frequency Hybrid Resonant Inverter under ZSI Mode", Patentee: Indian Institute of Technology (ISM), Dhanbad, Inventors: Avijit Chakraborty, Aniruddha Bhattacharjee, Pipul Roy, Pradip Kumar Sadhu, Niladri Das, and **Nitai Pal**.

**2023:**

2. Patent No: **470425**, dated 20th November 2023 granted for "Solar based Hybrid Heating System and Method with Constant Load Conditions for Low-Wattage Metallic Appliances", Patentee: Indian Institute of Technology (ISM), Dhanbad, Inventors: Moumita Sadhu, Niladri Das, Meetarani Tripathy, Pradip Kumar Sadhu, **Nitai Pal**, and Utpal Goswami.
3. Patent No: **451268**, dated 13th September 2023 granted for "Solar based Hybrid Heating System and Method with Automatic Load Impedance Matching for Low-Wattage Metallic Appliances", Patentee: Indian Institute of Technology (ISM), Dhanbad, Inventors: Kundan Kumar, Anik Goswami, Pradip Kumar Sadhu, Debabrata Roy, **Nitai Pal**, and M. K. Singh.
4. Patent No: **429901**, dated 25th April 2023 granted for "An Induction Curing System and Method for Roof Treatment with Asphalt Concrete to Cure a Crack-on Roof", Patentee: Indian Institute of Technology (ISM), Dhanbad, Inventors: Pradip Kumar Sadhu, Kaushik Neogi, Atanu Banerjee, G. Panda, **N. Pal**, and K. C. Jana.

**2022:**

5. Patent No: **413988**, dated 08th December 2022 granted for "A High Frequency Hybrid Resonant Inverter with AC Input Source", Patentee: Indian Institute of Technology (ISM), Dhanbad, Inventors: Pradip Kumar Sadhu, Ananyo Bhattacharya, Vivekananda Mukherjee, and **Nitai Pal**.
6. Patent No: **409320**, dated 19th October 2022 granted for "Contactless Emergency Lighting and Communication System with Axial Portability for Underground Mines", Patentee: Indian Institute of Technology (ISM), Dhanbad, Inventors: S. Vamsi Krishna, **Nitai Pal**, and Pradip Kumar Sadhu.
7. Patent No: **405442**, dated 31st August 2022 granted for "A Pacemaker Battery Recharger for Enhancing the Service Life", Patentee: Indian Institute of Technology (ISM), Dhanbad, Inventors: Pradip Kumar Sadhu, Animesh Halder, **Nitai Pal**, Ankur Ganguly, Prabir Bhowmik, and Moumita Sadhu.
8. Patent No: **403045**, dated 4th August 2022 granted for "A System for Induction Heated Sterilization of Surgical Instruments and a Method for the Same", Patentee: Indian Institute of Technology (ISM), Dhanbad, Inventors: Pradip Kumar Sadhu, **Nitai Pal**, Agamani Chakraborty, and Atanu Bandyopadhyay.
9. Patent No: **400850**, dated 5th July 2022 granted for "A Hybrid Particulate Matter (PM) Emission Control Device having Electrostatic Precipitator and High Frequency Induction Heating Coil for Diesel Engine and Method for the Same", Patentee: Indian Institute of Technology (ISM), Dhanbad, Inventors: Kaushik Sit, Pradip Kumar Sadhu, Arijit Baral, Kallol Bhaumik, Moumita Chakraborty, Sudipta Chakraborty, and **Nitai Pal**.

10. Patent No: **393014**, dated 25th March 2022 granted for "A High Frequency Full Bridge Series Resonant Inverter with AC Input Source", Patentee: Indian Institute of Technology (ISM), Dhanbad, Inventors: Pradip K. Sadhu, Debabrata Roy, **Nitai Pal**, and Arijit Baral.

**2021:**

11. Patent No: **359838**, dated 26th February 2021 granted for "Emission Control Device for Diesel Engine to Reduce the Particulate Matters in Exhaust Gases and the Method for the Same", Patentee: Indian Institute of Technology (ISM), Dhanbad, Inventors: Pradip K. Sadhu, **Nitai Pal**, and Atanu Bandyopadhyay.

**2020:**

12. Patent No: **341969**, dated 20th July 2020 granted for "A High Frequency Modified Half Bridge Resonant Inverter with AC Input Source", Patentee: Indian Institute of Technology (ISM), Dhanbad, Inventors: Pradip Kumar Sadhu, Palash Pal, **Nitai Pal**, and Arijit Baral.

**Patent Published / Applied:** 09 Nos. (*Indian*)

1. Prof. Anik Goswami, Prof. Pradip Kumar Sadhu, Prof. Prabhat Chandra Ghosh, Ms. Phularenu Das, Prof. Anirban Ghoshal, Prof. Arijit Baral, Prof. Nitai Pal, Mrs. Paromita Sadhu, Ms. Chitrangee Singh, Mr. Sagar Bhushan, Mr. Amit Kumar Singh, Sonal Mishra, and Dr. Koushik Mondal, "A hybrid renewable energy driven bidirectional dynamic and static wireless fast charging system for variable ground clearance and misalignment protected electric vehicles", submitted to the Patent Office, Government of India, Application No. **202631039815**, dated 30/03/**2026**.
2. Dr. Sukanta Halder, Nilanjan Das, Sampad Barik, Uppalapati Sudheer Kumar, Krunal Bhuvir, Shubham Ramesh Bhosale, Sk Bittu, Prof. Pradip Kumar Sadhu, Sonal Mishra, and Prof. Nitai Pal, "High-Frequency Isolated Dual-Channel Gate Driver for Wide Bandgap Inverters with Programmable Dead-Band and Parasitic-On Protection", submitted to the Patent Office, Government of India, Application No. **202631039825**, dated 30/03/**2026.**
3. Prof. Pradip Kumar Sadhu, Prof. Shyam A B, Phularenu Das, Prof. Nitai Pal, Chitrangee Singh, Prof. Anik Goswami, Mrs. Paromita Sadhu, and Sonal Mishra, "Hybrid Green Energy based DC Power Propelled Smart Sailing Boat / Cruise Utilizing BIPV, FSPV & CPV for Freshwater of Polar Countries", submitted to the Patent Office, Government of India, Application No. **202631033350**, dated 19/03/**2026**.
4. Prof. Pradip Kumar Sadhu, Prof. Anik Goswami, Mrs. Paromita Sadhu, Prof. Nitai Pal, Prof. Anirban Ghoshal, Sagar Bhushan, Phularenu Das, Amit Kumar Singh, and Sonal Mishra, "Hybrid Green Energy based AC Power Propelled Smart Sailing Boat / Cruise Utilizing BIPV & FSPV for Saline Water of Tropical Countries", submitted to the Patent Office, Government of India, Application No. **202631032473**, dated 18/03/**2026**.
5. Prof. Pradip Kumar Sadhu, Prof. Nitai Pal, Prof. Anik Goswami, Mrs. Paromita Sadhu, Prof. Anirban Ghoshal, Sagar Bhushan, Phularenu Das, Prof. Anindya Sinha, Dr. Koushik Mondal, and Sonal Mishra, "An IOT Based Non-contact Solid State Lighting, Portable Battery Charging of Cap Lamps and Generating Alert System in Multi-seam and Sectoral Underground Mines", submitted to the Patent Office, Government of India, Application No. **202531130467**, dated 23/12/**2025**.
6. Ashiwani Yadav, Ramesh Singh Parihar, Poorva Sharma, Dewashri Pansari, **Nitai Pal**, Faizan Arif Khan, and Rohit Kumar Verma, "A Process for a Hybrid Renewable Energy

System", Journal of Patent, Patent Office, Government of India, Journal No. 16/2024, publication date 19/04/**2024**, Application No. **202221059628**.

7. Pradip Kumar Sadhu, Anik Goswami, Sonal Mishra, **Nitai Pal**, Arijit Baral, Anirban Ghoshal, and Kartick Chandra Jana, "A Hybrid Renewable Energy Driven Bidirectional Wireless Charging System for Dynamic and Static Electric Vehicle" Journal of Patent, Patent Office, Government of India, Journal No. 07/2024, publication date 16/02/**2024**, Application No. **202231032196**.
8. Dr. Debarati Dey Roy, Prof. Dr. Arijit Saha, Susmita Dhar Mukherjee, Promit Kumar Saha, Dr. Rituparna Mukherjee, Dr. Saikat Majumdar, Anirban Ghosal, and **Dr. Nitai Pal**, "Electrically Doped DNA and Iron Quantum Dot Spintronic Model" Journal of Patent, Patent Office, Government of India, Journal No. 10/2023, publication date 10/03/**2023**, Application No. **202331004023**.
9. Abhishek Dhar, Promit Kumar Saha, Saurabh Adhikari, Rituparna Mukherjee, Saikat Majumdar, Aritras Chakraborty, and **Nitai Pal**, "Implementing a Smartphone-Controlled Low-Cost Drone" Journal of Patent, Patent Office, Government of India, Journal No. 06/2023, publication date 10/02/**2023**, Application No. **202331007043**.

**International Journal**: 67 Nos. (*Q=47: Q1=16, Q2=10, Q3=12, Q4=09*)

**2026:**

1. Subhabrata Boral, **Nitai Pal**, and Pankaj Kumar, "Advances in DER-integrated compressed air energy storage: A comprehensive review and future perspectives", – **Renewable and Sustainable Energy Reviews** ***–Elsevier***, ISSN 1364-0321, https://doi.org/10.1016/j.rser.2026.117624, Vol. 245, 117624 (2026). ***(SCIE; I.F: 19.2 – Q1)***.

**2025:**

2. Swati Lipsa, Ranjan Kumar Dash, Subhra Debdas, Korhan Cengiz, Pankaj Kumar and **Nitai Pal**, "Enhancing cardiac disease prediction with explainable bidirectional LSTM", – ***Scientific Reports***, ***Nature Portfolio,*** ISSN: 2045-2322, https://doi.org/10.1038/s41598-025-25071-8, Vol. 15, 41241 (2025) ***(SCIE; I.F: 4.3 – Q1)***.
3. Jagannath Patra, Ashiwani Yadav, Rohit Kumar Verma, **Nitai Pal**, Scion Samantray, Kunja Bihari Sahoo, Pragya Singh, Ramesh Singh Parihar, and Anil Kumar Panda, "Efficient Multi-Objective Approach using ABC Algorithm for Minimizing Generation Fuel Cost and Transmission Loss through FACTS Controllers Placement and Sizing", – ***Iranian Journal of Science and Technology, Transactions of Electrical Engineering– Springer Nature,*** ISSN: 2228-6179, https://doi.org/10.1007/s40998-025-00805-6, pp. 1-23, May 2025 ***(SCIE; I.F: 1.7 – Q3)***.

