

Curriculum Vitae

Ayman M. Al-Sawalha Professor

Dean, Faculty of Science, Jerash University

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ACADEMIC QUALIFICATION

Ph.D. in Physics (Theoretical Physics). Rajasthan University India. From 1993 to 1996.

Thesis title: Radiation Properties of Microstrip Antenna in Plasma Medium.

M.Sc. in Physics (Electronics, Comprehensive Exam). Aligarah Muslim University, India.

From 1991-1993.

B.Sc. in Physics, Mosel University, Iraq, From 1983 to 1987.

LANGUAGES

Arabic: Mother Language

English: Reading (Excellent), Writing (Excellent) and Conversation (V.Good)

PROFESSIONAL EXPERIENCE

Sep.2018 – present	Prof., Faculty of Science, Physics Dept., Jerash Univ., Jordan
Sep.2016 – Sep, 2018	Prof., Dean, Faculties of Science and Agriculture, Jerash Univ., Jordan.
Oct.2013 – Sep.2016	Acting Dean, Faculty of Science, Jerash University, Jordan.
Nov. 2010 – June 2013	Associate Professor, Department of Physics, Faculty of Science, King Faisal University, Saudi Arabia.
Aug. 2002 – Nov. 2010	Assistant Professor, Department of Physics, Faculty of Science, King Faisal University, Saudi Arabia.

Sep. 1997 – July 2002	Assistant Professor, Department of Science, Faculty of Agriculture and Science, Jerash University, Jordan.
March 1994 – Aug.1996	Teaching Assistant, Department of Physics, College of Science, Rajasthan University, India.
Oct, 1987 – June 1991	Ministry of Education, Jordan.

Membership in Professional Organizations:

- Member of the Indian Science Congress.
- Member of the IEEE.
- Member of the Saudi Physics Society.

Conferences:

- Asia Pacific Microwave Conference (APMC 96), 1996, New Delhi, India.
- National Communication Conference, 1996, Bombay, India.
- Workshop on Experimental Physics for undergraduate level at Rajasthan Univ., India. (1996).
- International Conference on Education, 2014, Dubai, UAE.
- International Conference on Science, Technology, Engineering and Management (ACADEMICSERVA), 23rd-24th, March 2018. Istanbul. Turkey.

Computer Skills:

DOS, Windows, Microsoft Office (Word, Excel, PowerPoint .etc.), FORTRAN Programming, Latex.

Record of Courses Taught at University Level:

I - King Faisal University (Saudi Arabia), (2002-2013).

a- M.Sc. Level:

Phys.506	Electrodynamics I
Phys.503	Mathematical Physics
Phys.501	Classical Mechanics

b- B.Sc. Level :

Phys.310	Quantum Mechanics(1)
Phys.301	Classical Mechanics I
Phys.302	Classical Mechanics II

Phys.303	Electromagnetic Theory I
Phys.304	Electromagnetic Theory II
Phys.311	Mathematical Physics I,II
Phys.251	Modern Physics
Phys.205	Thermodynamics
Phys.203	Vibration and Waves
Phys.106	General Physics Lab. (Electricity and Magnetism)
Phys.105	General Physics Lab. (Mechanics)
Phys.102	General Physics II
Phys.101	General Physics I
Phys.160	General Physics for Premedical Students

II – Jerash University (Jordan) (1997-2002).

B.Sc. Level:

Phys.311	Vector analysis
Phys.312	Analytical Mechanics
Phys.102	General Physics II
Phys.101	General Physics I
Phys.106	General Physics Lab. (Electricity and Magnetism)
Phys.105	General Physics Lab. (Mechanics)

III – I taught four years at several High Schools in Jordan, (1987 – 1991).

