PERSONAL INFORMATION

MOHAMED SALAH MOHAMED HASSAN (M. S. Hassan)

Room #301, Elect. Eng. Dept., Faculty of Eng., Minia University, Minia 61517, EGYPT.

+20-100-361-6450 FAX +208-6234-6674

m.salah@mu.edu.eg
m.salah@kyudai.jp

Skype: m.salah@mu.edu.eg
WhatsApp: +20-100-361-6450

http://orcid.org/0000-0002-0574-5349

Gender Male | Date of birth 10.05.1988 | Nationality Egyptian | Marital Status Married and have kids

APPLIED FOR

Visiting Researcher at Green Power Electronics Circuits Lab., Kyushu University

WORK EXPERIENCE

26/01/2021 – present

Assistant Professor

Minia - Egypt

Electrical Engineering Department, Faculty of Engineering, Minia University.

Teaching Experience

- **Electrical Power I** (2nd Year Students, Electrical Engineering Dept.– 2nd Semester 2020/2021).
- **Optimization Techniques** (3rd Year Students, Electrical Power & Machines Section– 2nd Semester 2020/2021)
- **Electrical Machines** (2nd Year Students, Electrical Engineering Dept., 1st Semester 2021/2022).
- **Energy Storage Technologies** (4th Year, El-Minia Higher Technology Institute, 1st Semester 2021/2022).

01/10/2020 – 30/12/2020

Visiting Researcher

Fukuoka - Japan

Green Power Electronics Circuits Laboratory,
Graduate School of Information Science and Elect. Eng., Kyushu University, JAPAN

28/06/2016 – 25/01/2021

Assistant Lecturer

Minia - Egypt

Electrical Engineering Department, Faculty of Engineering, Minia University.

Address: Egypt's Aswan agricultural road,
Electrical Engineering Department,
Faculty of Engineering, El-Minia, 61517, EGYPT.

Experience

- Along with the courses taught in the previous stage of my carrier as a "Teaching Assistant", a sufficient time has been devoted for IELTS preparation and searching for Ph.D. scholarship.

13/11/2013 – 18/07/2017

Deputy of Technical Manager

Minia - Egypt

Advanced Laboratory for Electric Power System, Faculty of Eng., Minia University.

Job Responsibilities

- Technical Engineer.
- Helping Technical Manager in laboratory management procedures.

Skills Acquired

- How to implement the ISO 17025 standard.
- How to implement IEC standards.
- Managerial skills.

01/03/2011 – 18/05/2016

Teaching Assistant

Minia - Egypt

Elect. Eng. Dept., Faculty of Eng., Minia University. Faculty of Eng., El-Minia, 61517, EGYPT.

Job Responsibilities

- Master student in the Electrical Engineering Program.
- Helping students in their teaching duties.
- Preparing assignments and evaluating students.

Skills Acquired

- How to search in International Databases and Journals related to my field.
- Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
- Flexibility and Creativity.

Teaching Experience

- **Automatic Control** (3rd Year Students, Electrical Power & Machines Section - 3rd Year Students, Communication & Electronics Section).
- **Control Engineering** (2nd Level Students, Mechatronics and Industrial Robotics Program).
- **Electrical Tests II** (2nd Year Students, Electrical Engineering Dept.).
- **Electrical Tests III** (3rd and 4th Year Students, Electrical Power & Machines Section).
- **Advanced Engineering Mathematics** (Differential Equations, 1st Year Students, Electrical Engineering Dept.).
- **Numerical Analysis for Engineers** (1st Year Students, Electrical Engineering Dept.).
- **Basics of Programmable Logic Controllers (PLC)** (3rd Year Students, Electrical Power & Machines Section), the implementation has been done through PLC and Drives Lab. From SIEMENS.
- **Power Electronics** (2nd Level Students, Mechatronics and Industrial Robotics Program).
- **Electrical Power I** (2nd Year Students, Electrical Engineering Dept.).
- **Engineering Electromagnetics** (2nd Year Students, Electrical Engineering Dept.).
- **Programming Computer Packaging (MATLAB)** (3rd Year Students, Electrical Power & Machines Section).

15/10/2010 – 31/01/2011 **Maintenance Engineer for PLC and Control Panels** Obour - Egypt

ARAB GROUP FOR PLASTIC INDUSTRIES (FOAMCO)
Obour City, Cairo, EGYPT.

