

S. Waqar Ahmed

CONTACT INFORMATION	Department of Physics, University of Karachi, University Road - 75270	Phone: +92 344 3554298 E-mail: syed.waqar81@outlook.com LinkedIn: syed waqar ahmed
PROFESSIONAL APPOINTMENTS	2018 – Present Teaching Associate , Department of Physics, University of Karachi 2017 Research Assistant , Department of Physics, School of Science and Engineering, LUMS (Lahore, Pakistan) 2015 – 16 Lab Instructor , Department of Basic Sciences, DHA SUFFA University	
EDUCATION	2018 MS, Physics, Lahore University of Management Sciences Thesis Title: Development of Low-field NMR Spectrometer Advisor: Dr. Sabieh Anwar 2014 BS, Physics, University of Karachi	
SCHOLARSHIP AWARD & CERTIFICATES	2016 Fully funded NOP Scholarship awarded for MS program at LUMS 2019 Attended Quantum Information Summer School (QISS) 2019 at Institute of Business Administration Karachi (IBA). 2019 Successfully completed the Second Refresher Course for Physics Teachers (Module- II) , July 2019 at National Centre for Physics (NCP), Islamabad, Pakistan. 2018 Workshop on Machine Learning with Python , 2018 at DHA Suffa University. 2016 Attended Quantum Information Summer School (QISS) 2016 at Habib University. 2014 Participated in International Conference on Nanomaterials and Nanotechnology 2014 at Federal Urdu University of Arts, Science & Technology.	
PROFESSIONAL DEVELOPMENT & COURSES	Research Projects 2017 On sample preparation techniques of Two-dimensional Transition Metal Dichalcogenide (MoS_2) using Plasma Vapor Deposition technique of Magnetron sputtering and post deposition annealing method. Supervisor: Dr. Ata Ul Haq 2017 PolyVinylAlcohol/Acrylate sample preparation using spin coating technique. The layer thickness measurements were produced via XRD, electron microscopy and ellipsometry. Supervisor: Dr. Ata Ul Haq Academic Projects 2016 Fabrication of YBCO High Temperature Superconductor, lab project. 2017 Study on Topological Superconductors, course project. Computer Science 2020 Deep learning with Tensorflow, coursera.org 2020 MIT 6.S161, Intro to Deep Learning, MIT 2020 machine learning bootcamp 2019-.. Artificial Intelligence, course at PIAIC & PannaCloud 2018 Introduction to Neural networks, cousera.org Further projects and tasks in machine learning can be found on Github repository	

TEACHING EXPERIENCES	Course Instructor, University of Karachi		
	2020	Electricity and Magnetism-I, Spring semester	
	2019	Modern Physics, Fall semester	
	2019	Mathematical Physics – II, Fall semester	
	2019	Mechanics & Properties of Matter, Spring semester	
	2018	Electricity & Magnetism – II, Fall semester	
	Teaching Assistant, University of Karachi		
	2020	Mathematical Physics-II, Spring semester	
	Lab Instructor, DHA Suffa University		
	2015	Applied Physics Lab, Fall semester Basic Electronics Lab, Fall semester	
	2016	Basis Electronics Lab, Spring semester	
	Delivered		
	2016	“Smartphone Physics” in Fourth Regional Lab Immersion Program 2016	
	Managed		
	2019	“Testing, Calibration & Measurements Laboratory”, Department of Physics, University of Karachi.	
	2019	“Quantum Information and Quantum Communication” research talk by Dr. Ayesha Khaliq (Assoc. Prof. at NUST) at University of Karachi.	
	Supervised Projects at TCML		
	Observation of Beta Backscattering in Metals		
	Observing Optical Activity of Glucose solution		
	Calibrating spectrophotometer with CuSO4		
	Modelling gravitational attraction in VPython		
	Calculating air drag using video tracking with Tracker		
	RESEARCH & COMPUTATION TOOLS	Python & VPython LabView	Mathematica Matlab
	LaTeX		
	RESEARCH INTERESTS	I want to steer my research towards much applicable side of physics. One of the greatest prospects I want to cover is quantum machine learning and its applications in particle physics data, this interlocking field intrigues me as well as its implications in real quantum system scenarios. My current research involves classical machine learning for satellite image processing.	
REFERENCES	Dr. Muhammad Sabieh Anwar, Associate Professor, LUMS sabieh@lums.edu.pk		MS Thesis Supervisor
	Dr. Ata Ul Haq, Assistant Professor, LUMS ata.haq@lums.edu.pk		Instructor
	Dr. Munawar Hussain, (Former)HoD, DHA Suffa University munawarhussain26@gmail.com		Supervising Officer