

Curriculum Vitae of Dr. Nur Mohammad
(As on 5th April, 2019)



1. **Name** : Dr. Nur Mohammad
2. **Father's Name** : Afzal Hossain Khan
3. **Present Position** : Associate Professor of Power Systems, EEE, CUET
4. **Postal Address** : Dr. Nur Mohammad
Associate Professor,
Department of Electrical and Electronic Engineering
Chittagong University of Engineering and Technology
Chittagong-4349, Bangladesh.
5. **Email Addresses** : nur.mohammad@cuet.ac.bd, nmkhanphd@gmail.com
6. **Tel/Cellphones** : Tel +88031714920~22, Ext. 2286, Cell +8801710610152
4. **Permanent Address** : Village - Kumirgari, Post Office - Bongram,
Police Station - Ataikula, District - Pabna
5. **Date of Birth** : 10th November, 1986
7. **Nationality** : Bangladeshi
8. **Educational Background**

Examination Passed	Name of Institution	Year of Passing	Board / University/Country	Division /Class/GPA
Ph.D.	Queensland University of Technology	2018	QUT, Brisbane, Australia	Satisfactory
M.Sc. (EEE)	Chittagong University of Engineering and Technology	2013	CUET, Chittagong, Bangladesh	97.00%
B.Sc. (EEE)	Rajshahi University of Engineering and Technology	2008	RUET, Rajshahi, Bangladesh	91.50%
H.S.C (Science)	Notre Dame College	2003	Dhaka Board, Bangladesh	78.00%
S.S.C (Science)	Miapur School	2001	Rajshahi Board, Bangladesh	97.60%

9. Thesis/Dissertation

- Ph.D Dissertation - Competitive Demand Response Trading In Electricity Markets: Aggregator And End -User Perspectives, Ph.D. dissertation 2018, Queensland University of Technology, QUT, Brisbane, Australia
- M.Sc. Thesis - Highly Efficient Maximum Power Point Tracking Using DC-DC Coupled Inductor Single-Ended Primary Inductance Converter for Photovoltaic Power Systems -2013, Chittagong University of Engineering and Technology, CUET, Chittagong, Bangladesh
- B.Sc. Thesis - Dispersion Control Characteristics of Dielectric Cylindrical Waveguide and a Novel Approach of Dispersion Compensation - 2008, Rajshahi University of Engineering and Technology, RUET, Rajshahi, Bangladesh

10. Research Interest

Electricity Mixing and Pricing Policy, Smart Grid Management, Application of IoT in Power Systems, Smart Metering, Home and Building Energy Management, Power System Economics, Economic Load Dispatch, Power Systems Simulation, Transactive Energy and Microgrid Optimization, Distribution Electricity Market Modeling, Electric Vehicle Charging and Energy Storage Management, Demand Side Management and Demand Response, Mathematical Programming and Optimization , Bi-level Optimization, Mathematical Problem with Equilibrium Constraint (MPEC), Game Theory.

11. Course Tech in EEE, CUET

i) Postgraduate

EEE 6206: Optimization in Power System Operation [PhD, MSc]

EEE 6211: Power System Operation and Control [PhD, MSc]

EEE 6211: Thesis [PhD, MSc Thesis]

ii) Undergraduate

EEE 471: Switchgear and Power System Protection

EEE 481: Power Stations

EEE 485: Renewable Energy Conversion

EEE 491: High Voltage Engineering

EEE 351: Electrical Power Transmission and Distribution

EEE 361: Power System Analysis

EEE 363: Control Systems

EEE 353: Measurement and Instrumentation

EEE 473: Semiconductor Physics and Devices

12. Carrier History: Teaching/Professional Experience

Post	University/ Institution & Country	Duration		
		From	To	Y M D
Associate Professor	Chittagong University of Engineering and Technology, Chittagong 4349, Bangladesh	13/03/2019	Till Date	
Assistant Professor	Chittagong University of Engineering and Technology, Chittagong 4349, Bangladesh	17/11/2011	12/03/2019	7-03-25
Lecturer	Chittagong University of Engineering and Technology, Chittagong 4349, Bangladesh	02/09/2008	17/11/2011	3-2-15
Total				10-06-10

13. Carrier History: Additional Experience and Administrative Responsibilities

Tenure	Affiliation	Activities
May 2018 to Till date	Postgraduate Course Coordinator, Department of Electrical and Electronic Engineering	The role encompasses helping in course planning, academic calendar design, and development and space management for course delivery. Storing, verifying and tabulating students' learning outcomes and course evaluation.

