

Curriculum Vitae

Dr. Atef AbdElKader. (MSc, PhD)

Personal Information

Name: Atef AbdElKader
Title: Associate Professor in Physics
Date of birth: 23-04-1969
Nationality: Palestinian/Canadian
Current Address/Country: Ajman University
Collage of Humanities and Sciences, P.O. Box 346, Ajman, UAE.
Telephone Number: +971 56 6385222
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QUALIFICATIONS

Years: 1995-1998
University, Country: The Queens University, UK.
Degree (y/n) & title: **PhD** in Physics, August 1998.
Thesis title: **Experimental Studies of Two-Dimensional Foam.**

Years: 1994-1995
University, Country: The Queens University, UK.
Degree (y/n) & title: **M. Sc** in Opto-Electronics and Optical Information Processing, August 1995.

WORK EXPERIENCE

Years: September 2002 - Now
Institution, City, Country: Ajman University, Ajman, UAE.
Job title: *Associate Professor in Physics*
Head of Mathematics and Science Department

Responsibilities:

- Teaching Physics courses of undergraduate students of the BSc degree of the colleges of Medicine, Dentistry, and Engineering.
- Head of Math and Science Department Sept 2016 - Now
- Participate in committee(s) and other activities for the development of the department, college and University.
- Publication, academic and scientific documentation and conference representation.

Years: Sept 1998 - July 2002
Institution, City, Country: Al-Quds University, Al Aqsa University and in the University of Science and Technology, Gaza Strip.
Job title: *Assistant Professor in Physics*

Responsibilities:

- Teaching Physics courses of undergraduate students of the BSc degree of the colleges of Engineering and Science.
- Participate in committee(s) and other activities for the development of the departments.

PROFESSIONAL EXPERIENCE

- Rich experience as lecturer, course developer, and problem solving and class teacher.
- Experience as reviewer of scientific journals.

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LANGUAGES

○ Co-organizer and speaker at several international conferences.
English/Arabic

COMPUTER SKILLS

Expert MS office, simulation and modelling

PERSONAL INTERESTS

Reading, Traveling.

ADDITIONAL INFO

Fields of expertise:

- 2D foam physics,
- Semiconductors laser.
- Materials science and application of nanomaterials.

Experience:

- Various optical characterization and analysis techniques in materials growth.
- Knowledge of Semiconductor technology, cleaning room processing and fabrication.
- Effective implementation and brainstorming.
- Modelling/simulation techniques AFM, SEM, XRD and TEM.
- International network in the academia (nano) optics.
- Complex optical experiments.

Skills:

Leadership, analytical, pragmatic attitude, self-motivated, hands-on, pro-active, independent and cross-functional teamwork, excellent communication, and time management.

Scientific Journals membership of:

Journal of Rheology, University of California,
American Journal of Physics,

Funding received:

Azure sponsorship credits, Microsoft AI funding programme.

Trainings:

Leadership and scientific writing.

SELECTED PUBLICATIONS:

- *Ground state structure and optoelectronic properties of novel quasi-2D layered halide perovskites CsPb₂X₅ (X= Cl, Br, I) via first principle calculations, Haq, I.U., Ali, A., AbdelKader, A., ... Alomar, M., Khan, I., Materials Science in Semiconductor Processing, (2024).*
- *Computation of soliton structure and analysis of chaotic behaviour in quantum deformed Sinh-Gordon model, Jhangeer, A., Ibraheem, F., Jamal, T., Riaz, M.B., Kader, A.A., PLoS ONE, (2024).*
- *Structural and optoelectronic properties of 2D halide perovskites Cs₂MBr₄ (M = Zn, Cd, Hg): a first principle study, Nawab, G., Rahman, A.U., Haq, I.U., A. Abdelkader, Alomar, M., Khan, I., Optical and Quantum Electronics, (2024).*
- *Exploring the Topological Correlations within Two-Dimensional Foam Structures, AbdelKader, A., Dawi, E.A., Haj Ismail, A. Evergreen, (2024).*
- *First-Principles Investigation of Optoelectronic Structure and Thermodynamic Properties of Ruddlesden-Popper Halide Perovskites for Optoelectronic Applications, Haq, I.U., Abdelkader, A., Obaidat, Y.A.H., ...Alsuhailani, A.M., Khan, I. Journal of Inorganic and Organometallic Polymers and Materials, (2024)*

