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Kvalifikationer

Power Electronics , Ph.D., Power Management of Single-Phase Grid-Connected Inverter, Jamia Millia Islamia
Dimissionsdato: 26. mar. 2021

Power System, Masters of Technology, Energy Efficient Building Inculcating Solar and Grid Integration, Amity University
apr. 2014 → aug. 2014

Dimissionsdato: 1. apr. 2016

Electrical and Electronics Engineering , Bachelor of Technology, Assisting System for Visually Impaired, Karunya Institute
of Technology and Sciences Coimbatore Tamil Nadu

jul. 2009 → apr. 2013

Dimissionsdato: 26. apr. 2013

Reliability of Power Electronics Converters, Guest Ph.D., Resiliency and reliability of a renewable-based power
electronics-based power system, Aalborg Universitet

okt. 2020 → dec. 2020

Ansættelse

Institut for Mekanik og Elektronik (IME)

SDU

1. jul. 2023 → 31. jan. 2025

Post.Doc

SDU Center for Industriel Elektronik (CIE)

SDU

Sønderborg

1. jul. 2023 → 31. jan. 2025

Postdoctoral Researcher

Brno University of Technology

Brno , Tjekkiet

1. dec. 2021 → 31. jan. 2023

Guest Faculty

Jamia Millia Islamia

New Delhi, Indien

1. aug. 2017 → 15. jan. 2020

Publikationer

Energy management scheme for optimizing multiple smart homes equipped with electric vehicles

Prum, P., Charoen, P., Khan, M. A., Bayati, N. & Charoenlarnopparut, C., 3. jan. 2024, I: Energies. 17, 1, 19 s., 254.

Techno-economic analysis and predictive operation of a power-to-hydrogen for renewable microgrids

Khan, M. A., Bayati, N. & Ebel, T., 15. dec. 2023, I: Energy Conversion and Management. 298, 13 s., 117762.

Advanced power converters and learning in diverse robotic innovation: a review

Singh, R., Kurukuru, V. S. B. & Khan, M. A., 19. okt. 2023, I: Energies. 16, 20, 28 s., 7156.

Digital Twin Paradigm for Fault Ride Through in Grid-Integrated Distributed Generation

Khan, M. A., Kurukuru, V. S. B., Bayati, N. & Ebel, T., okt. 2023, *2023 8th IEEE Workshop on the Electronic Grid (eGRID)*. IEEE, 8 s. (IEEE Workshop on the Electronic Grid (eGRID)).

Health Monitoring Framework for Electric Vehicle Drive Train in Digital Twin

Kurukuru, V. S. B., Khan, M. A. & Singh, R., sep. 2023, *2023 25th European Conference on Power Electronics and Applications (EPE'23 ECCE Europe)*. IEEE, 10 s.

Failure mode effect classification for power electronics converters operating in a grid-connected system

Kurukuru, V. S. B., Haque, A., Khan, M. A. & Kumar, R., 1. jun. 2023, I: *IEEE Systems Journal*. 17, 2, s. 3138-3149

Optimizing the performance of single-phase photovoltaic inverter using wavelet-fuzzy controller

Khan, M. A., Haque, A., Kurukuru, V. S. B. & Blaabjerg, F., mar. 2023, I: *e-Prime - Advances in Electrical Engineering, Electronics and Energy*. 3, 12 s., 100093.

Design and Control of Grid Connected Photovoltaic System

Haque, A., Khan, M. A. & Kurukuru, V. S. B., 2023, CRC Press. 244 s.

Electric Vehicle Charging/Discharging Models for Estimation of Load Profile in Grid Environments

Kurukuru, V. S. B., Khan, M. A. & Singh, R., 2023, I: *Electric Power Components and Systems*. 51, 3, s. 279-295

Overview and impact of faults in grid-connected photovoltaic systems

Khan, M. A., 25. nov. 2022, *Fault Analysis and its Impact on Grid-connected Photovoltaic Systems Performance*. Haque, A. & Mekhilef, S. (red.). Wiley, s. 1-42

Cybersecurity in power electronics using minimal data - a physics-informed spline learning approach

Kurukuru, V. S. B., Khan, M. A. & Sahoo, S., 1. nov. 2022, I: *IEEE Transactions on Power Electronics*. 37, 11, s. 12938-12943

Online Learning-based Islanding Detection Scheme for Grid-Connected Systems

Khan, M. A., Kurukuru, V. S. B. & Singh, R., 17. okt. 2022, *2022 24th European Conference on Power Electronics and Applications (EPE'22 ECCE Europe)*. IEEE, 10 s.