Job Responsibilities

- Control Engineer for PLC and Control Panels of the Factory.

Skills Acquired

- Deal with (Contactors, Relays, Overloads, C.Bs., Inverters, PLC) and how to connect them in the circuit.
- How to form a team work and how to lead a group of workers in the factory.

ACADEMIC QUALIFICATIONS

10/2017 – 09/2020 Ph.D., Electrical and Electronic Engineering Dept., Kyushu University, JAPAN

Green Power Electronics Circuits Laboratory,
Global Course of the Graduate School of Information Science and Electrical Engineering,

Thesis title

"Common-Mode Voltage and Circulating Current Reduction of Single-Stage Inverter in Renewable Energy Power Systems"

02/2013 – 05/2016 M.Sc., Electrical Engineering Dept., Faculty of Engineering, Minia University

Thesis title

"*Design and Power Quality Improvement of Photovoltaic Power System*"

DOI: 10.1007/978-3-319-47464-9, **ISBN:** 978-3-319-47464-9

09/2005– 07/2010 B.Sc., Electrical Engineering Department (Power and Machines Section) Minia - Egypt

Faculty of Engineering, Minia University.

Very good with honour's degree

Graduation Project

Project Topic	Design of Indoor Lighting and The Electrical Power Distribution System Taking into Account Its Related Problems.
Project Grade	*Distinction*

09/2002– 06/2005 General Secondary Education School (Abu Kurkas Secondary School for Boys) Minia - Egypt

Distinction with (95 %)

PUBLICATIONS

[1] **M. S. Hassan**, Ahmed Abdelhakim, Masahito Shoyama, Jun Imaoka, and Gamal M. Dousoky, "Parallel Operation of Split-Source Inverters for PV Systems: Analysis and Modulation for Circulating Current and EMI Noise Reduction," *IEEE Transactions on Power Electronics*, vol. 36, no. 8, pp. 9547–9564, Aug. 2021. https://doi.org/10.1109/TPEL.2021.3052676

[2] **M. S. Hassan**, Ahmed Abdelhakim, Masahito Shoyama, and Gamal M. Dousoky, "On-the-Analysis and Reduction of Common-Mode Voltage of a Single-Stage Inverter through Control of a Four-Leg-Based Topology," *International Journal of Electrical Power & Energy Systems*, vol. 127, pp. 1-24, May 2021. https://doi.org/10.1016/j.ijepes.2020.106710

[3] Ahmed Abdelhakim, and **M. S. Hassan**, "On-the-Assessment of Current-fed Modular Multilevel Converter for Single-Stage DC-AC Conversion Applications," *In progress.*

[4] Yuto Watase, **M. S. Hassan**, Masahito Shoyama, and Gamal M. Dousoky, "Modelling and Experimental Verification of Two Opposite-Phase Parallel Inverters for Conducted EMI Noise Suppression in DC-Fed Motor Drives," *In progress to be submitted to IEEE Transactions on Electromagnetic Compatibility.*

[5] Yahia M. Esmail, Ali H. Kasem Alaboudy, **M. S. Hassan**, Gamal M. Dousoky, "Mitigating Power Quality Disturbances in Smart Grid using FACTS," *Indonesian Journal of Electrical Engineering and Computer Science*, vol. 22, no. 3, pp. 1223–1235, June 2021. http://doi.org/10.11591/ijeecs.v22.i3.pp1223-1235

[6] **M. S. Hassan**, Ahmed Abdelhakim, Masahito Shoyama, Jun Imaoka, and Gamal M. Dousoky, "Three-Phase Split-Source Inverter-Fed PV Systems: Analysis and Mitigation of Common-Mode Voltage," *IEEE Transactions on Power Electronics*, vol. 35, no. 9, pp. 9826–9840, Sept. 2020. https://doi.org/10.1109/TPEL.2020.2971374

[7] **M. S. Hassan**, Ahmed A. Zaki Diab, Masahito Shoyama, and Gamal M. Dousoky, "Interleaved PWM Strategy for Common-Mode Leakage Current and EMI Noise Reduction of Paralleled Single-Stage DC-AC Converters ," in *Proc. 35th Annual IEEE Applied Power Electronics Conference and Exposition (APEC-2020)*, New Orleans, LA, USA, March 2020, pp. 768-774, https://doi.org/10.1109/APEC39645.2020.9124053

