



# Mohamed Mohamed

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Date of birth: 26/03/1988 | **Nationality:** Egyptian | **Gender:** Male |

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39 Ednaston road, Dunkirk, NG7 2JF, Nottingham, United Kingdom

## WORK EXPERIENCE

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12/12/2021 – CURRENT – Warwick, United Kingdom

### RESEARCH FELLOW – WMG WARWICK

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Project Title: Energy Storage Control BMS

12/08/2018 – 07/05/2020 – Nottingham, United Kingdom

### DEMONSTRATOR – UNIVERSITY OF NOTTINGHAM

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Provides a demonstration for undergraduate students in the following subjects.

1. H41EE1: Aerospace Electrical and Electronic Engineering 1(Nottingham University).
2. MM1PLS: Programming, Professional and Laboratory Skills (Nottingham University).
3. Marking of H41EE1 and MM1PLS coursework and exam script checker
4. Exam script checking

20/10/2015 – 30/11/2017 – Assiut, Egypt

### ASSISTANT LECTURER – UNIVERSITY OF ASSIUT

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Provides a demonstration for undergraduate students in the following subjects.

1. Electric machines I (2nd year)
2. Electric machine II (2nd year)
3. Electric machine II lab (3rd year)
4. Power electronics lab (3rd year)

Participates in final year graduations projects.

1. Design a high set-up converter for PV system (May 2015)
2. Advanced control methods for power system stabilization (May 2016)

21/10/2011 – 19/10/2015 – Assiut, Egypt

### UNIVERSITY TEACHING ASSISTANT – UNIVERSITY OF ASSIUT

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M.Sc. researcher in the field of electric machine control (motor drive)

Provides a demonstration for students in the following subjects.

1. C++ programming language (predatory year)
2. Electric field theory (1st year)
3. Electric machines I (2nd year)
4. Electric machine II (2nd year)
5. Special machines (4th year)
6. Advanced power electronic (4th year)
7. Utilization and energy conversion (4th year)
8. Electric drives (4th year)
9. Special machine lab (4th year)
  - Participates in final year graduations projects.
    1. Design of prototype of UPS (May 2011) UPS system design.
    2. Water pumping control in Assiut city (May 2012)
    3. Speed control of induction motor using PLC (May 2013)
    4. Electrical distribution project (May 2014)

31/10/2010 – 20/10/2011 – Cairo, Egypt

### MAINTENANCE ENGINEER – SPECIALIZED INDUSTRIES AND CONTRACTING CO. AN OSMAN GROUP COMPANY

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## ● EDUCATION AND TRAINING

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30/11/2017 – 01/03/2022 – Nottingham , United Kingdom

**PH.D. IN ELECTRICAL AND ELECTRONIC ENGINEERING** – University of Nottingham

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### Field(s) of study

- Engineering, manufacturing and construction : *Motor vehicles, ships and aircraft* | *Electricity and energy*

**Thesis:** Optimised DC Microgrid for Future Aircraft Platforms

31/08/2011 – 19/10/2015 – Assiut , Egypt

**MASTER OF SCIENCE IN ELECTRICAL ENGINEERING** – University of Assiut

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### Field(s) of study

- Engineering, manufacturing and construction : *Electricity and energy* | *Motor vehicles, ships and aircraft*

**Thesis:** Control of Induction Motors Using Power Electronics

Distinction (91%)

31/08/2005 – 12/06/2010 – Assiut, Egypt

**BACHELOR OF ELECTRICAL ENGINEERING** – University of Assiut

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Graduation Project Title: Application of PLCs in Industry

Grade: Distinction

### Field(s) of study

- Engineering, manufacturing and construction : *Electricity and energy* | *Motor vehicles, ships and aircraft*

Very good with honor (84%)

## ● LANGUAGE SKILLS

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Mother tongue(s): **ARABIC**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C2	C1	C1	C2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

## ● DIGITAL SKILLS

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### Technical Skills

Programming Languages: C, C++, Python, Matlab | Microsoft Office | Experience in softwares Psim, Matlab, OpenModelica, Autocad

## ● **COMMUNICATION AND INTERPERSONAL SKILLS**

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### **International conferences speaking**

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I have presented my papers at the following international conferences

- IEEE Middle East Power System Conference (MEPCON'2014), Assiut, Egypt.
- IEEE Electrical Systems for Aircraft, Railway, Ship Propulsion and Road Vehicles & International Transportation Electrification Conference (ESARS 2018), Nottingham, UK
- The 10th International Conference on Power Electronics, Machines and Drives (PEMD 2020), Nottingham, UK.

## ● **HONOURS AND AWARDS**

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01/05/2017

### **Newton-Mosharafa scholarship – sector of Cultural Affairs and Missions / Central Administration of Missions, the British Council,**

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Newton-Mosharafa scholarship is a highly competitive scholarship in Egypt and it is a joint program between the sector of Cultural Affairs and Missions / Central Administration of Missions, the British Council, and the British Embassy in Egypt. The scholarship for 3 years with the possibility of extension for the fourth year under certain conditions.

