



**(Prabhat Ranjan Sarkar)**

**Assistant Professor, Department of Electrical Engineering, Faculty of Engineering & IT,  
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Hyperlinks of ([Google Scholar](#), [ORCID ID](#), [SCOPUS](#), [Web of Science](#), [Resarch Gate](#), [Linkedin](#))

## PROFILE

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**Prabhat Ranjan Sarkar** joined the Department of Electrical Engineering as an Assistant Professor in July 2013. He has overall experience of more than 11 years. He has completed his B.Tech from UPTU Lucknow in the year 2011 and M.Tech from MNNIT Allahabad (U.P.) in the year 2013 respectively and currently pursuing his PhD from NIT Patna.

### RESEARCH INTEREST:

- Power Electronics
- Multilevel Inverters
- Renewable Energy System Designing & Sizing
- Energy Management, Economics

### SUMMARY OF RESEARCH ACCOMPLISHMENT:

- ➤ Citations :70
- ➤ H index : 6
- ➤ I10 index : 2
- ➤ Invited Talk as a Resource Person : 01

### PROFESSIONAL MEMBERSHIP:

- ISRD
- SESI
- IAENG

#### COURSE TAUGHT: (UG/PG level)

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- Signal System Analysis
- Fundamentals of Electromagnetic Field Theory
- Digital Circuits & Systems
- Power Electronics
- Advance Power Electronics
- Power System
- Advance Power System Analysis
- Renewable Energy Technology
- Control System
- Advance Control System
- Basic Electrical Engineering
- Power Quality Assessment
- Power Quality & Mitigation
- Energy Management Action & Planning
- Electric Drive
- Advance Electric Drive

#### ADMINISTRATIVE/DEPARTMENTAL RESPONSIBILITY

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- Program Coordinator (UG)
- Member, DQAC, BOS (EE)
- Member, Departmental NAAC Committee (Criteria-5)
- Coordinator, Departmental Exam Cell
- Convenor, Departmental Time table committee
- Coordinator, Admission committee

#### STUDENTS SUPERVISION

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M. Tech	12
B. Tech	16

#### PUBLISHED/ACCEPTED SCI/SCOPUS RESEARCH PAPERS

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- Sarkar, Prabhat Ranjan, Ahmad Faiz Minai, Isarar Ahmad, Farhad Ilahi Bakhsh, Akhlaque Ahmad Khan, and Rupendra Kumar Pachauri. "Power Quality Assessment and Enhancement using FLC based SPV Supported Cascaded H-Bridge Multilevel Inverter." *e-Prime-Advances in Electrical Engineering, Electronics and Energy* 7 (2024): 100465.
- Sarkar, Prabhat Ranjan, Ahmad Faiz Minai, MS Bhaskar, RK Pachauri "Examination of MPPT Algorithm on Three Step DC-DC Converter." IEEE 9th Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON) 2022.
- Supriya Kumari, Prabhat Ranjan Sarkar, Akhilesh Kumar Pandey, Ahmad Faiz Minai, Sandeep Kumar Singh "Modelling and Implementation of MPPT Controller for Off-Grid SPV System" 2021 Springer Nature Singapore Smart Energy and Advancement in Power Technologies: Select Proceedings of ICSEAPT 2021 Volume 1 pp-831-841.

- Prabhat Ranjan Sarkar, Ankit Kumar Yadav, Ahmad Faiz Minai, Rupendra Kumar Pachauri “MPPT based SPV system design and simulation using interleaved boost converter.” IEEE International Conference on Control, Automation, Power and Signal Processing (CAPS) 2021.
- Faizan Arif Khan, S Hasan Saeed, Mohammed Asim, Saifur Rahman, Prabhat Ranjan Sarkar “Cost optimization by adding SPV plant at load end in a grid connected system” IEEE International Conference on Computational and Characterization Techniques in Engineering & Sciences (CCTES), 2018.

