



Department of Electrical and Electronic Engineering
Khulna University of Engineering & Technology
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Biography

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Amit Kumer Podder

Assistant Professor

Research Area Renewable energy,
Microgrid system, Security system, Conveyor
control system

Education

M.Sc. in EEE

Khulna University of Engineering & Technology, Bangladesh (January-2017-2019)

Thesis Title: [Model predictive based energy efficient control of an on-grid PV inverter](#)

Satisfactory

B.Sc in EEE

Khulna University of Engineering & Technology, Bangladesh (2012-2016)

Higher Secondary School Certificate

Govt. Azizul Haque College, Bangladesh (2009-2011) Achievement: Board Scholarship in Talentpool Category

Secondary School Certificate

SOS Hermann Gmeiner College, Bogra., Bangladesh (2007-2009) Achievement: Board Scholarship in General Category

Service Records

- **Assistant Professor**
Department/Section: EEE
KUET From 01-01-1970 to 01-01-1970
Working Area: Khulna
Responsibility: Conducting classes and labs and supervising students
- **Lecturer**
Department/Section: EEE
KUET From 01-01-1970 to 01-01-1970
Working Area: Khulna
Responsibility: Teaching & Conducting sessional classes.
- **Lecturer**
Department/Section: EEE
North Western University From 01-01-1970 to 01-01-1970
Working Area: Khulna
Responsibility: Teaching and conducting sessional classes.

Research Interest

Renewable energy, Microgrid system, Security system, Conveyor control system

Security system design using RFID, Bluetooth, GSM and Arduino microcontroller

Industrial automation for sophisticated conveyor system

Model predictive control for renewable energy source based microgrid applications

Publication

Books

1. Podder, A. K., Rahman, M. Z. and Fahim, S. M. a. S. M. F. H. (June 2021 (Forthcoming)), ISBN:9780367610920, CRC Press, Taylor & Francis

Journals

14. (2021), "Integrated Modeling and Feasibility Analysis of a Rooftop Photovoltaic Systems for an Academic Building in Bangladesh," Oxford University Press, vol. In Press
13. Podder, A. K., Chakraborty, O., Islam, S. and Alhelou, N. M. K. a. H. H. (2021), "Control Strategies of Different Hybrid Energy Storage Systems for Electric Vehicles Applications," IEEE, vol. 9, pp. 51865-95
11. (April, 2021), "IoT based smart agrotech system for verification of Urban farming parameters," Elsevier, vol. 82, pp. 104025
10. Podder, A. K., Islam, S. and Rahman, A. A. U. (18 December 2020.), "A multivibrator and oscillator trainer kit for an emerging pedagogy in engineering," SAGE, vol. In Press
9. (November, 2020), "Systematic Categorization of Optimization Strategies for Virtual Power Plants," MDPI, vol. 13, no. 23, pp. 6251
8. Podder, A. K., Habibullah, M., Tariquzzaman, M. and Padmanaban, E. H. a. S. (September, 2020), "Power Loss Analysis of Solar Photovoltaic

Integrated Model Predictive Control Based On-Grid Inverter," MDPI, vol13, no.18, pp.4669

7. Komol, M. M. R. , Joarder, M. K. , Arifat, A. and Podder, A. A. K. (September, 2020) , " Fingerprint and password controlled garage access system with belt pulley and power screw driven mechanism," , Inderscience Publishers, vol8, no.1, pp.36-45
7. Sohag, M. U. and Podder, A. A. K. (September, 2020) , " Smart garbage management system for a sustainable urban life: An IoT based application," , Elsevier, vol11
6. Podder, A. K. , Tariquzzaman, M. and Habibullah, A. M. (January, 2020) , " Comprehensive performance analysis of model predictive current control based on-grid photovoltaic inverters," , IOP Science, vol1432, no. 012051
4. Komol, M. M. R. , Podder, A. K. and Nabeed, A. A. T. (September, 2019) , " Remote Sensing Global Ranged Door Lock Security System via Mobile Communication," , MECS, vol9, no.5, pp.25-37
3. Podder, A. K. , Roy, N. K. and Pota, A. H. (April, 2019) , " MPPT Methods for Solar PV Systems: A Critical Review Based on Tracking Nature," , IET Digital Library, vol13, no.10, pp.1615-1632
2. Komol, M. M. R. , Podder, A. K. , Ali, N. and Ansary, S. M. (2018) , " RFID and Finger Print Based Dual Security System: A Robust Secured Control to Access Through Door Lock Operation," , Science Publishing Group, vol6, no.1, pp.15-22
1. Podder, A. K. , Hasan, M. R. , Roy, N. K. and Komol, M. M. R. (July, 2018.) , " Economic Analysis of a Grid Connected PV Systems: A Case Study in Khulna," , EJERS, vol3, no.7, pp.16-21