**2024:**

4. Abhay Chhetri, Devender Kumar Saini, Monika Yadav and **Nitai Pal**, "Performance Analysis of Machine Learning Algorithms for Estimation of EV Penetration", – ***Microsystem Technologies, Springer-Nature***, ISSN: 1432-1858, https://doi.org/10.1007/s00542-024-05804-x, pp. 1817–1831, October 2024 ***(SCIE; I.F: 1.6 – Q3).***
5. Promit Kumar Saha, **Nitai Pal**, Faizan A. Khan and Aftab Alam, "Modelling of small signals in MISO DC-DC converters for hybrid energy sources", –***Microsystem Technologies, Springer-Nature***, ISSN: 1432-1858, https://doi.org/10.1007/s00542-024-05777-x, pp. 1753–1761, October 2024 ***(SCIE; I.F: 1.6 – Q3).***

6. Ashiwani Yadav, **Nitai Pal**, Faizan A. Khan, R S Parihar, Arsh Khan, Shekhar Solanki, Dewashri Pansari, Poorva Sharma, Karuna Yadav, "Comparative Assessment of Various MPPT Algorithms for Solar Photovoltaic Systems under Dynamic Shading Conditions", –***Microsystem Technologies, Springer-Nature***, ISSN: 1432-1858, https://doi.org/10.1007/s00542-024-05746-4, pp. 1649–1659, August 2024 ***(SCIE; I.F: 1.6 – Q3).***
7. Isarar Ahamad, Faizan A Khan, Arun K Yadav and **Nitai Pal**, Vishal S Chandel, Aftab Yaseen, Ijtaba S Khan, Mahfooz Ahmad, "Performance Assessment of Solar Energy Driven Cascaded H-Bridge Multilevel Inverters", –***Microsystem Technologies, Springer-Nature***, ISSN: 1432-1858, https://doi.org/10.1007/s00542-024-05748-2, pp. 1663–1671, August 2024 ***(SCIE; I.F: 1.6 – Q3).***
8. Devender Kumar Saini, Monika Yadav and **Nitai Pal**, "Optimal Allocation of Distributed Energy Resources to Cater the Stochastic E-vehicle Loading and Natural Disruption in Low Voltage Distribution Grid", –***Scientific Reports***, ***Springer-Nature,*** ISSN: 2045-2322, https://doi.org/10.1038/s41598-024-67927-5 pp. 1-33, July 2024 ***(SCIE; I.F: 4.3 – Q1).***
9. Faizan A. Khan, Saad Mekhilef, Vigna K. Ramachandaramurthy, Nur Fadilah Abd Aziz, **Nitai Pal**, Aftab Yaseen, Ashiwani Yadav, M. Asim and Obaid Alshammari, "Design and Development of Grid Independent Integrated Energy System for Electric Vehicle Charging Stations at Different Locations in Malaysia", –***Energy***, ***Elsevier***, ISSN: 0360-5442, https://doi.org/10.1016/j.energy.2024.131686, pp. 1-23, May 2024 ***(SCI; I.F: 9.0 – Q1)***.
10. Asim Halder, **Nitai Pal** and Debasish Mondal, "Design of Optimal Controller for Static Compensator via Hamiltonian Formalism for the Multimachine System", –***Sadhana-Indian Academy of Sciences, Springer Link,*** ISSN: 0256-2499, https://doi.org/10.1007/s12046-024-02462-7, Vol. 49, No. 182, pp. 1-14, May 2024 ***(SCIE; I.F: 2.012 – Q3)***.
11. Jagannath Patra and Nitai Pal, "Voltage Sag Assessment and Classification Model via H-Huang Transform, The Remora Optimization Approach, and the Persistent Hope Field Neural Network", –***Journal of Intelligent & Fuzzy Systems,*** ISSN: 1064-1246, 1875-8967**,** accepted on January 2024 ***(SCIE; I.F: 2.00 – Q4)***.

**2023:**

12. Arunima Mahapatra and **Nitai Pal**, "Comprehensive Study on Sizing of Hybrid Renewable Energy System using Commercial Software", –***Journal of Mines, Metals and Fuels,*** ISSN: 0022-2755, https://doi.org/10.18311/jmmf/2023/43192 Vol. 71, Issue. 12A, pp. 47-53, December 2023 (***SCOPUS Indexed***).
13. Deepti Singh, **Nitai Pal** and S. K. Sinha, "Technical Investigation on Operational Challenges of Large-scale PV Integration and Opportunities with Market Restructuring, Storages, Green Corridors, and AI", –***Microsystem Technologies, Springer-Nature***, ISSN: 1432-1858, https://doi.org/10.1007/s00542-023-05556-0, pp. 1-14, November 2023 ***(SCIE; I.F: 2.012 – Q3)***.
14. Jagannath Patra, **Nitai Pal**, Harish Chandra Mohanta, Reynah Akwafo and Heba G. Mohamed, "A Novel Approach of Voltage Sag Data Analysis Stochastically: Study, Representation, and Detection of Region of Vulnerability", –***Sustainability, MDPI***, ISSN: 2071-1050**,** https://doi.org/10.3390/su15054345, Vol. 15, No. 5, pp. 1-29, February 2023 ***(SCIE; I.F: 4.089 – Q2)***.
15. Manish Kumar and **Nitai Pal**, "Machine Learning-Based Electric Load Forecasting for Peak Demand Control in Smart Grid", –***Computers, Materials & Continua,*** ISSN: 1546-

2218, 1546-2226 https://doi.org/10.32604/cmc.2023.032971, Vol. 74, No. 3, pp. 4785-4799, 2023 (***SCIE; I.F: 3.860 – Q2***).

**2022:**

16. Monika Yadav, **Nitai Pal** and Devender Kumar Saini, "Low Voltage Ride Through Capability for Resilient Electrical Distribution System Integrated with Renewable Energy Resources", –***Energy Reports, Elsevier***, ISSN: 2352-4847, https://doi.org/10.1016/j.egyr.2022.12.023, Vol. 9, pp. 833-858, December 2022 ***(SCIE; I.F: 5.258 – Q2)***.
17. Jagannath Patra and **Nitai Pal**, "A Mathematical Approach of Voltage Sag Analysis Incorporating Bivariate Probability Distribution in a Meshed System", – ***Energies, MDPI***, ISSN: 1996-1073, https://doi.org/10.3390/en15207592, Vol. 15, No. 20, pp. 1-19, October 2022 ***(SCIE; I.F: 3.252 – Q3)***.
18. Faizan A. Khan, **Nitai Pal**, Syed. H. Saeed and Ashiwani Yadav "Modelling and Techno-Economic analysis of standalone SPV/Wind hybrid renewable energy system with lead-acid battery technology for rural applications", –***Journal of Energy Storage, Elsevier***, ISSN: 2352-152X, https://doi.org/10.1016/j.est.2022.105742, Vol. 55, pp. 1-23, September 2022 ***(SCIE; I.F: 9.0 – Q1)***.
19. Faizan A. Khan, **Nitai Pal**, Syed. H. Saeed and Ashiwani Yadav "Techno-economic analysis and feasibility valuation of standalone solar Photovoltaic/Wind Turbine hybrid energy system with various storage techniques and different locations in India", –***Energy Conversion and Management, Elsevier,*** ISSN: 0196-8904, https://doi.org/10.1016/j.enconman.2022.116217, Vol. 270, pp. 1-22, September 2022 ***(SCIE; I.F:* 11.533 – *Q1)***.
20. Deepti Singh, **Nitai Pal**, S. K. Sinha and B. Singh, "Allocation of Reserved Green Energy Transmission Corridors to Secure Power Purchase Agreements in Smart Power Networks during Congestion Management", –***Electric Power Systems Research, Elsevier,*** ISSN: 0378-7796, https://doi.org/10.1016/j.epsr.2022.108006, Vol. 209, pp. 1-15, April 2022 ***(SCIE; I.F: 3.499 – Q2)***.
21. Nimish Kumar and **Nitai Pal**, "Location and Orientation based Performance Analysis of 4.98 kWp Solar Photovoltaic System for Isolated Indian Islands", –***Sustainable Energy Technologies and Assessments, Elsevier***, ISSN: 2213-1388, https://doi.org/10.1016/j.seta.2022.102138, Vol. 52, pp. 1-14, March 2022 ***(SCIE; I.F: 5.353 – Q2)***.
22. Pankaj Kumar, **Nitai Pal** and Himanshu Sharma, "Optimization and techno-economic analysis of a solar photo-voltaic/biomass/diesel/battery hybrid off-grid power generation system for rural remote electrification in eastern India", –***Energy, Elsevier***, ISSN: 0360-5442, https://doi.org/10.1016/j.energy.2022.123560, Vol 247, pp. 1-17, February 2022 ***(SCI; I.F: 8.9 – Q1)***.

**2021:**

23. Yaduvir Singh and **Nitai Pal**, "Reinforcement learning with fuzzified reward approach for MPPT control of PV systems", –***Sustainable Energy Technologies and Assessments, Elsevier***, ISSN: 2213-1388, https://doi.org/10.1016/j.seta.2021.101665, Vol. 48, pp. 1-11, December 2021 ***(SCIE; I.F: 5.353 – Q2)***.
24. Pankaj Kumar, **Nitai Pal** and Himanshu Sharma, "Techno-economic analysis of solar photo-voltaic/diesel generator hybrid system using different energy storage technologies for isolated islands of India", –**Journal of Energy Storage, *Elsevier***, ISSN: 2352-152X,

https://doi.org/10.1016/j.est.2021.102965, Vol. 41, pp. 1-22, July 2021 ***(SCIE; I.F: 8.907 – Q1)***.

25. Monika Yadav, **Nitai Pal** and Devender Kumar Saini, "Resilient Electrical Distribution Grid Planning Against Seismic Waves Using Distributed Energy Resources and Sectionalizers: An Indian's Urban Grid Case Study", –***Renewable Energy, Elsevier***, ISSN: 0960-1481, https://doi.org/10.1016/j.renene.2021.06.071, Vol. 178, pp. 241-259, June 2021 ***(SCI; I.F: 8.001 – Q1)***.
26. Faizan A. Khan, **Nitai Pal** and Syed H. Saeed, "Optimisation and Sizing of SPV/Wind Hybrid Renewable Energy System: A Techno-Economic and Social Perspective", –***Energy***, ***Elsevier***, ISSN: 0360-5442, https://doi.org/10.1016/j.energy.2021.121114, Vol. 233, pp. 1-21, June 2021 ***(SCI; I.F: 7.147 – Q1)***.
27. Pankaj Kumar, Mohit Kumar and **Nitai Pal**, "An Efficient Control Approach of Voltage and Frequency Regulation in an Autonomous Microgrid", –***Rev. Roum. Sci. Techn.– Électrotechn. et Énerg.***, ISSN: 0035-4066, Vol. 66, No. 1, pp. 33–39, April 2021 ***(SCIE; I.F: 0.443 – Q4)***.