Power Flow Management With Q-Learning for a Grid Integrated Photovoltaic and Energy Storage System

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Machine learning framework for photovoltaic module defect detection with infrared images

Kurukuru, V. S. B., Haque, A., Tripathy, A. K. & Khan, M. A., aug. 2022, I: *International Journal of System Assurance Engineering and Management*. 13, 4, s. 1771-1787

Discrete Stochastic Control for Energy Management With Photovoltaic Electric Vehicle Charging Station

Mateen, S., Haque, A., Kurukuru, V. S. B. & Khan, M. A., jun. 2022, I: *CPSS Transactions on Power Electronics and Applications*. 7, 2, s. 216-225

Rule-based inferential system for microgrid energy management system

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Intelligent Transition Control Approach for Different Operating Modes of Photovoltaic Inverter

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Centralized intelligent fault localization approach for renewable energy-based islanded microgrid systems

Haque, A., Kurukuru, V. S. B., Khan, M. A., Malik, A. & Fayaz, F., 1. jan. 2022, *Applications of AI and IOT in Renewable Energy*. Elsevier Science, s. 129-149

Design and modeling approaches to cyberattacks for grid-tied PV systems

Bharath Kurukuru, V. S. & Khan, M. A., 1. jan. 2022, *Cyber security for microgrids*. Sahoo, S., Blaabjerg, F. & Dragicevic, T. (red.). United Kingdom: Institution of Engineering and Technology, s. 179-201

Condition monitoring and maintenance management with grid-connected renewable energy systems

Alam, M., Haque, A., Khan, M. A., Sobahi, N. M., Mehedi, I. M. & Khan, A. I., 2022, I: *Computers, Materials and Continua*. 72, 2, s. 3999-4017

Islanding classification and low-voltage ride through for grid connected transformerless inverter

Khan, M. A., Kurukuru, V. S. B. & Haque, A., 2022, *Intelligent Circuits and Systems*. Singh, R. & Gehlot, A. (red.). 1 udg. CRC Press, s. 27-33

Machine learning classifier for fault classification in photovoltaic system

Kurukuru, V. S. B., Khan, M. A., Haque, A. & Tripathi, A. K., 2022, *Intelligent Circuits and Systems*. Singh, R. & Gehlot, A. (red.). CRC Press, s. 34-40

Monitoring of Synchronization Failure for Power Electronics Converters

Khan, M. A. & Drapela, J., 2022, *2022 6th International Conference on System Reliability and Safety (ICSRS)*. IEEE, s. 26-31

Overview of fault detection approaches for grid connected photovoltaic inverters

Malik, A., Haque, A., Kurukuru, V. S. B., Khan, M. A. & Blaabjerg, F., 2022, I: *e-Prime - Advances in Electrical Engineering, Electronics and Energy*. 2

Resource management with kernel-based approaches for grid-connected solar photovoltaic systems

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Dynamic Voltage Support for Low Voltage Ride Through Operation in Single-Phase Grid-Connected Photovoltaic Systems

Khan, M. A., Haque, A. & Kurukuru, V. S. B., okt. 2021, I: *IEEE Transactions on Power Electronics*. 36, 10, s. 12102-12111

Failure mode classification for grid-connected photovoltaic converters

Kurukuru, V. S. B., Khan, M. A. & Malik, A., sep. 2021, *Reliability of Power Electronics Converters for Solar Photovoltaic Applications*. Haque, A., Blaabjerg, F., Wang, H., Yang, Y. & Jaffery, Z. A. (red.). Institution of Engineering and Technology, s. 205-249

A review on artificial intelligence applications for grid-connected solar photovoltaic systems

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Condition monitoring of IGBT modules using online TSEPs and data-driven approach

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Intelligent Transition Control between Grid-Connected and Standalone Modes of Three-Phase Grid-Integrated Distributed Generation Systems

Khan, M. A., Haque, A., Blaabjerg, F., Kurukuru, V. S. B. & Wang, H., jul. 2021, I: *Energies*. 14, 13, 21 s., 3979.

