

# *Curriculum Vitae* of **Md. Rasel Sarkar**

## **Lecturer**

Dept. of Electrical and Electronic Engineering,  
World University of Bangladesh, Dhanmondi,  
Dhaka - 1205, Bangladesh.

Contact No.: +8801722636396,

**Email:** raselbdeee@gmail.com; rasel.sarkar@eee.wub.edu.bd



## *Career Objective*

---

To pursue higher studies in a potential research university that will polish my technical/scientific skills and help me grow as a potential scientist into an excellent researcher, a good academician and human being.

## *Educational Background*

---

- ❑ Master of Engineering Science (M. Eng. Sc.)  
**Mechanical Engineering**  
University of Malaya, 50603 Kuala Lumpur, Malaysia.  
**Results:** Pass (Full Research Mode Program)  
Year of passing: **2019**
- ❑ Bachelor of Science (B.Sc.) in Engineering  
**Electrical and Electronic Engineering (EEE)**  
Prime University, Dhaka, Bangladesh.  
**Results:** CGPA: **3.64** on scale 4.00  
Year of passing: **2013**
- ❑ Higher Secondary Certificate (H.S.C)  
Police lines School and College, Kushtia, Bangladesh  
**Results:** GPA: 3.90 on scale 5.00  
Year of passing: 2008
- ❑ Secondary School Certificate (S.S.C.)  
Mujibnagar Model High School, Meherpur,  
Dhaka, Bangladesh.  
**Results:** GPA: 4.44 on scale 5.00  
Year of passing: 2006

## *Research Interests*

---

**Research Field:** forecasting, Optimization, Artificial Intelligence, Natural inspired algorithm, Wind Energy, Solar energy, Control, Energy Efficiency, Efficiency Improvement. Energy Storage System, Smart Grid, Image Processing, and Climate Change, Smart City.

## *Research Experience*

---

**Field of Study:** Wind Energy, Artificial Intelligence and Natural Inspired Algorithms.

**Research Topic:** Application of Nature-Inspired Algorithms and Artificial Intelligence for Optimal Efficiency of Horizontal Axis Wind Turbine.

**Supervisors:**

- Dr. Sabariah Binti Julai  
Senior Lecturer,  
Um Power Department of Mechanical Engineering, Faculty of Engineering, University of Malaya, 50603, Kuala Lumpur, Malaysia
- Dr. Chong Wen Tong  
Associate Professor,  
Department of Mechanical Engineering, Faculty of Engineering, University of Malaya, 50603, Kuala Lumpur, Malaysia.

**Objectives:**

- To propose an effective activation functions of NAR and NARX Neural Network for wind speed forecasting in Malaysia
- To optimize wind turbine blade (Airfoil S822) parameters using ACO, PSO and ABC algorithms and to find out effectiveness of proposed algorithms using ANFIS.
- To optimize of PID controller parameters using ACO for pitch angle controlling of wind turbine for stable wind power.

**Funded by:** University of Malaya Research Grants (UMRG), University Malaya, Malaysia.

**Duration:** 2.5 years (December 2014 to May 2017)

***Job Experience***

---

**Current position:**

**Designation:** Lecturer

**Department:** Department of Electrical and Electronic Engineering

**Organization:** World University of Bangladesh (WUB),  
3/A, Road # 4, Dhanmondi, Dhaka 1205, Bangladesh.

**Subject Taught:** Renewable Energy, Electrical Circuit Analysis, Power System Analysis, Control System and Electronics.

**Job Duration:** From October 2017 to Present

**Previous Experience:**

**Designation:** Research Assistant

**Lab:** Renewable Energy

**Department:** Mechanical Engineering

**Organization:** University of Malaya, 50603 Kuala Lumpur, Malaysia.

**Job Duration:** December 2014 to May 2017

**Designation:** Demonstrator

**Department:** Mechanical Engineering

**Organization:** University of Malaya, 50603 Kuala Lumpur, Malaysia.

**Job Duration:** From September 2015 to January 2016 and From February 2017 to May 2017

**Designation:** Teaching Assistant

**Department:** Electrical and Computer Engineering, Kulliyah of Engineering

**Organization:** International Islamic University of Malaya (IIUM), Malaysia.

**Job Duration:** From September 2014 to December 2014

## *Publications*

---

### **ISI Journal Articles**

- ❖ **R. Sarkar**, S. Julai, S. Hossain, W. T. Chong, and M. Rahman, "A Comparative Study of Activation Functions of NAR and NARX Neural Network for Long-Term Wind Speed Forecasting in Malaysia," *Mathematical Problems in Engineering*, vol. 2019, p. 14, **2019**. (*ISI-Indexed*) <https://doi.org/10.1155/2019/6403081> (**Published**)
- ❖ **Sarkar, M.R.**; Julai, S.; Wen Tong, C.; Toha, S.F. "Effectiveness of Nature-Inspired Algorithms using ANFIS for Blade Design Optimization and Wind Turbine Efficiency." *Symmetry* **2019**, 11, 456. (*ISI-Indexed*) <https://doi.org/10.3390/sym11040456>. (**Published**)
- ❖ **Md. Rasel Sarkar**, Sabariah Julai, Ch ong Wen Tong and Md Mahmudur Rahman. "Design of Optimal Pitch Angle Control System for Stable Wind Turbine Power Using ACO-PID Controller" *IET Renewable Power Generation (ISI-Indexed)* – (**Under Review**).