[8] Ahmed A. Zaki Diab, **M. S. Hassan**, and Masahito Shoyama, "Modified Adaptive Sliding Mode Control for Sensorless Direct-Drive Permanent Magnet Synchronous Generator Wind Turbines based on Fuzzy Logic Control," in *Proc. 4th IEEE International Future Energy Electronics Conference (IFEEC-2019)*, Singapore, Nov. 2019, pp. 802-809, https://doi.org/10.1109/IFEEC47410.2019.9015138

[9] **M. S. Hassan**, and Masahito Shoyama, "Pulse Width Modulation-Based Common-Mode Noise Source Characterization of Three-Phase Two-Level Split-Source Inverter Topology," in *Proc. 11th Annual IEEE Energy Conversion Congress and Exposition (ECCE-2019)*, Baltimore, MD, USA, Sept./Oct. 2019, pp. 2867-2872, https://doi.org/10.1109/ECCE.2019.8911837

[10] **M. S. Hassan**, and Masahito Shoyama, "Common-Mode Voltage Investigation and Reduction of Split-Source Inverter," in *Proc. 6th IEEE International Conference on Smart Grid (icSmartGrid-2018)*, Nagasaki, Japan, Dec. 2018, pp. 118-122, https://doi.org/10.1109/ISGWCP.2018.8634437

[11] **M. S. Hassan**, and Masahito Shoyama, "Common-Mode Noise Evaluation Study of Two-Level Voltage-Source Inverter using Bus-Clamping Discontinuous PWM Strategies," in *Proc. 40th IEEE International Telecommunications Energy Conference (INTELEC-2018)*, Paper ID: 118, Torino, Italy, Oct. 7-11, 2018. https://doi.org/10.1109/INTELEC.2018.8612306

[12] Adel A. Elbaset and **M. S. Hassan**, "*Design and Power Quality Improvement of Photovoltaic Power System*," **Springer** International Publishing AG, Switzerland, https://doi.org/10.1007/978-3-319-47464-9, **ISBN:** 978-3-319-47464-9, 2017.

[13] Adel A. Elbaset, **M. S. Hassan** and Hamdi Ali, "Performance Analysis of Grid-Connected PV System," in *Proc. 18th IEEE International Middle East Power Systems Conference (MEPCON-2016)*, Cairo, Egypt, Dec. 2016, https://doi.org/10.1109/MEPCON.2016.7836965

[14] **M. S. Hassan**, and Adel A. Elbaset, "Small-Signal MATLAB/Simulink Model of DC-DC Buck Converter using State-Space Averaging Method," in *Proc. 17th IEEE International Middle East Power Systems Conference (MEPCON-2015)*, Mansoura, Egypt, Dec. 15-17, 2015.

[15] **M. S. Hassan**, and Adel A. Elbaset, "A Comparative Study for Optimum Design of Grid Connected PV System based on Actual System Specifications," *International Journal of Computer Applications*, vol. 116, no. 3, pp. 19-34, April 2015.

[16] Adel A. Elbaset, and **M. S. Hassan**, "Design and Implement of 100 kW Rooftop Grid-Connected PV System: Faculty of Engineering as a Case Study," in *Proc. 3rd International Conference on Energy Systems and Technologies*, Cairo, Egypt, Feb. 16-19, 2015, pp. 71-83.

EXPERIMENTAL PROTOTYPES

1. Gate Drive Circuits using
   - DCP021515P (Isolated DC/DC Converters) with HCPL-3120 (Optocouplers).
   - IR2110 (High and Low Side Driver) with TLP2630 (Optocouplers)
2. Common-Grounded Single-Phase Inverter for Leakage Current Suppression
3. Three-phase Two-level Single-stage Split-Source Inverter (SSI) for Common-Mode Voltage Reduction.
4. Four-Leg Configuration of the SSI.
5. Paralleled Structure of the SSI for Circulating Current Reduction.

