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Designation : Assistant Professor

Department : Department of Electrical and Electronics Engineering
(JOINED THE INSTITUTE IN 2022)

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RESEARCH INTERESTS

Electric Vehicle, Distributed Generation, Distribution Network, Power System, Renewable Energy, Demand Side Management and Engineering Optimization.

Academic Qualifications

Ph. D. (Electrical Engineering), National Institute of Technology Agartala, India.

M. Tech (Power System), National Institute of Technology Agartala, India.

B. Tech (Electrical Engineering), Govt. College of Engineering and Textile Technology, Berhampore, India.

Teaching Experience/Industrial Experience/Research Experience

- ✓ Teaching Experience: 9+ Years.
- ✓ Research Experience: 9+ Years.

PUBLICATIONS

INTERNATIONAL JOURNALS

- [1]. **Arnab Pal**, Ajoy Kumar Chakraborty, and Arup Ratan Bhowmik. "Optimal placement and sizing of DG considering power and energy loss minimization in distribution system." International Journal on Electrical Engineering and Informatics, vol. 12 (3), pp. 624-653; 2020.
- [2]. Arvind Kumar, **Arnab Pal**, and Ram Naresh Rai; "MOGA optimisation of wear performance of stir cast AA7050/B4C-T6 ex-situ metal matrix composite", International Journal of Materials and Product Technology; vol. 60 (2-4), pp. 180-194; 2020.

- [3]. **Arnab Pal**, Aniruddha Bhattacharya, and Ajoy Kumar Chakraborty; "Allocation of electric vehicle charging station considering uncertainties", Sustainable Energy, Grids and Networks, Elsevier; vol. 25, pp. 100422; 2021.
- [4]. **Arnab Pal**, Aniruddha Bhattacharya, and Ajoy Kumar Chakraborty; "Placement of Public Fast-Charging Station and Solar Distributed Generation with Battery Energy Storage in Distribution Network Considering Uncertainties and Traffic Congestion", Journal of Energy Storage, vol. 41, pp. 102939; 2021.
- [5]. **Arnab Pal**, Aniruddha Bhattacharya, and Ajoy Kumar Chakraborty; "Allocation of EV Public Charging Station in Renewable based Distribution Network using HHO Considering Uncertainties and Traffic Congestion" Soft computing; 2021. (Preprint).
- [6]. Bishwajit Dey, Sourav Basak, and **Arnab Pal**; "Demand-side management based optimal scheduling of distributed generators for clean and economic operation of a microgrid system", International Journal of Energy Research, Wiley, vol. 46 (7), pp. 8817-8837; 2022.
- [7]. **Arnab Pal**, Aniruddha Bhattacharya, and Ajoy Kumar Chakraborty; "Placement of Electric Vehicle Charging Station and Solar DG in Distribution System considering Uncertainties", Scientia Iranica, Vol. 30 (1), pp. 183-206; 2023.
- [8]. **Arnab Pal**, Aniruddha Bhattacharya, and Ajoy Kumar Chakraborty; "Planning of EV Charging Station with Distribution Network Expansion Considering Traffic Congestion and Uncertainties" IEEE transactions on industry applications, vol. 59 (3), pp. 3810-3825; 2023.
- [9]. Rupali Brahmachary, Aniruddha Bhattacharya, **Arnab Pal**, and Irfan Ahmed; "Port optimization and charging station allocation considering EV user comfort with utility benefits", IEEE transactions on industry applications, vol. 60 (6), pp. 8239 – 8253 ; 2024.
- [10]. Bishwajit Dey, **Arnab Pal**, Raj Jadav, Sahil Kadiwala and Alok Kumar Singh; "Impact of maximized utility benefit based on customer willingness for economic operation of a grid connected microgrid system", Journal of Engineering Research, vol. 15 (19275), 2024.
- [11]. Bishwajit Dey, Srikant Misra, **Arnab Pal**, and Fausto Pedro Garcia Marquez; "An amalgamated load shifting cum curtailing policy with smart charging of PHEV for economic operation of microgrid system", Scientific Reports, Springer Nature, 2025.
- [12]. Bishwajit Dey, Soham Dutta, **Arnab Pal**, Gulshan Sharma, and Pitshou N. Bokoro; "Clean and economic operation of a PHEV integrated microgrid system implementing a novel load shifting cum curtailing strategy", International Journal of Modelling and Simulation, Taylor and Francis, 2025.
- [13]. Bishwajit Dey, Srikant Misra, and **Arnab Pal**; "Flexibility In Load Demand and PHEV Parameters for Clean and Economic Microgrid Operation", Scientific Reports, Springer Nature, 2025.
- [14]. Bishwajit Dey, Srikant Misra, and **Arnab Pal**; "Efficient and economical operation of microgrid system for varying electric vehicle sizes", Results in Engineering, Elsevier, vol. 27 ; 2025.

