

## **Prof. SERKAN AKKOYUN**

### **Personal Information**

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**Address:** Sivas Cumhuriyet Üniversitesi Fen Fakültesi Fizik Bölümü Sivas

### **International Researcher IDs**

ScholarID: 7Nd-aBAAAAAJ

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Publons / Web Of Science ResearcherID: ABD-8207-2020

ScopusID: 28567575100

Yoksis Researcher ID: 53279

### **Education Information**

Doctorate, Ankara University, Fen Bilimleri Enstitüsü, Fizik (YI) (Tezli), Turkey 2006 - 2011

Postgraduate, Ankara University, Fen Bilimleri Enstitüsü, Fizik (YI) (Tezli), Turkey 2003 - 2006

Undergraduate, Ankara University, Fen Fakültesi, Fizik Bölümü, Turkey 1998 - 2003

Associate Degree, Erciyes University, Kayseri Meslek Yüksekokulu, Bilgisayar Teknolojileri Bölümü, Turkey 1995 - 1997

### **Foreign Languages**

English, B2 Upper Intermediate

### **Dissertations**

Doctorate, AGATA Ge dedektörleri için gama ışın, nötron simülasyonları ve iz sürme tekniği, Ankara Üniversitesi, Fen Bilimleri Enstitüsü, Fizik (YI) (Tezli), 2011

Postgraduate, Uzayda gama ışını ölçümleri-bir GEANT simülasyonu, Ankara Üniversitesi, Fen Bilimleri Enstitüsü, Fizik (YI) (Tezli), 2006

### **Research Areas**

Artificial Intelligence, Computer Learning and Pattern Recognition, Nuclear physics

### **Academic Titles / Tasks**

Professor, Sivas Cumhuriyet University, Fen Fakültesi, Fizik Bölümü, 2020 - Continues

Associate Professor, Sivas Cumhuriyet University, Fen Fakültesi, Fizik Bölümü, 2016 - 2020

Associate Professor, Sivas Cumhuriyet University, Sağlık Hizmetleri Meslek Yüksekokulu, Tibbi Hizmetler Ve Teknikler

Bölümü, 2015 - 2015

Assistant Professor, Sivas Cumhuriyet University, Sağlık Hizmetleri Meslek Yüksekokulu, Terapi Ve Rehabilitasyon

Bölümü, 2013 - 2015

Research Assistant, Sivas Cumhuriyet University, Fen Fakültesi, Fizik Bölümü, 2009 - 2013

## Academic and Administrative Experience

Director of Vocational School, Sivas Cumhuriyet University, Sağlık Hizmetleri Meslek Yüksekokulu, Sağlık Hizmetleri Myo, 2019 - 2023