Administration and Committee service:

- Member of the College of Science Council, Jerash University.2001-2002.
- Secretary of the Department of Science, Jerash University, 1999-2001.
- Supervisor of B.Sc. Student, Jerash University, 1999-2002.
- Chairman of the Scientific Committee, Jerash University, 1999-2002.
- Curriculum Planning Committee.
- Member of committee of studying plane, King Faisal University, 2008-2012.
- Member of committee of M.Sc. student's examination. King Faisal University 2008-2010.
- Member of committee of studying plane, Jerash University, 2014-2017.
- Dean, Faculty of Science, Jerash University, Jordan, 2013-2015.
- Dean, Faculty of Agriculture and Faculty of Science, Jerash University, Jordan, 2015-2108.
- عضو في لجنة تأسيس كلية الصيدلة في جامعة جرش ٢٠١٥
- رئيس لجنة الخطط الدراسية في جامعة جرش ، ٢٠١٥-٢١٠٦
- عضو في المجلس التأديبي الابتدائي في جامعة جرش ، ٢٠١٧
- رئيس لجنة خدمة المجتمع في جامعة جرش ، ٢٠١٦

Funded Projects:

- 1- Enhancement of Electrical Conductivity by Al Doped ZnO Ceramic .King Faisal University. No.(90069).2009.
- 2- Effect of Cd Substitution in CoFe₂O₄ Ferrite, King Faisal University. No.(90073).2008.

- 3- Order Parameter Dimensionality Study in Copper Oxide Superconductors. King Faisal University. No.(8070),2007
- 4- Electrical Conductivity Study in Copper Oxide Superconductors. King Faisal University. No.(7033),2007
- 5- On the Two Band Model in Pure and Doped BSCCO Superconductors. King Faisal University. No.(6021),2007.
- 6- . Dielectric Parameters of Polyvinyl Chloride (PVC) in Powder Form at Microwave Frequency, King Faisal University Project. No.(6022),2006.

Research Interests:

- 1- Interaction of electromagnetic waves with plasma medium (ionosphere) and their applications to microstrip antenna and horn antenna (Satellite Antennas).
- 2- Microwave properties of materials in the powder and solid form.
- 3- Radiation Properties of Microstrip Antenna Array printed on ferrite.
- 4- Plasma Physics, Electromagnetic Theory Applications.

Research and Publications: (more than 25 research papers)

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| <input type="checkbox"/> Engineering Technologies Microstrip Patch Antenna Radiation ,Variation of Quality Factors and Bandwidth of a Conically Depressed....
A Al-Sawalha, T Al Smadi
Journal of Advanced Sciences and Engineering Technologies 1 (1), 7-10 | 2018 |
| <input type="checkbox"/> Purity Temperature Dependent for Coupled Harmonic Oscillators
A Merdaci, A Jellal, AA Sawalha, A Bahaoui
arXiv preprint arXiv:1804.05595 | 2018 |
| <input type="checkbox"/> Effect of Ionized Plasma Medium on the Radiation of a Rectangular Microstrip Antenna on Ferrite Substrate
A Al Sawalha
World Academy of Science, Engineering and Technology, International Journal ... | 2016 |
| <input type="checkbox"/> Anti-synchronization of fractional order chaotic and hyperchaotic systems with fully unknown parameters using modified adaptive control
MM Al-Sawalha, A Al-Sawalha
Open Physics 14 (1), 304-313 | 2016 |
| <input type="checkbox"/> Structural Characterization of Deformed Boron Nitride Nanotubes
JA Talla, A Sawalha, H Sabbah
Journal of Computational and Theoretical Nanoscience 11 (8), 1838-1843 | 2014 |
| <input type="checkbox"/> On the Two Band Model in Pure and Doped BSCCO Superconductors
A Al Sawalha
Journal of Natural Sciences 2 (1), 61-76 | 2014 |

