Irfan U. Khan

Email: **irfan.u.khan012@gmail.com** LinkedIn: [Irfan (Ullah) Khan | LinkedIn](#)

Education & Qualifications

1. **BSc/MPhys (Hons): Theoretical Physics: (First Class) - University of Leeds (2023)**
   Relevant Modules: Advanced Mechanics, Quantum Mechanics, Analytical solutions to partial differential equations, Fluid Dynamics, Hamiltonian Systems, Theoretical elementary particle physics, Quantum Field Theory, General Relativity, Quantum Many-Body physics
2. **PhD/DPhil: Theoretical Physics - University of Southampton (Expected 2028)**

College: Elliot Hudson College
A Levels Maths, Further Maths, Physics

High School
GCSE 5 GCSEs (Grade A-C) including English, Maths, Science and Computer Science

Physics Experience

Masters Extended Literature Review
- Analysis of graded Lie algebras focused on Supersymmetry
- Used literature databases such as arXiv, web of Science
- Mathematical derivations of Graded Lie algebras
- Wrote a detailed review of Supersymmetry and its solutions to the Standard model of particle physics
- Delivery of several PowerPoint presentations

Relevant Skills

Third Year Project
- Wrote a Python code which simulated 1D Ising Model
- Wrote a comprehensive analysis of the theory and experiment
- Have experience of quantum computing by coding on Quskit
- Analysed the given Quantum Computer problem from a linear algebra point of view including a presentation

Lab Experience
- Knowledge of GLP and use of PPE

- Following instructions
- Data collection
- Experimental design
- Risk assessment

Work Experience

Lextra Learning - Tutoring
- Tutoring GCSEs and A-Level: Maths, Further Maths and Physics
- Collaborating with teachers in large classes
- Conduct and mark examinations
- Regular teaching and tutoring online and in-person
- Leading and motivating a class

Extra-curricular activities

Writing, making YouTube videos, reviewing media

References

Available upon request