**2020:**

28. Pankaj Kumar, **Nitai Pal** and Himanshu Sharma, "Performance analysis and evaluation of 10 kWp solar photovoltaic array for remote islands of Andaman and Nicobar", –***Sustainable Energy Technologies and Assessments, Elsevier***, ISSN: 2213-1388, https://doi.org/10.1016/j.seta.2020.100889, Vol. 42, pp. 1–14, October 2020, ***(SCIE; I.F: 7.1 – Q1)***.
29. Monika Yadav, **Nitai Pal** and Devender Kumar Saini, "Microgrid control, storage, and communication strategies to enhance resiliency for survival of critical load", –***IEEE Access***, IEEE, ISSN: 2169-3536, https://doi.org/10.1109/ACCESS.2020.3023087, Vol. 8, pp. 169047-169069, 2020 ***(SCIE; I.F: 3.367 – Q2)***.
30. Asim Halder, **Nitai Pal** and Debasish Mondal, "Higher Order Sliding Mode STATCOM Control for Power System Stability Improvement", –***Mathematics and Computers in Simulation, Elsevier***, ISSN: 0378-4754, https://doi.org/10.1016/j.matcom.2020.04.033, Vol. 177, pp. 244-262, 2020 ***(SCI; I.F: 2.463 – Q1)***.
31. Yaduvir Singh, **Nitai Pal**, "Obstacles and comparative analysis in the advancement of photovoltaic power stations in India", –***Sustainable Computing: Informatics & Systems, Elsevier***, ISSN: 2210-5379, https://doi.org/10.1016/j.suscom.2020.100372, Vol. 25, pp. 1-8, March 2020 ***(SCIE; I.F: 2.798 – Q2)***.

**2019:**

32. A. Kumari, J. Patra, **N. Pal** and N. Kumar, "Impact of Solar Panel on the Transformer Performance: A Case Study", –***Iranian Journal of Science and Technology, Transactions of Electrical Engineering–Springer Nature,*** ISSN: 2228-6179, https://doi.org/10.1007/s40998-019-00300-9, Vol. 43, Issue 4, pp. 1–10, December 2019 ***(SCIE; I.F: 0.6 – Q3)***.
33. Yaduvir Singh and **Nitai Pal**, "Renewable Energy-Based Hybrid System", –*Advances in Interdisciplinary Engineering, Lecture Notes in Mechanical Engineering–Springer Nature, Singapore*, ISSN 2195-4356, https://doi.org/10.1007/978-981-13-6577-5_67, pp. 693-702, 2019 *(**SCOPUS**-Elsevier Indexed)*.
34. Partha Sarothi Sikder, **Nitai Pal**, Kota Sunil Patro, "A Modeling of Stand-alone Solar Photo-Voltaic System for Rural Electrification Purposes", –***Rev. Roum. Sci. Techn.–***

***Électrotechn. et Énerg.***, ISSN: 0035-4066, Vol. 64, No. *3*, pp. 241–246, September 2019 ***(SCIE; I.F: 1.114 – Q4)***.

35. Pankaj Kumar, Himanshu Sharma, **Nitai Pal**, Pradip Kumar Sadhu, "Comparative Assessment and Obstacles in the Advancement of Renewable Energy in India and China", –***Problemy Ekorozwoju – Problems of Sustainable Development***, ISSN: 1895-6912, Vol. 14, No. 2, pp. 191-200, 2019 (***SSCI; I.F: 0.577 – Q4***).
36. Chandrakesh Shukla and **Nitai Pal**, "Emissions and energy metrics analysis in current Indian roof top photo voltaic market", –***International Journal of Ambient Energy–Taylor & Francis,*** ISSN: 0143-0750 (Print) 2162-8246 (Online), https://doi.org/10.1080/01430750.2019.1611651, pp. 1–7, May 2019 ***(ESCI)***.
37. Yaduvir Singh and **Nitai Pal** "Performance Analysis of Control Techniques for Micro Power System using Hybrid Approach" –*IOP Conf. Series: Materials Science and Engineering–IOP Publishing*, ISSN: 1757-8981, https://doi.org/10.1088/1757-899X/691/1/012029, pp. 1-22, 2019 ***(SCOPUS****-Elsevier Indexed).*
38. Partha Sarothi Sikder, **Nitai Pal**, "Feasibility assessment of distributed generation systems in Sagar Island, West Bengal, India", –***Current Science,*** ISSN: 0011-3891, https://doi.org/10.18520/cs/v116/i8/1381-1386, Vol. 116, No. 8, pp. 1381–1386, April 2019. **(*SCI & SCIE; I.F: 0.883 – Q3).***
39. Partha Sarothi Sikder, **Nitai Pal**, "Modeling of an intelligent battery controller for standalone solar-wind hybrid distributed generation system", –***Journal of King Saud University–Engineering Sciences***, ISSN: 1018-3639, https://doi.org/10.1016/j.jksues.2019.02.002, Vol. 31, No. 3, 2019, pp. 1–10. (***SCOPUS****-Elsevier Indexed Journal*).

**2018:**

40. P. Kumar, P. S. Sikder and **N. Pal**, "Biomass fuel cell based distributed generation system for Sagar Island", –***Bulletin of the Polish Academy of Sciences – Technical Sciences***, ISSN: 0239-7528, E-ISSN: 2300-1917, https://doi.org/10.24425/124282, Vol. 66, No. 5, pp. 665–674, 2018 ***(SCIE; I.F: 1.361 – Q3)***.
41. Nimish Kumar, **Nitai Pal**, "The Existence of Barriers and Proposed Recommendations for the Development of Renewable Energy in Indian Perspective", –***Environment, Development and Sustainability–Springer Nature***, ISSN 1387-585X, https://doi.org/10.1007/s10668-018-0284-y, Vol 22, pp. 2187–2205, October 2018 ***(SCIE; I.F: 3.219 – Q2)***.
42. Ashiwani Yadav, **Nitai Pal**, Jagannath Patra, Monika Yadav, "Strategic planning and challenges to the deployment of renewable energy technologies in the world scenario: its impact on global sustainable development", –***Environment, Development and Sustainability–Springer Nature***, ISSN: 1387-585X, https://doi.org/10.1007/s10668-018-0202-3, Vol 22, pp. 297–315, June 2018 ***(SCIE; I.F: 3.219 – Q2)***.
43. Faizan A. Khan, **Nitai Pal** and Syed H. Saeed, "Review of solar photovoltaic and wind hybrid energy systems for sizing strategies optimization techniques and cost analysis methodologies", –***Renewable and Sustainable Energy Reviews–Elsevier***, ISSN 1879-0690, https://doi.org/10.1016/j.rser.2018.04.107, Vol. 92, pp. 937–947, April 2018 ***(SCIE; I.F: 10.556 – Q1)***.
44. Avijit Chakraborty, Pradip Kumar Sadhu, Arijit Chakrabarti, Amrik Basak, Nitai Pal, "Asymmetrical Duty Cycle Phase-Shifted Dual Output Induction Cooker", –***Rev. Roum.***

***Sci. Techn –Électrotechn. et Énerg***, ISSN: 0035-4066, Vol. 63, No. 1, pp. 65-70, 2018 ***(SCIE; I.F: 1.114 – Q4)***.

45. Prakhar Sharma, Pankaj Kumar, Himanshu Sharma, **Nitai Pal**, "Closed Loop Controlled Boost Converter using a PID Controller for Solar Wind Power System Installation", –***International Journal of Engineering & Technology***, ISSN: 2227-524X, https://doi.org/10.14419/ijet.v7i2.8.10420, 7(2.8), pp. 255-260, 2018 (***SCOPUS*** *Indexed Journal*).
46. Partha Sarothi Sikder, **Nitai Pal**, "A Comparison between Directly Connected and MPPT Connected Solar Powered Water Pumping System using PMDC Motor", –***Journal of Power Technologies***, Vol. 98, No. 1, 2018, ISSN 2038-4187, pp. 80-88 (***ESCI*** *under Thomson Reuters*).
47. Prabhat Chandra Ghosh, Pradip Kumar Sadhu, Ankita Ghosh, **Nitai Pal**, "Nanocrystallines as core materials for contactless power transfer (CPT)", –***Journal of Power Technologies***, Vol. 98, No. 1, 2018, ISSN 2038-4187, pp. 20-29 (***ESCI*** *under Thomson Reuters*).
48. Himanshu Sharma, Pankaj Kumar, **Nitai Pal**, Pradip Kumar Sadhu, "Problems in the Accomplishment of Solar and Wind Energy in India", –***Problemy Ekorozwoju–Problems of Sustainable Development***, ISSN: 1895-6912, Vol.13, No. 1, pp. 41-48, 2018 (***SSCI; I.F: 0.577 – Q4***).
49. Asim Halder, **Nitai Pal**, Debasish Mondal, "Transient Stability Analysis of a Multimachine Power System with TCSC Controller–A Zero Dynamic Design Approach", –***Electrical Power and Energy Systems– Elsevier***, ISSN 0142-0615, http://dx.doi.org/10.1016/j.ijepes.2017.10.030, Vol. 97, pp. 51-71, 2018 ***(SCIE; I.F: 4.418 – Q1)***.

**2017:**

50. Partha Sarothi Sikder, **Nitai Pal**, "Incremental Conductance based Maximum Power Point Tracking Controller using Different Buck-Boost Converter for Solar Photovoltaic System", –***Rev. Roum. Sci. Techn.– Électrotechn. et Énerg***., ISSN: 0035-4066, Vol. 62, No. *3*, pp. 269-275, April 2017 ***(SCIE; I.F: 1.114 – Q4)***.
51. Avijit Chakraborty, Debabrata Roy, Titas Kumar Nag, Pradip Kumar Sadhu, **Nitai Pal**, "Open Loop Power Control of a Two-Output Induction Heater", –***Rev. Roum. Sci. Techn.– Électrotechn. et Énerg.***, ISSN: 0035-4066, Vol. 62, No. 1, pp. 48–54, 2017 ***(SCIE; I.F: 1.114 – Q4)***.
52. Prabhat Chandra Ghosh, Pradip Kumar Sadhu, Ankita Ghosh, **Nitai Pal**, "A new circuit topology using Z-source resonant inverter for high power contactless power transfer applications", –***Archives of Electrical Engineering (AEE)***, ISSN: 1427-4221, e-ISSN: 2300-2506, https://doi.org/10.1515/aee-2017-0064, Vol. 66, No. 4, pp. 843-854, 2017 (***ESCI*** *under Thomson Reuters*).
53. Himanshu Sharma, **Nitai Pal**, Pankaj Kumar, Ashiwani Yadav, "A Control Strategy of Hybrid Solar-Wind Energy Generation System", –***Archives of Electrical Engineering (AEE)***, ISSN: 1427-4221, e-ISSN: 2300-2506, https://doi.org/10.1515/aee-2017-0018, Vol. 66, No. 2, pp. 241-251, 2017 (***ESCI*** *under Thomson Reuters*).

**2016:**

54. Ananyo Bhattacharya, Kaushik Sit, Pradip Kumar Sadhu, **Nitai Pal**, "A Novel Circuit Topology of Modified Switched Boost Hybrid Resonant Inverter Fitted Induction Heating Equipment", –***Archives of Electrical Engineering (AEE)***, ISSN: 1427-4221, e-ISSN:

2300-2506, https://doi.org/10.1515/aee-2016-0057, Vol. 65 (4), pp. 815-826, 2016 (***ESCI*** *under Thomson Reuters*).

