



Dr. Md. Habibullah

Professor

Research Area Multiphase Machines

(control, performance analysis and fault tolerant operation) Renewable energy and smart microgrids Model Predictive Control

(Design and applications to power electronics

and drives) Power Converter Power

Electronics and Drives

Education

Doctor of Philosophy (PhD)

The University of Sydney, Australia()

M.Sc. in Electrical and Electronic Engineering

Khulna University of Engineering & Technology (KUET), Bangladesh()

B.Sc. in Electrical and Electronic Engineering

Khulna University of Engineering & Technology (KUET), Bangladesh() Group: EEE,

Biography

Welcome to my official webpage.

Service Records

- **Professor**
Department/Section: Electrical and Electronic Engineering
Khulna University of Engineering & Technology (KUET) *From 01-01-1970 to 01-01-1970*
Working Area: Power Electronics and Drives, PV Energy Conversion
Responsibility: Teaching and Research
- **Associate Professor**
Department/Section: Electrical and Electronic Engineering
Khulna University of Engineering & Technology *From 01-01-1970 to 01-01-1970*
Working Area: Power Electronics and Drives, PV Energy Conversion
Responsibility: Teaching and Research
- **Teaching Assistant**
Department/Section: EIE
The University of Sydney *From 01-01-1970 to 01-01-1970*
Working Area: Power Electronics and Drives
Responsibility: Teaching and evaluation
- **Research Assistant**
Department/Section: EE & T
University of New South Wales (UNSW) *From 01-01-1970 to 01-01-1970*
Working Area: Power Electronics and Drives
Responsibility: Research
- **Lecturer (Part time)**
Department/Section: Electrical and Electronic Engineering
khulna University of Engineering & Technology *From 01-01-1970 to 01-01-1970*
Working Area: Power Electronics
- **Lecturer**
Department/Section: Electrical and Electronic Engineering
khulna University of Engineering & Technology *From 01-01-1970 to 01-01-1970*
Working Area: Power Electronics
Responsibility: Teaching and Supervision
- **Assistant Professor**
Department/Section: Electrical and Electronic Engineering
khulna University of Engineering & Technology *From 01-01-1970 to 01-01-1970*
Working Area: Power Electronics and Drives, PV Energy Conversion
Responsibility: Teaching and supervision

Research Interest

Multiphase Machines (control, performance analysis and fault tolerant operation)

Renewable energy and smart microgrids

Model Predictive Control (Design and applications to power electronics and drives)

Power Converter

Power Electronics and Drives

Publication

Books

1. <. H. Habibullah, D. Xiao and M. F. R. a. D. D. Lu, **Modeling, Simulation and Control of Electrical Drives**, ISBN:978-1-78561-587-0, The Institution of Engineering and Technology (IET), vol. 118, 2019 .
2. <. H. Habibullah and T. D. a. M. S. H. Sabbir, **Induction Motors - Recent Advances, New Perspectives and Applications**, IntechOpen, 2023 .

Journals

20. , "Simplified predictive current controller for three-to-five-phase direct matrix converter," **World Journal of Engineering**, Emerald, vol. ahead-of-print, no.ahead-of-print, 2022 .
19. M. Tariquzzaman, <. H. Habibullah and A. K. Podder, "Multi-Constraints Based Predictive Current Control of Simplified Neutral Point Clamped Inverter," **World Journal of Engineering**, Emerald, vol. 20, no.1, pp.204-218, 2021 .
18. A. K. Podder, <. H. Habibullah and N. K. R. a. H. R. Pota, "A chronological review of prospects of solar photovoltaic systems in Bangladesh: Feasibility study analysis, policies, barriers, and recommendations," **IET Renewable Power Generation**, IET, vol. 15, pp.2109-2132, March 2021 .
17. A. Podder, <. H. Habibullah, M. Tariquzzaman, E. Hossain and a. S. Padmanaban, "Power Loss Analysis of Solar Photovoltaic Integrated Model Predictive Control Based On-Grid Inverter.," **Energies 2020**, MDPI, vol. 13, 4669, 2020 .
16. A. K. Podder, M. Tariquzzaman and a. <. H. Habibullah, "Comprehensive performance analysis of model predictive current control based on-grid photovoltaic inverters," **Journal of Physics: Conference Series**, IOP Science, vol. 1432, no.012051, January 2020 .
15. <. H. Habibullah, D. Lu, D. Xiao, I. Osman and a. M. F. Rahman, "Selected Prediction Vectors Based FS-PTC for 3L-NPC Inverter Fed Motor Drives," **IEEE Transactions on Industry Applications**, IEEE, vol. 53, no.4, pp.3588-3597, July/Aug. 2017 .
14. <. H. Habibullah, D. Lu, D. Xiao, J. E. Fletcher and a. M. F. Rahman, "Low Complexity Predictive Torque Control Strategies for a Three-level Inverter Driven Induction Motor," **IET Electric Power Applications**, IET, vol. 11, no.5, pp.776-783, 2017 .
13. <. H. Habibullah, D. Lu, D. Xiao, J. E. Fletcher and a. M. F. Rahman, "Predictive Torque Control of Induction Motor Sensorless Drive Fed by a 3L-NPC Inverter," **IEEE Transactions on Industrial Informatics**, IEEE, vol. 13, no.1, pp.60-70, Feb. 2017 .
12. <. H. Habibullah, D. Lu, D. Xiao and a. M. F. Rahman, "Finite-State Predictive Torque Control of Induction Motor Supplied from a Three-Level NPC Voltage Source Inverter," **IEEE Transactions on Power Electronics**, IEEE, vol. 32, no.1, pp.479-489, 2017 .
11. <. H. Habibullah, D. Lu, D. Xiao and a. M. F. Rahman, "A Simplified Finite-State Predictive Direct Torque Control for Induction Motor Drive," **IEEE Transactions on Industrial Electronics**, IEEE, vol. 63, no.6, pp.3964-3975, 2016 .
10. M. Habibullah and D. Lu, "A Speed-Sensorless FS-PTC of Induction Motors Using Extended Kalman Filters," **IEEE Transactions on Industrial Electronics**, IEEE, vol. 62, no.11, pp.6765-6778, 2015 .
8. <. H. Habibullah, M. A. Rafiq and a. B. C. Ghosh, "A New QEA Based High Performance Sensorless Control of IM Drive," **ACEEE International Journal on Control System and Instrumentation**, ACEEE, vol. 3, no.2, pp.21-25, March 2012 .
7. K. K. Halder, M. Habibullah, N. K. Roy, M. A. Rafiq and B. Ghosh, "Vector Control of a Position Sensorless SPMSM Drive with RNN Based Stator Flux Estimator," **Journal of Electrical Engineering (JEE)**, Politehnica, vol. 12, no.2, pp.217-224, June 2012 .

