



TAYFUN AKYÜREK

ASST. PROF.

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Learning Knowledge

Doctorate 2010 - 2015	University Of Missouri-Rolla, Nuclear Engineering, United States Of America
Postgraduate 2008 - 2010	University Of South Carolina, Nuclear Engineering, United States Of America
Postgraduate 2004 - 2007	Suleyman Demirel University, Fen Bilimleri Enstitüsü, Turkey
Undergraduate 1999 - 2003	Süleyman Demirel Üniversitesi, Fen-Edebiyat Fakültesi, Fizik Bölümü, Turkey

Dissertations

Doctorate, Active-Passive nuclear spent fuel interrogation using photons and neutrons, University of Missouri-Rolla, Nuclear Engineering, 2015

Postgraduate, -, University of South Carolina, Nuclear Engineering, 2010

Academic Titles / Tasks

Assistant Professor 2020 - Continues	Marmara University, Faculty Of Arts And Sciences, Physics
Research Assistant PhD 2015 - 2020	Marmara University, Faculty Of Arts And Sciences, Physics
Research Assistant PhD 2018 - 2019	Istanbul Technical University, Enerji Enstitüsü, Nükleer Araştırmalar Anabilim Dalı

Research Assistant
2012 - 2015

University Of Missouri-Rolla, College Of Engineering, Nuclear Engineering

Research Assistant
2010 - 2011

University Of South Carolina, College Of Engineering And Computing , Nuclear Engineering

Supported Projects

1. Akyürek T., Project Supported by Higher Education Institutions, Determination of Nuclear Fuel Burn-up Distribution at TRIGA Mark II Research Reactor, 2016 - 2019

Awards

1. Akyürek T., Tübitak Yayın Teşvik Ödülü, Tübitak, October 2019
2. Akyürek T., Tubitak yayın tesvik, Tubitak, October 2019
3. Akyürek T., Tubitak Yayın Tesvik, Tubitak Yayın Tesvik, August 2016
4. Akyürek T., 2016 yılı tebliğ ödülü, Marmara Üniversitesi Fen Edebiyat Fakültesi, May 2016
5. Akyürek T., Tubitak Yayın Tesvik, Tubitak Yayın Tesvik, July 2008

Scholarships

YLSY, Ministry of Education, 2007 - 2015

Erasmus, European Commission, 2005 - 2006

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

1. **Simultaneous experimental evaluation of pulse shape and deadtime phenomenon of GM detector**
Almutairi B., Alam S., Goodwin C. S. , Usman S., Akyürek T.
SCIENTIFIC REPORTS, vol.11, no.1, 2021 (Journal Indexed in SCI)
2. **A new dead-time determination method for gamma-ray detectors using attenuation law**
AKYÜREK T.
Nuclear Engineering and Technology, 2021 (Journal Indexed in SCI Expanded)
3. **Delayed fast neutron as an indicator of burn-up for nuclear fuel elements**
AKYÜREK T., Shoaib S., Usman S.
Nuclear Engineering and Technology, 2021 (Journal Indexed in SCI Expanded)
4. **Experimental evaluation of the deadtime phenomenon for GM detector: deadtime dependence on operating voltages**
Almutairi B., Alam S., AKYÜREK T., Goodwin C. S. , Usman S.
SCIENTIFIC REPORTS, vol.10, no.1, 2020 (Journal Indexed in SCI)
5. **Neutron reflector analysis for the beam-port of the Missouri S&T Reactor**
Akyürek T., Vaz W. S. , Alajo A. B. , King J. C. , Usman S., Giraldo C. H. C.
Journal of Radioanalytical and Nuclear Chemistry, vol.322, no.2, pp.975-981, 2019 (Journal Indexed in SCI)
6. **Neutron flux characterization of the beam port of the Missouri University of Science and Technology Reactor**
Albarqi M., Alsulami R., AKYÜREK T., Graham J.
Journal of Radioanalytical and Nuclear Chemistry, vol.321, no.1, pp.109-116, 2019 (Journal Indexed in SCI)

