Dr. Prasanta Kumar Barik, Ph. D (IIT(ISM), Dhanbad)

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Educational Qualification

Dr. Prasanta Kumar Barik, Ph. D in Electrical Engineering at IIT (ISM), Dhanbad in 2024, he did his M. Tech in Power Electronics & Drives in 2009 from KIIT DU and B. Tech in Electrical Engineering from Utkal University in 2005.

Experience (18 Years in Teaching and Research)

- ➢ Working in CVRCE, Bhubaneswar from 15th February 2006 to 11th February 2010 as Lecturer, Department of Electrical Engineering.
- ➢ Working in ITER, SOA University, Bhubaneswar from 12th February 2010 to 30th August 2012 as Asst. Professor, Department of Electrical Engineering.
- ➢ Working in CAET, OUAT, Bhubaneswar since 31st August 2012 as Asst. Professor, Department of Mechanical & Electrical Engineering.

Dr. Prasanta Kumar Barik is currently working as an Assistant Professor in the Department of Mechanical and Electrical Engineering, CAET, OUAT, Bhubaneswar, Odisha. His current research interests include power quality, renewable energy sources and microgrid. He has more than 25 numbers of research papers in international journal and conferences. He has published 4 book chapters in Elsevier, Taylor & Francis.

Projects

Sl.No.	Name of the Project	Amount	Agency	Duration
1	Demonstrating solar fencing with integrated	56.27Lakh	RKVY, Govt.	2021-2024
	approach of alarming unit and cellular		of Odisha	As PI
	phone-based warning system for protecting			
	crops from stray/wild animals			
2	Conversion of agricultural residues to	128.5	Dept. of	2022-2025
	biofuels through solar photovoltaic powered	Lakh	Agriculture	As Co-PI
	microwave pyrolysis		Govt. of Odisha	
3	Solar based smart villages with focus on	5 Lakh	DST	2020
	drinking water, agriculture operation and			3month
	microgrid system			As Co-PI

Administrative Experience/Post(s) Responsibilities held

Sl.No.	Name of the Post	Duration
1	OIC Examination UG	From 2019 to till date
2	OIC Examination PG	From 2019 to till date
3.	Nodal officer ICT cell OUAT	From 2019 to till date
4	Nodal officer AMS of CAET	From 2022 to till date
5	Class Teacher 1st year	From 2019 to till date
6.	OIC Time table	From 2024 to till date
7.	OIC Academic	From 2024 to till date
8.	OIC Semester Calendar	From 2024 to till date

Publications

International Journals

- Barik, P.K., Samal, S., Gupta, D.K., Appasani, B., Jha, A.V., Islam, M.M. and Ustun, T.S., 2024. Split-source inverter with adaptive control scheme-based shunt active power filter for power quality improvement. *IET Power Electronics*. I.P-1.7, Wiley, (SCI).
- Barik, P. K., Shankar, G., Sahoo, P. K., Elavarasan, R. M., Kumar, S., Ibanez, F. M., and Terzija, V. 2023. A novel negative feedback phase locked loop-based reference current generation technique for shunt active power filter. *International Journal of Electrical Power* & *Energy Systems*, 153, 109389. Elsevier. I.P-5.2. (SCI).
- Patel, P., Samal, S., Jena, C., and Barik, P. K. 2023. Harmonic Mitigation in a Hybrid Power System Integrated Shunt Active Power Filter Employing FLC and an Adaptive Current Control Technique. ECTI Transactions on Electrical Engineering, Electronics, and Communications, 21(1), 248667-248667. SCOPUS
- Patel, P., Samal, S., Jena, C., and Barik, P. K. 2023. Shunt active power filter with MSRF-PI-AHCC technique for harmonics mitigation in a hybrid energy system under load changing condition. *Australian Journal of Electrical and Electronics Engineering*, 20(1), 63-77. Taylor and Francis, SCOPUS.
- Barik, P.K., Shankar, G. and Sahoo, P.K., 2022. Investigations on Split-Source Inverter Based Shunt Active Power Filter Integrated Microgrid System for Improvement of Power Quality Issues. *Journal of Electrical Engineering and Technology*, 1-23. Springer. I.P-1.069. (SCI).
- Samal, S., Barik, P. K., and Hota, P. K. 2021. Harmonics Mitigation of a Solar PV-Fuel Cell Based Microgrid System using a Shunt Active Power Filter. *ECTI Transactions on Electrical Engineering, Electronics, and Communications, 19* (2), 127-135. SCOPUS.
- Panigrahi, S. K. Samal, S., Barik, P. K. 2021. Simulation Design and Harmonics Analysis of SPV-Wind Energy-based Hybrid Energy System under Different Nonlinear Load Condition. *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, 12(9), 1021-1031. SCOPUS
- Barik, P.K., Shankar, G. and Sahoo, P.K., 2020. Power quality assessment of microgrid using fuzzy controller aided modified SRF based designed SAPF. *International Transactions on Electrical Energy Systems*, 30(4), pp. e12289. I.P- 2.860, Wiley (SCI)
- Samal, S., Hota, P. K., and Barik, P. K. 2020. Performance improvement of a distributed

generation system using unified power quality conditioner. *Technology and Economics of Smart Grids and Sustainable Energy*, 5(1), 1-16. **Springer. SCOPUS**

Samal, S., Hota, P. K., and Barik, P. K. 2020. Power quality assessment of a solar PV and fuel cell-based distributed generation system using unified power quality conditioner. *International Journal of Ambient Energy*, 1-11. Taylor & Francis. SCOPUS.