INTERNATIONAL CONFERENCES

- [1]. Arnab Pal, Ajoy Kumar Chakraborty, Arup Ratan Bhowmik, Bhaskar Bhattacharya, "New Algorithms for DG Allocation with Less Execution

Time to Minimize the Power Loss". Proceedings of IEEE International Conference on Electrical, Electronics, Communication, Computer and Optimization Techniques (ICEECOT), Mysure, 15th – 16th December, 2017.

- [2]. Arnab Pal, Ajoy Kumar Chakraborty, Arup Ratan Bhowmik, Bhaskar Bhattacharya, "Optimal Placement of DG Units in Distribution Network Using APCSA and OBOSA for Power Loss and Execution Time Minimization". Proceedings of IEEE International Conference on Computer, Electrical and Communication Engineering (ICCECE-2017), Kolkata, 22nd – 23rd December, 2017.
- [3]. Arnab Pal, Ajoy Kumar Chakraborty, Arup Ratan Bhowmik, Bhaskar Bhattacharya, "Optimal DG Allocation for Minimizing Active Power Loss with Better Computational Speed and High Accuracy". Proceedings of IEEE International Conference on Recent Advances in Information Technology (RAIT), IIT Dhanbad, 15th – 17th, 2018.
- [4]. Arnab Pal, Soumesh Chatterjee, Aniruddha Bhattacharya, and Ajoy Kumar Chakraborty; "Optimal Design of Microgrid with Demand Side Management in Presence of Electric Vehicle"; 2020 IEEE First International Conference on Smart Technologies for Power, Energy and Control (STPEC), VNIT Nagpur, India, 25th - 26th September, 2020.
- [5]. Arnab Pal, Aniruddha Bhattacharya, and Ajoy Kumar Chakraborty; "Allocation of EV Fast Charging Station with V2G Facility in Distribution Network"; 2019 8th International Conference on Power Systems (ICPS), MNIT Jaipur, India, 20th – 22nd December, 2019.
- [6]. Arnab Pal, Aniruddha Bhattacharya, and Ajoy Kumar Chakraborty; "Planning of EV Charging Station with Renewable based Generation in an Overlaid Network Considering Uncertainty and Traffic Flow"; 2021 IEEE International Conference on Computing, Power and Communication Technologies (GUCON), Kuala Lumpur, Malaysia 2021.
- [7]. Arnab Pal, Sourav Das, Ajoy Kumar Chakraborty, Parimal Acharjee and Aniruddha Bhattacharya "Cost Benefit Analysis of EV Charging Scheduling under Stochastic Framework Considering PV and Battery Energy Storage" IEEE International Conference on Smart Technologies for Power, Energy and Control (STPEC 2021), Bilaspur, C.G. India.
- [8]. Sourav Das, Arnab Pal, Parimal Acharjee, Ajoy Kumar Chakraborty and Aniruddha Bhattacharya, "Uncertainty based Electric Vehicle Charging Scheduling with V2G feature considering Photovoltaic and Battery Energy Storage", IEEE International conference on Power Electronics, Smart Grid and Renewable Energy (PESGRE 2022), Trivandrum, Kerala, India.
- [9]. Dhritiman Adhya, Arnab Pal, Ajoy Kumar Chakraborty, Aniruddha Bhattacharya, "Machine Learning Application for Prediction of EV Charging Demand for the Scenario of Agartala, India" IEEE 4th International Conference on Energy, Power and Environment (ICEPE 2022), NIT Meghalaya.
- [10]. Sourav Das, Arnab Pal, Parimal Acharjee, Ajoy Chakraborty and Aniruddha Bhattacharya, "Planning for Allocating Renewable Supported Charging Station with Intelligent Charging Scheduling in Distribution Network" IEEE 1st International Conference on Sustainable Technology for Power and Energy Systems (STPES 2022),

NIT Srinagar, IIT Jammu.

