CURRICULUM VITAE

Dr. Tariq A. Al-Abdullah

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Personal Information:

Date of Birth:	25-01-1973
Place of Birth:	Kuwait/Kuwait
Citizenship:	Jordanian
Marital Status:	Married
Children:	Bana, Muhannad

EDUCATION:

2001-2007 Doctor of Philosophy in Physics. (Major in Nuclear Physics) at Texas A&M University, College Station TX, USA.
Dissertation: "*Extracting The Asymptotic Normalization Coefficients in Neutron Transfer Reactions to Determine the Reaction Rates for* $^{22}Mg(p,\gamma)^{23}Al$ *and* $^{17}F(p,\gamma)^{18}Ne$".

1995-1998 Master of Science in Physics**.** (Major in Atomic Physics) at Yarmouk University, Irbid, Jordan.
Thesis:"*A Study of the Stochiometry of Jordanian Water Samples using XRF technique* ".

1991-1995 Bachelor of Physics at Yarmouk University, Irbid, Jordan.

1990-1991 General Secondary Education Examination (scientific stream) in Zarqa, Jordan.

ACADEMIC POSITIONS

Sept. 2007 – present	Assistant Professor, Physics Department, The Hashemite University, Zarqa, Jordan
Jan. 2003 – June 2007	Research Assistant, Cyclotron Institute, Texas A&M Univ., USA
Jan. 2002 – Dec. 2003	Teaching Assistant, Physics Department, Texas A&M Univ., USA
Sept. 1999 – Sept. 2001	Teaching Assistant, Physics Department, The Hashemite Univ., Jordan
Jan. 1997 – Sept. 1998	Teaching Assistant, Physics Department, Jordan Univ. for Science and Technology, Jordan.
Sept. 1996 – June. 1997	Teaching Assistant, Physics Department, Yarmouk Univ., Jordan.

Employment History (non-academic)

Sept. 1998 – Sept. 1999	Forensic Laboratory, Police Department, Jordan.
Sept. 1995 – Sept. 1996	High School Teacher in Physics, Zarqa, Jordan.

Research Visits

June 2013 – Sept. 2013	Visiting Scientist, Helmholtz-Zentrum Rossendorf-Dresden, Germany
June 2012 – Sept. 2012	Visiting Scientist, Helmholtz-Zentrum Rossendorf-Dresden, Germany
June 2011 – Sept. 2011	Visiting Scientist, Helmholtz-Zentrum Rossendorf-Dresden, Germany
July 2009 – Oct 2009	Visiting Researcher, Cyclotron Institute, Texas A&M University, USA.

Teaching

I have taught the following courses in Physics:

1. General Physics (I)
2. General Physics (II)
3. General Physics (III)
4. General Physics
5. Modern Physics (I)
6. Mathematical Physics (I)
7. Waves and Vibrations
8. Optics
9. Optics Laboratory
10. Quantum Physics (I)
11. Quantum Physics (II)
12. Nuclear Physics
13. Special topics (Astronomy)
14. Advanced Physics Laboratory (I)

RESEARCH EXPERIENCE

- Helmholtz-Zentrum Rossendorf-Dresden, Germany
  - Involved in studying the nucleosynthesis of ^{44}Ti in supernovae.

- Cyclotron Institute, Texas A&M University, Texas, USA
  - Involved in determining astrophysical reaction rates in ONe novae using the MDM spectrometer.
  - Involved in studying the nuclear structure of elements that have astrophysical interests using MARS.
  - Involved in determining astrophysical reaction rates in Pop III stars using radioactive beams.

- Forensic Laboratory, Amman, Jordan.
  - Involved in analyzing chemical and physical samples using the TLC, X-Ray fluorescence, Infrared spectrometer, and Refractometer.

- Physics Department, Yarmouk University, Irbid, Jordan.
  - Involved in studying the atomic compositions of solid and liquid samples using the energy dispersive X-ray fluorescence.

Graduate Studies

I supervised three master students in Physics. Their main research areas include Atomic and Radiation Physics. The analyzing tools includes Gamma Spectroscopy, X-Ray Fluorescence (WDXRF, EDXRF, TXRF), Induced Coupled Plasma (ICP-MS), and Liquid Scintillator. I was an external examiner for two master students in Physics and Geology.