INTERNSHIP EXPERIENCE

15/08/2016 – 25/08/2016	Pathways to Higher Education Project, Cairo University. Successfully completed a 75-hour English Language Course entitled "**English for Life**".	Cairo - Egypt
01/02/2016 – 04/02/2016	Transition to Employment and Career Guidance for Youth in Public Universities. Attended the TOT Workshop on Career Guidance (CG) in Public Universities funded from the **International Labour Organization (ILO)**.	Cairo - Egypt
November 09-21, 2013 November 03-05, 2013 October 13-14, 2013 November 24-25, 2012	Advanced Electric Power Lab., Faculty of Engineering, Minia University. Attended some courses related to Laboratory Accreditation entitled 1. Implementation of Laboratory Accreditation of ISO Requirements. 2. Establishing of Laboratory Management System (Documentation & Document Control for ISO 7025:2005). 3. Quantifying Uncertainty in Testing Laboratories. 4. General Requirements for Competence of Testing Laboratories – ISO 17025:2005.	Minia - Egypt
29/01/2012 - 02/02/2012	Education System Enhancement Unit, Minia University. Successfully completed a 25-hour English Language Course of "**Intermediate Level**".	Minia - Egypt
29/01/2012 - 02/02/2012	Education System Enhancement Unit, Minia University Successfully completed a 75-hour English Language Course of (50-hour online training and 25-hour face to face training) "**Intermediate Level**".	Minia - Egypt
15/09/2010 -15/12/2011	Ministry of Military Production, Training Sector Science & Technology Centre for Excellence (STCE). Attended technical training courses of 1. Automatic Control and its applications. 2. Programmable Logic Controllers (PLCs) and its applications. (Classic Control, Automatic Control, Principals of Pneumatic Systems, Siemens PLC S7-300 Program and its applications, HMI)	Cairo - Egypt
02/08/2009 - 20/08/2009	Cairo Electricity Production Company. Summer training at Power Stations Training Centre (North Cairo Generation Station).	Cairo - Egypt
15/07/2009 - 30/07/2009	Egyptian Company for METRO (E.C.M). Summer training in the techniques of operation and maintenance for METRO, Tura El-bald maintenance workshop for the First Line (Helwan –El marge)	Cairo - Egypt
01/02/2009 - 11/02/2009	Pathways to Higher Education Project, Cairo University. Development of Thinking and Managerial Skills (DTMS) course (**Behavioural Approach**) GPA for the whole program is 4.75 points (out of 5).	Minia - Egypt
10/08/2008 - 24/08/2008	Faculty of Engineering, Cairo University. Attended the course of Programmable Logic Controllers (PLC)– Electrical Power & Machines Dept.	Cairo - Egypt
03/08/2008 - 28/08/2008	Arab Contractors Company. Summer training at Central Library of Cairo University in the field of Lighting Design and Distribution system	Cairo - Egypt
28/07/2008 - 30/07/2008	BEST Association. Attended Human Resource (HR) course (Communication skills, Teams and work group, and Leadership skills).	Minia - Egypt
06/07/2008 - 24/07/2008	TELECOM EGYPT Company (MINIA Branch).	Minia - Egypt

Summer training in these fields (EWSD Exchange, fiber optics cables, test room).

23/06/2008 - 03/07/2008	Pathways to Higher Education Project, Cairo University. Development of Thinking and Managerial Skills (DTMS) course of (**Managerial Approach**) GPA for the whole program is 4.51 points (out of 5).	Minia - Egypt
28/01/2008 - 07/02/2008	Pathways to Higher Education Project, Cairo University. Development of Thinking and Managerial Skills (DTMS) course of (**Knowledge Approach**) GPA for the whole program is 4.67 points (out of 5).	Minia - Egypt
06/08/2007 - 01/09/2007	Sugar & Integrated Industries Company (S.I.I.C). Summer training at Abu Kurkas Sugar Factories, in these fields (D.C Machines, Transformers and Armature winding)	Minia - Egypt

PERSONAL SKILLS

Mother tongue(s): Arabic

Other language(s):

English	**IELTS – Band score 6** University of Cambridge, ESOL Examination **BULATS** (Business Language Testing Service) English Proficiency Test at Minia University (580 out of 677)
Japanese	Basics

Communication skills
- Good communication skills gained through my experience as a Demonstrator, and Assistant Lecture at Faculty of Engineering such as communicating with my supervisors and students.
- Attending training in effective communication through **PATHWAYS** training programs from Cairo University.

