



Curriculum Vitae



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EDUCATION BACKGROUND

- **Ph.D** in Physics , Jordan University, **Jordan** (2006- 2010) (*Average: Excellent*).
Dissertation: Impedance Calculation of Infinite Networks Using Lattice Green's
Function : Perfect and Perturbed Lattices.
- **M. Sc.** in Physics, Central University of Hyderabad, **India**(1994-1996) (*Average:
Very Good*).
- **B. Sc.** in Physics and Mathematics, Al-Yarmouk University, **Jordan** (1983-1987)
(*Average: Good*).

EXPERIENCE

2011-2012: Full time lecturer at Department of Physics, Al -Hussein Bin Talal University, Jordan.

2012-2015: Assistant Prof. at Department of Physics, Al-Hussein Bin Talal University, Jordan

2015-: Associate Prof. at Department of Physics, Al-Hussein Bin Talal University, Jordan.

2013-2014: Head of Department of Physics, Al-Hussein Bin Talal University, Jordan.

2017-2018: Sabbatical, Taibah University, Kingdom of Saudi Arabia

TEACHING EXPERIENCE

I taught the courses :

- ☐ General Physics I.
- ☐ General Physics II.
- ☐ General Physics Lab. I
- ☐ General Physics Lab. II
- ☐ Mathematical Physics I.
- ☐ Mathematical Physics II.
- ☐ Statistical Mechanics.
- ☐ Modern Physics.
- ☐ Physics of Vibrations and Waves.
- ☐ Intermediate lab.
- ☐ Solid state physics.
- ☐ Quantum mechanics I.
- ☐ Quantum mechanics II.

COMPUTER SKILLS

- ICDL
- Mathematica
- Origin
- Latex

LANGUAGES

- Arabic Mother language
- English

PUBLICATIONS IN REFEREED JOURNALS

1. **M. Q. Owaidat**, “The vibrational frequencies of the diced and decorated honeycomb lattices” , **International Journal of Modern Physics B**.(Accepted 2019)
- 2 . **M. Q. Owaidat**, R. S, Asad, Zhi-Zhong Tan " Resistance computation of generalized decorated square and simple cubic network lattices”
Results In Physics. (Accepted 2019)
3. Zhen Tan , Z.-Z. Tan , J. H. Asad, and **M.Q. Owaidat**, “Electrical characteristics of the $2 \times n$ and $\square \times n$ circuit network”, **Physica Scripta**. (Accepted 2019)
4. **M. Q. Owaidat**, A. Al-Badawi, M. Abu-Samak, “The two-point resistance on the diamond cubic lattice”, **Eur. Phys. J. Plus**. **133**:199(2018).
5. **M. Q. Owaidat**, A. A. Al-Badawi, J. H. Asad, Mohammed Al-Twiessi, “Two-Point Resistance on the Centered-Triangular Lattice”, **CHIN.PHYS. LETT**. **35**,2, 020502(2018).
6. **M. Q. Owaidat**, Monther Alsoul, Ahmed. A. Qwasmeh, Almaasfeh Sultan Abdelmajid , “Two-point resistance on hypercubic lattices with second nearest neighbor resistors”, **Advances in Physics Theories and Applications**,74(2018).
7. Mohammed Al-Tweissi, Mou'ad A. Tarawneh, **M. Q. Owaidat**, Monther Alsoul, “Optical Characterization of Thin Films Poly (Ethylene Oxide) Doped with Cesium Iodide”, **J. NANO-ELECTRON.PHYS**, **10**, 05016(2018).
8. A. Al-Badawi and **M. Q. Owaidat**, The Dirac equation in Schwarzschild black hole coupled to a stationary electromagnetic field, **Gen. Relativ. Gravit**. 49:110(2017)
9. Z.-Z. Tan, J.H. Asad, and **M.Q. Owaidat**, “Resistance formulae of a multipurpose n- step network and its application in LC network”, **Int. J. Circ. Theor. Appl**. (2017)
10. A. Al-Badawi, **M. Q. Owaidat** and S. Tarawneh, “The geodesics structure of Schwarzschild black hole immersed in an electromagnetic universe”. **Int. J. Mod. Phys. D**, **26** 1750169(2017).
- 11 . **M. Q. Owaidat**, R. S, Asad and Zhi-Zhong Tan "On the perturbation of a uniform tiling with resistors" , **Int. J. Mod. Phys B**,30,1650166 (2016).
- 12 . **M. Q. Owaidat** and R. S, Asad " Resistance calculation of three-dimensional triangular and hexagonal prism lattices" , **Eur. Phys. J. Plus.**, **131** (2016).