SKILLS

- Computer Language: Fortran, C and C++.
- Operating System: Linux, and Microsoft Windows.
- Analysis Tools: PAW and ROOT.
- Software: OriginLab, Microsoft Office, Latex and Mathematica.

Languages

	Reading	Writing	Listening
• Arabic	Excellent	Excellent	Excellent
• English	Excellent	Excellent	Excellent

International Conferences (Oral Presentation)

1. Oct. 25 – 27, 2011 — The 4th International Symposium on Nuclear Energy, Jordan.
2. Aug. 29 – Sept. 2, 2011 — 2nd workshop on Exotic Radionuclides from Accelerator Waste for Science and Technology, Paul Scherrer Inst., Switzerland.
3. Mar. 13 – 19, 2011 — The 8th Russbach Workshop on Nuclear Astrophysics, Salzburg, Austria.
4. Mar. 17 – 19, 2009 — A Workshop on Nuclear Science and Education, Cairo, Egypt.
5. June 23 – 27, 2008 — Nuclear Reactions with Exotic Nuclei for Astrophysics, Sinaia, Romania.
6. Aug. 20 – 31, 2007 — Carpathian Summer School of Physics 2007, "Advances in Nuclear and Particle Astrophysics", Sinaia, Romania.
7. May 8 – 16, 2007 — JINA Special School on "Nuclear Mass Models", Argonne National Laboratory, Chicago, IL, USA.
8. Apr. 14 – 17, 2007 — The American Physics Society (APS), April Meeting, Florida, USA.
9. Oct. 25 – 28, 2006 — The American Physics Society (APS), Division of Nuclear Physics Fall Meeting, Tennessee, USA.
10. Sept. 18 – 22, 2005 — 2nd Joint Meeting of the Nuclear Physics Divisions of the APS and the Physical Society of Japan, Hawaii, USA.
11. Apr. 16 – 19, 2005 — The American Physics Society (APS), April Meeting, Florida, USA.
12. Oct. 27 – 30, 2004 — The American Physics Society (APS), Division of Nuclear Physics Fall Meeting, Chicago, IL, USA.

Technical Reports

1.	Aug. 2011.	Work in Progress, HZDR, Dresden, Germany.
2.	Apr. 2007	PhD Dissertation Defense, Texas A&M Univ., Texas, USA.
3.	Nov. 2006	PhD Progress Report, Cyclotron Institute, Texas, USA.
4.	Dec. 2005	PhD Progress Report, Cyclotron Institute, Texas, USA.
5.	June 1998	MCs Thesis Defense, Yarmouk University, Irbid, Jordan.

International Conferences (Attendance)

1.	Oct. 26 – 28, 2009	The 2nd International Symposium on Nuclear Energy, Jordan.
2.	Apr. 10 – 14, 2006	2006 Mitchell Symposium on Astronomy, Cosmology and Fundamental Physics, Texas A&M Univ., Texas, USA
3.	Feb. 13 – 17, 2006	The School on Tools and Toys in Nuclear Astrophysics: "The Nuclear Shell Model", Michigan, USA.
4.	June 13 – 24, 2005	Carpathian Summer School of Physics 2005, "Exotic Nuclei and Nuclear/Particle Astrophysics", Mamaia, Romania.
5.	Feb. 12 – 16, 2005	The 3rd World Consensus Initiative workshop, Texas, Texas A&M Univ., USA.