Organisational / managerial skills
Pathways to Higher Education Project, Faculty of Engineering, Cairo University
- Organizer for Development of Thinking and Managerial Skills (DTMS) program, Minia University.

Computer skills
- Proficiency in using Microsoft **Word**, **Excel**, **Power Point**, **Visio**, **Outlook**, and **Internet** (ICDL Certified).
- Programming with **Sematic Manager S7-300/400** Program for Siemens PLC.
- Good user of **AutoCAD 2D** program.
- Computer Maintenance.

Job-related skills
- Advanced research abilities in international publishing websites.
- Modelling and Programming with **MATLAB/Simulink** packages.
- Experience to design and to program TMS320F28xx DSPs with **Code Composer Studio** (implementation with control cards of Piccolo TMS320F28069, Piccolo TMS320F28335, Delfino TMS320F28379D).
- Good user of **PSIM, LTspice** and **PLECS** programs for Power Electronics modelling and simulations.
- Background of schematics design using **Altium** program for printed circuit boards (PCBs) layout.
- Typesetting with **LaTeX** (**MikTeX** and **TeXstudio**) for documents preparation.
- Good user of **EndNote X9, and JabRef** programs for references' management.
- Experimental experience related to Power Electronics from circuit design to schematic implementation.
- Ability to work in a group or individually according to the job description.
- Self-motivated.

Special skills
- Egyptian private car driving license.
- Japanese private car driving license.

EXTRACURRICULAR ACTIVITIES

2017- present: Reviewer at several IEEE Transactions
- (IEEE Transactions on Power Electronics)
- (IEEE Transactions on Industrial Electronics)
- (IEEE Journal of Emerging and Selected Topics in Power Electronics).

2017- present: Member "**Egyptian Students Association in Japan, Kyushu Branch (ESAJ-K)**".

2012- 2016: Member "**IEEE Minia University Student Branch**".
- Attending lectures given to stuff members to develop my teaching skills.

- Attending Faculty seminars on M.Sc. and Ph. D degrees in the field of Electrical Engineering.

07/02/2010 - 17/02/2010 **Organizer** for development of thinking and managerial skills (Pathways) course at Minia university, Minia, EGYPT.

2009 Member in "**MAAAN** team", Sakiet El-Sawy, Cairo, EGYPT.

2009 Member in "**REBIRTH** team", Minia University, Minia, EGYPT.

MEMBERSHIPS

2020 - present Member "Institute of Electrical and Electronics Engineers (IEEE)".

2018 - 2020 Student Member "Institute of Electrical and Electronics Engineers (IEEE)".
- Member of Power Electronics Society (PELS).
- Member of Industrial Electronics Society (IES).

2017 - present Member "Egyptian Students Association in Japan, Kyushu Branch (ESAJ-K)".

2011 - present Member "Egyptian Engineering Syndicate".

HORORS & AWARDS

Sept., 2021 **Postdoctoral Research Fellowship** (ID No PR197) from the Egyptian Government to be executed in Japan.

May, 2021 **International Scientific Publication Award**, Minia University Research Office, Minia University, Egypt

March, 2020 **APEC Student Travel Support:** Power Sources Manufacturers Association (PSMA), California, USA to attend (*APEC-2020*, New Orleans, LA, USA) (*Conference held virtually due to COVID-19 outbreak*) (https://www.psma.com/2020-Travel-Support-Recipients).

Feb, 2020 The (2019) **Excellent Student Award** of the IEEE Fukuoka Section (http://ckt.ees.kyushu-u.ac.jp/prize.htm). (http://www.ieee-jp.org/section/fukuoka/index.php?Awards).

Nov, 2019 **International Conference Grant**; Kyudai Foundation, Japan for attending int. conference (*IFEEC-2019*, Singapore).

Oct, 2019 Overseas **Travel Expenses Award**; Telecommunications Advancement Foundation (電気通信普及財団賞), Japan to attend (*ECCE-2019*, Baltimore, MD, USA) (https://www.taf.or.jp/files/items/1641/File/2019年度海外渡航旅費援助.pdf).

Oct, 2018 Short-term **Overseas Travel Grant**: Graduate School of ISEE, Kyushu University, Japan to attend (*INTELEC-2018*, Torino, Italy).