55. Ananyo Bhattacharya, Pradip Kumar Sadhu, Aritra Bhattacharyya, **Nitai Pal**, "Voltage Controlled Hybrid Resonant Inverter–An Essential Tool for Induction Heated Equipment", –***Rev. Roum. Sci. Techn. – Électrotechn. et Énerg.***, ISSN: 0035-4066, Vol. 61, no. 3, pp. 273-277, 2016 ***(SCIE; I.F: 1.114 – Q4)***.
56. Avijit Chakraborty, Pradip Kumar Sadhu, Kallol Bhaumik, Palash Pal, **Nitai Pal**, "Performance Analysis of High frequency Parallel Quasi Resonant Inverter Based Induction Heating System" –*International Journal of Electrical and Computer Engineering (IJECE)*, Vol.6, No. 2, 2016 (***SCOPUS*** *Indexed Journal*).
57. Avijit Chakraborty, Pradip Kumar Sadhu, Kallol Bhaumik, Palash Pal, **Nitai Pal**, "Design and Implementation of A PV Powered Tri-Cycle", –*International Journal of Electrical and Computer Engineering (IJECE)* (ISSN: 2088-8708, https://doi.org/10.11591/ijece.v6i2.8034), Vol. 6, No. 2, pp. 447-457, 2016 (***SCOPUS*** *Indexed Journal*).

**2015:**

58. Himanshu Sharma, **Nitai Pal**, Yaduvir Singh and Pradip Kumar Sadhu, "Development and Simulation of Stand-Alone Photovoltaic Model Using Matlab/Simulink", –*International Journal of Power Electronics and Drive System (IJPEDS)*, ISSN: 2088-8694, Vol. 6, No. 4, pp. 703-711, December 2015 (***SCOPUS*** *Indexed Journal*).
59. Alok Kumar Shrivastav, Pradip Kumar Sadhu, Ankur Ganguly and **Nitai Pal**, "A Novel Transient Current Limiter Based on Three-Phase Thyristor Bridge for Y-yg Transformers" –*International Journal of Power Electronics and Drive System (IJPEDS)*, ISSN: 2088-8694, Vol. 6, No. 4, pp. 747-758, December 2015. (***SCOPUS*** *Indexed Journal*).
60. Suprava Chakraborty, Pradip Kumar Sadhu and **Nitai Pal**, "Technical Mapping of Solar PV for ISM-an Approach Toward Green Campus" –***Energy Science and Engineering, published by the Society of Chemical Industry and John Wiley & Sons Ltd.***, ISSN: 2050-0505, https://doi.org/10.1002/ese3.65, Vol. 3, No. 3, pp. 196–206, May 2015 ***(SCIE; I.F: 3.553 – Q3)***.
61. Debabrata Roy, Pradip Kumar Sadhu and **Nitai Pal**, "Reduction of Harmonics Contained in the Input Power Supply - Dynamic Tool for Current Source Full-Bridge Inverter Based Induction Heater", –*PRZEGLĄD ELEKTROTECHNICZNY, Polish scientific journals*, ISSN 0033-2097, Vol. 91 No. 4, pp. 123-126, 2015 (***SCOPUS*** Indexed Journal).
62. Nibedita Das, **Nitai Pal**, Sadhu K. Pradip, "Economic cost analysis of LED over HPS flood lights for an efficient exterior lighting design using solar PV", –***Building and Environment – Elsevier***, ISSN 0360-1323, https://doi.org/10.1016/j.buildenv.2015.03.005, Vol. 89, pp. 380-392, 2015 ***(SCIE; I.F: 5.459 – Q1)***.
63. Soumya Das, Pradip Kumar Sadhu, **Nitai Pal**, Gourav Majumdar and Saswata Mukherjee, "Solar Photovoltaic Powered Sailing Boat Using Buck Converter", –*International Journal of Power Electronics and Drive System (IJPEDS)*, ISSN: 2088-8694, Vol. 6, No. 1, pp. 129-136, March 2015 (***SCOPUS*** Indexed Journal).
64. Pradip Kumar Sadhu, Palash Pal, **Nitai Pal** and Sourish Sanyal, "Selection of Power Semiconductor Switches in M.H.B.R.I. Fitted Induction Heater for Less Harmonic Injection in Power Line", –*International Journal of Power Electronics and Drive System (IJPEDS)*, ISSN: 2088-8694, Vol. 6, No. 1, pp. 121-128, March 2015 (***SCOPUS*** Indexed Journal).

**2014:**

65. Suprava Chakraborty, Pradip Kumar Sadhu, **Nitai Pal**, "New Location Selection Criterions for Solar PV Power Plant", *–International Journal of Renewable Energy Research (IJRER)*, ISSN: 1309-0127, Vol.4, No.4, pp. 1020-1030, 2014 (***ESCI*** under Thomson Reuters).
66. Pradip Kumar Sadhu Debabrata Roy, **Nitai Pal**, Sourish Sanyal, "Selection of Appropriate Semiconductor Switches for Induction Heated Pipe-Line using High Frequency Full Bridge Inverter", *–International Journal of Power Electronics and Drive System (IJPEDS)*, ISSN: 2088-8694, Vol. 5, No. 1, pp. 112–118, July 2014 (***SCOPUS*** Indexed Journal).

**2013:**

67. Dola Sinha, Pradip Kumar Sadhu, **Nitai Pal** and Nirmal Baran Hui, "Genetic neural-based modeling of AC resistance of heating coil used for high-frequency inverter-fed induction cooker", *–**Neural Computing & Application (Springer)***, ISSN: 0941-0643, Vol. 22, No. 7-8, pp. 1379 – 1388, Jun 2013. *(**SCIE; I.F: 4.213 – Q1**)*.

**National Journal**: 07 Nos.

**2011:**

1. Pradip Kumar Sadhu, **Nitai Pal**, Dola Sinha and Tarun Kumar Chatterjee, "A Comparative Survey on High Efficient Clean Heat Production through Microwave Oven and Induction Cooker", *–Industrial Engineering Journal of Indian Institution of Industrial Engineering*, Navi Mumbai, Vol. II & Issue No. 23, pp. 08-12, May 2011.

**2010:**

2. R. P. Gupta, Dr. U. Prasad, Dr. P. K. Sadhu, **Dr. N. Pal**, "Efficient Lighting System for Underground Coal Mines using LED", *–Journal of Institution of Engineers (I) - Springer*, ISSN: 2250-2106 (print version), Mining Engineering Division, Vol. 91, pp. 21-24, August 2010.
3. **N. Pal**, P. K. Sadhu, Dola Sinha, "An energy efficient MCT based H.F. inverter for operating CFL from solar PV charged batteries", *–IEEMA Journal*, Vol 1, No 11, pp. 84-88, July 2010.

**2009:**

4. **N. Pal**, P. K. Sadhu, R. N. Chakrabarti, "Choice of Pan Material in Radio-frequency Mirror Inverter Induction Cooker", *–Journal of Institution of Engineers (I) - Springer*, ISSN: 2250-2106 (print version), Vol 89, pp. 09-18, March 2009.

**2006:**

5. P. K. Sadhu, **Nitai Pal**, Rupendranath Chakrabarti and D. K. Mittra, "A dynamic model for the simulation of induction cooktop", *–Industrial Engineering Journal of Indian Institution of Industrial Engineering*, Navi Mumbai, Vol. XXXV, No 6, pp. 37-41, June 2006.
6. **N. Pal**, P. K. Sadhu and R. N. Chakrabarti, "A Comparative Study of HF Mirror Inverter for Induction Cooker through Real-time and PSPICE Simulation", *–Journal of Institution of Engineers (I) - Springer*, ISSN: 2250-2106 (print version) Vol. 86, pp. 268-274, March 2006.

**2005:**

7. **Nitai Pal**, P. K. Sadhu and Rupendranath Chakrabarti, "Electromagnetic and radio frequency interferences suppressor for industrial induction heating equipment", *–Industrial*

*Engineering Journal of Indian Institution of Industrial Engineering*, Navi Mumbai, Vol. XXXIV, No 11, pp. 12-14, November 2005.

**International Conference**: 63 Nos.

**2026:**

1. Chitrangee Singh, **Nitai Pal**, Sagar Bhushan, and Hritik Kashyap "Performance and Reliability Assessment of a Solar PV Power-Driven Water Pumping System for Decentralized Energy Applications: A Case Study of Dhanbad, India", – accepted for possible publication in the proceeding of IEEE 8th International Conference on Condition Assessment Techniques in Electrical Systems (**CATCON 2026**) to be organized by IIT (ISM) Dhanbad during 18–20 December 2026.
2. Chitrangee Singh, and **Nitai Pal**, "Design and Feasibility Assessment of a Solar-Hydro Hybrid Off-Grid Energy System with Pumped Storage for Jharkhand Remote Communities", – accepted for possible publication in the proceeding of IEEE International Conference on Power Electronics, Drives and Energy Systems 2026 (**PEDES 2026**) to be organized by IIT Guwahati, Assam during 16–19 December 2026.
3. Chitrangee Singh, and **Nitai Pal**, "Economic Analysis of Standalone Hybrid Green Energy System for Rural Development in India", –published in the proceeding of IEEE North-East India International Energy Conversion Conference and Exhibition (**NE-IECCE 2026**) organized by Department of Electrical Engineering, NIT Meghalaya during 12–14 June 2026.
4. Hemant Kumar, **Nitai Pal**, Chitrangee Singh, "Performance Investigation of Solar PV under Variable Dust Deposition and Irradiance Conditions", –published in the proceeding of the proceeding of IEEE North-East India International Energy Conversion Conference and Exhibition (**NE-IECCE 2026**) organized by Department of Electrical Engineering, NIT Meghalaya during 12–14 June 2026.
5. Pankaj Sarkar, **Nitai Pal**, Sudipta Chakraborty, Dinesh Mistri, Nimesh Kumar Singh, and Faizan A. Khan, "Prototyping of Structurally Optimized Four-wheeled EV for Rural Mobility", –published in the proceeding of the Technical Conference on Bharat Electricity Summit (**BES-2026**) organized under the patronage of the Ministry of Power, Government of India, held at Dwarka, New Delhi during 19–22 March 2026.
6. **Nitai Pal**, Prakhar Pandey, Promit Kumar Saha, Faizan A. Khan, Brijesh Singh, and Yaduvir Singh, "Performance Investigation of MPPT Controlled Boost Converter for Rural RE Applications", –published in the proceeding of the Technical Conference on Bharat Electricity Summit (**BES-2026**) organized under the patronage of the Ministry of Power, Government of India, held at Dwarka, New Delhi during 19–22 March 2026.