September 2018 to Till date	Assistant Provost, Shahid Mohammad Saha Hall, CUET	Regularly schedule and lead seat-allocation meetings. Communicate with the information received from the student to the provost and the staff.
July 2018 to Till date	Student Advisor, EEE	To assist the individual students in maintaining a balance between the academic and extracurricular aspects of student life.
September 2008 to Till date	Member, Bureau of Research and Testing Consultancy (BRTC)	As one of the members of the BRTC, my responsibility includes technical testing and consultancy service related to Electrical Engineering for the clients. Such activities bridge the relationship between the university and the local industry, which is important for techno-economic development as a whole.
November 2008 to Till date	Editorial Member, Journal of Electrical and Electronic Engineering (JEEE)	Comply guidelines for preparing and submitting manuscripts. Providing a clear statement of the Journal's policies and standard on authorship criteria. Find the referees of the papers submitted. Have to make the important decisions regarding which articles to reject or accept for publication.

14. Professional Affiliation and Membership

Member: Institute of Engineers Bangladesh, [IEB](#) (25108)

Member: Institute of Electrical and Electronic Engineers, [IEEE](#) (93543288)

Editor: Journal of Electrical and Electronic Engineers, [JEEE](#)

15. Training/Workshop Attended

- Workshop on **Familiarization with Bangladesh Standard (BDS) and Training on Parameter Measurement for Solar PV System Equipment**, Organized by Dept. of EEE, Bangladesh University of Engineering & Technology (BUET), Sponsored by Sustainable and Renewable Energy Development Authority (SREDA), Dhaka, Bangladesh (26-28 June, 2018).
- Workshop on **Skill Development Competition Arrangement on Divisional Level**, Organized by Divisional Commissioner Office, Chittagong, Bangladesh (22 February, 2018).
- Workshop on **It's all about Energy - Dealing with Australia's Energy Future, Does Coal have a Future? Renewable Energy - How far Can We Go?** Organized by Australian Energy Market Operator, Queensland Museum, Brisbane, Australia (18 August, 2017).

- Seminar on **Renewable Energy: What Difference will Storage Really Make?** organized by Power, Energy and Clean Technologies (PECT) Seminar Series in Science and Engineering Faculty, Queensland University of Technology, Brisbane, Australia (2 September 2016).

16. Academic Award and Scholarship

- International Postgraduate Research Award for pursuing PhD in Electrical Power Engineering (2014- 2017)
- QUT Top Up Excellence Scholarship (2014- 2017)
- Technical Scholarship for pursuing BSc Eng. ((2005 - 207)
- Secondary School Certificate Merit Scholarship (2004)
- District Commissioner Merit Medal and Certificate (2002)
- Secondary Junior School Talent pool Scholarship (1995)

17. Recent Research and Consultancy Areas

i) Research Projects

- Smart Grid: Demand-Side Management using Dynamic Pricing and Feed-in Tariff
- Residential Load Scheduling using IoT for Distribution Power System Automation
- IoT based Control of Appliances for Smart Home to Reduce Electricity Consumption
- Transactive Load Control for Heating Ventilation Air Conditioning (HVAC) in Industry
- Optimization in Power System Extension Planning, Operation and Control
- Economic Operation of Interconnected and Cross-border Power Systems
- Grid-Connected DFIG to Regulate Power System Primary Frequency and Voltage
- Simulation of a Vehicle-to-Grid (V2G) System and its Impact on Power System Stability
- MPPT Algorithms for Harnessing Power from PV and Wind Energy Converter System
- Security Constraint Economic Load Dispatch Problem for Reliable Electricity Supply

- Energy Mixing, Pricing Policy: Vision-2041-Future Scenario for Sustainable Development

i) Consultancy Projects

- Cable-Car project across NAF river, Cox's- Bazar
- Teaching-Learning Capacity Development in EEE of CUET under HEQEP Project funded by WB, Netherland
- Design of 200 MW power plant in Cox's Bazar
- Grid-Connected DFIG to Regulate Power System Primary Frequency and Voltage
- Installation of Capital Machinery and Equipment's for Hexane Production Plant, Super Petrochemical (Pvt.) Limited, Chittagong, Bangladesh.
- Testing and inspection of Sealed lead Acid battery from Commissioner of Customs, Custom House, Chittagong, Bangladesh.
- Testing and inspection of Online UPS backup battery from Commissioner of Customs, Custom House, Chittagong, Bangladesh.
- Inspection of Installation of Voice Communication Control System (VCCS) and VHF Communication System at Shah Amanat International Airport, Chittagong, Bangladesh.
- Consultancy services for preparation, specification, estimation , tender document and contract engagement equipment and machinery for different workshop, jetty side and dry dock side.

