

## C.V.

### **Personal Information :**

Name : Mohammad Amin Za'al Abbadi

Nationality : Jordanian

Place of birth : Al Salt / Jordan

Date of birth : Nov. ,

Current address: Mu'tah University

Vice President for Academic Affairs

Mu'tah, Al Karak

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Jordan

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, or maabbadi@yahoo.com

### **Qualifications :**

- PhD in Physics(Atomic and Molecular), University of Oregon,

U.S.A., June .

- M.Sc. in Electronics, University of Wales, U.K., January .

- B.Sc. in Physics, University of Baghdad, Iraq, June .

Title of PhD Thesis:

"Infrared Spectroscopy of Negative Molecular Ions"

Title of Masters Thesis:

"Audiofrequency Thermal Measurements on Metals"

**Academic and Professional Positions :**

- Staff member at Mut'ah University with ranks as follows:
  - a-Assistant professor of physics (Sep. , - Sep. , ).
  - b- Associate professor of physics (Sep. , - July , ).
  - c- Professor of physics (July , - Now).
- Lecturer in Physics at Amman Polytechic during the period:  
June - Sep. .
- Physics teacher at Al Salt Secondary School in Jordan during the period: Sep. - Sep. .

**Scholarship Awards :**

- PhD scholarship award from Mutah University at the University of Oregon, Eugene, USA (Sep. - June )
- British Council scholarship award for Masters Degree at the University of Wales, Cardiff, U.K. (Sep. - Dec. ).
- B.Sc. scholarship award from the Jordanian Ministry of Education at Baghdad University, Iraq (Sep. - June ).

**Research areas of interest :**

- Experimental laser spectroscopy of atomic and molecular anions.
- Theoretical investigation of atomic and molecular models

applied to calculate the binding energies and the photodetachment cross-sections of negative ions, in gas phase.

### **Computer Skills :**

- MUCDL equivalent to ICDL (IT + Files + Word + Excel + Access + PowerPoint + Internet).
- Computational Physics using Mathematica Programming.
- Use of EasyPlot Program for Science applications.

### **List of Publications :**

- Mohammad Al-Za'al, Harold C. Miller, and John W. Farley, , "Measurement of the infrared Photodetachment cross section of  $\text{NO}^-$  ", Physical Review A, Vol. , No. , pp. - .
- Mohammad Al-Za'al, Harold C. Miller, and John W. Farley, , "Observation of metastable states in the autodetachment continuum of the negative molecular ion  $\text{NH}^-$  ", Chemical Physics Letters, Vol. , No. + , pp. - .
- Mohammad Al-Za'al, Harold C. Miller, and John W. Farley, , "High-resolution measurement of the infrared rotation-vibration spectrum of the negative molecular ion  $\text{NH}^-$  ", Physical Review A, Vol. , No. , pp. - .
- Harold C. Miller, Mohammad A. Al-Za'al, and John W. Farley, , "Measurement of hyperfine structure rotation-vibration spectrum of  $\text{NH}^-$  ", Physical Review Letters, Vol. , No. , pp. - .
- Mohammad A. Abbadi, , "Superposition approach applied to one particle in an attractive double Dirac delta potential", Murtah Journal for Research and Studies-Natural and Applied Sciences Series

- , Vol. , No. , pp. - .
- Mohammad A. Abbadi, , "Calculation of the photodetachment cross-section of  $\text{Fe}^-$  near threshold using the zero-core-contribution model", Mu'tah Journal for Research and Studies-Natural and Applied Sciences Series, Vol. , No. , pp. - .
  - Mohammad A. Abbadi and John W. Farley, , "Measurement of the Photodetachment Cross-Section of the Radical Anion  $\text{C}_2\text{H}^-$ ", Mu'tah Lil-Buhooth Wa Al-Dirasat Journal (Series B: Natural and Applied Sciences), Vol. , No. , pp. - .
  - Mohammad A. Abbadi, , " Effects of Shape Resonances in the Spectra of Negative Ions", ABHATH AL-YARMOUK Journal (Basic Sciences and Engineering), Vol. , No. , pp. - .
  - Mohammad A. Abbadi and Zuheir S. El-Bayyari, , "Screened Hydrogenic Calculations of the Photodetachment Cross-Section of the Atomic Lithium Anion", Mu'tah Lil-Buhooth Wad - Dirasat (Series B: Natural and Applied Sciences). Vol. , No. , pp. - .
  - Mohammad A. Abbadi and Zuheir S. El-Bayyari, , " The Absolute Threshold Photodetachment Cross-Section of  $\text{Al}^-$ ", Mu'tah Lil-Buhooth wad - Dirasat (Series B: Natural and Applied Sciences), Vol. , No. , pp. - .
  - Mohammad A. Abbadi, "Binding Energies of Alkali-Metal Negative Ions", , Mu'tah Lil-Buhooth Wad - Dirasat (Series B: Natural and Applied Sciences). Vol. , No. , pp. - .
  - Mohammad A. Abbadi, Nidal M. Bani-Hani, and Jamil M. Khalifeh,

