Muhammad Haseeb **ARSHAD**

Electrical Engineer | Power Electronics | Machine Learning

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House No 10 Street No 1 Younaspura Daras Road Baghbanprua Lahore - Pakistan
Born on October 10, 1989

Education

2018-2020 M.Sc. Electrical Engineering (Specialization : Control & System Engineering)
- *King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia*
- CGPA 3.857/4.0
- **Thesis :** Intelligent Model Predictive Torque Control of Induction Motor

2016-2017 M.Sc. Electrical Engineering (Specialization : Power & Control Systems)
- *University of Engineering & Technology, Lahore, Pakistan*
- CGPA 3.63/4.00
- **Design Project :** Advance Direct Torque Control of Two Phase Symmetrical Induction Motor fed with B4 Inverter

2009-2014 B.Sc. Electrical Engineering (Specialization : Electronics & Telecommunication)
- *University of the Punjab, Lahore, Pakistan*
- CGPA 3.81/4.0
- **Thesis :** Wandering Autonomous Lifelike Behaviour Based Ground Vehicle

Academic and Professional Experience

Present – Sep 2020 Design Engineer, AMCON, Pakistan
- SCADA system calibration
- Develop overall electrical infrastructure design
- Handling customer meetings and suggestion regarding changes to the design

Excel | Webex Meet | Outlook

May 2020 – September 2018 Research Assistant, FACTS LAB - KFUPM, Saudi Arabia
- Optimization of FS-MPTC for Induction Motor
- Investigating the performance of predictive current control for line-start PMSM

MATLAB | MultiSim | Simulink | dSpace | RTDS | LaTeX

December 2019 – September 2019 Teacher Assistant, KFUPM, Saudi Arabia
- Assignment and quiz grader
- Project groups co-supervisor

MATLAB | MultiSim | PSpice | MAPLE | LaTeX

May 2019 – April 2019 Teacher Assistant, KFUPM, Saudi Arabia
- Book Keeping of student records of past three years (2016-2019)
- Helper for academic petition forms

Excel | MS Word | Outlook

Publications

Advanced Direct Torque Control of Four Switch Fed Two-Phase Symmetric Induction Motor — June 2018
Muhammad Haseeb Arshad, Muhammad Khalid
Accepted in IEEE 27th International Symposium on Industrial Electronics (ISIE)

A Chaos Based SVPWM technique for B4 Inverter fed Two-Phase Symmetric Induction Motor for THD & EMI improvement at Low Modulation Index — July 2019

Muhammad Haseeb Arshad, Mahmoud Kassas

Accepted in IEEE Texas Power and Energy Conference (TPEC)

Weighting Factors Optimization of Model Predictive Torque Control of Induction Motor Using NSGA-II With TOPSIS Decision Making — December 2019

Muhammad Haseeb Arshad, Mohammad Ali Abido, Aboubakr Salem, Abubakr H Elsayed

Accepted in IEEE Access

Artificial Bee Colony Optimized Self-tuning PI Speed Controller for FCS-MPCC of Permanent Magnet Synchronous Machines — December 2020

Muhammad Haseeb Arshad, Abubakr H Elsayed, Mohammad Ali Abido, Aboubakr Salem

Accepted in International Conference of Smart Systems and Emerging Technologies (SMARTTECH)

A Simple Technique for Studying Chaos using Jerk Equation with Discrete Time Sine Map — January 2021

Muhammad Haseeb Arshad, Mahmoud Kassas, Alaa E Hussein, Mohammad Ali Abido

Accepted in Applied Sciences

Hierarchical Control of DC Motor coupled with Cuk Converter combining Differential Flatness and Sliding Mode Control — January 2021

Muhammad Haseeb Arshad, Mohammad Ali Abido

Accepted in Arabian Journal for Science and Engineering

An Overview of Sequential Learning Algorithms for Single Hidden Layer Networks : Current Issues & Future Trends — Under Review

Muhammad Haseeb Arshad, Mohammad Ali Abido

Submitted to IEEE Transactions on Artificial Intelligence

MPC of LSPMSM Using A Novel Flux Observer Based on Indirect Current Method - Not published yet — Under Review

Abubakr H Elsayed, **Muhammad Haseeb Arshad**, Aboubakr Salem, Alaa E Hussein, Mohammed Ali Abido

Submitted to IEEE Access

GA tuned Adaptive Discrete-time Sliding Mode Controller for LCL Grid-Connected Inverter — Under Review

Muhammad Haseeb Arshad, Sami El-Farik, Mati Ur-Rasool, Mohammed Ali Abido, Md. Ismail Hossain

Reviewer's Comments Addressed - Submitted to Journal of Franklin Institute

Optimal Weighting Factor Selection of Finite Set Control Model Predictive Torque Control of IM Drive using Cascaded Feedforward Neural Network — Under Review

Muhammad Haseeb Arshad, Mohammad Ali Abido

Working on Reviewer's Comments - Submitted to IEEE Transactions on Industrial Electronics

Professional Training and Courses

21 June 2020 – 25 June 2020 | **Data Science Fundamentals, KFUPM, KnowledgeHut**

- Data Science in Businees
- Data Analytics Tools
- Data Science Methodology

Zoom | Jupitor Notebook

September 2019 – December 2019 | **ICS-460 | Introduction to Machine Learning, KFUPM, Saudi Arabia**

- Machine Learning and its Fundamentals
- Supervised, Unsupervised & Reinforced Learning
- Regression vs Classification Techniques
- Introduction to Deep Neural Networks
- Implementation of Machine Learning Algorithms using Jupitor Notebook

Jupitor Notebook | MATLAB | Excel

July 2017 – September 2017 | **The Data Scientist's Toolbox | Data Science Specialization, John Happkins University, Coursera**
- Introduction to Data Science
- Big Data Analytics

MS Word | RStudio

Skills

Programming	**C++**, **MATLAB**, **Python**, VHDL, MAPLE, R
Engineering Softwares	**MATLAB**, **Proteus**, **NI MultiSim**, **CorelDraw**, NI LABView, Kiel, Photoshop CS5
Operating System	**Windows 10**, **Mac OS X**, Windows 7, Linux Redhat
Other	**DSpace**, **CNN**, **RNN**, **LSTM**, **Jupitor Notebook**, RStudio, AVR Studio, Active-HDL, MS Office, MS Visio, VAEs

Important Coursework

- Convex Optimization
- Evolutionary Optimization
- Intelligent Control
- Adaptive Control
- Stochastic Process
- Machine Learning
- Digital Signal Processing
- Linear Control Systems
- Advance Power Electronics
- Design of Digital System
- Nonlinear Dynamical Systems

Achievements

- Got 1st position in the of Punjab Group Colleges during the session 2006-08
- Got 4th position in B.Sc. Electrical Engineering at university level during the session 2009-13
- HEC Indigenous Scholar for my postgraduate studies at UET Lahore
- Got 4th position in M.Sc. Electrical Engineering at university level during the session 2016-17
- Graduate Scholar at KFUPM, Dhahran, Saudi Arabia on fully funded scholarship
- Won Travel Grant from IES for ISIE 2018 conference.

Languages

Urdu	●●●●●
Punjabi	●●●●●
English	●●●●○

Professional Affiliations

- Pakistan Engineering Council (Registered and Supervisory Engineer under C-5/C-6 Category
- Institute of Electrical and Electronics Engineers (IEEE) USA (Student Member)
- Industrial Electronics Society (IES) USA (Student Member)

References

- References will be provided upon request