Islanding Classification Mechanism for Grid-Connected Photovoltaic Systems

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Control strategy for grid-connected solar inverter for IEC standards

Khan, M. A. & Sangwongwanich, A., 1. jan. 2021, *Reliability of power electronics converters for solar photovoltaic applications*. Haque, A., Blaabjerg, F., Wang, H., Yang, Y. & Jaffery, Z. A. (red.). Stevenage Herts, United Kingdom: Institution of Engineering and Technology, s. 141-188

Data-driven model for state of health estimation of lithium-ion battery

Singh, R., Kurukuru, V. S. B. & Khan, M. A., 2021, Springer. (Advances in Intelligent Systems and Computing, Bind 1257).

Decision-Making Approach for Smart Charging of Electric Vehicles

Haque, A., Kurukuru, V. S. B., Khan, M. A. & Bilal, S. M., 2021, *2021 IEEE Transportation Electrification Conference, ITEC-India 2021*. IEEE, 6 s.

From Physics to Data Oriented Cyber Attack Profile Emulation in Grid Connected PV Systems

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Power Management of Single Phase Grid Connected Inverter

Khan, M. A., 2021, Jamia Milia Islamia University. 175 s.

Single phase transformerless photovoltaic inverter for grid connected systems - an overview

Khan, M. A., Haque, A., Kurukuru, V. S. B. & Mekhilef, S., 2021, I: *International Journal of Power Electronics*. 13, 4, s. 434-480

Standalone operation of distributed generation systems with improved harmonic elimination scheme

Khan, M. A., Haque, A., Kurukuru, V. S. B., Wang, H. & Blaabjerg, F., 2021, I: *IEEE Journal of Emerging and Selected Topics in Power Electronics*. 9, 6, s. 6924-6934

State of Charge Estimation Using Data-Driven Techniques for Storage Devices in Electric Vehicles

Singh, R., Khan, M. A. & Kurukuru, V. S. B., 2021, Springer. 8 s. (Advances in Intelligent Systems and Computing, Bind 1165).

Machine learning based fault classification approach for power electronic converters

Kurukuru, V. S. B., Haque, A., Kumar, R., Khan, M. A. & Tripathy, A. K., 16. dec. 2020, *9th IEEE International Conference on Power Electronics, Drives and Energy Systems, PEDES 2020*. IEEE, 9379365

Intelligent control of a novel transformerless inverter topology for photovoltaic applications

Khan, M. A., Haque, A. & Kurukuru, V. S. B., 1. jun. 2020, I: *Electrical Engineering*. 102, 2, s. 627-641

Coordinated reactive power strategy using static synchronous compensator for photovoltaic inverters

Fatama, A. Z., Khan, M. A., Kurukuru, V. S. B., Haque, A. & Blaabjerg, F., jun. 2020, I: *International Transactions on Electrical Energy Systems*. 30, 6, 18 s., 12393.

Model-Based Data Driven Approach for Fault Identification in Proton Exchange Membrane Fuel Cell

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A Novel Fault Classification Approach for Photovoltaic Systems

Kurukuru, V. S. B., Blaabjerg, F., Khan, M. A. & Haque, A., 8. jan. 2020, I: *Energies*. 13, 2, 308.