## ● **RESEARCH INTERESTS**

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### **Research Interests**

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- Motor drive.
- Smart energy management of DC microgrid.
- Energy management of energy storage systems for electrical more electric aircraft
- Control system using a pic and DSP controller
- Soft switching DC-DC power converter topologies
- More-Electric Aircraft (MEA) applications
- Electrical Power System for More electric aircraft including their architectures, advanced modelling, control and stability issues of MEA power system

## ● PUBLICATIONS

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### Publications

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1. M. A. A. Mohamed, S. S. Yeoh, J. Atkin, H. Hussaini and S. Bozhko, "Efficiency Focused Energy Management Strategy Based on Optimal Droop Gain Design for More Electric Aircraft," in IEEE Transactions on Transportation Electrification, doi: 10.1109/TTE.2022.3159731.
2. Mohamed A.A. Mohamed, Habibu Hussaini, Jason Atkin, Seang Yeoh, Serhiy Bozhko", "Optimal Droop Gain Design for MEA DC Microgrid based-on Artificial Neural Network," MEA 2021 conference, France.
3. Mohamed A.A. Mohamed, Jason Atkin, Seang Yeoh, Mohsen Khalaf, Serhiy Bozhko", "Analysis and Design of Battery Controller for More Electric Aircraft Application," IPRECON 2021 IEE conference, India.
4. Mohamed A.A. Mohamed, Mohamed Rashed, Xiaoyu Lang, Jason Atkin, Seang Yeoh, Serhiy Bozhko", "Droop control design to minimize losses in DC microgrid for more electric aircraft," Electric Power Systems Research, Volume 199, 2021.
5. Mohamed A. A. Mohamed, Mohamed Rashed, Serhiy Bozhko ", "Enhanced Flux Weakening Control of PMM-Based Starter-Generator System in More Electric Aircraft," The 10th International Conference on Power Electronics, Machines and Drives (PEMD 2020), Nottingham, UK.
6. Mohamed A. A. Mohamed, Quanxue Guan, Mohamed Rashed ", "Control of DC-DC Converter for Interfacing Supercapacitors Energy storage to DC Micro Grids," IEEE Electrical Systems for Aircraft, Railway, Ship Propulsion and Road Vehicles & International Transportation Electrification Conference (ESARS 2018), Nottingham, UK.
7. G. Elsaady, Elnobi. A. Ibrahim, M. Elbesealy ", "A Fuzzy V/F Control for High-Performance Induction Motors Drive", Scientific Online Publishing SOP Transactions on Transmission and Smart Grid, Vol. 2, 2015
8. Gaber Elsaady, Elnobi A. Ibrahim, and Mohamed Elbesealy ", "An Improved V/F Control for High Performance Three Phase Induction Motor Drive" 16th International Middle- East Power Systems Conference -MEPCON'2014. Ain Shams University, Cairo, Egypt, December 23 - 25, 2014.
9. Gaber Elsaady, Elnobi A. Ibrahim, and Mohamed Elbesealy ", "V/F control of Three Phase Induction Motor Drive with Different PWM Techniques." Innovative Systems Design and Engineering Vol. 4, No. 14, pp. 131-144, 2013.

## ● MANAGEMENT AND LEADERSHIP SKILLS

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### SOFT SKILLS

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Attended the following workshops in Assiut University Faculty and Leadership Development Project (FLDP)

- Communication skills
- Effective thinking
- Effective teaching
- Effective presentation
- Scientific publishing
- The leadership of the research team
- Organization of scientific conferences
- Strategic planning
- Time management and meetings
- Ethics of scientific research
- Advanced e-learning
- Exam systems and assessment of students
- Financial aspects of university work
- How to activate the electronic course
- How to write a competitive paper

Attended the following workshops in Nottingham University, central short courses

- Where to publish, impact factors and other metrics (engineering)
- Shut up and write
- Demonstrating in laboratory practicals
- Demonstrating and assessing for M3
- Data research management
- Problems with academic writing

## ● NETWORKS AND MEMBERSHIPS

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04/11/2019 – CURRENT

**IEEE Graduate Student Member**

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United Kingdom and Ireland Section

## ● RESEARCH GATE ACCOUNT

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**Research Gate Account**

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[https://www.researchgate.net/profile/Mohamed\\_Mohamed412](https://www.researchgate.net/profile/Mohamed_Mohamed412)

## ● GOOGLE SCHOLAR ACCOUNT

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**Google Scholar Account**

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<https://scholar.google.com.eg/citations?user=x7RgrIEAAAAJ&hl=en>

## ● LINKED IN ACCOUNT

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**Linked in Account**

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<https://www.linkedin.com/in/mohamed-mohamed-5b6795178/>

## ● RECOMMENDATIONS

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Serhiy Bozhko – Professor in Aircraft Electric Power Systems – [serhiy.bozhko@nottingham.ac.uk](mailto:serhiy.bozhko@nottingham.ac.uk) – (+44) 011 58468490

Prof Serhiy was my main supervisor during my PhD study.

Rauf Sattar – Engineering/Technologist, Motor & Generators, GE power conversion, Technology Drive – [Rauf.Sattar@ge.com](mailto:Rauf.Sattar@ge.com) – (+44) 1788563338

Eng Rauf, is my colleague in the PEMC group, Nottingham University.

Jason Atkin – Associate Professor – [jaa@nottingham.ac.uk](mailto:jaa@nottingham.ac.uk) – (+44) 1158466531

Dr Jason was my supervisor during my PhD study.