- , "A Variational Calculation of Binding Energies in Negative Ions", *Mutah Lil-Buhooth Wad - Dirasat (Series B: Natural and Applied Sciences)*. Vol. , No. , pp. - .
- Mohammad A. Abbadi, Nidal M. Bani-Hani, and Jamil M. Khalifeh, , "A Variational Wave Function for  $p$ -Orbitals in Atomic Negative Ions", *International Journal of Theoretical Physics (U.S.A.)*, Vol. , No. , pp. - .
- Mohammad A. Abbadi and Y. S. Abdelrahman, , "The Photodetachment Cross Section of the Atomic Phosphorus Anion", *Mutah Lil-Buhooth Wad - Dirasat (Series B: Natural and Applied Sciences)*, Vol. , No. , pp. - .
- Mohammad A. Abbadi, "Electronic Screening Effect in  $H^-$ ", , *ABHATH AL-YARMOUK Journal (Basic Sciences and Engineering)* , Vol. , No. A, pp. - .
- Mohammad A. Abbadi, I. I. Al-Qasir, and J. M. Khalifeh , , "Three-Parameter Wave Functions for  $ns$  -Orbitals in Alkali-Metal Negative Ions", *International Journal of Theoretical Physics* , Vol. , No. , pp. - .
- Sadeqa J. Ameen and Mohammad A. Abbadi , , "Calculation of Binding Energy and Photodetachment Cross Section of  $Al^-$ ", in preparation.
- Maher A. Lafi and Mohammad A. Abbadi, , "Calculation of Binding Energy and Photodetachment Cross Section of  $H^-$ ", in preparation.

### **Courses I taught :**

- Undergraduate level: General Physics ( ), General Physics ( ), Electronics, Modern Physics, Atomic Physics, Molecular Physics, Plasma Physics, Thermodynamics, Statistical Mechanics, General Theory of Relativity, Physics Laboratories (Mechanics, Electricity and Magnetism, Electronics, Intermediate Physics, and Advanced Physics), and Computational Physics.
- Masters level: Research methods in Physics, Plasma Physics, and General Theory of Relativity.

### **Administrative positions :**

- Chairman of Physics Dept. ( / ).
- Acting Director of personnel Dept. ( – ).
- Acting Dean of the Faculty of Sciences ( - ).
- Dean of Scientific Research (April - July )
- Vice President of Mutah University for :
  - a- Scientific Faculties Affairs (Aug. , - Sep. , )
  - b- Administrative Affairs (Sep. , –Jan. , ).
  - c- Academic Affairs (Jan. , – Now).

### **Committees Memberships :**

- Academic Committee for Appointment and Promotion ( – Now).
- Higher Committee for Academic Research ( – ).
- IT and e-learning Higher Committee ( – Now).
- Students Transfer Committee ( – Now).

- Study Plans Committee (      – Now).
- Courses Schedule Committee (      – Now).
- University Strategic Plan Committee (      – Now).
- Quality Assurance Committee (      – Now).
- Higher Education Development Committee (      – Now).
- Mutah University Deans Council (      – Now).
- Mutah University Council (      – Now).
- National Agenda Implementation Committee (      –      ).
- Directors Board of the University House for Consultations and Studies, Ltd. (      –      ).
- Yemeni - Jordanian Private University Establishment Committee (      – Now).

**Management Training :**

- Management in Colleges – Staff and Resources Management - at Further Education Staff College, Coombe Lodge , Blagdon, Near Bristol, UK (Nov.      – Dec.      ,      ).
- Bristol Polytechnic Management Training (Dec.      -      ,      ).
- Research Team Work at University of Nevada , LV, USA (June      – Sep.      ,      ).

**Sabbatical Leave :** Al al-Bayt University/Jordan (      /      ).