A present and future state-of-the-art development for energy- efficient buildings using PV systems

Khan, M. A., Mishra, S. & Haque, A., 2. jan. 2020, I: *Intelligent Buildings International*. 12, 1, s. 44-63

Performance assessment of stand-alone transformerless inverters

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Reliability analysis of a solar inverter during reactive power injection

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Energy Management Strategy for Grid Connected Solar Powered Electric Vehicle Charging Station

Haque, A., Kurukuru, V. S. B. & Khan, M. A., dec. 2019, *2019 IEEE Transportation Electrification Conference, ITEC-India 2019*. 9080846

Stochastic methods for prediction of charging and discharging power of electric vehicles in vehicle-to-grid environment

Haque, A., Kurukuru, V. S. B. & Khan, M. A., 6. nov. 2019, I: *IET Power Electronics*. 12, 13, s. 3510-3520

Control of drum level dynamics in Coal-Fired Boiler-Turbine Units

Singh, R., Khan, M. A. & Kurukuru, V. S. B., nov. 2019, *2019 International Conference on Power Electronics, Control and Automation, ICPECA 2019 - Proceedings*. IEEE

Droop based Low voltage ride through implementation for grid integrated photovoltaic system

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Failure Rate Basics for a Case Study on Grid Connected Photovoltaic Plant

Ali, S., Khan, M. S., Kurukuru, V. S. B., Khan, M. A. & Haque, A., nov. 2019, *2019 International Conference on Power Electronics, Control and Automation, ICPECA 2019 - Proceedings*.

Fault Classification with Robust Knowledge Transfer for Single Phase Grid Connected Photovoltaic Systems

Kurukuru, V. S. B., Haque, A., Khan, M. A. & Tripathy, A. K., nov. 2019, *2019 International Conference on Power Electronics, Control and Automation, ICPECA 2019 - Proceedings*. 8975554

Fault Identification Algorithm for Grid Connected Photovoltaic Systems using Machine Learning Techniques

Dadhich, K., Kurukuru, V. S. B., Khan, M. A. & Haque, A., nov. 2019, *2019 International Conference on Power Electronics, Control and Automation, ICPECA 2019 - Proceedings*. 8975397

Hybrid algorithm for reactive power control in grid integrated Photovoltaic inverters

Fatama, A-Z., Khan, M. A., Kurukuru, V. S. B. & Haque, A., nov. 2019, *2019 International Conference on Power Electronics, Control and Automation, ICPECA 2019 - Proceedings*. 8975627

Machine Learning Based Islanding Detection for Grid Connected Photovoltaic System

Khan, M. A., Haque, A. & Kurukuru, V. S. B., nov. 2019, *2019 International Conference on Power Electronics, Control and Automation, ICPECA 2019 - Proceedings*. 8975614

Power Management for Hybrid Energy Storage System in Electric Vehicles

Usmani, M. J., Haque, A., Kurukuru, V. S. B. & Khan, M. A., nov. 2019, *2019 International Conference on Power Electronics, Control and Automation, ICPECA 2019 - Proceedings*. 8975530

Reliability Analysis of Silicon Carbide Power Modules in Voltage Source Converters

Kurukuru, V. S. B., Haque, A., Khan, M. A. & Tripathy, A. K., nov. 2019, *2019 International Conference on Power Electronics, Control and Automation, ICPECA 2019 - Proceedings*. 8975617

Review on Reliability of Power Electronic Components in Photovoltaic Inverters

Shahzad, M., Kurukuru, V. S. B., Khan, M. A. & Haque, A., nov. 2019, *2019 International Conference on Power Electronics, Control and Automation, ICPECA 2019 - Proceedings*. 8975585

Thermography Based Real Time Intelligent Condition Monitoring System for Solar Power Inverter

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Enhancement of Fault ride through strategy for single-phase grid-connected photovoltaic systems

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Fault Classification for Photovoltaic modules using Thermography and Image Processing

Kurukuru, V. S. B., Haque, A. & Khan, M. A., sep. 2019, *2019 IEEE Industry Applications Society Annual Meeting, IAS 2019*. 8912356

Fault diagnosis of Photovoltaic Modules

Khan, M. A., Haque, A., Kurukuru, V. S. B., Khan, I. & Jaffery, Z. A., jun. 2019, *I: Energy Science & Engineering*. 7, 3, s. 622-644

Intelligent Control of Converter for Electric Vehicles Charging Station

Jha, M., Blaabjerg, F., Khan, M. A., Kurukuru, V. S. B. & Haque, A., jun. 2019, *I: Energies*. 12, 12, 2334.

