



Waleed J Hassan

LECTURER



1 January 1974



EEE Dept. College of Engineering
University of Thi-Qar



waleed-j@utq.edu.iq

hassanwa@msu.edu

About me

In my work and study, I always prefer to know the target first then I will decide based on my knowledge if I am capable of achieving the work or not. I would like my job to be evaluated based on how many problems have been solved not on how much time has been spend working on a given problem.

Skills

Fractional slot concentrated winding



Motor harmonics analysis



MagNet FEA



MotorSolve



dSPACE DS1103



SIMULINK



MATLAB



(*)[The skill scale is from 0 (Fundamental Awareness) to 6 (Expert).]

Research

Design, analysis and control of multi-phase drive system, Practically, design and control the two planes, five-phase permanent magnet synchronous motors

Education

2014-2018 Ph.D. in Electrical Power Engineering

Leicester, UK

Thesis: Design, Analysis and Control of a Five-Phase Fractional Slot Surface Mounted PM Machine for Applications with a Wide Speed Range

2009-2011 M.Sc. in Electrical Engineering

Michigan, USA

Two years course/research degree. Thesis: Efficiency Optimization of PMSM Based Drive System

1997-2001

B.Sc. in Electrical Engineering

Baghdad, Iraq

Principles and applications of power system, power electronics and electrical machines

Publications

W. Hassan and Bingsen Wang, "Efficiency optimization of PMSM based drive system," Proceedings of The 7th International Power Electronics and Motion Control Conference, Harbin, 2012, pp. 1027-1033.

W. Hassan, P. Lefley and M. Kansara, "Optimum Flux-Weakening Characteristics for Five-Phase Surface Mount Permanent Magnet Synchronous Machines," 2018 International Symposium on Electrical Machines (SME), Andrychów, 2018, pp. 1-5.

Experience

- 1 Control Algorithm Development:
Algorithm implementation in real time controllers.
- 2 Motor Design, Modeling and Analysis:
Design of electric machines for a given application based on cost, power, speed and reliability requirements.
- 3 Multi Phase Drive System:
Design, analysis and control of 5,7, and 9 phase SPM motors.

Projects

- 1 Building and design two-level five-phase voltage source inverter.
- 2 Building and design a signal conditioning and protection board for the dSPACE DS1103 controller.
- 3 Building an isolated gate-drive circuit for each leg of the two-level 5-phase voltage source inverter.
- 4 Building and design a prototype FSCW five-phase SPM motor.

References

PhD thesis supervisor: Dr Paul Lefley
BSc (Eng), PhD, CEng, MIET, MIEEE, FHEA
T: +44 (0)116 252 2526
E: PWL3le.ac.uk
Engineering Department
University of Leicester