Conference

16. Hossain, M. A. , Tariquzzaman, M. , Podder, A. K. , Sabbir, M. S. H. and Habibullah, A. M. (26-28 December, 2019) , "Predictive Current Control of a Simplified Three-level Neutral-point Clamped Inverter," , IEEE
15. Swarnakar, S. C. and Tariquzzaman, A. K. P. a. M. (20-22 Dec. 2019) , "Solar, Fuel Cell and Battery Based Hybrid Energy Solution for Residential Appliances," , IEEE
14. Rahman, M. M. , Bappy, A. S. and Podder, M. M. R. K. a. A. K. (20-22 Dec. 2019) , "Automatic Product 3D Parameters and Volume Detection and Slide Force Separation with Feedback Control System," , IEEE
13. Komol, M. M. R. , Nawaz, M. M. , Podder, A. K. and Khan, M. T. (17-19 December, 2019) , "Design, Construction and Performance Test of a Pedal Operated Hacksaw Machine,"
12. Mofidul, R. B. , Sabbir, M. S. H. and Rahman, A. K. P. a. M. S. (3-5 May, 2019.) , "Design and Implementation of Remote Controlling and Monitoring System for Automatic PLC Based Packaging Industry," , IEEE Xplore
11. Bappy, F. I. , Islam, M. J. , Podder, A. K. , Dipta, D. R. and Hossain, H. M. R. F. a. E. (3-5 May, 2019) , "Comparison of Different Hybrid Renewable Energy Systems With Optimized PV Configuration to Realize the Effects of Multiple Schemes," , IEEE Xplore
10. Khan, M. T. , Komol, M. M. R. , Podder, A. K. and Mishu, S. A. (30-31 January, 2019.) , "A Developed Length Based Product Separating Conveyor for Industrial Automation," , IEEE Xplore
9. Podder, A. K. , Ahmed, K. , Roy, N. K. and Habibullah, A. M. , "Design and Simulation of a Photovoltaic and Fuel Cell Based Micro-grid System," , IEEE
7. Podder, A. K. and Habibullah, A. M. (20-22 Dec. 2018) , " Model Predictive Based Energy Efficient Control of Grid-connected PV Systems," , IEEE, BUET, pp.413-416
6. Podder, A. and Bosu, A. (27-29 December 2017.) , "Performance Analysis of the Communication Satellite at the Proposed Orbital Slots for Bangladesh," , IEEE
5. Nahid, E. , Podder, A. K. and Mollah, M. N. (7-9 December 2017.) , "Design and Performance Analysis of a Novel Electromagnetic Bandgap Structure Assisted Phased Array Antenna ," , IEEE
4. Komol, M. M. R. and Podder, A. K. (7-9 December 2017.) , "Design and Construction of Product Separating Conveyor based on Color ," , IEEE
3. Podder, A. K. , Islam, A. S. M. J. , Hasanuzzaman, S. and Bhuiyan, M. S. I. a. A. (7-9 December 2017.) , "Substrate Effects on Channel Temperature Distribution of AlGaIn/GaN HEMT," , IEEE
2. Podder, A. , Ahmed, K. and Biswas, N. K. R. a. P. (28-30 September) , "Design and Simulation of an Independent Solar Home System with Battery Backup," , IEEE
1. Islam, A. S. M. J. , Hasanuzzaman, S. , Podder, A. , Islam, M. and Bhuiyan, A. (13-14 May, 2016) , "Theoretical analysis of substrate effects on the DC performance of AlGaIn/GaN high electron mobility transistor,"