An efficient islanding classification technique for single phase grid connected photovoltaic system

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Fault classification for Photovoltaic Modules Using Thermography and Machine Learning Techniques

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Control and stability analysis of H5 transformerless inverter topology

Khan, M. A., Haque, A. & Kurukuru, V. S. B., 26. mar. 2019, *2018 International Conference on Computing, Power and Communication Technologies, GUCON 2018*. s. 310-315 8674915

A Multi Feature Based Islanding Classification Technique for Distributed Generation Systems

Fatama, A-Z., Haque, A. & Khan, M. A., 2019, *2019 International Conference on Machine Learning, Big Data, Cloud and Parallel Computing (COMITCon)*. s. 160-166

Fault classification for Photovoltaic Modules Using Thermography and Machine Learning Techniques

Kurukuru, V. S. B., Haque, A. & Khan, M. A., 2019, *2019 IEEE Industry Applications Society Annual Meeting*.

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Kurukuru, V. S. B., Haque, A. & Khan, M. A., 2019, *Applications of Computing, Automation and Wireless Systems in Electrical Engineering - Proceedings of MARC 2018*. Sood, Y. R., Tomar, A. & Mishra, S. (red.). s. 649-661 (Lecture Notes in Electrical Engineering, Bind 553).

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Voltage-Balancing Control for Stand-Alone H5 Transformerless Inverters

Khan, M. A., Haque, A. & Kurukuru, V. S. B., 2019, *Applications of Computing, Automation and Wireless Systems in Electrical Engineering*. Tomar, A., Sood, Y. R. & Mishra, S. (red.). s. 663-675 (Lecture Notes in Electrical Engineering, Bind 553).

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Hybrid voltage control for stand alone transformerless inverter

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Performance optimization of UPFC assisted hybrid power system

Kurukuru, V. S. B., Khan, M. A. & Singh, R., 13. jun. 2018, *2018 IEEMA Engineer Infinite Conference, eTechNxT 2018*. Urooj, U. S. & Mukhopadhyay, S. (red.). s. 1-6

Grid connected energy efficient building with roof top SPV

Khan, M. A., Mishra, S. & Harish, V. S. K. V., 11. maj 2018, *2017 Recent Developments in Control, Automation and Power Engineering, RDCAPE 2017*. s. 120-124

Fault Classification for Single Phase Photovoltaic Systems using Machine Learning Techniques

Ahmad, S., Hasan, N., Kurukuru, V. S. B., Khan, M. A. & Haque, A., 2018, *2018 8th IEEE India International Conference on Power Electronics (IICPE)*.

Intelligent control of fixed capacitor - thyristor controlled reactor for power quality improvement

Khan, M. A., Kurukuru, V. S. B., Mishra, S. & Singh, A. K., 28. jun. 2016, *7th IEEE India International Conference on Power Electronics, IICPE 2016*. 8079342

Intelligent pitch angle control for wind-doubly fed induction generator system

Khan, M. A., Kurukuru, V. S. B., Singh, R., Gupta, A. & Dehury, S. S., 2016, *India International Conference on Power Electronics, IICPE*.

Priser

Best Project Award

Khan, Mohammed Ali (Modtager), 2013

Excellent Oral Presentation Winner

Khan, Mohammed Ali (Modtager), 25. nov. 2022

Otto Mønstedts Fond - Conference Participation Abroad

Khan, Mohammed Ali (Modtager), 24. okt. 2023

World's Top 2 % Scientists in Energy

Khan, Mohammed Ali (Modtager), 4. okt. 2023

Presse/medie

Artificial intelligence and machine learning for power electronics

Mohammed Ali Khan

09/11/2021

1 Mediebidrag

Solar inverter fault detection techniques at a glance

Mohammed Ali Khan

14/04/2022

1 Mediebidrag