Conference

27. , "Selective Voltage Vector Based Predictive Torque Control of Five-Phase Induction Motor Drive," **2020 11th International Conference on Electrical and Computer Engineering (ICECE)**, IEEE, 17-19 Dec. 2020 , pp.182-185.
26. , "Modulated Model Predictive Current Control of Three-Level NPC Inverter with Overmodulation Capability," **2020 11th International Conference on Electrical and Computer Engineering (ICECE)**, IEEE, 17-19 Dec. 2020 , pp.137-140.
25. B. C. Ghosh and <. H. a. M. E. Ali, "Performance Comparison of Five and Six Phase Induction Motors Operating under Normal and Faulty Conditions," **2019 4th International Conference on Electrical Information and Communication Technology (EICT)**, IEEE, 20-22 Dec. 2019 , pp.1-6.
23. A. K. Podder, K. Ahmed, N. K. Roy and a. <. H. Habibullah, "Design and Simulation of a Photovoltaic and Fuel Cell Based Micro-grid System," **2019 International Conference on Energy and Power Engineering (ICEPE)**, IEEE, 14-16 March, 2019 .
22. A. K. Podder, <. H. Habibullah and N. K. Roy, "Current THD Analysis of Model Predictive Control based Grid-Connected PV Inverter," **2019 International Conference on Electrical, Computer and Communication Engineering (ECCE)**, IEEE, 7-9 February, 2019 .
21. , "Model Predictive Based Energy Efficient Control of Grid-connected PV Systems," **10th International Conference on Electrical and Computer Engineering (ICECE 2018)**, IEEE, 20-22 Dec. 2018 .
20. I. Osman, D. Xiao, M. Rahman and <. H. Habibullah, "A two-stage optimal vector selection method for predictive torque control of a three-level VSI driven induction motor," **2017 Australasian Universities Power Engineering Conference (AUPEC)**, IEEE, 19-22 Nov. 2017 , pp.1-6.
19. <. H. Habibullah, D. Lu, D. Xiao and a. M. F. Rahman, "Performance Investigation of Selected Prediction Vectors Based FS-PTC for 3L-NPC Inverter Fed Motor Drive," **8th Annual IEEE Energy Conversion Congress & Exposition (ECCE 2016)**, IEEE, Sep. 18-22, 2016 , pp.1-8.
18. , "An Improved Sensorless FS-PTC of Induction Motors Using Estimated Stator Currents," **6th International Symposium on Sensorless Control for Electrical Drives (SLED)**, IEEE, June 2015 , pp.1-6.
17. <. H. Habibullah, D. Lu, D. Xiao and a. M. F. Rahman, "A Computationally Efficient FS-PTC for IM With Minimum Voltage Vectors," **11th International Conference on Power Electronics and Drive Systems (PEDS)**, IEEE, 9-12 June 2015 , pp.992-997.
16. , "Encoderless FS-PTC for Induction Motor with Extended Kalman Filter," **Australasian Universities Power Engineering Conference (AUPEC)**, IEEE, 28th Sep.-1st Oct. 2014 , pp.1-5.
15. , "Stator Resistance Tuning for PTC Based Induction Motor Drive at Very Low Speed," **Australasian Universities Power Engineering Conference (AUPEC)**, IEEE, 28th Sep.-1st Oct. 2014 , pp.1-5.
14. , "Model Predictive Duty Based Torque and Flux Ripples Minimization of Induction Motor Drive," **The 7th IET International Conference on Power, Electronics, Machines and Drives (PEMD)**, IET, 8-10 April, 2014 , pp.1-6.
13. , "Predictive Torque and Flux Control of a Four-Switch Inverter-Fed IM Drive," **International Future Energy Electronics Conference (IFEEC 2013)**, IEEE, 3-6 Nov. 2013 , pp.629-634.
8. <. H. Habibullah, M. A. Rafiq, M. Shahjahan and a. B. C. Ghosh, "Chaotic Learning Based ANN for Improved Rotor Flux Estimation of Induction Motor Drive," **Int. Conf. on Informatics, Electronics & Vision (ICIEV12)**, IEEE/OSA/IAPR, 18-19 May, 2012 , pp.199-204.
7. <. H. Habibullah, K. K. Halder, M. A. Rafiq and a. B. C. Ghosh, "High Performance Sensorless Control of Induction Motor Drive with Space Vector Modulation," **Int. Conf. on Advances in Electrical Engineering (ICAEE)**, 19-20 Dec. 2011 , pp.154-159.
6. <. H. Habibullah, M. A. Rafiq and a. B. C. Ghosh, "A New QEA Based High Performance Sensorless Control of IM Drive," **Int. Conf. on**

