Muhammad Haseeb ARSHAD
Electrical Engineer | Power Electronics | Machine Learning

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125 Gulmuhar Block, Bahria Town, 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
July 2020 — Assistant PMO & Design Specialist, CNS ENGINEERING, Pakistan
> Develop overall electrical infrastructure design
> Handling customer meetings and suggestion regarding changes to the design
> Taking care of technical specs of electrical equipments according to the future needs

[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

An Overview of Sequential Learning Algorithms for Single Hidden Layer Networks : Current Issues & Future Trends *June 2020*

Muhammad Haseeb Arshad, Mohammad Ali Abido

Submitted to IEEE Transactions on Artificial Intelligence

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

MPC of LSPMSM Using A Novel Flux Observer Based on Indirect Current Method - Not published yet *January 2021*

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

Submitted to IEEE Access

Genetic Algorithm tuned Adaptive Discrete-time Sliding Mode Controller for LCL Grid-Connected Inverter *February 2021*

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

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 *March 2021*

Muhammad Haseeb Arshad, Mohammad Ali Abido

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	**The Data Scientist's Toolbox	Data Science Specialization**, JOHN HAPPKINS UNIVERSITY, Coursera
September 2017	› 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