

MARIUM GHULAM NABI

📍 Karachi, Pakistan ✉️ mariumgn@neduet.edu.pk

EDUCATION

NED University of Engineering and Technology **Karachi, Pakistan**
Master of Science (MS) in Physics **Nov 2019 – Mar 2022**
Thesis Title: Signal processing of cardiovascular velocity waveforms generated by doppler ultrasound

NED University of Engineering and Technology **Karachi, Pakistan**
Bachelor of Science (BS) in Applied Physics **Dec 2015 - Aug 2019**
Thesis Title: Stability of Triaxial galaxy models for SMBH (Supermassive Black Holes) Binary Evolution

WORK EXPERIENCE

NED University of Engineering and Technology **Karachi, Pakistan**
Lecturer **Mar 2024 – Present**
Department of Physics
Class Advisor of First year Batch 2024
Taught Courses: Applied Physics, Applied Physics for Engineers, Heat and Thermodynamics, Mechanics and Properties of matter, Waves & Oscillation

NED University of Engineering and Technology **Karachi, Pakistan**
Visiting Faculty **Oct 2020 – Feb 2024**
Department of Physics
Taught Courses: Applied Physics, Applied Physics for Engineers, Heat and Thermodynamics

Pakistan Space and Upper Atmosphere Research Commission (SUPARCO) **Karachi, Pakistan**
Research Intern **Dec 2018 – Aug 2019**

- Conducted quantitative research on different models of Binary Supermassive Black holes (SMBH) for the stability of triaxial galaxies by using triaxiality parameters.
- Executed simulations for galaxy models on ACCRE cluster
- Performed data processing and analysis through MATLAB and Python

PCSIR Laboratories Complex **Karachi, Pakistan**
Research Intern **Sep 2018 – Oct 2018**

- Conducted experimental research on instruments relevant to the domain of material analysis
- Research on Construction Materials and the role of Nanotechnology in Construction Sector

RESEARCH PROJECTS

- **pH sensors:** Suggested **cost-effective** and durable alternative materials with improved soil testing potential for **agricultural** use

COURSES

University of Arizona (Coursera)
Course Title: Astronomy: Exploring Time and Space

The Open University

Course Title: Microgravity: living on the International Space Station

Course Title: Particle Physics

University of Leeds (Futurelearn)

Course Title: 3-course program “An Introduction to coding and design

Griffith University (Futurelearn)

Course Title: Big Data Analytics: Opportunities, Challenges and the Future

HONOURS AND AWARDS

Judge at “Virtual PBL Culmination of Grade IV”

Beaconhouse School System PECHS Primary II, July 2020

HEC Prime Minister’s Merit Laptop Award

NED University of Engineering and Technology, April 2018

Received laptop as a merit award through HEC for being top of the class in 2018 undergraduate.

Certificate of Appreciation from Head of Physics Department, University of Florida

CONFERENCES

- Presented Project in Sindh Research & Technology Showcase, 2025 “Construction of a quantum random number generator “, January 2025
- Hosted pre conference seminar of “7th Annual National Conference on International Day of Medical Physics”, NED University of Engineering and Technology, November 2024
- Attended the “Symposium on Geomagnetic Field Observation “, NED University of Engineering and Technology in collaboration with SUPARCO, April 2024
- Attended the “12th School on LHC Physics”, National Centre for Physics (NCP), August 2023
- Guest speaker at “Career Success Seminar: Exploring Pathways in Physics and Beyond (Live Webinar)”, NED University of Engineering and Technology, July 2023
- Attended the “11th School on LHC Physics, National Centre for Physics (NCP)”, August 2022
- Attended the “Summer School on Cosmology 2022”, Abdus Salam International Centre for Theoretical Physics (ICTP)”, Trieste, Italy (Online), July 2022
- Attended the “10th School on LHC Physics (Virtual), National Centre for Physics (NCP)”, August 2021
- Attended the “International School on Physics & Allied Disciplines (ISPAD-2021)-Webinar”, National Centre for Physics (NCP), March 2021
- Attended the “Conference on Quantum Annealing/Adiabatic Quantum Computation”, Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste (Online), October 2020
- Attended the “IWARA 2020 Video Conference - 9th International Workshop on Astronomy and Relativistic Astrophysics”, September 2020
- Attended the “International Conference on Leadership”, NED University of Engineering and Technology, May 2018
- Attended the “National Conference on Physics Education”, Usman Institute of Technology, December 2017

SKILLS

Programming: Python, MATLAB, Mathematica, Origin

Soft Skills: Communication & Teamwork