18. Supervision/Evaluation of Research Project [in the last 2 years]

i) Postgraduate

Master Degree/ PhD	Supervision Started Date 18/5/2018	Student's Name	Supervisor/Co-Supervisor(s)
MSc Eng.	Supervision in Progress	Akramul Haque	Supervisor
MSc Eng.	do	Kanij Ahmed	Co-Supervisor
MSc Eng.	do	Ataur Rahman	Supervisor

ii) Undergraduate

I have supervised many undergraduate students' project. Some of the project topics are given below:

1. Multi-Directional Solar Tracker Using Low-Cost Photo Sensor Matrix (Completed 2013).
2. A Novel Two Switch Non-inverting Buck-Boost Converter based Maximum Power Point Tracking System (Completed-2012).
3. A Scalable Power Factor Controller for Low-Voltage Distribution System (Completed 2012).
4. Assisted Vehicle Driving by Embedded Autonomous Safety System (Completed 2011).

19. List of Publications:

19.1. International Journal:

SL. No.	Title of the Paper	Name of the Journal with Vol. No. pp	Year and Country of Publication	Name of Author(s)*
1	Transactive control of industrial heating–ventilation–air-conditioning units in cold-storage warehouses for demand response	<i>Sustainable Energy, Grids and Networks</i> Vol. 18, pp: 100201	Mar 2019, Elsevier, Switzerland, [Scopus]	Nur Mohammad, Ataur Rahman
2	Input Switched Closed-Loop Single Phase ĆUK AC to DC Converter with Improved Power Quality	<i>International Journal of Power Electronics and Drive Systems,</i> Vol. 10, No. 3, pp. 717 – 730	Mar 2019, Indonesia, [Scopus]	Md. Shamsul Arifin, Nur Mohammad, Mohammad Ibrahim Khalil, Mohammad Jahangir Alam
3	A Design Consideration for Planar Inverted Fractal Antenna to Minimize Length-Dependent Specific Absorption Rate	<i>Indonesian Journal of Electrical Engineering and Computer Science,</i> Vol. 12, No. 3, pp. 1171 – 1178	Sept 2018, Indonesia, [Scopus]	Akramul Haque, Sheikh Alimur Razi, Nur Mohammad
4	The Role of Demand Response Aggregators and the Effect of GenCos Strategic Bidding on the Flexibility of Demand	<i>Energies</i> Vol. 11, No.12, pp: 1 –22	Nov 2018, MDPI, Switzerland, [Scopus]	Mohammad, Nur Mishra, Yateendra
5	Coordination of Wind generation and Demand Response to Minimize Operation Cost in Day-	<i>IET Generation Transmission & Distribution</i> Vol. 12, No.16,	Sept 2018, Institution of Engineering and Technology,	Mohammad, Nur Mishra, Yateendra