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- *An evaluation of banana stem extract's potential for improving ZnO nanostructures for photocatalytic oxidation of methylene blue in aqueous solution under natural light conditions*, Noonari, T.M., Tahira, A., Bhatti, M.A., ... Nafady, A., Ibpoto, Z.H., *Biomass Conversion and Biorefinery*, (2024).
- *Efficient visible-light-driven photocatalytic removal of Acid Blue 92, E. coli, and S. aureus over Ag-AgCl nanoparticles-decorated bismuth sulfide microparticles*, Dawi, E.A., Padervand, M., Bargahi, A., ... Bahrami, M.K., Abdelkader, A. *Materials Research Express*, (2023).
- *Excitation Function of Freeze-Out Parameters in Symmetric Nucleus–Nucleus and Proton–Proton Collisions at the Same Collision Energy*, Badshah, M., Haj Ismail, A., Waqas, M., ...Adil Khan, M., AbdelKader, A., *Symmetry*, (2023).
- *Facile Synthesis of Ni-Doped ZnO Nanostructures via Laser-Assisted Chemical Bath Synthesis with High and Durable Photocatalytic Activity*, Zyoud, S.H., Ganesh, V., Che Abdullah, C.A., Abdelkader, A ...Altarifi, S.M., Abdelwahab, M.S., *Crystals*, (2023).
- *Estimation and Comparison of the Clearness Index using Mathematical Models - Case study in the United Arab Emirates*, Ismail, A.H., Dawi, E.A., Almokdad, N., Abdelkader, A., Salem, O., *Evergreen*, (2023).
- *Tuning Monte Carlo Models to Reproduce Cosmic Radiation Interacting with the Earth's Atmosphere*, Ajaz, M., Haj Ismail, A., Waqas, M., Abdelkader, A ...Adil Khan, M., Safeen, K., *Atmosphere*, (2023).
- *Charged Particles Transverse Momentum and Pseudorapidity Distribution in Hadronic Collisions at LHC Energies*, Ajaz, M., Haj Ismail, A.A.K., Ullah Mian, M., Abdelkader, A., Dawi, E.A., Tabassam, U., *Entropy*, (2023).
- *Numerical study of optical absorption coefficients in Manning-like AlGaAs/GaAs double quantum wells: Effects of doped impurities*, Dakhlaoui, H., Belhadj, W., Durmuslar, A.S., Ungan, F., Abdelkader, A., *Physica E: Low-Dimensional Systems and Nanostructures* (2023).
- *Shear-fetched fluctuations in 2D wet foam*, AbdElKader, A., Dawi, E.A, *Indian Journal of Physics*, (2023).
- *Simulation Studies of Track-Based Analysis of Charged Particles in Symmetric Hadron–Hadron Collisions at 7 TeV*, Muhammad Ajaz, Abd Al Karim Haj Ismail, Haifa I. Alrebdi, Abdel-Hakem Abdel-Aty, Mateen Ullah Mian, Muhammad Adil Khan, Muhammad Waqas, Ahmed M. Khubrani, Hua-Rong Wei and Atef AbdelKader. *Symmetry*, (2023).
- *Optimizing the zenith angle dependence of cosmic ray muons from Charm particles in the knee region: simulation study*, A. Haj Ismail and A. AbdelKader, *Journal of Physics*, (2023).
- *Dependence of Freeze-Out Parameters on Collision Energies and Cross-Sections*, Waqas, M.; AbdelKader, A.; Ajaz, M.; Tawfik, A.N.; Wazir, Z.; Haj Ismail, A.A.K.; Luo, S.J.; Khan, H.Z, *Universe*, (2023).
- *Pseudorapidity dependence of the bulk properties of hadronic medium in pp collisions at 7 TeV*, Ajaz, M., Haj Ismail, A.A.K., Waqas, M., ...AbdelKader, A., Suleymanov, R., *Scientific Reports*, (2022) (Q1* journal).
- *Excitation Function of Kinetic Freeze-Out Parameters at 6.3, 17.3, 31, 900 and 7000 GeV*, Waqas, M., Haj Ismail, A.A.K., Ajaz, M., Abdelkader, A., *Universe*, (2022) (Q2 journal).
- *Numerical modeling of high conversion efficiency fto/zno/cds/czts/mo thin film-based solar cells: Using scaps-1d software*, Zyoud, S.H., Zyoud, A.H., Ahmed, N.M., ...Abdelkader, A.F.I., Shahwan, M. *Crystals*, (2021) (Q2 journal).
- *Numerical modelling analysis for carrier concentration level optimization of CdTe heterojunction thin film-based solar cell with different non-toxic metal chalcogenide buffer layers replacements: Using SCAPS-1D software*, Zyoud, S.H., Zyoud, A.H., Ahmed, N.M., Abdelkader, A.F.I. *Crystals* (2021) (Q2 journal).
- *Study of kinetic freeze-out parameters as a function of rapidity in pp collisions at cern sps energies*,

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Waqas, M., Chen, H.-M., Peng, G-X, ...Jamal, S., Abdelkader, A., *Entropy*, (2021) (Q1 journal).