Sept, 2018 **1st Runner-Up**, Annual KUFSA Soccer Tournament, Ito Campus, Kyushu University, Japan

March, 2018 Participating in the **J-MENA project** student voices; (Kyushu University, Japan) toward doubling the number of students from Middle East and North Africa (MENA) to study in Japan (https://jmena.jp/en/voices/1557/).

Oct, 2017 Full **Ph.D. Scholarship** from the joint partnership on education: Egypt-Japan Education Partnership (**EJEP, 1st Batch**), funded from Ministry of Higher Education (**MoHE**) in Egypt in cooperation with Japan International Cooperation Agency (**JICA**) in Japan.

April, 2017 The annual **Best Master's Thesis,** President of Minia University, Minia, Egypt.

Feb, 2016 Full **Funded Training** workshop on "Transition to Employment and Career Guidance (CG) for Youth in Public Universities"; **International Labour Organization (ILO)**, Cairo, Egypt.

Oct, 2014 M.Sc. scholarship from the International Master in Renewable Energies and Energy Efficiency in the MENA region (**double M.Sc. degree REMENA program)** between University of Kassel in German and Cairo University in Egypt, funded from the German Academic Exchange Service (**DAAD**), Aug. 2014. (*Withdraw due to half funding*).

Oct, 2014 Advanced Laboratory for Electric Power System **Accreditation Certificate** (2014) according to **ISO/IEC 17025:2005** standard from the Egyptian Accreditation Council (**EGAC**).

Feb. 2011 **Assignment for the Job of Demonstrator**, Minia University, Egypt.
Demonstrator Position, in Minia University, is only offered to the Top-of-Class Candidate.

May 2002 **Distinguished Student Certificate**, Menshiat El-Fekryia Preparatory School, Abu Kurkas, Minia, EGYPT.

REFERENCES

1) Prof. **Masahito SHOYAMA**, Professor (My PhD Supervisor), SMIEEE
Department of Electrical Engineering,

Faculty of Information Science and Electrical Engineering.
Department of Automotive Science,
Graduate School of Integrated Frontier Sciences

W2-655, Kyushu University, 744 Moto-oka, Nishi-ku, Fukuoka 819-0395, JAPAN
Phone: +81-92-802-3713 (**preferable**), Fax: +81-92-802-3703
Email: shoyama@ees.kyushu-u.ac.jp

2) Dr. **Gamal M. Dousoky**, Associate Professor, SMIEEE

IBCT-Certified Associate Trainer

318 Elect. Eng. Dept., Faculty of Engineering, Minia University, 61517, EGYPT
Phone: +20-86-236-2083 (Ext. 248), Fax: +208-6234-6674
Email: dousoky@mu.edu.eg, Mobile: +20-109-905-3763

3) Dr. **Ahmed Abdelhakim**, PhD, SMIEEE

Scientist & Project Manager
ABB Corporate Research Centre, Forskargränd 7, 72178 Vasteras, SWEEDEN

Associate Editor
IEEE Transactions on Industrial Electronics
IEEE Transactions on Transportation Electrification

Phone: +46 (0) 21 323151, Mobile: +46 (0) 72 2329836
E-mail: ahmed.abdelhakim@se.abb.com
ahmed.abdelhakim@ieee.org

4) Dr. **Ahmed A. Mohamed**, PhD

Associate Professor, PhD Program Advisor
Department of Electrical Engineering, Room ST-638
Grove School of Engineering
City University of New York, City College
160 Convent Avenue, New York, N.Y. 10031, USA
URL: http://smartgrid.ccny.cuny.edu

Phone: (212) 650-6619
E-mail: amohamed@ccny.cuny.edu

5) Prof. **Sayed Kaseb**, Professor

Chairman of Mechanical Power Engineering Department, Cairo University
Manager of the “International Ranking Unit”, Cairo University
Exchange Administrator, Egyptian National IAESTE Committee
Manager of Renewable Energy and Energy Efficiency Master, EGYPT/GERMANY
Manager of Pathways to Higher Education, EGYPT

1 Gamaa Street, Faculty of Engineering, Cairo University, Giza, EGYPT, PC: 12613
Mobile: +20-106-668-9701, Fax: +202-3570-3620
Email: kaseb@cu.edu.eg