	Ahead Electricity Markets using Bi-level Optimization Framework	pp: 3793 –3802	UK, [Scopus]	
6	Highly Efficient Maximum Power Point Tracking Using DC-DC Coupled Inductor Single-Ended Primary Inductance Converter for Photovoltaic Power Systems	<i>International Journal of Sustainable Energy</i> , Vol. 35, No. 9, pp: 914 – 932	Sept 2016, Taylor and Francis, UK, [Scopus]	Quamruzzaman, Muhammad Mohammad, Nur Matin, M. A. Alam, M. R.
7	A Novel Two Switch Non-inverting Buck-Boost Converter based Maximum Power Point Tracking System	<i>International Journal of Electrical and Computer Engineering</i> , Vol. 3, No. 4, pp: 467 – 477	Aug 2013, Institute of Advanced Engineering and Science, Indonesia [Scopus]	Tawfique Ahmed, Khandker Datta, Mithun Mohammad, Nur
8	Parasitic Effects on the Performance of DC-DC SEPIC in Photovoltaic Maximum Power Point Tracking Applications	<i>Smart Grid and Renewable Energy</i> , Vol. 4, pp: 113 – 121	Dec 2013, Scientific Research Publishing, USA	Mohammad, Nur Q. Zaman, MRT Hossain MR Alam
9	Improved Solar Photovoltaic Array Model with FLC Based Maximum Power Point Tracking	<i>International Journal of Electrical and Computer Engineering</i> , Vol. 2, No. 6, pp. 717 – 730	June 2013, Institute of Advanced Engineering and Science, Indonesia, [Scopus]	Mohammad, Nur Islam, Asiful Karim, Tarekul Hossain, Quazi Delwar
10	Design and Implementation of Hybrid Automatic Solar-Tracking System	<i>Journal of Solar Energy Engineering</i> , Vol. 135, No. 1, pp: 0110131 – 0110136	Aug 2012, American Society of Mechanical Engineers USA [Scopus]	Mohammad, Nur Karim, Tarekul
11	The Effect of Environmental Obstacle on Electromagnetic Waves for Efficient Wireless Communication by FDTD Method	<i>International Journal of System Simulation</i> Vol.6, No. 1 pp. 21 – 24	June 2012, Serial Publication Pte Ltd., India	Abdul Khaleque Md Mortuza Ali Mohammad, Nur

19.2. Book/Book Chapter:

SL. No.	Title of the Book/Book Chapter:	Publisher and DOI	Year and Country of Publication	Name of Author(s)*
1	Book Chapter: Demand Side Management and Demand Response for Smart Grid	<i>Kabalci Ersan, Kabalci Yasin (Editors), Book: Smart Grids and Their Communication Systems, Springer, Singapore, DOI: 10.1007/978-981-13-1768-2_6</i>	March 2019, Springer Nature, ISBN: 978-981-13-1767-5 Singapore	Mohammad, Nur Mishra, Yateendra
2	Book: Dispersion Compensation of the Fiber Optic Cables: Principles and Practices	<i>VDM Verlag Dr. Müller, ISBN: 978-3-639-31401-4</i>	June 2010, VDM Verlag Dr. Müller, ISBN: 978-3-639-31401-4 Germany	Mohammad, Nur Ahmed, Tofael

19.3. National Journal:

SL. No.	Title of the Paper	Name of the Journal with Vol. No. pp	Year and Country of Publication	Name of Author(s)*
1	Performance Analysis of A Single-Phase H-Brridge Sinusoidal PWM Solar Inverter	<i>International Journal of Engineering and Technology, Vol. 9, No. 3 pp: 895 – 904</i>	Sept 2012, g-Science, ISSN: 1812-7711, Bangladesh	Nur Mohammad, Prodip Biswas, Abdulah, Rarequl Karim
2	Dispersion Control Characteristics of The Dielectric Cylindrical Waveguide and A Novel Approach of Dispersion Compensation	<i>International Journal of Engineering and Technology, Vol.7, No. 3 pp: 667 – 671</i>	Sept 2010, g-Science, ISSN: 1812-7711, Bangladesh	Nur Mohammad, Asiful Islam, Abdul Khaleque, M. Shamsul Arefin