**2024:**

7. Pankaj Sarkar, Arnab Ghosh, **Nitai Pal**, Sudipta Chakraborty and Faizan A Khan, "Gravity Battery: A Scalable Solution for Renewable Energy Storage in Mining Applications", – published in the proceeding of the International Conference on Mine Ventilation and Environment for Green Mining (**MVEGM-2024**) organized by Department of Mining Engineering, *IIT(ISM) Dhanbad* held at Puri, Odisha, during 20–22 December 2024.
8. Promit Kumar Saha, **Nitai Pal**, Faizan A. Khan and Aftab Alam, "EV Battery Charging System and Impact of Uncoordinated Charging on Distribution Network", –published in the proceeding of the 7th International Conference on Energy Systems, Drives and

Automations (**ESDA2024**) organized by *Applied Computer Technology*, Kolkata during 14–15 December 2024.

9. Dilip Kumar, Rammanohar Lohia, Yogesh Kumar Chauhan, Ajay Shekhar Pandey and **Nitai Pal**, "A Novel Hybrid MPPT Approach for Tip Speed Ratio and Pitch angle control in Wind Energy Conversion System using Sea Lion–Puma Algorithm", –published in the proceeding of the 7th International Conference on Energy Systems, Drives and Automations (**ESDA2024**) organized by *Applied Computer Technology*, Kolkata during 14–15 December 2024.
10. Prabhat Ranjan Sarkar, Ravi Shanker, Md Nishat Anwar, Faizan Arif Khan and **Nitai Pal**, "Climatic Influence Analytics on Solar PV and EV Charging in Grid Connected Networks", –published in the proceeding of the 7th International Conference on Energy Systems, Drives and Automations (**ESDA2024**) organized by *Applied Computer Technology*, Kolkata during 14–15 December 2024.
11. Sudheer Kumar Singh, Km Alka, Shivi Chaturvedi, Hrishabh Prajapati, **Nitai Pal**, Faizan A. Khan and Ranjana Singh, "Implementing and Analyzing Machine Learning Models for Early Diabetes Detection: A Methodological Approach using Survey-based Data", –published in the proceeding of the 7th International Conference on Energy Systems, Drives and Automations (**ESDA2024**) organized by *Applied Computer Technology*, Kolkata during 14–15 December 2024.
12. Jagannath Patra, Ashiwani Yadav, **Nitai Pal**, Mohm. Arsh Khan, Rohit Verma, Ramesh Singh Parihar, Kunja Bihari Sahoo, Varsha Sahu and Shraddha Netam, "Power Quality Improvement: A Fuzzy Logic Approach to DVR-Based Voltage Sag Mitigation", –published in the proceeding of the 7th International Conference on Energy Systems, Drives and Automations (**ESDA2024**) organized by *Applied Computer Technology*, Kolkata during 14–15 December 2024.
13. Swati Lipsa, Ranjan Kumar Dash, Subhra Debdas, Korhan Cengiz, Pankaj Kumar and **Nitai Pal**, "An accurate and explainable approach towards cardiac disease detection using bidirectional long short-term memory", –published in the proceeding of the 7th International Conference on Energy Systems, Drives and Automations (**ESDA2024**) organized by *Applied Computer Technology*, Kolkata during 14–15 December 2024.
14. Kumar Avinash Chandra, Prabhat Kumar Upadhyay, Pankaj Kumar and **Nitai Pal**, "A Practical MI-Driven BCI Framework for Real-Time Motorized Wheelchair Control using Reduced-Channel EEG and Hybrid Deep Learning", –published in the proceeding of the 7th International Conference on Energy Systems, Drives and Automations (**ESDA2024**) organized by *Applied Computer Technology*, Kolkata during 14–15 December 2024.
15. Rakesh Roshan, Subhra Debdas, Srikanta Mohapatra, Pankaj Kumar, **Nitai Pal** and K. Praveen, "Smart Agriculture: Cost Optimization through IoT-enabled Remote Monitoring, Animal Deterrence, and Precision Irrigation", –published in the proceeding of the 7th International Conference on Energy Systems, Drives and Automations (**ESDA2024**) organized by *Applied Computer Technology*, Kolkata during 14–15 December 2024.
16. Avinash Prasad, Brijesh Singh, **Nitai Pal**, Pankaj Sarkar, Arnab Ghosh and Sudipta Chakraborty, "Review on EV Fast Charging, Stability and Deployment", –published in the proceeding of the 7th International Conference on Energy Systems, Drives and Automations (**ESDA2024**) organized by *Applied Computer Technology*, Kolkata during 14–15 December 2024.

17. Subhabrata Boral, **Nitai Pal**, "Performance Investigation of Boost Converter using Adaptive Neuro Fuzzy Inference System and PI Controller", –published in the proceeding of the 11th International Conference on Microelectronics Circuits and Systems (**Micro2024**) Organized by Delhi Technological University, Delhi during 16–17 May 2024.
18. Arunima Mahapatra, **Nitai Pal**, Ratan Mandal, "A comprehensive study on the methods of optimization used in hybrid renewable energy systems", –published in the proceeding of the 11th International Conference on Microelectronics Circuits and Systems (**Micro2024**) Organized by Delhi Technological University, Delhi during 16–17 May 2024.

**2023:**

19. Abhay Chhetri, Devender Kumar Saini, Monika Yadav and **Nitai Pal**, "Performance Analysis of Machine Learning Algorithms for Estimation of EV Penetration", –published in the proceeding of the 6th International Conference on Energy Systems, Drives and Automations (**ESDA2023**) organized by *Applied Computer Technology*, Kolkata during 30–31 December 2023.
20. Brijesh Singh, **Nitai Pal**, Mukesh Prasad, and Preeti Roy, "Investigation for Sustainable Development of Micro Agriculture through Hybrid Energy Systems (Solar and Biomass) in Remote Areas of Jharkhand: A Comprehensive Survey", –published in the proceeding of the 6th International Conference on Energy Systems, Drives and Automations (**ESDA2023**) organized by *Applied Computer Technology*, Kolkata during 30–31 December 2023.
21. Umang Sharma, Arunima Mahapatra, Pankaj Kumar, Ravi Chaurasia, **Nitai Pal**, and Himanshu Sharma, "Techno-economic Performance Analysis of an Off-Grid Hybrid Power Generation System for Isolated Remote Area of India", –published in the proceeding of the 6th International Conference on Energy Systems, Drives and Automations (**ESDA2023**) organized by *Applied Computer Technology*, Kolkata during 30–31 December 2023.
22. Promit Kumar Saha, and **Nitai Pal**, "Multi-Input Hybrid DCDC Converter Formulation and Analysis in an Integrated Environment", –published in the proceeding of the 6th International Conference on Energy Systems, Drives and Automations (**ESDA2023**) organized by *Applied Computer Technology*, Kolkata during 30–31 December 2023.
23. Isarar Ahamad, Faizan Arif Khan, Arun Kumar Yadav, **Nitai Pal**, Vishal S Chandel, Aftab Yaseen, Ijtaba Saleem Khan, Mahfooz Ahmad, and Mohammad Arsh Khan, "Performance Evaluation of Cascaded H-Bridge Multilevel Inverters based on Solar Energy", –published in the proceeding of the 6th International Conference on Energy Systems, Drives and Automations (**ESDA2023**) organized by *Applied Computer Technology*, Kolkata during 30–31 December 2023.
24. Deepti Singh, **Nitai Pal** and Brijesh Singh, "Deployment of Reserve Corridors in PV Integrated Power System and Performance Analysis", –published in the proceeding of the 7th International Conference on Computer Applications in Electrical Engineering-Recent Advances (**CERA 2023**), to be organized by ***IIT Roorkee***, Haridwar, Uttarakhand during 27–29 October 2023. doi: 10.1109/CERA59325.2023.10455695.
25. Arunima Mahapatra and **Nitai Pal**, "Comprehensive Study on Sizing of Hybrid-Renewable-Energy System using Commercial Software", –published in the proceeding of the International Conference on Engineering Design and Computing (**ICEDC 2023**), co-

sponsored by IEEE Kolkata Section, organized by ***Swami Vivekannada University***, West Bengal, during 28–29 January 2023.

26. Deepti Singh, **Nitai Pal** and S. K. Sinha, "Critical Technical Review on Challenges and Research Scope of Large-Scale Solar PV Integration in Power Networks", –published in the proceeding of the 5th International Conference on Energy Systems, Drives and Automations (**ESDA2022**) organized by ***Applied Computer Technology***, Kolkata during 31st December 2022–01st January 2023.

**2019:**

27. Sayantam Sarkar, Anjan Kumar Dan and **Nitai Pal**, "Development and Analysis of an Efficient Energy Management for a PV Based Microgrid System", –published in the proceeding of IEEE International Conference on Smart Cities Model (ICSCM 2019) organized by the IEEE Madras Section and ***IIT Madras***, India held at Indian Institute of Technology, Madras, Chennai during 20–21 January 2019, pp. 1-6, doi: 10.1109/ICSCM46742.2019.9081820.

**2018:**

28. Asim Halder, Debasish Mondal and **Nitai Pal**, "Nonlinear Optimal STATCOM Controller for Power System Based on Hamiltonian Formalism", –published in the proceeding of IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES 2018) organized by ***IIT Madras***, Chennai during 18–21 December 2018, pp. 1-6.
29. Prakhar Sharma, Pankaj Kumar and **Nitai Pal**, "Design and Implementation of Closed Loop Controlled Boost Converter for Solar Power Installation System using Fuzzy Logic Controller", –published in the proceeding of an IEEE International Conference on Recent Advances in Information Technology (RAIT-2018) organized by Department of Computer Science and Engineering, held at ***IIT(ISM) Dhanbad***, India, held at Dhanbad, during 15–17 March 2018, pp. 1-5.
30. Nimish Kumar, **Nitai Pal**, Pankaj Kumar and Aprajita Kumari, "Impact of Different Inertia Weight Functions on Particle Swarm Optimization Algorithm to Resolve Economic Load Dispatch Problems", –published in the proceeding of an IEEE International Conference on Recent Advances in Information Technology (RAIT-2018) organized by Department of Computer Science and Engineering, held at ***IIT(ISM) Dhanbad***, India, held at Dhanbad, India during 15–17 March 2018, pp. 1-5.
31. Hariom Kumar, Jagannath Patra, Ashiwani Yadav and **Nitai Pal**, "Power Quality Assessment and Improvement of 3-Phase 3-Wire Non-Linear System using Instantaneous Power Theory Based DSTATCOM", –published in the proceeding of an IEEE International Conference on Recent Advances in Information Technology (RAIT-2018) organized by Department of Computer Science and Engineering, held at ***IIT(ISM) Dhanbad***, India, held at Dhanbad, during 15–17 March 2018, pp. 1-6.
32. Ashiwani Yadav, Jagannath Patra, **Nitai Pal** and Harshit Gupta, "Performance Analysis of VSI Based Standalone PV Generation System Connected to Induction Motor", –published in the proceeding of an IEEE International Conference on Recent Advances in Information Technology (RAIT-2018) organized by Department of Computer Science and Engineering, Indian Institute of Technology (Indian School of Mines) Dhanbad, India, held at ***IIT(ISM) Dhanbad***, during 15–17 March 2018, pp. 1-6.