7. **Determination of plutonium and uranium content and burnup using six group delayed neutrons**
AKYÜREK T., Usman S.
Nuclear Engineering and Technology, vol.51, no.4, pp.943-948, 2019 (Journal Indexed in SCI)
8. **Voltage dependent pulse shape analysis of Geiger-Müller counter**
Almutairi B., Akyürek T., Usman S.
Nuclear Engineering and Technology, vol.51, pp.1081-1090, 2019 (Journal Indexed in SCI)
9. **Portable spectroscopic fast neutron probe and He-3 detector dead-time measurements**
Akyurek T., Tucker L. P. , Liu X., Usman S.
PROGRESS IN NUCLEAR ENERGY, vol.92, pp.15-21, 2016 (Journal Indexed in SCI)
10. **Spent fuel interrogation using delayed fast neutron spectrum at Missouri University of Science and Technology Reactor**
Akyurek T., Usman S.
Progress in Nuclear Energy, vol.85, pp.525-540, 2015 (Journal Indexed in SCI)
11. **A comparison of traditional and hybrid radiation detector dead-time models and detector behavior**
Yousaf M., Akyurek T., Usman S.
Progress in Nuclear Energy, vol.83, pp.177-185, 2015 (Journal Indexed in SCI)
12. **GM counter deadtime dependence on applied voltage, operating temperature and fatigue**
Akyurek T., Yousaf M., Liu X., Usman S.
Radiation Measurements, vol.73, pp.26-35, 2015 (Journal Indexed in SCI)
13. **Review and characterization of best candidate isotopes for burnup analysis and monitoring of irradiated fuel**
Akyurek T., Tucker L., Usman S.
Annals of Nuclear Energy, vol.69, pp.278-291, 2014 (Journal Indexed in SCI)
14. **Reduced shell model calculations of 111Sb and 112Sb**
Dikmen E., Akyürek T.
Chinese Physics Letters, vol.24, no.6, pp.1521-1524, 2007 (Journal Indexed in SCI)

Articles Published in Other Journals

1. **Farklı sıcaklıklar altında BSR yakıt demetinin efektif çoğalma faktörü ve yakıt sıcaklığı katsayısı hesaplamaları**
AKYÜREK T.
Balıkesir Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.20, pp.1-9, 2018 (Other Refereed National Journals)
2. **A 18 Çekirdekleri için Nükleer Enerji Seviyelerinin Hesaplanması**
AKYÜREK T.
Süleyman Demirel Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.13, pp.1-5, 2009 (Other Refereed National Journals)

Refereed Congress / Symposium Publications in Proceedings

1. **Pulse Shape Dependence on Applied Voltage of Geiger-Mueller Detector**
Almutairi B., Alam S. B. , AKYÜREK T., Cameron G., Olson A., Usman S.
5th International Conference on Sensors Engineering and Electronics Instrumentation Advances, Kanarya Adaları (Tenerife), Spain, 25 - 27 September 2019, pp.270-272
2. **Spent Fuel Analysis Using Six Group Delayed Neutron Parameters**
AKYÜREK T., Usman S.
ANS Winter Meeting Expo 2018, 11 - 15 October 2018, vol.119, pp.309-310
3. **Spent Fuel Investigation System at ITU Triga Mark II Reactor**
AKYÜREK T., REYHANCAN İ. A. , kızıltaş s.

- ANS Winter Meeting Expo 2018, 11 - 15 November 2018
4. **The Economic Effect of Nuclear Reactor Types**
AKYÜREK T.
International Congress of Energy, Economy and Security, 21 - 22 April 2018
 5. **A New Phenomenological Model for Geiger-Müller Deadtime**
Usman S., Almutairi B., AKYÜREK T.
ANS Winter Meeting and Nuclear Technology Expo, 29 October - 02 November 2017
 6. **Calculation of reactor parameters of pwr assembly at different temperatures**
AKYÜREK T.
10. Uluslararası Nükleer Yapı Özellikleri Konferansı, 20 - 22 September 2017
 7. **Dead time Calculations of Liquid Scintillator Neutron Detector Using Attenuation Law**
AKYÜREK T., Usman S.
American Nuclear Society (ANS) Winter Meeting & Expo, LAS VEGAS, United States Of America, 6 - 10 November 2016
 8. **Dead time Determination of Helium Detector Using MCNP Code**
AKYÜREK T., Tucker L. P. , Usman S.
American Nuclear Society (ANS) Winter Meeting & Expo, LAS VEGAS, United States Of America, 6 - 10 November 2016
 9. **GEÇİKMİŞ HIZLI NÖTRONLAR YARDIMIYLA DENEYSSEL NÜKLEER YAKIT DENETİMİ**
AKYÜREK T., Usman S.
XI Ulusal Nükleer Bilimler ve Teknolojileri Kongresi, Aydın, Turkey, 12 - 14 October 2016
 10. **Different Methods for Dead time Determination of Nuclear Detectors**
AKYÜREK T.
1st International Underground Resources and Energy Conference, Yozgat, Turkey, 6 - 08 October 2016
 11. **Nuclear MOX Fuel Burnup Analysis and Monitoring Using Non Destructive Method**
AKYÜREK T., Usman S.
1st International Underground Resources and Energy Conference, Yozgat, Turkey, 6 - 08 October 2016
 12. **LWR Design Impact on Radiological Source Term**
Usman S., AKYÜREK T.
1st International Underground Resources and Energy Conference, Yozgat, Turkey, 6 - 08 October 2016
 13. **Distance Education of Reactor Laboratory at Missouri S T**
Yousaf M., AKYÜREK T., Alajo A., Usman S.
American Nuclear Society Conference, San-Antonio, United States Of America, 6 - 11 June 2015, vol.112, pp.41-46
 14. **Operating voltage dependence of detector deadtime GM counter**
AKYÜREK T., Yousaf M., Usman S.
American Nuclear Society Conference, San Diego, United States Of America, 11 - 15 November 2012, vol.107, pp.331-332
 15. **The effect of 0h11 2 level on shell model calculations of light nuclei**
AKYÜREK T.
International Physics conference, Muğla, Turkey, 18 - 21 July 2005
 16. **Shell model calculation of 18O and 18F**
AKYÜREK T.
International Conference of BPU, İstanbul, Turkey, 10 - 14 July 2006
 17. **Shell Model Calculation of Sb103 and Sb105**
AKYÜREK T.
Atom-Molekül ve Çekirdek Sistemlerinin Yapıları ve Spektrumları Çalıştayı, Çanakkale, Turkey, 4 - 08 July 2005

