MUHAMMAD KAMRAN

CONTACT

Name: Muhammad Kamran
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PERSONAL INFORMATION

Religion: Islam
Nationality: Pakistani
Language: Urdu & English

EDUCATION & QUALIFICATIONS

PhD (CS)   **2017-2022, NED University of Engineering & Technology, CGPA 3.85.**

MCIT   2013 - 2015, NED University of Engineering & Technology, **CGPA 3.56.**

BSCS   2007 - 2010, UBIT University of Karachi, **CGPA 3.64 (2nd Position).**

PROFESSIONAL CERTIFICATIONS:

Faculty Development Program   NED University of Engineering & Technology.
Web Engineering   NED University of Engineering & Technology.
Programmable Logical Control   NED University of Engineering & Technology.
Wind Turbine   HAMDARD University.

TECHNICAL SUMMARY:

ASSEMBLY, C, C++, C#, ARDUINO & PYTHON, VISUAL STUDIO 2003, 2005 & 2008.

BS FINAL YEAR PROJECT:

IoT – Home Automation system

MS FINAL YEAR PROJECT:

IoT - 3 Phase wireless electricity monitoring system using GPRS.

PhD RESEARCH TOPIC:

Practical Quantum Key Distribution based on Higher Dimension protocol.

PROFESSIONAL PROJECTS:

- Persistence of Vision Display 3 IN 1.
- Electronic Load HMI Design (For R&D Organization).
- Data Acquisition System for Solar Panels Using NI-DAQ Cards (For R&D Organization).

EMPLOYMENT HISTORY:

Organization: R & D   **January 24th, 2006 – May 24th 2021.**

TEACHING EXPERIENCE:

CS & IT Dept. of NED University of Engineering & Technology.

Assistant Professor   **27th Oct, 2021- Present**
Lecturer   **25th May, 2021- 26th Oct, 2022**

ACHIEVEMENT:

Best Performance awards for consecutive two years **2007 & 2008**.
Annual Excellence awards for the years **2012 & 2014**.
Distinguished Service award for the year **2018**.

PUBLICATION & POSTERS:

1. **Kamran M, Khan MM, Malik T. Decoy state HD QKD system for secure optical communication. In2021 International Conference on Cyber Warfare and Security (ICCWS) 2021 Nov 23 (pp. 87-92). IEEE.**
2. **Kamran M, Malik T, Khan MM. Evaluation of eavesdropping error-rates in higher-dimensional QKD system implemented using dynamic spatial modes. International Journal of Quantum Information. 2021 Oct 20:2150030.**
3. **Muhammad KAMRAN, Tahir MALIK, Muhammad Mubashir KHAN, Asad ARFEEN. "Quantum key distribution over free space optic (FSO) channel using higher order Gaussian beam spatial modes." Turkish Journal of Electrical Engineering & Computer Sciences 28, no. 6 (2020): 3335-3351.**
4. **Kamran M, Khan MM, Malik T. "High Dimensional Quantum Key Distribution System Using Structured Light" (Poster accepted in Qcrypt2021).**

FUNDINGS ACHIEVED:

- *MoST funding and HEC funding through NED UET in year* **2020**. *(PhD Scholar)*
- *Sindh Research Support Program funding in year* **2021**. *(Co-PI)*

INTEREST:

I am a quantum enthusiast, and really interested to learn the practical stuff in the quantum optics domain. I have practically simulated the 4- Dimensional Quantum Key Distribution system using structured light in my PhD. I have simulated the free space QKD system. Nowadays, I am working on developing the proof of concept model of the mentioned QKD system. Also exploring the atmospheric effects which cause turbulence in the quantum channel. I will also study the fiber-guided and under-water version of the said system.