**2017:**

33. **Nitai Pal**, Ashiwani Yadav, Shweta Rani and Jagannath Patra, "Voltage Profile Improvement in Off Grid Wind Turbine System using MGVC and Diesel Generator", –

published in the proceeding of 4th International Conference on Power, Control and Embedded Systems (ICPCES–2017), organized by the Department of Electrical Engineering, MNNIT Allahabad, held at ***MNNIT Allahabad***, during 09–11 March 2017, pp. 64-65.

**2016:**

34. Mohit Kumar, Pankaj Kumar, Ashiwani Yadav and **Nitai Pal**, "Fuzzy Gain Scheduled Intelligent Frequency Control in an AC Microgrid", –published in the proceeding of 3rd International Conference on Recent Advances in Information Technology (RAIT-2016), organized by the Department of Computer Science and Engineering held at ***IIT(ISM) Dhanbad***, during 03–05 March 2016, pp. 237-242.

**2015:**

35. **Nitai Pal**, Kota Sunil Patro and Budankailu Varsha Subudhi "Study on Non-isolated Power Electronics Converters using State Space Analysis", –published in the proceeding of 2nd International Conference & Exhibition on "Industrial Engineering-2015" ***Dubai, UAE***, during 16–18 November 2015, Volume 4, Issue 5, pp. 36.
36. Mr. Palash Pal, Prof. Pradip Kumar Sadhu, **Dr. Nitai Pal**, "Filter Design for Harmonics Minimization of CSI Based Contact Less Induction Heater", –published in the proceeding of IEEE Conference, International Conference on Energy, Power and Environment (ICEPE-2015), organized by Department of Electrical & Electronics Engineering, ***NIT Meghalaya***, during 12–13 June 2015.

**2014:**

37. Nibedita Das and **Nitai Pal**, "Thermal Impact on LED based Solar PV Cell", –published in the proceeding of 2nd IEEE International Conference on Emerging Technological Trends in Electronics, Communication and Networking 2014 (ET2ECN2014), organized by ***SVNIT, Surat***, India, during 26–27 December 2014, pp.46-49.
38. **Nitai Pal**, S. Vamsi Krishna and Pradip Kumar Sadhu, "Stand Alone Effective Lighting System using Defective Fluorescent Tube Light for Haul Road", –published in the proceeding of "International Conference on Control, Instrumentation, Energy and Communication" (CIEC14), organized by Department of Applied Physics, ***University of Calcutta***, held at Kolkata, during 31st January–02nd February 2014, pp. 406-410.
39. Pradip Kumar Sadhu, Ananyo Bhattacharya and **Nitai Pal**, "Review of Microwave Oven- a Health Hazardous Tool for Cooking as Compared to Induction Cooker", –published in the proceeding of "International Conference on Control, Instrumentation, Energy and Communication" (CIEC14), organized by Department of Applied Physics, ***University of Calcutta***, held at Kolkata, during 31st January–02nd February 2014, pp. 187-191.
40. Nibedita Das, **Nitai Pal** and Pradip Kumar Sadhu, "Selection of LED T8 Over CFL T8 for an Efficient Interior Lighting Design", –published in the proceeding of "International Conference on Control, Instrumentation, Energy and Communication" (CIEC14), organized by Department of Applied Physics, ***University of Calcutta***, held at Kolkata, during 31st January–02nd February 2014, pp. 182-186.
41. Suhit Datta, Nihit Kumar Singh, Swastik Roy and **Nitai Pal**, "Some Studies on Utilization of Human Body Energy with Hybrid Piezoelectric and Thermoelectric Effect", –published in the proceeding of "International Conference on Control, Instrumentation, Energy and Communication" (CIEC14), organized by Department of Applied Physics, ***University of Calcutta***, held at Kolkata, during 31st January–02nd February 2014, pp. 241-243.

**2013:**

42. Pradip Kumar Sadhu, Ananyo Bhattacharya and **Nitai Pal** "Dual Zone Industrial Induction Heater using MOSFET based High Frequency Hybrid Resonant Converter", –published in the proceeding of 2013 IEEE 1st International Conference on Condition Assessment Techniques in Electrical Systems (CATCON 2013), organized by IEEE, DEIS Kolkata Chapter, held at ***Jadavpur University***, Kolkata, during 06–08 December 2013, pp. 335-340.
43. **Nitai Pal**, Rabindra Nath Raul, S. Vamsi Krishna and Pradip Kumar Sadhu, "Modulation Techniques for Power Line Communications", –published in the proceeding of "The 2nd International Conference on Engineering & Applied Science" (ICEAS 2013), at ***Tokyo, Japan***, during 15–17 March 2013, pp. 1331-1337.

**2012:**

44. **Nitai Pal**, Pradip Kumar Sadhu and S. Vamsi Krishna, "A Constant Brightness LED Based Cap Lamps for Underground Coalmines using Buck Regulator", –published in the proceeding of "World Congress of Engineering 2012" (WCE 2012), at the ***Imperial College, London, U.K.***, during 04–06 July 2012, ISBN: 978-988-19252-1-3, ISSN: 2078-0958, Volume II, pp. 986-990.
45. Pradip Kumar Sadhu, **Nitai Pal** and Atanu Bandyopadhyay, "A new generation IGBT based High Frequency Mirror Inverter for Induction Heating", –published in the proceeding of "World Congress of Engineering 2012" (WCE 2012), at the ***Imperial College, London, U.K.***, during 04–06 July 2012, ISBN: 978-988-19252-1-3, ISSN: 2078-0958, Volume II, pp. 962-967.
46. **Nitai Pal**, Pradip Kumar Sadhu and R. Swaroop, "Closed Loop Speed Control of DC Motors used in Rock Drilling and Mud Pump Application", –published in the proceeding of "International MultiConference of Engineers and Computer Scientist" (IMECS 2012), at The Royal Garden, 69 Mody Road, Tsimshatsui, ***Kowloon, Hong Kong*** during 14–16 March 2012, ISBN: 978-988-19251-1-4, pp. 1052-1054.
47. Pradip Kumar Sadhu, **Nitai Pal** and Atanu Bandyopadhyay, "Choice of Semiconductor Switches for Energy Efficient Induction Heated Pipe-line using H. F. Mirror Inverter", –published in the proceeding of "International MultiConference of Engineers and Computer Scientist" (IMECS 2012), at The Royal Garden, 69 Mody Road, Tsimshatsui, ***Kowloon, Hong Kong*** during 14–16 March 2012, ISBN: 978-988-19251-1-4, pp. 1002-1005.
48. **Nitai Pal**, S. Vamsi Krishna, Ramjee Prasad Gupta, Ayodhya Kumar and Upendra Prasad, "Haul Roads Lighting System for Open Cast Mine using Green Energy", –published in the proceeding of "International MultiConference of Engineers and Computer Scientist" (IMECS 2012), at the Royal Garden, 69 Mody Road, Tsimshatsui, ***Kowloon, Hong Kong*** during 14–16 March 2012, ISBN: 978-988-19251-1-4, pp. 987-990.

**2010:**

49. D. Sinha, A. Bandyopadhyay, P. K. Sadhu and **N. Pal**, "Computation of Inductance and AC Resistance of a Twisted Litz-Wire for High Frequency Induction Cooker", –published in the proceeding of IEEE sponsored International Conference on "Industrial Electronics, Control & Robotics" (IECR 2010) during 27–29 December 2010 at ***NIT, Rourkela***, Orissa, India.
50. Dola Sinha, Atanu Bandyopadhyay, Pradip Kumar Sadhu and **Nitai Pal**, "Optimum Construction of Heating Coil for Domestic Induction Cooker", –published in the

proceeding of International Conference on Modelling, Optimization and Computing (ICMOC 2010) organized by ***NIT, Durgapur*** during 28–30 October 2010, pp. 439–444.

51. **Nitai Pal**, Pradip Kumar Sadhu, Ayodhya Kumar and Upendra Prasad, "Energy Efficient Solar CFL Lighting System using MOSFET Based High Frequency Inverter for Remote Areas", –published in the proceeding of the 2nd International Conference on Computer and Automation Engineering (ICCAE 2010) organized by IACSIT, Sichuan University and IEEE, Computational Intelligence Society, held in ***Suntec City, Singapore*** during 26–28 February 2010, Volume 5, pp. 646-649.
52. **Nitai Pal**, Pradip Kumar Sadhu, Ramjee Prasad Gupta and Upendra Prasad, "Review of LED Based Cap Lamps for Underground Coalmines to Improve Energy Efficiency as Compared to Other Light Sources", –published in the proceeding of The 2nd International Conference on Computer and Automation Engineering (ICCAE 2010) organized by IACSIT, Sichuan University and IEEE, Computational Intelligence Society, held in ***Suntec City, Singapore*** during 26–28 February 2010, Volume 5, pp. 675-677.
53. Pradip Kumar Sadhu, **Nitai Pal**, Atanu Bandyopadhyay and Dola Sinha 'Review of Induction Cooking– a Health Hazards Free Tool to Improve Energy Efficiency as Compared to Microwave Oven.' –published in the proceeding of the 2nd International Conference on Computer and Automation Engineering (ICCAE 2010) organized by IACSIT, Sichuan University and IEEE, Computational Intelligence Society, held in ***Suntec City, Singapore*** during 26–28 February 2010, Volume 5, pp. 650-654.
54. Pradip Kumar Sadhu, **Netai Paul**, Dola Sinha and Atanu Bandyopadhyay 'Energy Efficient Induction Heated Cooking–Range using MCT based Hybrid Resonant Converter.' –published in the proceeding of the 2nd International Conference on Computer and Automation Engineering (ICCAE 2010) organized by IACSIT, Sichuan University and IEEE, Computational Intelligence Society, held in ***Suntec City, Singapore*** during 26–28 February 2010, Volume 5, pp. 637-641.

**2009:**

55. P. K. Sadhu, **N. Pal,** T. K. Chatterjee, R. P. Gupta and U. Prasad, "Energy Conservation and Economic Lighting System using Solid-state Cap Lamps in Underground Coal Mines" –published in the proceedings of the International Conference on Ninth International Mine Ventilation Congress, 09th IMVC, New Delhi, India held on 10–13 November 2009, organized by Department of Mining Engineering, ***Indian School of Mines, Dhanbad***, India, pp. 217 – 221.
56. **Nitai Pal,** Pradip Kumar Sadhu, Dilip Kumar Mittra and Upendra Prasad, "Electrical Energy Conservation and Losses Management of Rotating Electrical Machines used in Underground Coal Mines" –published in the proceedings of the International Conference on Ninth International Mine Ventilation Congress, 09th IMVC, New Delhi, India held on 10–13 November 2009, organized by Department of Mining Engineering, ***Indian School of Mines, Dhanbad***, India. pp. 223 – 228.