- Effect of Ionized Plasma Medium on Radiation Properties of Rectangular Microstrip Antenna Printed on Ferrite Substrate 2014
AA Sawalha
New Yourk Science Journal 7
- Microwave propagation in warm, collisional magnetoionic media 2013
MS Bawa'aneh, AM Al-Khateeb, AS Sawalha
IEEE Transactions on Plasma Science 41 (9), 2496-2500
- Enhanced microwave absorption in warm plasma: Modified Appleton-Hartree equation 2013
MS Bawa'aneh, AM Al-Khateeb, AS Sawalha
Plasma Science (ICOPS), 2013 Abstracts IEEE International Conference on, 1-1
- Microwave propagation in a magnetized inhomogeneous plasma slab using the Appleton–Hartree magnetoionic theory 2012
MS Bawa'aneh, AM Al-Khateeb, AS Sawalha
Canadian Journal of Physics 90 (3), 241-247
- Thermoelectric Power(C hapter in Book) 2012
A., Sawalha
Thermoelectric Power
- Effect of warm ionized plasma medium on radiation properties of four elements microstrip antenna array printed on ferrite substrate 2010
AA Sawalha, IA Mubarak
Brazilian Journal of Physics 40 (1), 22-25
- Chaos anti-synchronization of two non-identical chaotic systems with known or fully unknown parameters 2009
A Al-Sawalha
Chaos, Solitons & Fractals 42 (3), 1926-1932
- Enhancement of electrical conductivity by Al-doped ZnO ceramic varistors 2009
A Sedky, A Al-Sawalha, AM Yassin
Physica B: Condensed Matter 404 (20), 3519-3524
- Effect of Warm Ionized Plasma Medium on Radiation Properties of Mismatched Microstrip Termination 2009
A Al-Sawalha
Journal of Electromagnetic Analysis and Applications 1 (03), 181
- The Influence of Cu and Mg Dopant on the Microwave Properties of PVC 2009
A Alsawalha, AA Almulhem, A Sedky
Ferroelectrics 386 (1), 118-124
- Electrical conductivity study in pure and doped ZnO ceramic system 2009
A Sawalha, M Abu-Abdeen, A Sedky
Physica B: Condensed Matter 404 (8-11), 1316-1320
- Impact of Bi₂O₃ addition on the normal state properties of Bi₃. 4Pb₀. 3Sr₂Ca₁. 3– x RExCu₂O_y ceramics 2008
A Aljaafari, A Sedky, A Al-Sawalha

- ☐ Enhancement of electrical conductivity of ZnO ceramic varistor by Al doping 2008
A Sedky, A Al-Sawalha, AM Yassin
Egypt. J. Solids 31 (2), 205-215
- ☐ On the correlation between order parameter, superconducting volume fraction 2006
and critical current density in R: 123 superconductors
A Sedky, MI Youssif, SM Khalil, A Sawalha
Solid state communications 139 (3), 126-131
- ☐ Impact of Co Substitution at Fe Site on the Properties of Fe_{0.9-x}Co_x ZrO₂. 2005
Alloys
A Sawalha, QI Mohaidat
Editorial Advisory Board e, 654
- ☐ On Radiation from a Conically Depressed Microstrip Antenna in Plasma". 1997
AA Sawalha
Indian J.of Physics 71 (5), 597-606
- ☐ Study of Matched Microstrip Termination in Warm Ionized Plasma Medium. 1997
AA Sawalha
Indian J.of Physics 71 (2), 173-181
- ☐ Effect of electroacoustic waves on radiation properties of microstrip matched 1996
coaxial termination
AM Salem, D Bhatnagar, JM Gandhi
Journal of plasma physics 56 (1), 25-34

BOOKS:

- 1 - **Classical Mechanics**, (published at King Faisal University).2009
- 2 – **Electromagnetic**, (published at King Faisal University), 2010.
- 3- Chapter in a Book: **Thermoelectric Power** (Nova Science Publishers 2012, New York, USA).

Other Activities:

- Reviewer in APPLIED PHYSICS LETTERS
Published by the American Institute of Physics
Argonne National Laboratory
Building 203, Room R-127
Argonne, IL 60439-4843, USA.
- Supervisor of two M.Sc. students.

Referees:

- 1- Prof. Dr. Abdul Latif Al Shareef, Physics Dept. Mu'ta University, Jordan.
- 2- Prof. Ahmad Al Khateeb, Physics Dept., Yarmouk University, Jordan.
- 3- Prof. Dr. Abdelazeez Almulhem, Vice President of King Faisal University, Saudi Arabia.