13. **M. Q. Owaidat**, "Determining the Resistance of a Full -Infinite Ladder Network Using Lattice Green's Function", **Advanced Studies in Theoretical Physics**, Vol. 9, no. 2, 77 - 83 (2015).
14. **M. Q. Owaidat**, Ahmed H. Qwasmeh and Ayed Al e'damat, "Spanning trees on decorated centered cubic lattices", **Applied Mathematical Sciences**, Vol. 9, no. 25, 1235 – 1244(2015)
15. **M.Q. Owaidat**, Hijjawi. R. S., & Khalifeh, J. M.: Perturbation theory of uniform tiling of space with resistors. **Eur. Phys. J. Plus.**, 129, 29(2014)
16. **M.Q. Owaidat**., Hijjawi, R. S, Asad, J. H & Khalifeh, J. H.: The two-point capacitance of infinite triangular and honeycomb networks. **Eur. Phys. J. Appl. Phys.** 68: 10102(2014)
17. Jihad, H. A., Diab, A. A., **Owaidat, M. Q.**, Khalifeh, J. M Perturbed Infinite 3D Simple Cubic Network of Identical Capacitors. **APhysPolA.126**,777-781 (2014).
18. Jihad, H. A., Diab, A. A., **Owaidat, M. Q.**, Hijjawi. R. S., Khalifeh, J. M.: Infinite Body Centered Cubic Network of Identical Resistors. **APhysPolA.125**,60-64(2014)
19. **M. Q. Owaidat**, J. H. Asad & J. M. Khalifeh, "Resistance calculation of the decorated centered cubic networks: Applications of the Green's function", **Modern Physics Letters B**, Vol. 28, No. 32 (2014) 1450252 (12 pages).
20. **M.Q. Owaidat**, " Regular Resistor Lattice Networks in Two Dimensions (Archimedean Lattices)". **Applied Physics Research**; 6 (5), 100-108(2014).
21. **M.Q. Owaidat**. :Resistance calculation of the face-centered cubic lattice: Theory and Experiment. **Am. J. Phys.**, 81, 918(2013).
22. **M.Q. Owaidat**, Hijjawi. R. S, Asad, J. H, & Khalifeh. J. M. : Electrical networks with interstitial single capacitor. **Mod. Phys. Lett. B**, 27, 1350123(2013)
23. **M.Q. Owaidat**, Hijjawi, R. S, & Khalifeh. J. M. : Network with Two Extra Interstitial Resistors. **Int. J. Theor. Phys.**, 51, 3152 (2012).
24. **M.Q. Owaidat** :Networks of Identical Capacitors with a Substitutional Capacitor. **JJP**, 5(3), 113-118(2012)

25. **M. Q. Owaidat**, Hijjaw, R.S., Khalifeh, J.M.: Substitutional single resistor in an infinite square lattice application to lattice Green's function. **Mod. Phys. Lett. B** **19**, 2057–2068 (2010)
26. **M. Q. Owaidat**, Hijjaw, R.S., Khalifeh, J.M.: Interstitial single resistor in a network of resistors application of lattice Green's function. **J. Phys. A, Math. Theor.** **43**, 375204 (2010).

PUBLICATIONS UNDER REVIEW(2018)

1. **M. Q. Owaidat**, Ahmed A. Qwasmeh, J. H. Asad “Resistance calculation of pentagonal lattice structure of resistors “**Communications in Theoretical Physics**.

INTERNATIONAL REVIEWER

1. International Reviewer for **International Journal Circuit Theory and Applications(John Wiley & Sons Ltd)**.
2. International Reviewer for **Frontiers of Information Technology & Electronic Engineering-Springer**.
3. International Reviewer for **Indian Journal of Physics- Springer**.

CONFERENCES:

- International Conferences on Sciences, Al al –Bayt University Nov.20-22, 2012.

THE PRESENT RESEARCH INTERESTS

Condensed matter and materials physics; General and interdisciplinary physics; Nonlinear dynamics and complex systems

- Calculating the resistance and capacitance of lattices using lattice Green's function.
- Studying classical dynamics of lattices(lattice vibration) in harmonic approximation.

REFERENCES

References available upon request.