Publications:

1. **T. Al-Abdullah**, D. Bemmerer, *et al.*,
   " The feasibility of direct measurements of the ^{44}Ti(α, p)^{47}V and ^{40}Ca(α, p)^{43}Sc reactions in forward kinematics at astrophysically relevant temperatures**"**
   Europe. Phys. J. A 50, 140 (2014)

2. **T. Al-Abdullah**, F. Carstoiu, *et al.*,
   " Peripheral elastic and inelastic scattering of ^{17,18}O on light targets at 12 MeV/nucleon"
   Phys. Rev. C 89, 064602 (2014)

3. **T. Al-Abdullah**, F. Carstoiu, *et al.*,
   "Astrophysical reaction rate for ^{17}F(p,γ)^{18}Ne from the transfer reaction ^{13}C(^{17}O,^{18}O)^{12}C"
   Phys. Rev. C 89, 025809 (2014)

4. **T. Al-Abdullah**, F. Carstoiu, *et al.*,
   "Stellar reaction rate for ^{22}Mg+p→^{23}Al from the asymptotic normalization coefficient in the mirror nuclear system ^{22}Ne+n→^{23}Ne."
   Phys. Rev. C 81, 035802 (2010)

5. A. Banu, **T. Al-Abdullah**, C. Fu, *et al*.,
"Astrophysical S factor for the radiative capture $^{12}N(p,\gamma)^{13}O$ determined from the $^{14}N(^{12}N,^{13}O)^{13}C$ proton transfer reaction".
Phys. Rev. C 79, 025805 (2009)

6. Changbo Fu, V. Z. Goldberg, ..., **T. Al-Abdullah**, L. Trache, and R. E. Tribble. "First observation of α-cluster states in the 14O + 4He interaction". **Phys. Rev. C 77, 064314 (2008)**

7. M. La Cognata, C. Spitaleri, R E Tribble, **T. Al-Abdullah**, *et al*.,
"Indirect measurement of the $^{18}O(p, \alpha)^{15}N$ reaction rate through the THM",
J. Phys. G: Nucl. Part. Phys. 35 **014014 (2008)**

8. Changbo Fu, V. Z. Goldberg, ..., **T. Al-Abdullah**, L. Trache, and R. E. Tribble. "Single and double proton emissions from the 14O+4He interaction".
Phys. Rev. C 76, 021603 (2007)

9. V. E. Iacob, Y. Zhai, T. Al-Abdullah, C. Fu, *et al*.,
"β decay of proton-rich nucleus ^{23}Al and astrophysical consequences".
Phys. Rev. C 74, 045810 (2006)

10. R.E. Tribble, **T. Al-Abdullah**, *et al.*,
"Astrophysical reaction rates obtained by indirect techniques".
AIP Conference Proceedings 1289, 239 (2010)

11. M. La Cognata, C. Spitaleri, A.M. Mukhamedzhanov, **T. Al-Abdullah**, *et al.*,
"First measurement of the $^{18}O(p,\alpha)^{15}N$ cross section at astrophysical energies". **J. Phys. Conference Series 202, 012019 (2010).**

12. **T. Al.-Abdullah**, F. Cârstoiu, *et al.*,
"Extracting the Asymptotic Normalization Coefficients in Neutron Transfer Reactions to Determine the Astrophysical Reaction Rates for $^{22}Mg(p,\gamma)^{23}Al$ and $^{17}F(p,\gamma)^{18}Ne$". AIP **Conference Proceedings 972, 439 (2008)**

13. M. La Cognata, C. Spitaleri, R. E. Tribble, **T. Al-Abdullah**, *et al.*,
"Recent Applications of the THM to the AGB Star Nucleosynthesis".
AIP Conference Proceedings 972, 485 (2008)

14. A. Banu, **T. Al-Abdullah,** *et al.*,
"Astrophysical S-factor of the $^{12}N(p,\gamma)^{13}O$ Reaction Determined from the $(^{12}N,^{13}O)$ Proton Transfer Reaction".
AIP Conf. Proc., 972, 443 (2008)

15. Changbo Fu, V. Z. Goldberg, ..., **T. Al-Abdullah**, *et al.*,
"Proton decay of ^{18}Ne states populated in the ^{14}O+alpha resonance interaction".
AIP Conf. Proc. 1005, 144 (2008)

16. R.E. Tribble, **T. Al-Abdullah**, C. Fu, C.A. Gagliardi, *et al.*,
"An indirect method using ANCs in nuclear astrophysics"
Proceedings of the Carpathian Summer School, **Romania, 2005 pg. 307**, ed. by S. Stoica, L. Trache, and R.E. Tribble (World Scientific, Singapore, 2006).

Professional References:

1. **Prof. Carl A. Gagliardi**
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