Courses

Nükleer Fizik, Undergraduate, 2018 - 2019, 2019 - 2020

Physics II, Undergraduate, 2019 - 2020, 2020 - 2021
Nükleer Fizik Laboratuvarı, Undergraduate, 2017 - 2018, 2018 - 2019, 2019 - 2020
Nükleer Fizik, Undergraduate, 2018 - 2019, 2019 - 2020
Nükleer Fizik, Undergraduate, 2018 - 2019, 2019 - 2020
Physics I, Undergraduate, 2019 - 2020
Nükleer Fizik, Undergraduate, 2018 - 2019, 2019 - 2020
Physics I, Undergraduate, 2019 - 2020
Radiation and Radioisotope Applications, Postgraduate, 2020 - 2021
Elektrik ve Manyetizma, Undergraduate, 2020 - 2021
Nükleer Fizik , Undergraduate, 2018 - 2019, 2019 - 2020
Physics I, Undergraduate, 2016 - 2017, 2017 - 2018, 2018 - 2019
Nuclear Reactors, Undergraduate, 2017 - 2018, 2018 - 2019, 2019 - 2020
Physics I, Undergraduate, 2016 - 2017, 2017 - 2018, 2018 - 2019
Nükleer Reaktörler, Undergraduate, 2018 - 2019
Physics II, Undergraduate, 2016 - 2017, 2017 - 2018, 2018 - 2019
Nuclear Reactor Physics, Doctorate, 2016 - 2017
Physics II, Undergraduate, 2016 - 2017, 2017 - 2018
Physics I, Undergraduate, 2016 - 2017
Physics I, Undergraduate, 2016 - 2017
Physics I, Undergraduate, 2016 - 2017

Scientific Refereeing

NUCLEAR TECHNOLOGY, SCI Journal, April 2020
PROGRESS IN NUCLEAR ENERGY, SCI Journal, September 2018
Nuclear engineering and radiation science, Other Indexed Journal, May 2018
NUCLEAR TECHNOLOGY, SCI Journal, March 2018
NUCLEAR TECHNOLOGY, SCI Journal, February 2018
APPLIED RADIATION AND ISOTOPES, SCI Journal, February 2018
PROGRESS IN NUCLEAR ENERGY, SCI Journal, February 2018
PROGRESS IN NUCLEAR ENERGY, SCI Journal, December 2017
TURKISH JOURNAL OF PHYSICS, National Scientific Refreed Journal, August 2017
PROGRESS IN NUCLEAR ENERGY, SCI Journal, March 2017
Progress In Nuclear Energy, SCI Journal, January 2017
NUCLEAR TECHNOLOGY, SCI Journal, February 2016

Edit Congress and Symposium Activities

1st International Underground Resources and Energy Conference, Invited Speaker, Yozgat, Turkey, 2016

Invited Talks

1st International Underground Resources and Energy Conference, Conference, Yozgat Bozok Üniversitesi, Turkey, October 2016

Research Areas

Nuclear Engineering and Nuclear Energy Studies, Engineering and Technology