

FAIZAN-E-ILAH

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EDUCATION

Lahore University of Management Sciences, Lahore, Pakistan *Oct. 2019 – May 2021*
Master of Science (MS): Physics
Overall GPA: 3.66/4.00
University of Engineering and Technology (UET), Lahore, Pakistan *Oct. 2015 – May 2019*
Bachelor of Science (B.Sc.): Electrical Engineering

RESEARCH AND TEACHING EXPERIENCE

Research Assistant (Machine Learning) *Oct. 2021 – Present*
(Optimizing diverse molecular systems using Reinforcement and Neuro-evolutionary learning)
Physics Department, Lahore University of Management Sciences (LUMS), Lahore

Research Assistant (Quantum Optics) *Jun. 2019 – Apr. 2021*
(Built Single Photon Quantum Mechanics Laboratory)
Physics Department, Lahore University of Management Sciences (LUMS), Lahore

Teaching Assistant (Modern Physics) *Jan. 2020 – Jun. 2020*
(Conducted recitations, helped students with their assignments, marked their quizzes)
Physics Department, Lahore University of Management Sciences (LUMS), Lahore

Research Intern (Classical Optics) *Jun. 2018 – Aug. 2018*
(Designed and Refined classical optics experiments)
Physics Department, Lahore University of Management Sciences (LUMS), Lahore

PUBLICATIONS

Journal Publications

- A. Akbar, F. Ilahi, and M. Anwar, “*Quantum process tomography of a magneto-optic transformation*,” Phys. Let. A 127467(2021).
- M. Waseem, F. Ilahi, and M. Anwar, “*Hippopedal intensity plots: drawing comparisons between antenna and optical polarimetry*,” Appl. Opt. 58, 8442-8448 (2019).

Books

- Waseem, M. H., Ilahi, F. E., Anwar M. S. (2020) “*Quantum Mechanics in the Single Photon Laboratory*,” Institute of Physics (IOP).
- Editors: Ilahi, F. E., Waseem, M. H. “Popular science writings by Prof. Asghar Qadir.” (in preparation)
- Ilahi, F. E., Waseem, M. H. “Euclid’s Elements in Urdu.” (in preparation)

PRESENTATIONS AND TALKS

- Ilahi, F. E., Waseem, M. H. (2019). Lecture series (4 lectures) titled ‘A Prolegomenon to the Philosophy of Quantum Mechanics’.
Information Technology University (ITU). Lahore, Pakistan.

- Ilahi, F. E., Waseem, M. H. (2019). Lecture series (8 lectures) titled ‘A Gentle Introduction to Quantum Optics’.
University of Engineering and Technology (UET). Lahore, Pakistan.

PROJECTS

- Machine Learning Approaches for Optimizing Particle Self-Assembly *Oct. 2021 – Present*
- Automation of a supply-chain business *Jul. 2021 – Present*
- Single Photon Faraday and Kerr Effect *Jan. 2019 – Dec. 2020*
- Single Photon Quantum Mechanics Laboratory *Dec. 2017 – Jan. 2019*
<https://www.physlab.org/qmlab/>
- Design and Development of Classical Optics Experiments *Jul. 2017 – Dec. 2017*
<https://www.physlab.org/optics-lab/>

RESEARCH INTERESTS

- Quantum Information
- Foundations of Quantum Mechanics
- Open Quantum Dynamics
- Machine learning

CONFERENCES ATTENDED

- Information, Black holes and Quantum Theory: Theoretical Physics at Crossroads. *Mar. 2018*
Abdus Salam School of Mathematical Sciences (AS-SMS)
- Symposium on Recent Developments in Theoretical Physics. *Nov. 2017*
Abdus Salam School of Mathematical Sciences (AS-SMS)
- Understanding Salam *Jan. 2018*
Abdus Salam School of Mathematical Sciences (AS-SMS)
- All Pakistan Power and Energy Symposium (APPES). *Oct. 2016*
University of Engineering and Technology Lahore

CO-CURRICULAR ACTIVITIES

- Interviewed Dr. Pervez Hoodbhoy for Spectra magazine *Dec. 2019*
- Published a popular article ‘Schrodinger’s Cat: A Mind-Boggling Thought Experiment’ *Jan. 2018*
<https://spectramagazine.org/physics/schrodinger-cat>
- Won ‘Think like Einstein’ competition by presenting on ‘Black Hole Information Paradox’ *Nov. 2016*
- Editor of Spectra Magazine *2016 – 2017*

MISC INTERESTS

- Machine Learning and Artificial Intelligence
- Research in Quantum Foundations and Logic, Mathematical Biology, and Biophysics
- Translating classic mathematical/physics texts into Urdu
- Reading dystopian literature
- Reading urdu and Persian poetry