### **Scopus Journal Articles**

- ❖ **MR Sarkar**, S Julai, CW Tong, OZ Chao, M Rahman, *Mathematical Modelling and Simulation of Induction Generator Based Wind Turbine in Matlab/Simulink*' *ARPJ Journal of Engineering and Applied Sciences*, VOL. 10, NO 22, Dec, 2015 ISSN 1819-6608. (**Published**)
- ❖ **Md Rasel Sarkar**, Md Abdul Halim, Anas Abdullah Alvi, Mamunur Rahman, Md Jesmin Nahar: "Single Axis Solar Tracker for Maximizing Power Production and Sunlight Overlapping Removal on the Sensors of Tracker" *International Journal of Electrical and Computer Engineering*. (**Under Review**)
- ❖ **Md. Rasel Sarkar**, Sabariah Julai, Ong Zhi Chao, Chong Wen Tong and Mahmudur Rahman "A Study on Effects of Flow Uniformity on Vibration and Power Generation of Vertical Axis Wind Turbine" "Vibration" (**Under Review**)

### **Conference Articles**

- ❖ Mamun, M. A. A., **Sarkar, M. R.**, Parvez, M., Nahar, M. J., & Rana, M. S. (2017, December). Determining the optimum tilt angle and orientation for photovoltaic (PV) systems in Bangladesh. In *2017 2nd International Conference on Electrical & Electronic Engineering (ICEEE)* (pp. 1-4). IEEE. DOI: 10.1109/CEEE.2017.8412910 (**Published**)
- ❖ **Md. Rasel Sarkar**, Mst. Jesmin Nahar, Awatif Nadia, Md. Abdul Halim, S. M. Sajjad Hossain Rafin and Md. Mamunur Rahman: "Proficiency Assessment of Adaptive Neuro-Fuzzy Inference System to Predict Wind Power: A Case Study of Malaysia" 1st International Conference on Advances in Science, Engineering and Robotics Technology (ICASERT-2019) (**Accepted**)
- ❖ **Md Rasel Sarkar**, Sabariah Julai, Chong Wen Tong, Md. Abdul Halim and Mst Jesmin Nahar: A Comparative Study on Wind Turbines: A Review. International Conference on Computer, Communication, Chemical, Materials and Electronic Engineering (IC4ME2 2019). (**Under Review**)

### *Scholarships*

---

- Scholarship from University of Malaya Research Grants (UMRG), under University of Malaya, during the Master of Engineering Science program for 2.5 years.
- Merit scholarship during the B.Sc. Engineering program for 4 years in Prime University, Dhaka, Bangladesh.

### *Seminar and workshop Experiences*

---

- Practical workshop on COMSOL Multiphysics, Department of Electrical Engineering University of Malaya, 20th December 2016
- Research Methodology Program, March, 2014, University of Malaya, Malaysia.

### *Special Training*

---

- Electrical and Machine Maintenance from Bangladesh-Korea Technical Training Centre and also certified. (6 Months)
- Cisco Certified Network Associate (CCNA) from New Horizons, Dhaka, Bangladesh 3 Months (68 hours)

### *Computer Skills*

---

**Operating System:** MS Windows, Windows XP, Vista.

**Application Software:** Engineering Software: MATLAM/Simulink, OrCAD PSpice, Multisim COMSOL Multiphysics, AutoCAD, Adobe illustrator, Microsoft word, Excel and Power Point.

**Programming language:** Python

### *Language Skills*

---

- Bengali: Native
- English: Good in writing, speaking, listening & reading
- Basic language course completed on Bahasa Melayu

### *Personal Details*

---

Date of Birth : 7 June, 1990  
Father's Name : Md. Rafiqul Islam  
Mother's Name : Mst. Rozina Begum  
Sex : Male  
Blood Group : B<sup>+</sup>  
Religion : Islam  
Marital Status : Married  
Nationality : Bangladeshi by Birth  
Personal Interests : Reading Books, Playing Cricket, & Travelling.  
Permanent Address : Bojrok Jamalpur, Vategram, Sadullapur, Gaibandha, Bangladesh

### *References*

---

**Dr. Sabariah Binti Julai**  
**Senior Lecturer**

Department of Mechanical Engineering, Faculty of Engineering, University of Malaya, 50603 Kuala Lumpur, Malaysia  
Mobile: + 60193809348; Tel: +603-79675317  
E-mail: sabsz@um.edu.my

**Md. Zakir Hossain**  
**Assistant Professor**

Dept. of Electrical and Electronic Engineering, Faculty of Engineering, Dhaka University of Engineering and Technology (DUET), Gazipur, Bangladesh  
Mobile: +8801862648324  
E-mail: mzakir@duet.ac.bd