**2007:**

57. **Nitai Pal**, Pradip Kumar Sadhu, Dilip Kumar Mittra and Rupendranath Chakrabarti, "Role of Electromagnetic and Radio Frequency Noise Suppressor for High Frequency Inverter Operated Induction Heating Equipment", –published in the proceeding of an International Conference on Modeling and Simulation MS-07 organized by the Department of Applied Physics, ***University of Calcutta*** in association with AMSE held at the Circle, VIP Road, Kolkata-52 during 03–05 December 2007, pp. 440 – 443.

58. Pradip Kumar Sadhu, **Nitai Pal,** Rupendranath Chakrabarti and T. K. Chatterjee, "Performance Analysis of H.F. Mirror Inverter for Energy Efficient Induction Cooking Appliance Range", –published in the proceeding of an International Conference on Modeling and Simulation (MS 07) organized by the Department of Applied Physics, ***University of Calcutta*** in association with AMSE held at the Circle, VIP Road, Kolkata-52 during 03–05 December 2007, pp. 444–448.
59. **Nitai Pal,** Dr. Pradip Kumar Sadhu, Prof. (Dr.) Rupendranath Chakrabarti and Prof. (Dr.) Dilip Kumar Mittra, "Mathematical Modeling of Induction Cooker with PSPICE Simulation", –published in the proceeding of an International Conference on Emerging Trends in Electrical Engineering (ETEE 2007) organized by ***Jadavpur University***, Kolkata held at Science City, Kolkata during 12–14 January 2007, pp. 162–167.
60. **Nitai Pal,** Dr. Pradip Kumar Sadhu, Narendranath Jana, Prof. (Dr.) Rupendranath Chakrabarti and Dr. T. K. Chatterjee, "A Real Time Model Calculations for Skin Effect of Induction Cooktop (Cooker)", –published in the proceeding of an International Conference on Emerging Trends in Electrical Engineering (ETEE 2007) organized by ***Jadavpur University***, Kolkata held at Science City, Kolkata during 12–14 January 2007, pp. 250–256.

**2005:**

61. **Nitai Pal,** Dr. P.K. Sadhu, Prof. (Dr.) R. N. Chakrabarti and Prof. (Dr.) D. K. Mittra, "A Novel Energy Efficient Heat Transfer System for Induction Heated Cooking-range using Radio-frequency Series Resonant Inverter", –published in the proceeding of 3rd International Conference on Energy Research & Development (ICERD-3) organized by College of Science & Engineering, Kuwait University and Ministry of Energy, Kuwait held at Hotel Sheraton, ***Kuwait*** during 21–23 December 2005, pp. 797–806.
62. **Nitai Pal,** Narendranath Jana, Pradip Sadhu and Rupendra Chakrabarti, "Analysis of DC-Link Half-bridge Resonant Inverter used for Domestic Induction Cookers", –published in the proceeding of an International Conference (PEITSICON 2005) organized by the ***Institution of Engineers*** (U.K.), Calcutta Branch held at the Science City, Kolkata during 28–29 January 2005, pp. 258–261.

**2001:**

63. **Nitai Pal**, Prof A. K. Mukhopadhyay, Dr. Samarjit Sengupta and Utpal Maji, "Optimum Operating Condition of a Series Capacitor Compensated EHV Transmission Line for its Enhanced Efficiency", –published in the proceeding of an International Conference CIIC-2001 organized by the Department of Applied Physics, ***University of Calcutta*** held at the Science City, Kolkata during 13–15 December 2001, pp. 243-248.

**National Conference**: 26 Nos.

**2026:**

1. Rajeev Kumar Singh, Pradip Kumar Sadhu, and **Nitai Pal**, "State-of-Charge Estimation, Safety, and Management Systems for Lithium-Ion and Solid-State Batteries", –published in the proceeding of the National Seminar on "Batteries for Mining Sector- Challenges and the Way Forward", organized by Directorate General of Mines Safety **(DGMS) HQ, Dhanbad** held on 10th August, 2026.

**2020:**

2. Faizan A. Khan, **Nitai Pal** and Syed H. Saeed, "SPV/Wind Hybrid Energy System: Future of Rural India", –published in the proceeding of 21st National Power System Conference (NPSC 2020) organized by ***IIT Gandhinagar***, Gujarat, India held at Indian Institute of Technology, Gandhinagar, Gujarat during 17–19 December 2020.

**2018:**

3. Pankaj Kumar, Prakhar Sharma, **Nitai Pal**, "Performance Analysis of Underground Mine Ventilation System using MATLAB/Simulink", –published in the proceeding of 3rd National Conference on Mining Equipment: New Technologies, Challenges and Applications (MENTCA–2018), organized by the Department of Mining Machinery Engineering, ***IIT(ISM) Dhanbad***, held at Dhanbad, during 09–10 February 2018, pp. 110–112.

**2017:**

4. Himanshu Sharma, Pankaj Kumar, Yaduvir Singh and **Nitai Pal**, "PV Cell Characteristic Variations due to Change in Parameters", –published in the proceeding of National Conference on Renewable Energy Sources for Sustainable Climate (Solaris-2017), organized jointly by IIT (BHU) Varanasi, ***IIT Delhi*** and BERS Delhi, held at Varanasi, during 7th – 9th February 2017, pp. 134-141.

**2015:**

5. **Nitai Pal**, Himanshu Sharma, Shivam Yadav and Pankaj Kumar, "A Modeling and Simulation of Photovoltaic Power Generation System for Surface Mine", –published in the proceeding of National Conference on Mining Equipment: New Technologies, Challenges and Applications (MENTCA–2015), organized by the Department of Mining Machinery Engineering, ***Indian School of Mines, Dhanbad*** held at Dhanbad, during 9–10 October 2015, pp. 358-362.

**2013:**

6. S. Vamsi Krishna, K. Dharma Rao, Ritesh Mishra, Birendar Singh, P. K. Sadhu and **N. Pal**, "Efficient Photovoltaic Conversion and its Antecedents", –published in the proceeding of National Seminar on Energy and Environment for Sustainability (EES–2013), organized by ***BIT Sindri***, Jharkhand held at Sindri, during 16–17 March 2013, pp. 269–273.

**2012:**

7. **Nitai Pal**, S. Vamsi Krishna, R. Nath Raul and P. K. Sadhu, "Study on Coupling Techniques for Power Line Communications", –published in the E-Proceedings of Michael Faraday IET India Summit-2012, organized by Young Professional Section, the ***Institution of Engineering and Technology-UK***, Kolkata, during November 25, 2012, pp. 163–167.
8. **Nitai Pal**, Pradip Kumar Sadhu and S. Vamsi Krishna, "Energy Efficient Stand-alone Lighting System for Surface Mine Haul Roads", –published in the proceeding of National Seminar on Mining Equipment– New Technologies Challenges and their Application (MENTCA–2012) organized by Department of Mechanical Engineering & Mining Machinery Engineering, ***Indian School of Mines, Dhanbad***, Jharkhand during 19–21 January 2012, pp. 269–276.
9. Pradip Kumar Sadhu and **Nitai Pal**, "On-line Cure Monitoring System for OTR Tyres using Intelligent and Proactive Control", –published in the proceeding of National Seminar on Mining Equipment – New Technologies Challenges and their Application (MENTCA–2012) organized by Department of Mechanical Engineering & Mining Machinery

Engineering, ***Indian School of Mines, Dhanbad***, Jharkhand during 19–21 January 2012, pp. 233–239.

10. Rabindra Nath Raul, **Nitai Pal**, Pradip Kumar Sadhu and Gautam Sarkar, "LED Based Solid-State Cap Lamps for Underground Mines", –published in the proceeding of National Seminar on Mining Equipment – New Technologies Challenges and their Application (MENTCA–2012) organized by Department of Mechanical Engineering & Mining Machinery Engineering, ***Indian School of Mines, Dhanbad***, Jharkhand during 19–21 January 2012, pp. 285-291.

**2011:**

11. **Nitai Pal**, Pradip Kumar Sadhu, Atanu Bandyopadhyay and S. Vamsi Krishna, "A Review on Electromagnetic Fields Pollution in Cell-Phone Communication", –published in the proceeding of National Seminar on Frontiers in Electronics, Communication, Instrumentation and Information Technology (FECIT–2011) organized by ***Indian School of Mines, Dhanbad*** during 03–04 November 2011, pp. 51.
12. S. Vamsi Krishna, **Nitai Pal** and Pradip Kumar Sadhu, "A Review on Power Line Communications", –published in the proceeding of National Seminar on Frontiers in Electronics, Communication, Instrumentation and Information Technology FECIT–2011 organized by ***Indian School of Mines, Dhanbad***, Jharkhand during 03–04 November 2011, pp. 53.
13. Pradip Kumar Sadhu, **Nitai Pal**, Atanu Bandyopadhyay and Dola Sinha, "A Review on Hazards in Microwaved Cooking and Induction Cooking" –published in the proceeding of National Seminar on Frontiers in Electronics, Communication, Instrumentation and Information Technology (FECIT–2011) organized by ***Indian School of Mines, Dhanbad***, Jharkhand during 03–04 November 2011, pp. 67.

**2010:**

14. **N. Pal,** P. K. Sadhu, Rupam Das, Dola Sinha, "Review on Closed Loop Speed Control of DC Motors used in Rock Drilling and Mud Pump Application", –published in the proceedings of the National Conference cum Workshop on Geological and Technological Facets of CBM, Shale Gas, Energy Resources and $CO_2$ Sequestrain (CSECS2010) organized by ***Indian School of Mines, Dhanbad*** during 19–20 November 2010.
15. Dola Sinha, Pradip Kumar Sadhu and **Nitai Pal**, "Study of TRIAC Control Strategies for Speed Control of Drill Motor for Different Types of Rocks" –published in the proceedings of the National Conference cum Workshop on Geological and Technological Facets of CBM, Shale Gas, Energy Resources and $CO_2$ Sequestrain (CSECS2010) organized by ***Indian School of Mines, Dhanbad*** during 19–20 November 2010, pp. 228-234.
16. **N. Pal**, P. K. Sadhu, Kumar Saurabh, Rahul, U. Prasad and R. P. Gupta, "Review on Speed Control of DC Motors used in Mud Pumps of Drill Rig Equipment" –published in the proceedings of the National Seminar on "Drills & Drilling– An Update (D & DU–2010)" held on 23-24$^{th}$ September 2010, organized by ***Indian School of Mines, Dhanbad***, pp. 163-167.
17. P. K. Sadhu, **N. Pal,** Mayank Gupta, Shubham Agarwal and Dola Sinha "Some Studies on Various Aspects of Drilling Technology using DC Motors" –published in the proceedings of the National Seminar on "Drills & Drilling– An Update (D & DU–2010)" held on 23-24$^{th}$ September 2010, organized by ***Indian School of Mines, Dhanbad***, pp. 73-81.
18. D. Sinha, S. Das, M. K. Mukherjee, A. Bandyopadhyay, P. K. Sadhu and **N. Pal**, "Speed Control of Drill Motor for Different Types of Rock Mass According to their Drillability"

– published in the proceedings of the National Seminar on "Drills & Drilling– An Update (D & DU–2010)" held on 23-24th September 2010, organized by I***ndian School of Mines, Dhanbad***, pp. 103-108.