- *Simulation of the evolution of the COVID-19 pandemic in the United Arab Emirates using the SIR epidemical model*, A. Haj Ismail, E.A. Dawi, A. AbdElKader, Saleh T. Mahmoud, and T. Jwaid, *Arab Journal of Basic and Applied Science*, (2021) (Q1* journal).
- *Blended Learning in Higher Education: A Study of Its Impact on Students' Performance*, Alsalhi, N.R., Eltahir, M.E., Al-Qatawneh, S., ...Abdelkader, A.F.I., Jumaili, L.A., *International Journal of Emerging Technologies in Learning*, (2021) (Q2 journal).
- *Impact of Using the Differentiated Instruction (DI) Strategy on Student Achievement in an Intermediate Stage Science Course*, Alsalhi, N.R., Abdelrahman, R., Abdelkader, A.F.I., ...Habboush, M., Qawasmi, A.A., *International Journal of Emerging Technologies in Learning*, (2021) (Q2 journal).
- *The Effect of Blended Learning on the Achievement of Students Dentistry College in Physics Course: Case Study at Ajman University*, Najeh Rajeh Alsalhi, Mohd Eltahir, E.A. Dawi, Abdelkader A and Zyoud S. H, *Electronic Journal of e-Learning (EJEL)*, Volume 19, Issue 1, (2021) (Q1 journal).
- *Influence of Magnetic Field on Level of Linearly Polarized Laser Beam Passing through Faraday Crystal*, Zyoud, S. H., AbdElKader. A, Holi, A., *Defect and Diffusion Forum* (2021). (Q3 Journal).
- *Precautionary measures and the first wave evolution of Covid-19: a comparison study*, A. Haj Ismail, T. Jwaid, E.A. Dawi, A. AbdElKader, *International Journal of Pharmaceutical Research*, Vol. 12, Issue 4, 4391-4394 (2021) (Q3 journal).
- *Numerical Simulation for Optimization of ZnTe-Based Thin-Film*. Zyoud, S., & Abdelkader, A., *International Review on Modelling and Simulations*, (2021) (Q2 Journal).
- *Growth of interface region in 2D wet foam*, *Crystals*, 10, (8) 703; DOI: 10.3390/cryst10080703 (2020), A. AbdElKader, E.A. Dawi, A.K. Haj Ismail, and S.H. Zyoud. (Q2 Journal).
- *The Earth's magnetic field and azimuth variations of the electromagnetic component of cosmic air showers at ground level*, Accepted for publication in the *Journal of Advanced Research in Dynamical and Control Systems*, (2020), A. Haj Ismail, E. Dawi, and A. AbdElKader.
- *Sputtering of size-tunable oxidized Fe nanoparticles by gas flow method*, *Appl. Phys. A* (2020). Dawi, E.A., Ismail, A.H., A. AbdElKader, and A. Karar. A. A. (Q2 Journal).
- *The Impact of Temperature on the Performance of Semiconductor Laser Diode*, *International Journal of Advanced Science and Technology* (2020), S. H. Zyoud, A. AbdElKader, Zyoud A. H. (Q3 Journal).
- *Assembly and optical properties of metal nanoparticles*, *Solid State Phenomena* (2019), E.A. Dawi, and A. AbdElKader. (Q3 Journal).
- *Characteristics of Semiconductors Laser under Influence of Magnetic Field*, *Journal of Advanced Research in Dynamical and Control Systems* (2019), S. H. Zyoud, A. AbdElKader. (Q3 Journal).
- *The Influence of magnetic field on pulse distribution of laser diode*, *Universal Journal of Electrical and Electronic Engineering* (2019), S. H. Zyoud, A. AbdElKader. (Q4 Journal).
- *Evolution of a Defect in a 2D Wet Foam*, *International Journal of Recent Technology and Engineering* (2019), A. AbdElKader, and E.A. Dawi. (Q4 Journal).
- *The Effect of Cell Boundary on 2D Foam*, *MATEC Web of Conference*, (2018); A. AbdElKader.
- *Shear-Induced Changes in Two-Dimensional Foam* *Physical Review Letter* Vol. 82, pp. 2610-2613 (1999), A. AbdElKader and J.C. Earnshaw. (Q1* Journal).
- *Evolution of Grain Boundaries in Two-Dimensional Foam* *Journal of Physics: Condense. Matter* Vol 11, pp. 3051-3063 (1999), A. Abd el Kader and J.C. Earnshw. (Q2 Journal).

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- *Growth of Disorder about Point Defects in Two-Dimensional Foam' Physical Review E (1998), A. AbdElKader and J.C. Earnshaw. (Q1 Journal).*
- *Foam to Order, The Irish Scientist, 6, pp. 127 (1998), A. Abd el Kader and J.C. Earnshaw.*
- *Evolution of a Two-Dimensional Foam containing a Single Topological Defect: An Experimental Study' Physical Review E Vol. 56, pp. 3251-3255 (1997), A.Abd el Kader and J.C. Earnshaw. (Q1 Journal).*
- *Stability of Two-Dimensional Foam' Philosophical Magazine A Vol. 76, pp. 1251-1260 (1997), A.Abd el Kader and J.C. Earnshaw. (Q2 Journal).*