

Academic Curriculum Vitae (C.V)

Farhad Muhsin Mahmood

**MSc. In Electrical and Electronic Engineering,
Nottingham-UK**

Contact information

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Academic Profile



Currently I am Lecturer and Electronic lab supervisor at the Department of Physics, University of Halabja.

Education History

1. University: The University of Nottingham, UK campus

Faculty of Engineering, School of Electrical and Electronic Engineering

Department of Electrical and Electronic Engineering

Date and duration: From beginning of September 2014 to the end of September 2015

Graduation date: 11th of December 2015

Location: Nottingham, United Kingdom

Degree and Course code: Master of Science (MSc.) in Electrical and Electronic Engineering, H60F.

Detail of the course: I have completed the course with Distinction level in the final project (master thesis) with the mark of 76%, and year average of 68.4%, then I have been awarded MSc. with merit which is equivalent to the second class honours (upper division). During the course I have studied some essential modules like: Advanced Power Conversion, Advanced Control System Design with Project, Advanced AC Drives with Project, Electrical Machines, RF Microelectronics with project, Power Systems for Aerospace, Marine and Automotive Applications, Power Electronic Design. Particularly I have interested in the Power conversion and its control algorithm, therefore I have selected this area to focus on for my final project (master thesis).

Course works and assignments: During the above duration I did some interesting course works and achieved an excellent mark with the gain of the excellent skills in that fields, significant course works included: Direct on Line (DOL) and Indirect Rotor Flux Orientation (IRFO) Controlled Induction Motor using MATLAB Simulink, modelling DC motor drive with flexible shaft using MATLAB Simulink, design of distributed amplifiers in Advance Design System (ADS), design of low noise amplifier in ADS.

Final MSc. Project: the title of the project is **(Coordinated Control of a Large Offshore Wind Farm through VSC-HVDC Link)**. Supervised by Dr. Alessandro Costabeber, which I have got **Distinction level** with the mark of **(76%)**, and I have a plan to do further research on the same topic, even widening the topic to the Modular Multilevel HVDC control with an efficient control algorithm in the future.

2. Institution: The University of Nottingham, UK campus

School of Education, Centre for English Language Education (CELE)

Course: Pre-sessional English for Academic Purposes (PEAP)

Course Dates: 10 July 2014 to 19 September 2014

Degree and certificate: Level B2 which is equivalent to the 6.5 in IELTS.

Note: this course gave me an academic background in all four elements of language skills, it was very beneficial for me, since I have been familiar with the UK education system and socialize with the students of different countries and backgrounds.

3. University: Sulaimaniya Polytechnic University.

College and Department: College of Engineering, Department of Communication Engineering

Location: Sulaimaniya city, Kurdistan Region Iraq

Duration: October 2008 to July 2012

Degree and certificate: Bachelors of Science (Bsc.) in Communication Engineering.

Final project of Bsc degree: “Using MATLAB program for evaluating information measures”

4. High School: Ahmad Mokhtar Jaf.

Location: Halabja city, Kurdistan Region-Iraq

Duration: 2005 to 2008

Certificate: Baccalaureate Examination for preparatory Schools (SCIENTIFIC - SECTION)

Note: I was passed with an excellent mark around (92%), which is a satisfactory mark in our country to register for the above BSc. degree in engineering college. In addition to that I have achieved mark of 98% in the Physics subject.

Employment History

1. Working Place: University of Halabja/ College of Science/ Department of Physics.

Job title: University Lecturer

Location: Halabja city, Kurdistan Region-Iraq

Date and duration: from January 2016 until Now

Detail: this is a full-time job in a public academic institution, Previously I was worked as a university lecturer and I was taught Electronic Circuit module to the 3rd stage of the Physics students. In addition to that I was also taught the Practical Electronic module to the same students. I was taught my students with highly standard guidelines and the newest methods of teaching, furthermore I have tried to familiarize students with the new computer program in that fields, particularly MATLAB Simulink, and Advance Design System (ADS). In addition to that I was taught Technical English and Scientific debate modules to the first stage students of the same department.

- **I was visitor lecturer at the Darbandikhan Technical Institute and taught Electronic module to the first stage at the Department of Electrical.**

2. Working Place: Directorate of Engineering & Projects at the University of Halabja

Job title: Electrical and Electronic Engineer.

Location: Halabja city, Kurdistan Region-Iraq

Date and duration: from January 2013 to January 2016

Detail: this was a full-time job in a public sector of government, I used to work as Electrical and Communication Engineer, during that time I had supervised some of the significant projects of Halabja university, like supervisor engineer in the research centre building and computer building projects, this work was very important to me since I had been familiar with the team working, and working as an independent engineer.

3. Working Place: Newroz Telecom for Internet service providing.

Job title: Telecommunication Engineer.

Location: Sulaimaniya city, Kurdistan Region-Iraq

Date and duration: from August 2012 to January 2013

Detail: this was a full-time job in a private sector, I used to work as a Telecom Engineer, I had learnt the most fundamental engineering skills through the practice, and facing with the technical matters then making a right decision.

Current Research, Publication and Seminar Presentation

Currently, I am working on one of my research, it will be published in the University Journal. I have presented an academic seminar related to the final project of the master course at the University of Nottingham.

Professional Memberships

- I am member in the Kurdistan Engineering Union as Engineer.
- I am member of The Institution of Engineering and Technology - The IET, as a postgraduate student.