19.4. Proceedings of International Conference/Seminar/Workshop:

SL. No.	Title of the Paper	Name of the Proceedings with Date and Location	Year and Country of Publication	Name of Author(s)*
1	Optimal Energy Mix and Operation Cost in the Presence of Nuclear and Solar PV Generation	<i>International Conference on Electrical, Computer Communication Engineering (ECCE 2019)</i>	Feb 2019, Coxs Bazar, Bangladesh	Showkat Hossain, Mufрад Rahaman, Israt Tasnim, Nur Mohammad
2	A Survey of Cross Country Generation Mix Opportunities and Challenges: Bangladesh, Australia, and the U.S.A Perspectives	<i>International Conference on Electrical, Computer Communication Engineering (ECCE 2019)</i>	Feb 2019, Coxs Bazar, Bangladesh	Moon Barua, Nur Mohammad,
3	Scenario of Power Generation-Mix in Bangladesh and Australia	<i>International Conference on Electrical, Computer Communication Engineering (ECCE 2019)</i>	Feb 2019, Coxs Bazar, Bangladesh	Sagar Kumar Shil, Farzana Parvin Polly, Mohammad Zahidul Islam, Nur Mohammad
4	An Outlook over Electrical Energy Generation and Mixing Policies of Bangladesh to Achieve Sustainable Energy Targets -Vision 2041	<i>2019 International Conference on Robotics, Electrical and Signal Processing Techniques (ICREST)</i>	Sept 2018, Dhaka, Bangladesh	Md. Kamrul Hasan, Nur Mohammad
5	Transactive Market Clearing Model with Coordinated Integration of Large-Scale Solar PV Farms and Demand Response Capable Loads	Proceedings of <i>Australian Universities Power Engineering Conference (AUPEC-2017)</i>	Nov 2017, Melbourne, Australia	Mohammad, Nur Mishra, Yateendra
6	Competition Driven Bi-Level Supply Offer Strategies in Day-Ahead Electricity Market	Proceedings of <i>Australian Universities Power Engineering Conference (AUPEC-2016)</i>	Sept 2016, Brisbane, Australia	Mohammad, Nur Mishra, Yateendra
7	Maximum Power Point Tracking Of Photovoltaic Arrays in Matlab Using Fuzzy Logic Controller	Proceedings of <i>Annual IEEE India Conference: Green Energy, Computing</i>	Dec 2010, Kolkata, India	Islam, M.A. Talukdar, A.B. Mohammad, Nur

		<i>and Communication (INDICON-2010)</i>		Khan, Poritosh Kumar Shadhu
8	Modeling And Performance Analysis of A Generalized Photovoltaic Array in Matlab	Proceedings of <i>International Conference on Power Electronics, Drives and Energy Systems (PEDES 2010 and 2010 Power India)</i>	Dec 2010, New Delhi, India	Islam, M.A. Mohammad, Nur Khan, Poritosh Kumar Shadhu

19.5. Proceedings of National Conference/Seminar/Workshop:

SL. No.	Title of the Paper	Name of the Proceedings with Date and Location	Year and Country of Publication	Name of Author(s)*
1	Electric Power Generation-Mix for Bangladesh and Its Future	<i>International Conference on Electrical, Computer Communication Engineering (ECCE 2019)</i>	Feb 2019, Coxs Bazar, Bangladesh	Anik Nath, Suirov Barua, Nur Mohammad
2	Performance Improvement of In _{0.65} Ga _{0.35} N Solar Cell Incorporated With Front and Back Contact	<i>2018 4th International Conference on Electrical Engineering and Information & Communication Technology (iCEEICT)</i>	Sept 2018 Dhaka, Bangladesh	Sheikh Alimur Razi, Syeda Maliha Rahim, Rodoshi Zakaria Urbi, Nur Mohammad, Rabiul Islam
3	Multi-Directional Solar Tracker Using Low-Cost Photo Sensor Matrix	Proceedings of <i>IEEE International Conference on Informatics, Electronics and Vision (ICIEV- 2014)</i>	May 2014, Dhaka, Bangladesh	M.N. Samrat, N. Hoque Mohammad, Nur, I.M.J Prince, M.H.R. Adib, R. M. Iftakherahme
4	Dispersion Control Characteristics of Four Ring and Five Ring Hexagonal Photonic Crystal Fiber: A Comparison	Proceedings of <i>National Conference on Electronics, Information and Telecommunication (NCEIT-2008)</i>	Dec 2008, Rajshahi, Bangladesh	M.A.G. Khan, Nur Mohammad, Tareq Anam Fahim

20. Identifiers and Profile Link:

- [Mendeley profile](#)
- [Google Scholar Profile](#)
- [ResearchGate Profile](#)
- [CUET Academic Staff](#)
- [ResearcherID](#)
- [Linkedin Profile](#)
- [Publons Profile](#)

21. Reviewer/Editor:

Have editorial contributions to review for proceedings in conferences and following academic journals. The detail is referred to <https://publons.com/author/1358175/dr-nur-mohammad#profile>

- ✓ 2018 Reviewed for [IET Generation, Transmission & Distribution](#)
- ✓ 2018 Reviewed for [IET Renewable Power Generation](#)
- ✓ 2018 Reviewed for [IEEE Transaction Industrial Informatics](#)
- ✓ 2018 Reviewed for [IEEE Transaction on Smart Grid](#), [IET Smart Grid](#)
- ✓ 2018 Reviewed for [International Conference on Innovations in Science, Engineering and Technology \(ICISSET\)](#)
- ✓ 2014 Reviewed for [International Journal of Energy Technology and Policy](#)