#### PAPER PUBLISHED IN NATIONAL/INTERNATIONAL CONFERENCES

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- Sarkar, Prabhat Ranjan, Ahmad Faiz Minai, MS Bhaskar, RK Pachauri “Examination of MPPT Algorithm on Three Step DC-DC Converter.” IEEE 9th Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON) 2022.
- Supriya Kumari, Prabhat Ranjan Sarkar, Akhilesh Kumar Pandey, Ahmad Faiz Minai, Sandeep Kumar Singh “Modelling and Implementation of MPPT Controller for Off-Grid SPV System” 2021 Springer Nature Singapore Smart Energy and Advancement in Power Technologies: Select Proceedings of ICSEAPT 2021 Volume 1 831-841
- Prabhat Ranjan Sarkar, Ankit Kumar Yadav, Ahmad Faiz Minai, Rupendra Kumar Pachauri “MPPT based SPV system design and simulation using interleaved boost converter.” IEEE International Conference on Control, Automation, Power and Signal Processing (CAPS) 2021.
- Faizan Arif Khan, S Hasan Saeed, Mohammed Asim, Saifur Rahman, Prabhat Ranjan Sarkar “Cost optimization by adding SPV plant at load end in a grid connected system” IEEE International Conference on Computational and Characterization Techniques in Engineering & Sciences (CCTES), 2018.

#### PUBLISHED NON-SCI-SCOPUS BUT PEER REVIEWED RESEARCH PAPERS

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- Eahraz Ahmad, Faizan A Khan, Prabhat R Sarkar “Modelling & Simulation of PV Module Connected with Three-Port DC Converter.” International Journal of Engineering and Management Research. 2021, volume 11, issue 3, pp 259-264. <https://doi.org/10.31033/ijemr.11.3.41>
- Pradeep Kumar, Akhlaque Ahmad Khan, Prabhat Ranjan Sarkar “Single Switch AC-DC Cuk Converter for Power Factor and Efficiency Enhancement” International Journal of Innovative Science and Research Technology. 2018, Volume 3, issue 4, pp 252-256. <https://www.researchgate.net/publication/363185021>
- Isarar Ahamad, Mohammad Asim, Prabhat Ranjan Sarkar, Faizan Arif Khan “Comparison of conventional PFC boost converter and bridgeless PFC boost converter.” International Journal of Innovative Research in Electrical, Electronics, Instrumentation and Control Engineering. 2016, volume 4, issue: 5, pp 210-212. DOI 10.17148/IJIREEICE.2016.4552.

- Abhishek Jain, Prabhat Ranjan Sarkar, K Siddique “Controlling of permanent magnet brushless Dc motor using instrumentation technique” International Journal of Advance Engineering and Research Development. 2015, Volume 2, issue 1, pp- 83-90.
- Prabhat Ranjan Sarkar, Faizan Arif Khan, Isarar Ahamad “Performance enhancement of Multilevel Inverter in PV system with new topology.” International Journal of Advance Engineering and Research Development. 2015, Volume 1, issue 1, pp-301-307
- Shasya Shukla, Fatima Yasmeen, Prabhat Ranjan Sarkar “Controlling the Active Power and Frequency of Single and Multi Area Interconnected Power System Using PID Controller” International Journal of Engineering Research and General Science. 2015, volume 3, issue 2.
- M.K. Siddiqui Abhishek Jain, Prabhat Ranjan Sarkar “Controlling of Brushless DC Motor using Instrumentation Technique” International Journal of Advanced Engineering and Research Development. 2015, Volume 2, Issue 1, Pages 83-90.
- Abhishek Jain, Prabhat Ranjan Sarkar, Mohd Khursheed Siddique “Modeling and Performance Analysis of a Permanent Magnet Brushless DC motor using Instrumentation Technique” International Journal of Engineering Research and General Science. 2015, Volume 3, Issue 1, Pages 814-820.
- V. K. Dwivedi Prabhat Ranjan Sarkar, Mohit Bajaj “ Design and Performance Analysis of Proposed Efficient Boost-Inverter Implemented Using Step-Up DC-DC Converter.” International Journal of Advanced Research in Electronics and Communication Engineering. 2013, Volume 3 Issue 1, Pages 814-820.
- Prabhat Ranjan Sarkar, Abhishek Kashyap, Vineeta Agarwal “ Enhancement in performance of wind energy conversion system including matrix converter” International Journal of Advancements in Electronics and Electrical Engineering – IJAEEE Volume 2 : Issue 3

#### BOOK CHAPTERS

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- Supriya Kumari, Prabhat Ranjan Sarkar, Akhilesh Kumar Pandey, Ahmad Faiz Minai, Sandeep Kumar Singh “Modelling and Implementation of MPPT Controller for Off-Grid SPV System” 2021 Springer Nature Singapore Smart Energy and Advancement in Power Technologies: Select Proceedings of ICSEAPT 2021 Volume 1 831-841
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