Computer skills

- MATLAB Simulation, I have used MATLAB Simulink for the most of my projects, therefore I am very familiar with it.
- Advance Design System (ADS).
- (Power Simulation) PSIM
- AutoCAD (Electrical Engineering design).
- All Microsoft offices Program.
- C# (Programming Language).
- Designing a Moodle website for the physics department (Online learning environment for education)

Language skills

- Kurdish (Native)
- English (Fluent)
 - IETLS test scored 6.5 overall (Equivalent to C1).
 - Having completed my studies in an English-speaking country, where both my undergraduate and postgraduate instruction was conducted in English, I possess an excellent level of proficiency in the English language.

Training courses and Activities

1. **Organization: University of Human Development.**

Location: Sulaimaniya city, Kurdistan Region-Iraq

Course: Methods of teaching, leadership and academic development

Duration: From May 2016 to August 2016

Degree: Passing the course and getting permission to teach at the University of Halabja as a university lecturer.

2. **Organization: High professional organization.**

Location: Sulaimaniya city, Kurdistan Region Iraq

Course: Electrical board design, design of distribution board, how to manage and supervise electrical projects.

Certificate: Certificate of achievement

Duration: one week (May 2016).

3. **Organization: IQDC for Management, Technical and Engineering Consultants.**

Location: University of Halabja, Halabja City, Kurdistan Region Iraq

Courses: During this training course I have been awarded some International Organization for Standardization (ISC) certificates, the corticates has been mentioned in the below:

- i. **ISO/IEC 17025:2005**, Awareness Training Testing and Calibration Laboratories 15 May 2014.
- ii. **ISO 9001:2008** Quality Management Systems (05-08) May 2014.
- iii. **ISO 14001:2004** Awareness Training Environmental Management Systems (13-14) May 2014. **iv.**
OHSAS 18001: 2007 Awareness Training Occupational Health and Safety Management System (11-12) May 2014.

Research Interests.

- Modular multilevel converters for HVDC.
- High-power density converters.
- Control and stability analysis of ac and dc microgrids
- Power electronics systems.
- Design of novel topologies, control systems based on a wide range of algorithms, including modeling, design, and simulation.
- Design of new topologies of power electronics converters.
- Renewable energy conversion systems (photovoltaic and wind).
- Energy storage.
- Railway electrification systems.
- Modeling and control of multilevel converters.

Publications

- [1] [Single-phase common ground type 5L inverter with reduced capacitor voltage stress for photovoltaic applications.](#)
- [2] [Simulation and experimental study of power flow in a seven-phase transformer under fault conditions.](#)
- [3] [Power Quality Measures of Non-Ideal 3-phase Diode Rectifiers and Smoothing Circuits.](#)
- [4] [Starting Analysis of Squirrel Cage Induction Motors 1000 kW by Variable Frequency Drive in Power System, Case study: Tabriz Pump station.](#)
- [5] [Design and Programming of a Microcontroller Based on a Solar Tracking System](#)

List of Reviewed Papers

1. Reviewed papers for IEEE Access.
2. Reviewed for many papers for IEEE Transactions on Power Electronics.
3. Member of Editorial Board of Frontiers in Electronics and Frontiers in Energy Research.
4. Reviewed papers for IET ENERGY SYSTEMS INTEGRATION.
5. Reviewed papers for NTU Journal of Renewable Energy.
6. Reviewed papers for Protection and Control of Modern Power Systems which were published by Springer Nature.

FUNDING and ACADEMIC AWARDS

- I have been granted an academic full-funded scholarship by The Higher Committee for Education Development in Iraq (HCED), in order to study MSc. degree in one of UK universities. Year of award was 2014.
- I was honored to receive a certificate of recognition from the University of Halabja Chancellor in 2023, acknowledging my exceptional contributions to reputable journals through the publication of outstanding papers.
- I was presented with a certificate of recognition by the Faculty of Science Dean for my outstanding performance in teaching, positive student feedback, and contributions to academic development. Additionally, I achieved the second-highest ranking in the Faculty of Science in 2023.

PROFESSIONAL REFERENCES

1. [Professor Pericle Zanchetta, Fellow IEEE](#)

IEEE IAS Education Dept. Chair and Editor in chief of the IEEE open access Journal on Industry Applications. Power Electronics, Machines and Control Group.

Department of Electrical and Electronic Engineering.

University of Nottingham, University Park, NG7 2RD Nottingham UK.

Email: pericle.zanchetta@nottingham.ac.uk - Telephone: +44 115 9515592 -Postgraduate Co-supervisor.

2. [Dr Al Watson](#)

Associate Professor in High Power Electronics

Director of Postgraduate Research, Power Electronics, Machines and Control Research Group

Email: alan.watson@nottingham.ac.uk Telephone: +44 115 74 84462 – Postgraduate instructor.

3. [Professor Serhiy Korposh](#)

Professor in Photonics Instrumentation

Department of Electrical and Electronic Engineering

University of Nottingham, University Park, NG7 2RD Nottingham UK

Email: S.Korposh@nottingham.ac.uk Telephone: +44 1157484701- Postgraduate course director

4. [Dr. Halgurd Nawzad Awl](#)

Associate Professor in Communication Engineering, Faculty of Engineering, Sulaimani Polytechnic University

Email: halgurd.awl@spu.edu.iq Telephone: Telephone: +964 7703582281- Undergraduate instructor and advisor.