

ENGR. DR. DANISH ARIF

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Total Experience: 15 years

IEEE Professional Member # 90439837 PEC # Elect / 28871

OBJECTIVE

Seeking a position to utilize my skills and abilities in reputed institution that provides opportunities for professional and intellectual growth in terms of resourcefulness, innovation and flexibility.

POST GRADUATION WORK EXPERIENCE

- **University of the Punjab** as Assistant Professor, Institute of Electrical, Electronics and Computer Engineering (July 2012 – Present)
 - Teaching area: Instrumentation with IoT, Computer Programming, Embedded Systems, Image Processing
 - Research area: Artificial Intelligence, Instrumentation, IoT, Biomedical Engineering, Robotics
 - NAVTTC, Program Head (Artificial Intelligence, Automation and Energy Efficiency)
 - TEVTA, Consultant for Revamping of Technical Education
 - PTBB, Expert/ Reviewer (Modern Science & Computing)
 - Former Member Punjab University Exam Monitoring Team
 - Member Board of Studies
 - Convener Outcome Based Education at IEECE
 - Focal Person for PEC Accreditation
 - Convener for QEC at IEECE
 - Former Member Technical Evaluation Committee
 - Member Curriculum Revision Committee
 - Former Focal Person Security Planning and Deployment
 - Focal Person ORIC for Department of Electrical Engineering
 - Master Trainer Microsoft Office Specialist
 - IEEE PU Branch Coordinator
 - Online Examination: Training, Design and Deployment
 - Online Teaching System Development & Deployment

Jiangxi University of Science & Technology, China as Associate Professor, Department of Electrical Engineering (Sep 2019 – Jun 2022)

- Research area: Artificial Intelligence, Parallel Computing
- Teaching area: Embedded Systems, Digital Control Systems
- **Sui Northern Gas Pipelines Ltd.** as Engineer, Transmission Department, (Jun 2012 – Aug 2012)
 - Calibration & Metering with Electronic Flow Computers
 - SCADA
- **MOBILINK** as Supervision Engineer, Network Operation Centre (Mar 2012 – Jun 2012)
 - Network Operations Control
 - Software Research and Development
- **EMTEL** as Executive Engineer (Apr 2011 – Apr 2012)
 - Telecom Sites Maintenance
 - Telecom Equipment Procurement
- **Ministry of Defence** as Assistant Manager, Electronics (July 2010 – Apr 2011)
 - Instrumentation/ Sensors, RADAR & GPS integration
 - Avionics System Design/ JF-17
- **Micro Electronics International Pvt. Ltd.** as Project Engineer (Jan 2010 – July 2010)
 - Encryption Modules / Programming

INTERNSHIP EXPERIENCE

- **WATEEN Telecom** as Intern (Jun 2009 – Aug 2009)
 - Optical Fibers
- **ICC Pvt. Ltd.** as Intern (Jun 2008 – Aug 2008)
 - High Power Transmission lines and substations
- **Horizon Line** as Intern (Jun 2007 – Aug 2007)
 - Installation of telecom repeaters

CONSULTANCIES

- | | | |
|---------------------|---------------------------|---------------------|
| ➤ SNGPL | ➤ Inxol Technologies | ➤ PTBB |
| ➤ Minhaj University | ➤ EMTEL | ➤ TEVTA |
| ➤ BreathiO | ➤ Aqua Shine Technologies | ➤ Muslim Scientific |

PHD RESEARCH TITLE

Person of Interest Rapid Identification and Tracking Assistance System (POIRIT) Assistance System

MASTERS RESEARCH

Study of the effects of Conventional, Hybrid and Electric vehicle emissions in Lahore

BACHELORS FINAL YEAR RESEARCH PROJECT

Development of All-weather, All-terrain, Automatic and GSM-controlled, GPS-aided Skirmish and Defense Vehicle using Microcontroller

EDUCATION

Year	Institute	Degree	Grade
2017-23	Department of Electrical Engineering, Faculty of Engineering, University of Cape Town, SA	PhD Electrical Engineering	Pass
2011-13	Institute of Quality & Technology Management, University of the Punjab, Lahore	MS Total Quality Management	3.60
2005-09	College of Engineering and Emerging Technologies, University of the Punjab, Lahore	Electrical Engineering	3.74
2003-05	Government College University, Lahore	H.S.S.C	75 %
2001-03	Crescent Model Higher Secondary School, Lahore	S.S.C	88%

AWARDS AND ACHIEVEMENTS

- IEEE Myron Zuker Award for Innovation 2018 (USA) (Telemedical Assistant)
- IEEE Myron Zuker Award for Innovation 2019 (USA) (Neurofeedback System for Rehabilitation)

RESEARCH COLLABORATIONS

- Dr. Simon Winberg (University of Cape Town, South Africa)
- Dr. Zhao Huatao (Jiangxi University of Science & Technology, China)
- Dr. Fayyaz Ahmad (SUPARCO, Pakistan)
- Engr. Suleman Khuwaja (Inxol Technologies)
- Engr. Hassan Ali (Zong)