**2008:**

19. P. K. Sadhu, **N. Pal,** D, Sinha and T. K. Chatterjee, "A Comparative Study between Microwave Cooking and Induction Heated Cooking", – published in the proceeding of National Seminar on Frontiers in Electronics, Communication, Instrumentation and Information Technology (FECIT–2008) organized by ***Indian School of Mines University, Dhanbad***, Jharkhand during 13–15 October 2008, pp. 318–323.
20. Rakesh Kumar Agrawal, Tamal Batabyal, Dola Sinha, **Nitai Pal** and Upendar Prasad, "A Comparative Study on Energy Efficient Power-frequency and High-frequency Electrical Heating", – published in the proceeding of National Seminar on Frontiers in Electronics, Communication, Instrumentation and Information Technology (FECIT–2008) organized by ***Indian School of Mines University, Dhanbad***, Jharkhand during 13–15 October 2008, pp. 389–393.
21. P. K. Sadhu, **N. Pal**, D. K. Mittra and Dola Sinha, "Energy Conservation and Losses Management in Rotating Electrical Machines", – published in the proceeding of National Seminar on Crushing Screening & Conveying (CS&C–2008) organized by ***Indian School of Mines University, Dhanbad***, Jharkhand during 11–12 September 2008, pp. 157–165.
22. **N. Pal**, P. K. Sadhu, T. K. Chatterjee and U. Prasad, "Role of Electrical Energy Conservation and Management in Industries", – published in the proceeding of a National Seminar on Crushing Screening & Conveying (CS&C–2008) organized by ***Indian School of Mines University, Dhanbad***, Jharkhand during 11–12 September 2008, pp. 29–34.

**2006:**

23. **Nitai Pal,** Dr. Pradip Kumar Sadhu, Prof. (Dr.) Rupendranath Chakrabarti and Dr. Tarun Kumar Chatterjee, "Circuit and Wave Analysis of a New Generation Radio Frequency Mirror Inverter Applied to Induction Heating", – published in the proceeding of a National Seminar on Condition Monitoring Overview & Advanced Techniques (COMOAT–2006) organized by ***Indian School of Mines, Dhanbad*** during 15–16 September 2006, pp. 367–378.

**2002:**

24. **Nitai Pal,** Pradip Kumar Sadhu, Rupendranath Chakrabarti and Narendranath Jana, "A Novel Radio-frequency Series Load Resonant Inverter for Induction Cooking", – published in the proceeding of 12th National Power Systems Conference (NPSC–2002) organized by ***IIT Kharagpur***, Vol II, 27–29 December 2002, pp. 595 – 598.
25. **Nitai Pal,** Dr. Pradip Kumar Sadhu, Prof. (Dr.) R. N. Chakrabarti and Narendranath Jana, "High Efficient Industrial Induction Heating using Phase Shifted PWM Inverter", – published in the proceeding of 28th Annual Convention and Exhibition of IEEE India Council EPIC, IEEE (ACE–2002) organized by ***IEEE Calcutta Section*** held at the Science City, Kolkata during 20–21 December, 2002, pp. 418–421.
26. **N. Pal,** Dr P. K. Sadhu, Dr. R. N. Chakrabarti, Mrs. N. L. Nath and N. Jana, "High Efficient Industrial Induction Heating using Radio Frequency Mirror Inverter", – published in the proceeding of National Seminar on Indian Power Scenario- present and future perspective, 18th National Convention of Electrical Engineers (POWER–2002) organized by the Institution of Engineers (India) Jharkhand State Centre, Ranchi held at ***Birla Institute of Technology, Mesra***, Ranchi during 01–02 November, 2002, pp. 117–120.

**Book Published:** 02 Nos.

**2017:**

1. Himanshu Sharma, Pankaj Kumar and **Nitai Pal**, "A Control Strategy of Hybrid Solar-Wind Energy Generation System" ***Lap Lambert Academic Publishing, Germany***, ISBN: 978-620-2-01771-8, pp. 1-58, August 2017.

**2013:**

2. Pradip Kumar Sadhu, **Nitai Pal** and Ananya Bhattacharya, "Design of Working Coil Using Litz Wire for Industrial Induction Heater" ***Lap Lambert Academic Publishing, Germany***, ISBN: 978-3-659-35853-1, pp. 1-65, March 2013.

**Book Chapter Published**: 16 Nos.

**2025:**

1. Promit Kumar Saha and **Nitai Pal**, "Comprehensive investigation of the architectures of single-stage switched-boost inverters" –Recent Advancements in Computational Intelligence and Design Engineering, ***Taylor & Francis, Imprint: CRC Press, London***, 2025, chapter 47, pp. 304-317, https://doi.org/10.1201/9781003596745.
2. Arunima Mahapatra and **Nitai Pal**, "Renewable energy sources: A solution to the future global energy crisis" –Recent Advancements in Computational Intelligence and Design Engineering, ***Taylor & Francis, Imprint: CRC Press, London***, 2025, chapter 50, https://doi.org/10.1201/9781003596745.
3. Arunima Mahapatra and **Nitai Pal**, "A thorough investigation on hybrid renewable energy system management techniques" –Recent Advancements in Computational Intelligence and Design Engineering, ***Taylor & Francis, Imprint: CRC Press, London***, 2025, chapter 51, https://doi.org/10.1201/9781003596745.

**2023:**

4. Manish Kumar and **Nitai Pal**, "Simulation and Modeling of Electrical Load Data Using Machine Learning" –Machine Learning in Information and Communication Technology, Lecture Notes in Networks and Systems 498, **Springer Nature Singapore Pte Ltd.** 2023, pp. 311-316, https://doi.org/10.1007/978-981-19-5090-2_28.

**2022:**

5. Madhuri Saha and **Nitai Pal**, "Analysis, Modeling, and Forecasting of Day-Ahead Market Prices in Indian Power Exchange" –Communication and Intelligent Systems, Lecture Notes in Networks and Systems 461, **Springer Nature Singapore**, 2022, pp. 989-1013, https://doi.org/10.1007/978-981-19-2130-8_77.

**2021:**

6. **Nitai Pal** and Sk Aminul Islam "A Comprehensive Analysis of Classical and Variable Step Size P&O Algorithms for MPPT Technique used in Solar Photovoltaic System" –New Frontiers in Communication and Intelligent Systems, **Computing & Intelligent Systems, SCRS, India**, 2021, pp. 595–603, https://doi.org/10.52458/978-81-95502-00-4-61.
7. Faizan Arif Khan, **Nitai Pal** and Syed Hasan Saeed, "Stand-alone hybrid system of solar photovoltaics/wind energy resources: an eco-friendly sustainable approach" –Advances in

Nonlinear Dynamics and Chaos (ANDC), [Renewable Energy Systems - Modeling, Optimization and Control, **Elsevier, Academic Press**], ISBN: 978-0-12-820004-9, Chapter 31, September 2021, pp. 687-705, DOI: 10.1016/B978-0-12-820004-9.00030-9.

8. Pankaj Kumar, **Nitai Pal** and Mohit Kumar, "Hybrid operational deployment of renewable energy—a distribution generation approach" –Advances in Nonlinear Dynamics and Chaos (ANDC), [Design, Analysis and Applications of Renewable Energy Systems, **Elsevier, Academic Press**], ISBN: 978-0-12-824555-2, Chapter 26, September 2021, pp. 627-643, DOI: 10.1016/B978-0-12-824555-2.00020-4.
9. Boral S., **Pal N**. (2021), LCL Topology-Based Wireless Charging Unit for Electric Vehicles. In: Mohapatro S., Kimball J. (eds) Proceedings of Symposium on Power Electronic and Renewable Energy Systems Control (PERESC2020), organized by **IIT Bhubaneswar,** Lecture Notes in Electrical Engineering, Vol. 616, pp. 3-15, Springer, Singapore, Print ISBN: 978-981-16-1977-9, Online ISBN: 978-981-16-1978-6, DOI: 10.1007/978-981-16-1978-6_1.
10. Mandal A., **Pal N**. (2021), Purification of Harvested Rainwater Using Solar PV-Based Pulsed Corona Discharge. In: Mohapatro S., Kimball J. (eds) Proceedings of Symposium on Power Electronic and Renewable Energy Systems Control (PERESC2020), organized by **IIT Bhubaneswar,** Lecture Notes in Electrical Engineering, Vol. 616, pp. 477-487, Springer, Singapore, Print ISBN: 978-981-16-1977-9, Online ISBN: 978-981-16-1978-6, DOI: 10.1007/978-981-16-1978-6_41.
11. Nimish Kumar, Promit Kumar Saha, **Nitai Pal** and Neha Kumari, "Effect of Modulation Index of Nonlinearly Decreasing Inertia Weight on the Performance of PSO Algorithm for Solving ELD Problems" – Advances in Smart Grid Automation and Industry 4.0, ***Springer, Singapore***, Vol. 693, May 2021, pp. 767-775, Print ISBN 978-981-15-7674-4, Online ISBN 978-981-15-7675-1, DOI: 10.1007/978-981-15-7675-1 (*SCOPUS-Indexed*).

**2020:**

12. **Nitai Pal** and Faizan Arif Khan, "Hydro Power Technology" – ***Academic Press***, an imprint of Elsevier, pp. 91-120, September 2020, ISBN: 978-0-12-822989-7.
13. Pankaj Kumar, Kumar Avinash Chandra, Sanjay Patel, **Nitai Pal,** Mohit Kumar and Himanshu Sharma, "Operational Challenges towards Deployment of Renewable Energy" – ***IntechOpen Limited, London, UK***, pp. 1-17, September 2020, ISBN: 978-1-78984-284-5, DOI: 10.5772/intechopen.92041.
14. A. Halder, **N. Pal** and D. Mondal, "Implications of Nonlinear Control over Traditional Control for Alleviating Power System Stability Problem" – Intelligence Enabled Research, ***Springer, Singapore***, pp. 83-95, 2020, Print ISBN: 978-981-15-2020-4, Online ISBN: 978-981-15-2021-1, DOI: 10.1007/978-981-15-2021-1_10 (*SCOPUS-Elsevier Indexed*).

**2015:**

15. Palash Pal, Pradip Kumar Sadhu, **Nitai Pal** and Prabir Bhowmik, "A New Heat Treatment Topology for Reheating of Blood Tissues After Open Heart Surgery" – *Advancements of Medical Electronics,* ***Springer Link, India****,* DOI 10.1007/978-81-322-2256-9_10*,* Print ISBN 978-81-322-2255-2, Online ISBN 978-81-322-2256-9, Book Part – Part II, pp. 101-108, January 2015.

**2012:**

16. Dola Sinha, Pradip Kumar Sadhu and **Nitai Pal**, "Design of an Induction Heating Unit Used in Hyperthermia Treatment" – *Advances in Therapeutic Engineering,* ***CRC Press, Taylor & Francis Group***, ISBN: 978-1-4398-7173-7, Chapter 11, pp. 215-266, October 2012.