Sivas Cumhuriyet Üniversitesi, Kangal Meslek Yüksekokulu, 2016 - 2017

Sivas Cumhuriyet Üniversitesi, Sağlık Hizmetleri Meslek Yüksekokulu, 2013 - 2015

## Courses

İleri Nükleer Fizik, Postgraduate, 2019 - 2020

Nükleer Radyasyon Algılama ve Ölçümü, Postgraduate, 2018 - 2019

Uzmanlık Alan Dersi, Postgraduate, 2019 - 2020

Radyasyondan Korunma, Associate Degree, 2019 - 2020

Fizik, Undergraduate, 2019 - 2020

Tıbbi Fizik, Undergraduate, 2019 - 2020

Mühendisler için Matematiksel Modelleme, Undergraduate, 2018 - 2019

Seminer Dersi, Postgraduate, 2018 - 2019

İleri Nükleer Fizik, Postgraduate, 2019 - 2020

Fizik, Undergraduate, 2019 - 2020

Fizik-I, Undergraduate, 2018 - 2019

Genel Fizik I, Undergraduate, 2018 - 2019

Genel Fizik II, Undergraduate, 2017 - 2018

Genel Fizik I, Undergraduate, 2018 - 2019

Optisyenlik Uygulamaları - III, Associate Degree, 2016 - 2017

Seminer Dersi, Postgraduate, 2016 - 2017

Robotik, Undergraduate, 2016 - 2017

Robotik, Undergraduate, 2016 - 2017

Uzmanlık Alan Dersi, Postgraduate, 2016 - 2017

Robotik, Undergraduate, 2016 - 2017

Fizik Ve Geometrik Optik - II, Associate Degree, 2016 - 2017

Fizik Ve Geometrik Optik - II, Associate Degree, 2016 - 2017

Optisyenlik Uygulamaları - III, Associate Degree, 2016 - 2017

Lens Tasarımı ve Kusurları, Postgraduate, 2016 - 2017

Fizik Ve Geometrik Optik - I, Associate Degree, 2016 - 2017

Optik Aletler Ve Kullanımı, Associate Degree, 2016 - 2017

Nükleer Fizik, Undergraduate, 2015 - 2016

Temel Bilgi Teknolojileri - I, Associate Degree, 2016 - 2017

Optisyenlik - III, Associate Degree, 2015 - 2016

Optik ve Oftalmik Aletler, Associate Degree, 2016 - 2017

Nükleer Fizik, Undergraduate, 2015 - 2016

Optisyenlik Uygulamaları - II, Associate Degree, 2016 - 2017

Fizik Ve Geometrik Optik - I, Associate Degree, 2016 - 2017

Optik Aletler Ve Kullanımı, Associate Degree, 2014 - 2015

Optik Aletler Ve Kullanımı, Associate Degree, 2014 - 2015

Araştırma Projesi, Associate Degree, 2015 - 2016  
Temel Fizik, Associate Degree, 2015 - 2016  
Optik Aletler Ve Kullanımı, Associate Degree, 2014 - 2015  
Matematik, Associate Degree, 2014 - 2015  
Temel Fizik, Associate Degree, 2014 - 2015  
Röntgen Fiziği, Associate Degree, 2014 - 2015  
Nükleer Tip, Associate Degree, 2014 - 2015  
Matematik, Associate Degree, 2014 - 2015  
Matematik, Associate Degree, 2013 - 2014  
Nükleer Tip, Associate Degree, 2014 - 2015  
Fizik - I, Associate Degree, 2013 - 2014  
Temel Bilgisayar Teknolojileri Kullanımı, Associate Degree, 2013 - 2014  
Temel Bilgi Teknolojileri Kullanımı, Associate Degree, 2013 - 2014  
Temel Bilgi Teknolojileri Kullanımı, Associate Degree, 2013 - 2014

## Jury Memberships

Associate Professor Exam, Associate Professor Exam, Sivas Cumhuriyet Üniversitesi, October, 2020  
Associate Professor Exam, Associate Professor Exam, Sivas Cumhuriyet Üniversitesi, March, 2020

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Generation of fusion and fusion-evaporation reaction cross-sections by two-step machine learning methods**  
AKKOYUN S., Yeşilkanat C. M., BAYRAM T.  
Computer Physics Communications, vol.297, 2024 (SCI-Expanded)
- II. **Machine learning predictions for cross-sections of  $^{43,44}\text{Sc}$  radioisotope production by alpha-induced reactions on Ca target**  
AKKOYUN S., Yeşilkanat C. M., BAYRAM T.  
Nuclear Instruments and Methods in Physics Research, Section B: Beam Interactions with Materials and Atoms, vol.549, 2024 (SCI-Expanded)
- III. **Neutron Single-Particle States in  $^{101}\text{Sn}$  by Polynomial Fits and Shell Model Calculations for Light Sn Isotopes**  
Yakhelef A., AKKOYUN S.  
Brazilian Journal of Physics, vol.54, no.1, 2024 (SCI-Expanded)
- IV. **Applications of different machine learning methods on nuclear charge radius estimations**  
BAYRAM T., Yeşilkanat C. M., AKKOYUN S.  
Physica Scripta, vol.12, no.1, 2023 (SCI-Expanded)
- V. **Estimation of the  $S_{34}(0)$  S-factor for  $^{3}\text{He}(\alpha, \gamma)^{7}\text{Be}$  reaction by using distorted wave born approximation and artificial neural network**  
KOÇAK G., Pasayigit E., AKKOYUN S.  
Physica Scripta, vol.98, no.10, 2023 (SCI-Expanded)
- VI. **Determination of Photonuclear Reaction Cross-Sections on Stable P-shell Nuclei by Using Deep Neural Networks**  
AKKOYUN S., KAYA H., ŞEKER A., YEŞİLYURT S.  
Brazilian Journal of Physics, vol.53, no.4, 2023 (SCI-Expanded)
- VII. **Performance of machine learning algorithms on neutron activations for Germanium isotopes**  
Gargouri R., AKKOYUN S., Maalej R., Damak K.  
Radiation Physics and Chemistry, vol.208, 2023 (SCI-Expanded)