RESEARCH PROJECTS

- Cost Effective Solution for Minimization of Medical Errors and Acquisition of Vitals by Using Autonomous Nursing Robot
- Cost-Effective Indoor HVAC Energy Efficiency Monitoring based on Intelligent Decision Support System under Fermatean Fuzzy Framework
- Unmanned Ground Vehicle
- Brain Tumor Detection using Deep Learning and Parallel Computing
- Ariel target estimation from GUI of X-Band Radar using Machine Learning
- Brain waves-controlled home appliances for paralysis patients
- Workplace efficiency enhancement by activity monitoring using image processing
- Development of Cost-Effective night vision system
- Renal cancer and stones detection system using Deep Learning
- Development of F-16 C/D auto-pilot and target engagement system using reinforcement learning
- Rehabilitation of Depression through Neurofeedback Systems
- American Sign Language to Speech conversion system using gesture recognition
- Pico hydro power generation unit for domestic use in remote areas
- Driver Assistance System using Image Processing and Deep Learning
- AgroFarm: Farmer Assistance System with Sensors and Predictive Models using Machine Learning
- IOT based remote monitoring system for hydro power plants (University of the Punjab)
- Block Chain Based E-Tendering System
- Re-Generation and Estimation of HD Image from Low Resolution CCTV Image Using Cycle GAN
- Brain Tumor Detection from Magnetic Resonance Imaging using Deep learning with Parallel Computing
- Hyper-real High-Definition Image Formation using Multi-Stage Generative Adversarial Network
- Customer Activity Monitoring System Using Artificial Intelligence with Image Processing
- COVID-19 AND PNEUMONIA Detection in X-Ray Images Using Deep Learning Models
- Efficient Waste Management by Air Quality Index Monitoring using Artificial Intelligence and IoT
- AI based COVID-19 Early Diagnosis and Growth Prognosis System for common citizens using Forecasting Deep Learning Models
- Neurofeedback and Computer Vision based Industrial Control and Supervisory System (ICSS) to utilize Physically Impaired People in Industry using Deep Learning
- AI based Cost Effective Driver Assistance System for South Asian Region
- Cancer Cells and Tumor Detection Using Deep Learning
- Multi-Mode Radar Target Estimation using Deep Learning

PROFESSIONAL TECHNICAL PROJECTS / ASSIGNMENTS

- Intruder and Environment Sensing System (AESP)
- Building Security System Plan & Implementation (AESP)
- Home Automation System Design (AESP)
- JF-17 aircraft avionics system development (MOD)
- F-16C/D aircraft HUD design study (MOD)
- Range extension kit GPS integration for air to ground weapon (MOD)
- Aircraft LRUs PCB Design & Implementation (MOD)
- Aircraft Multi Functional Displays Integration (MOD)
- Aircraft LRUs Power Supply Design (MOD)
- Encryption modules development (MOD)
- Security planning and devices installation at forward military base (MOD)
- BTS to SDR swapping (EMTEL)
- Repeaters Installation in Rural Areas (EMTEL)
- Organization level Web portal for SOPs, Catalogues & Registers (Mobilink)
- Preventive Maintenance Management System (Mobilink)
- Design of backup system for telecom sites monitoring and report management software (Mobilink)
- Gas flow computers replacement and installation Lahore sector SMS (SNGPL)
- Calibrations of Electronic Flow Computers at IPPs (SNGPL)
- Design and Development of daughter card for gas chromatograph (SNGPL)
- Maintenance / support for Scandura calibrating equipment (SNGPL)
- HEC Building and Equipment Upgrade Project of Rs.200M (University of the Punjab)
- Smart performance management system using Artificial Intelligence (Mobilink)
- Online Teaching/ Assessment system deployment (University of the Punjab)

TECHNICAL SKILLS

LANGUAGES	HARDWARE	MANAGEMENT & DATABASE TOOLS
<ul style="list-style-type: none"> ➤ Visual Basic ➤ Assembly ➤ C/ C++ ➤ VHDL ➤ Python ➤ Java Script 	<ul style="list-style-type: none"> ➤ PIC, 8051, AVR, ESP32 ➤ DSP processors ➤ FPGA (Xilinx Altera) ➤ Raspberry Pi ➤ NVIDIA Jetson 	<ul style="list-style-type: none"> ➤ SPSS ➤ Minitab ➤ Microsoft Excel (with VB) ➤ Microsoft Access
NETWORKING & COMMUNICATION	MULTIMEDIA & COMPOSING TOOLS	ENGINEERING SOFTWARE
<ul style="list-style-type: none"> ➤ IP camera ➤ IoT Devices 	<ul style="list-style-type: none"> ➤ Dreamweaver ➤ Flash/ Swish ➤ Corel Draw/Photoshop ➤ Microsoft Office 	<ul style="list-style-type: none"> ➤ Protel ➤ MATLAB ➤ HFSS ➤ Multisim / Proteus ➤ Microsoft Visio

TRAININGS /COURSES / DIPLOMAS

- Lean Six Sigma (Yellow Belt)
- Microsoft Office Specialist
- Electrical Safety (PEC)
- Power System Protection (PEC)
- Gas Measurement (SNGTI)
- WiMax (Mobilink)
- Six Sigma Implementation (EBA)
- Quality Management (IQTm)
- Security Management Systems (PKE)
- Safety & Management course (NESCOM)
- CC++ course (NESCOM)
- PCB Design (NESCOM)
- GSM/BSS (ZTE-UET)
- 8051 Micro-Controller (PITAC)
- Outcome Based Education (PEC)