

TARIQ MAHMOOD

LECTURER

CENTRE FOR HIGH ENERGY PHYSICS,
UNIVERSITY OF THE PUNJAB, LAHORE

PHONE: 0321-4617186

TARIQMAHMOOD_16@HOTMAIL.COM

EDUCATION

Centre for High Energy Physics, University of the Punjab

PhD. High Energy Physics (continue)

GC University Lahore

MS. Computer Sciences (Quantum Artificial General Intelligence and Consciousness)

Title: Modeling and Simulation of Quantum Cognitive Perceptual Associative Memory for Computer Vision using Unified Theory of Mind for Machine Consciousness

Centre for High Energy Physics, University of the Punjab

M.Sc Computational Physics.

Thesis Title: Microcontroller Based Digital Locking System

University of the Punjab

B.Sc. Physics & Math (A+B)

[Majors: Physics, Mathematics (A+B)]

BISE, Lahore

Intermediate in Pre-Engineering

[Majors: Physics, Mathematics, Chemistry]

BISE, Lahore

Matriculation

[Majors: Physics, Mathematics, Chemistry, GTD]

PUBLICATIONS

- Muhayyuddin, **Tariq Mahmood**, M. Zeeshan Iqbal, Maqsood Ahmad, Haris Rasheed “**High Performance Computing based Numerical Solution of Boltzman Transport Equation for Thermoelectric Nanostructures**” (submitted).
- Wajahat M. Qazi, Muhayyuddin, **Tariq Mahmood**, Khalil Ahmad “**OpenQCF: Quantum Computing Framework for Simulating Quantum Algorithms, Quantum Circuits and Quantum Consciousness**” (submitted).
- **Tariq Mahmood**, Wajahat M. Qazi, Muhayyuddin “**Design and Implementation of Perceptual Associative Memory for Conscious Machines**” (submitted).
- Muhayyuddin, Wajahat M. Qazi, **Tariq Mahmood** “**Q-ACID: Modeling Dreams in Machines**” (submitted).

AREAS OF INTEREST

- Lattice Quantum Chromodynamics
- Quantum Computing and Intelligence
- Mathematical Modeling
- Reduced Order Modeling
- Computational Physics Simulation
- High Performance Computing
- Artificial Intelligence & Machine Consciousness
- Computer Vision

PROFESSIONAL DIPLOMAS AND WORKSHOPS

- Participated 3rd Pakistan Botanic Gardens Conference “*Role of Botanic Gardens in Conserving Natural Vegetation*” held at GC University, Lahore.
- Diploma in Artificial Intelligence.
- Attended a workshop on *Quantum Computing* in NCBA&E.
- Attended a workshop on *Technological Singularity* in GC University.

PROFESSIONAL EXPERIENCE

- Lecturer in Centre for High Energy Physics, University of the Punjab, Lahore.
 - Electronics
 - Computer Programming
 - Advance Computer Programming
 - Computational Physics Simulation I (Lab)
 - Computational Physics Simulation II (Theory + Lab)
- Lecturer in Department of Computer Science, **GC University, Lahore.**
 - Numerical & Symbolic Computing
 - Parallel and Distributed Computing
 - Quantum Computing
 - Algorithm Analysis
 - Artificial Intelligence
 - Visual Programing
 - Introduction to Computing
- Visiting Lecturer in **National College of Business Administration and Economics, Lahore.**
 - Artificial Intelligence
 - Data Structures and Analysis of Algorithm
- Worked as Visiting Lecturer in “College of Technology”, **University of Lahore.**
Major Subjects taught to B.Tech
 - Electronics
 - Applied Physics.
- Worked as Visiting Lecturer Scholar College Shadman Chock Lahore.
- Worked as an Internee in **School Education Department, Civil Secretariat, Lahore** through **National Internship Program of Punjab Government, Pakistan.**

PROJECTS

- **Current Projects**
 - Working on a project of machine consciousness(detail available on demand)
 - Developing a Dot Net based framework for Quantum Computer Simulator
 - Chaotic Associative Memory for Robots.
 - Computer Vision, Face/Object recognition using Neural Networks
 - High Performance Computing
- **Completed Project**
 - Single Qubit Quantum Computer Simulator
 - Simulation of motion of charge particle in cyclotron
 - Solution of Time independent Schrödinger Equation Using Half Step Method and RK Method.
 - Monte Carlo Simulation of Radioactive Decay.
 - Phase Trajectory of a Chaotic Pendulum.

COMPUTER SKILLS

▪ **Programming Skills**

Having excellent programming skills in;

- C / C++, In Windows
- C# using DOT NET Technology
- MPI Programing, High Performance Computing
- Grid Computing in C#, Windows Communication Foundation
- CUDA and OpenCL based Parallel programming for GPU

PERSONAL PROFILE

- Father's Name: Barkat Ali
- NIC No: 35101-1267214-1
- Date of Birth: Nov 15, 1986
- Place of Birth: Kasur, Pakistan
- Marital Status: Single