- [11]. Arnab Pal, Sourav Das, Ajoy Kumar Chakraborty, Parimal Acharjee and Aniruddha Bhattacharya, "Optimal Allocation of Parking Lot with Intelligent Charging Scheduling of Electric Vehicles in Distribution System" IEEE 1st International Conference on Sustainable Technology for Power and Energy Systems (STPES 2022) NIT Srinagar, IIT Jammu.
- [12]. Arnab Pal, Ajoy Kumar Chakraborty, and Aniruddha Bhattacharya; "Planning of EV Charging Station with Renewable based Generation in an Overlaid Network Considering Uncertainty and Traffic Flow"; IEEE IAS Global Conference on Renewable Energy and Hydrogen Technologies (GlobConHT), Male City (Maldives) 2023.
- [13]. Smruti Ranjan Nayak, Rajendra Kumar Khadanga, and Arnab Pal; "Innovative Variable Structure PWM Method with the Nearest-Level Modulation Technique in a Five-Level Multilevel Inverter"; International Conference on Intelligent Computing and Sustainable Innovation in Technology (IC-SIT) 2024.
- [14]. Bishwajit Dey, Srikant Misra, Arnab Pal, Gulshan Sharma, Pitshou N. Bokoro; " Cost-Effective Microgrid Operation with Plug-In Hybrid Electric Vehicle Considering Demand Side Management"; IEEE International Conference on Adaptive Science and Technology (ICAST) - ICAST 2024.

NATIONAL CONFERENCES

- [1]. Arnab Pal, Ajoy Kumar Chakraborty, Aniruddha Bhattacharya, "Wind Energy and Hybrid Power System: A review". All India Seminar on Scope and Opportunity of Small Hydro & Wind Power in NER of India, NIT Mizoram, 2nd – 3rd August 2019.
- [2]. Kaustav Bhattacharjee, Arnab Pal, Ajoy Kumar Chakraborty, Aniruddha Bhattacharya, Arup Ratan Bhowmik, "Electric Vehicle Charging and Vehicle to Grid Technology: A review paper". All India Seminar on Scope and Opportunity of Small Hydro & Wind Power in NER of India, NIT Mizoram, 2nd – 3rd August 2019.

ANY OTHER

Book / Book Chapters

- [1]. Arnab Pal, Aniruddha Bhattacharya, and Ajoy Kumar Chakraborty, "Planning of Electric Vehicle Charging Station with Integration of Renewables in Distribution Network", Planning of Hybrid Renewable Energy Systems, Electric Vehicles and Microgrid: Modeling, Control and Optimization, Springer Nature Singapore, pp. 193-225, 2022.
- [2]. Sourav Das, Arnab Pal, Parimal Acharjee, Ajoy Kumar Chakraborty and Aniruddha Bhattacharya, "Multilevel Planning for Smart Charging Scheduling for On Road Electric Vehicles Considering Seasonal Uncertainties", Planning of Hybrid Renewable Energy Systems, Electric Vehicles and Microgrid: Modeling, Control and Optimization, Springer Nature Singapore, pp. 649-688, 2022.

Projects

- [1]. Project Title: Electric Vehicle Charging Station in Smart Grid. Under: Silicon Research Promotion Scheme (SRPS), Period: 15th Jan 2023 to 14th Jan 2024, Status: Completed.

- [2]. Project Title: Feasibility Study for HT/LT Switchgear for Power Factor Improvement, Motor Loading/Efficiency & Energy Saving Recommendations, and Battery Bank Parallel Operation Study. Under: Hindalco Industries Limited (Aditya Birla Group), Status: Ongoing.
- [3]. Project Title: Power System Analysis, Harmonic Study, Relay Coordination & Motor Starting Analysis. Under: Vedanta-FACOR Mines, Period: 4th Aug 2025 to 30th April 2026, Status: Completed.
- [4]. Project Title: Power System Analysis, Harmonic Study & Relay Coordination. Under: Vedanta-FACOR Charge Chrome Plant, Status: Ongoing.
- [5]. Project Title: Power System Analysis, Harmonic Study & Relay Coordination. Under: Vedanta-FACOR Captive Power Plant, Status: Ongoing.

Recognitions

Recognized in World Ranking for Scientist by AD Scientific Index -
World Citation Ranking - 2024.