

Research Groups & Collaborators

- **Research Group 1**

Prof. Fedda Y. Alzoubi

Prof. Mohammad K. Alqadi

Prof. Hasan M. Al-Khateeb

Dr. Khalid Al-Jarrah

Research Interests

Polarized electron-atoms collisions

Superconductivity

Radiation Measurements

Fractional Calculus

X-ray fluorescence

Optical Properties of Materials

Nanoparticles: Synthesis, Characterization, and Application

Research Collaborators

Prof. Nabil Y. Ayoub, President, American University at Madaba, Jordan

Prof. Khalid AbuMurad, Yarmouk University, Jordan

Prof. Barakat Bataineh, Yarmouk University, Jordan

Eng. Jehad Al-Zouby, Al-Balqa University, Jordan

- **Research Group 2**

Prof. Abdalla Obeidat

Prof. Akram Rousan

Prof. Mohammad Khair Qaseer

Dr. Maen Gharaibeh

Dr. Adnan Jaradat

Dr. Khalid Aledielat

Research Interests

Chaos and Nonlinear equations

Fractional Calculus

Ising, XY, and Heisenberg models

Magnetism

Molecular dynamic simulations
Monte-Carlo simulations
Density Functional Theory
Semi-conductor physics

Research Collaborators

Khitam Khasawneh, Yarmouk University

- **Research Group 3**

Prof. Ahmad Al-Omari
Prof. Borhan Albiss
Prof. Ahmad Alsaad
Prof. Mohammad Al-Omari (Al-Akhras)
Prof. Taha Rababeh
Dr. Mohannad Al-Jarrah

Research Interests

Theoretical Condensed Matter Physics
Experimental Condensed Matter Physics
Magnetism
Density Functional Theory
Ferroelectrics
Nano science and technology

Research Collaborators

Prof. Renat Sabirianov, University of Nebraska/Omaha/USA
Prof. Laurent Bellaiche, University of Arkansas/USA
Prof. Barry Cheung, University of Nebraska/Lincoln/USA
Dr. Nabil Al-Aqtash, Hashemite University/Jordan

- **Research Group 4**

Prof. Mohammad Al-Omari (Al-Akhras)
Dr. Khalid Al-Jarrah
Dr. Mohammad Alebrahim

Research Interests

Nano-medicine
Nanotechnology
Application of physics in medicine
Photosensitization and Photobiology
Biological radiation
EMF radiation biology
Molecular mechanisms in photo-medicine

Research Collaborators

Dr. Ahmad Telfah, Leibniz-Institut für Analytische Wissenschaften - ISAS - e.V. 44139 Dortmund, Germany.

Prof. Marwan Mousa, Department of Physics, Mutah University, Al-Karak, Jordan.

Dr. Venkatesha Narayanaswamy, Department of Geology, United Arab Emirates University, Al-Ain 15551, UAE.

Prof. Ihab M. Obaidat, Department of Physics, United Arab Emirates University, Al-Ain 15551, UAE.

Dr. Riad Ababneh, Department of Physics, Yarmouk University

Carlos J. Tavares, Centre of Physics of the Universities of Minho and Porto, 4804-533 Guimaraes, Portugal.

Prof. Roland Hergenröder, Leibniz-Institut für Analytische Wissenschaften - ISAS - E.V, 44139 Dortmund, Germany.

• **Research Group 5**

Dr. Adnan Sharia

Prof. Borhan Albiss

Dr. Khalid Aledielat

Dr. Mazen Shatnawi

Dr. Munther Qandah

Research Interests

Renewable Energy
Solar Cells
Crystallization of amorphous silicon
Simulation of solar cells
Solar thermal heating systems

Solar concentrators
Thin film solar cells
Camouflage thin films

Research Collaborators

PV research center, University of Arkansas, USA
PV Center, Middle East Technical University, Turkey