International Conferences

- Samal, S., Dash, R., Pradhan, A. and Barik, P.K., 2024. Application of Active Power Filter in the Hybrid Power System to Regulate the Grid Voltage. *Linear and Nonlinear System Modeling*, pp.49-65.
- Patel, P., Samal, S., Mishra, P.K., Jena, C., Barik, P.K. and Mohapatra, A., 2024, Adaptive Controller with Fuzzy and Modified SRF-Based SAPF for Harmonics Reduction Under Distorted Source Conditions. In 2024 IEEE 13th International Conference on Communication Systems and Network Technologies (CSNT) (pp. 1-7). IEEE.
- Patel, P., Samal, S., Mishra, P.K., Jena, C., Barik, P.K. and Gupta, D.K., 2024. Power quality analysis using adaptive controller based SAPF under different loading scenario. In 2024 Second International Conference on Smart Technologies for Power and Renewable Energy (SPECon) (pp. 1-6). IEEE.
- Banerjee, A., Samal, S., Ghatak, S. R., Mohapatra, A., Samal, P., and Barik, P. K. 2023. Control and Design of an Electric Vehicle Battery Charger Utilizing Solar PV System. In 2023 International Conference on Artificial Intelligence and Applications (ICAIA) Alliance Technology Conference (ATCON-1) (pp. 1-7). IEEE.
- Samal, S., Jena, C., Soni, R. K., Verma, R., Sahaya, S., and Barik, P. K. 2023. Sustainable and Optimal Rolling of Electric Vehicle on Roadways with Better Implementation. In *Recent advances in Power Systems: Select Proceedings of EPREC 2022* (pp. 1-15). Singapore: Springer Nature Singapore.
- Barik, P.K., Shankar, G. and Sahoo, P.K., 2022. Performance Assessment of MSRF-FLC-AFHCC Control Strategy for Shunt Active Power Filters to Mitigate Power Quality Issues. In AIP Conference Proceedings, vol. 2459, no. 1, p. 050019. AIP Publishing LLC, 2022., pp. 403-414.
- Sahay, S., Samal, S., Nayak, S., Barik, P. K., Soni, R. K., and Pradhan, A. 2022. Risks in an Active Distribution Network: A Review of the Literature. In 2022 4th International Conference on Smart Systems and Inventive Technology (ICSSIT) (pp. 1-9). IEEE.
- Samal, S., Acharya, B., and Barik, P. K. 2022. Internet of Things (IoT) in agriculture toward urban greening. In AI, Edge and IoT-based Smart Agriculture (pp. 171-182). Academic Press.
- Barik, P.K., Shankar, G. and Sahoo, P.K., 2021. DC-Link Capacitor Voltage Stabilization of a Shunt Active Power Filter Using Fuzzy Logic Controller Under Dynamic Loading Condition. In Proceedings of Symposium on Power Electronic and Renewable Energy Systems Control, pp. 403-414. Springer, Singapore, 2021.
- Samal, S., Barik, P. K., and Hota, P. K. 2021. Performance Improvement of a UPQC Integrated with a Microgrid System Using Modified SRF Technique. In *Microgrids* (pp. 201-216). CRC Press. Taylor & Francis.
- Samal, S., Barik, P. K., Jena, T., and Debnath, M. K. 2021. Performance Analysis of Solar PV-Based Unified Power Quality Conditioner System for Power Quality Improvement Under

Nonlinear Load Condition. In *Green Technology for Smart City and Society*, pp. 497-512. Springer,

- Panigrahi, S. K., Samal, S., Dei, G., Gupta, D. K., Jena, C., and Barik, P. K. 2021. Harmonics Analysis of Solar Photovoltaic Wind Energy-Based Hybrid System. In 2021 2nd International Conference for Emerging Technology (INCET) (pp. 1-6). IEEE.
- Samal, S., Hota, A., Hota, P. K., and Barik, P. K. 2021. Power Quality Analysis of a Distributed Generation System Using Unified Power Quality Conditioner. In *Progress in Advanced Computing and Intelligent Engineering* (pp. 157-169). Springer, Singapore.
- Samal, S., Hota, A., Hota, P.K. and Barik, P.K., 2020. Harmonics and voltage sag compensation of a solar pv-based distributed generation using MSRF-based UPQC. In *Innovation in Electrical Power Engineering, Communication, and Computing Technology: Proceedings of IEPCCT 2019* (pp. 87-98). Springer Singapore.
- Samal, S., Jena, T., and Barik, P. K. 2020. Power Quality Improvement of a Fuel Cell-Based Distributed Generation System Using Unified Power Quality Conditioner. In Advances in Electrical Control and Signal Systems (pp. 227-238). Springer, Singapore.
- Samal, S., Barik, P.K. and Sahu, S.K., 2018. Extraction of maximum power from a solar PV system using fuzzy controller based MPPT technique. In 2018 Technologies for Smart-City Energy Security and Power (ICSESP) (pp. 1-6). IEEE.
- Samal, S., Ramana, M. and Barik, P.K., 2018. Modeling and simulation of interleaved boost converter with MPPT for fuel cell application. In 2018 Technologies for Smart-City Energy Security and Power (ICSESP) (pp. 1-5). IEEE.
- Samal, S., Hota, P.K. and **Barik, P.K.**, **2017**. Fuel cell integrated UPQC System for power quality improvement. In *2017 IEEE Calcutta Conference (CALCON)* (pp. 325-330). IEEE.
- Samal, S., Hota, P.K. and Barik, P.K., 2016. Harmonics mitigation by using shunt active power filter under different load condition. In 2016 international conference on signal processing, communication, power and embedded system (SCOPES) (pp. 94-98). IEEE.