



**AMANI KRAISHAN**



## **Amani Kraishan**

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### **PROFESSIONAL SUMMARY**

Accomplished Assistant Professor with over a decade of experience in nuclear and radiation physics. Proven track record in research and teaching, with significant contributions to the field of particle physics and extensive publication history. Recognized for excellence in teaching and research, including awards from Temple University and Battelle Memorial Institute, and Stony Brook University. Skilled in experimental design, data analysis, and developing new experimental techniques.

### **ACADEMIC QUALIFICATIONS**

- **Ph.D. in Physics (2018)**  
Temple University, College of Science and Technology, Philadelphia, PA
- **M.Sc. in Physics (2012)**  
University of Delaware, College of Art and Science, Newark, DE
- **B.Sc. in Physics (2006)**  
Al-Hussein Bin Talal University, College of Science, Ma'an, Jordan

### **SPECIALTY**

**General Specialization:** Physics

**Specialization:** Nuclear and Radiation Physics



## **CAREER HISTORY**

### **ASSISTANT PROFESSOR**

Department of Physics, College of Science, Al-Hussein Bin Talal University, Ma'an, Jordan

September 2018 - Present

- Lead and conduct research in nuclear and radiation physics
- Develop and teach undergraduate and graduate courses.
- Supervise student research projects and theses.

### **RESEARCH ASSISTANT**

Department of Physics, Temple University, Philadelphia, PA

June 2015 – June 2018

- Conducted research in nuclear physics and hadron structure.
- Assisted in developing new experimental techniques.

### **TEACHING ASSISTANT**

Department of Physics, Temple University, Philadelphia, PA

August 2013 – May 2015

- Assisted in teaching physics courses.
- Conducted research and experiments in particle physics.

### **RESEARCH AND TEACHING ASSISTANT**

Department of Physics, College of Science, Al-Hussein Bin Talal University, Ma'an, Jordan

June 2006- June 2009

- Conducted laboratory sessions, demonstrating experiments, and ensuring students understood the procedures and concepts.
- Provided individual and group tutoring sessions to help students grasp difficult concepts and improve their problem-solving skills.
- Graded assignments, exams, and lab reports, providing constructive feedback to students.



## HONORS, SCHOLARSHIPS, AWARDS, AND GRANTS

- |                  |   |
|------------------|---|
| <b>2018</b>      | Recognition Award by Battelle Memorial Institute and Stony Brook University, USA. |
| <b>2016</b>      | Outstanding Teaching Assistant Award in Physics, Temple University, USA.          |
| <b>2009-2014</b> | Fellowship for M.Sc. and PhD research, Al-Hussein Bin Talal University, Jordan.   |
| <b>2006</b>      | Highest honor B.Sc. Student award, Al-Hussein Bin Talal University, Jordan.       |
| <b>2003-2006</b> | Fellowship for Bachelor studies, Al-Hussein Bin Talal University, Jordan.         |

## RESEARCH INTERESTS

- Nuclear Physics
- Radiation Physics
- Hadron Structure.
- Detector development for particle physics.

## PUBLICATIONS

- Contributed to over 70 publications with more than 6000 citations for the STAR collaboration in peer-reviewed journals. Selected publications include:
  - **Adam, J., et al.** (2019). Measurement of the longitudinal spin asymmetries for weak boson production in proton-proton collisions at  $s = 510$  GeV. Physical Review D, 99(5), 051102.
  - **Ahmad Al-Badawi, Amani Kraishan.** (2023). Fermionic greybody factors and quasinormal modes of black holes in Kalb-Ramond gravity. Annals of Physics, 458(3), 169467.



- **Ahmad Al-Badawi, Amani Kraishan.** (2024). Dirac perturbations of Hayward black hole with quintessence: Quasinormal modes and greybody factor, Chinese Journal of Physics, Volume 87, 2024, Pages 59-69.
- **A.F. Kraishan, et al.** (2024) Transfer factors for natural radioactivity into olive mill pomace, Applied Radiation and Isotopes, Volume 204, 2024, 111136.
- **Amani Kraishan, et al.** (2024). Assessment of natural radioactivity in soil and olive mill pomace utilizing NaI (TI) gamma-ray spectrometry and low background alpha/beta counting system. Nuclear Engineering and Technology, 56(5), 1925-1931.

## **CONFERENCES AND PROCEEDINGS**

- **“Measurement of Longitudinal Single-Spin Asymmetry for W Boson Production in Polarized proton-proton Collisions at STAR”**, Poster, RHIC/AGS Users Meeting (Brookhaven National Lab, NY), June 2018.
- **“Measurement of the Longitudinal Single-Spin Asymmetry for W Boson Production in Polarized Proton-Proton Collisions at STAR”**, APS Division of Nuclear Physics Fall Meeting (Pittsburgh, PA), October 2017.
- **“Probing Helicity and Unpolarized Quark/Anti-quark Distribution Function Using W Boson Production at RHIC”**, RHIC/AGS Users Meeting (Brookhaven National Lab, NY), June 2017.
- **“Measurement of Longitudinal Single-Spin Asymmetry for W Boson Production at Forward Pseudocapacitive in Polarized proton-proton Collisions at STAR”**, Poster, RHIC/AGS Users Meeting (Brookhaven National Lab, NY), June 2017.
- **“Measurement of Longitudinal Single-Spin Asymmetry for W Boson Production at STAR at Forward Rapidity”**, APS April Meeting (Washington, DC), January 2017.
- **“The Forward GEM Tracker (FGT) of STAR at RHIC”**, Poster, RHIC/AGS Users Meeting (Brookhaven National Lab, NY), June 2016.
- **“Test of Commercially Manufactured Large Single Mask GEM Foils”**, APS Division of Nuclear Physics Fall Meeting (Santa Fe, NM), October 2015.



## **PROFESSIONAL SERVICE**

- Peer Reviewer (2023 - Present): Conduct peer reviews for multiple scientific journals, specializing in nuclear and radiation physics.

## **TEACHING**

### **Courses Taught – Undergraduate**

#### **Al-Hussein Bin Talal University**

- General Physics I & II
- General Physics Lab I & II
- Mathematical Physics I & II
- Classical Physics I & II
- Vibration and Waves Physics
- Thermodynamics
- Optics II
- Intermediate Lab
- Introduction to Astrophysics

#### **Temple University**

- Introduction to General Physics I Lab
- Introduction to General Physics II Lab
- Elementary Classical Physics II Lab

## **SKILLS**

### **Languages**

- **Arabic:** Native
- **English:** Excellent
- **Turkish:** Good



## Computer Programs

- C/C++
- ROOT
- Bash Scripts
- Linux
- LaTeX
- Mathematica
- ICDL

## Soft Skills

- **Communication:** Excellent written and verbal communication skills.
- **Teamwork:** Proven ability to work effectively in collaborative environments.
- **Problem-Solving:** Strong analytical and problem-solving abilities.
- **Time Management:** Skilled in managing multiple projects and meeting deadlines.
- **Attention to Detail:** Meticulous in research and data analysis.

## Relevant Competencies

- **Clean Room Experience:** Worked in a clean room environment for sensitive experiments.
- **Measurement Skills:** Experienced in measuring current leakage for GEM foil.