- VIII. **Estimation of fission barrier heights for even-even superheavy nuclei using machine learning approaches**  
Yesilkanat C. M., AKKOYUN S.  
Journal of Physics G: Nuclear and Particle Physics, vol.50, no.5, 2023 (SCI-Expanded)
- IX. **Predicting  $\beta$  -decay energy with machine learning**  
Munoz J. M., AKKOYUN S., Reyes Z. P., Pachon L. A.  
Physical Review C, vol.107, no.3, 2023 (SCI-Expanded)
- X. **Neural network predictions of (n,2n) reaction cross-sections at 14.6 MeV incident neutron energy**  
AKKOYUN S., Amrani N., BAYRAM T.  
Applied radiation and isotopes : including data, instrumentation and methods for use in agriculture, industry and medicine, vol.191, pp.110554, 2023 (SCI-Expanded)
- XI. **Neural network estimations of annealed and non-annealed Schottky diode characteristics at wide temperatures range**  
DOĞAN H., Duman S., TORUN Y., AKKOYUN S., Doğan S., ATİCİ U.  
Materials Science in Semiconductor Processing, vol.149, 2022 (SCI-Expanded)
- XII. **Effect of the Woods-Saxon Spin-Orbit Term on the Nuclear Spectra: 0-18 Application**  
AKKOYUN S.  
BRAZILIAN JOURNAL OF PHYSICS, vol.52, no.3, 2022 (SCI-Expanded)
- XIII. **Estimations of first 2(+) energy states of even-even nuclei by using artificial neural networks**  
Akkoyun S., Kaya H., Torun Y.  
INDIAN JOURNAL OF PHYSICS, vol.96, no.6, pp.1791-1797, 2022 (SCI-Expanded)
- XIV. **Artificial-intelligence-supported shell-model calculations for light Sn isotopes**  
AKKOYUN S., Yakhelef A.  
PHYSICAL REVIEW C, vol.105, no.4, 2022 (SCI-Expanded)
- XV. **MODELING OF PATELLA HEIGHT WITH DISTAL FEMUR AND PROXIMAL TIBIA REFERENCE POINTS WITH ARTIFICIAL NEURAL NETWORK**  
OTAĞ İ., ÇİMEN K., TORUN Y., PAZARCI Ö., AKKOYUN S., OTAĞ A., ÇİMEN M.  
Journal of Mechanics in Medicine and Biology, vol.22, no.2, 2022 (SCI-Expanded)
- XVI. **Energy transitions and half-life determinations of Sc-47 isotopes from photonuclear reaction on Ti target**  
KOÇAK G., AKKOYUN S., BOZTOSUN İ., Dapo H.  
INTERNATIONAL JOURNAL OF MODERN PHYSICS E, vol.31, no.03, 2022 (SCI-Expanded)
- XVII. **Estimations of (n, p) reaction cross-sections at 14.5 MeV incident neutron energy by artificial neural networks**  
AKKOYUN S., Amrani N.  
Radiation Physics and Chemistry, vol.184, 2021 (SCI-Expanded)
- XVIII. **Neuro-fuzzy modeling of deformation parameters for fusion-barriers**  
Akkoyun S., Torun Y.  
NUCLEAR ENGINEERING AND TECHNOLOGY, vol.53, no.5, pp.1612-1618, 2021 (SCI-Expanded)
- XIX. **Optical analysis of quantum dot with velocity-dependent potential**  
BAHAR M. K., Ungan F., Kaya H., AKKOYUN S.  
INTERNATIONAL JOURNAL OF QUANTUM CHEMISTRY, vol.121, no.5, 2021 (SCI-Expanded)
- XX. **Estimation of the wind speed in Sivas province by using the artificial neural networks**  
GÜRLEK C., Sahin M., AKKOYUN S.  
Wind and Structures, An International Journal, vol.32, no.2, pp.161-167, 2021 (SCI-Expanded)
- XXI. **Estimation of fusion reaction cross-sections by artificial neural networks**  
AKKOYUN S.  
NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS, vol.462, pp.51-54, 2020 (SCI-Expanded)
- XXII. **Adjustment of Non-linear Interaction Parameters for Relativistic Mean Field Approach by Using Artificial Neural Networks**

- Bayram T, Akkoyun S, Senturk S.  
PHYSICS OF ATOMIC NUCLEI, vol.81, no.3, pp.288-295, 2018 (SCI-Expanded)
- XXIII. **Determinations of Er-171 half-life and some Tm-171 transition energies**  
BAYRAM T, AKKOYUN S.  
NUCLEAR SCIENCE AND TECHNIQUES, vol.29, no.3, 2018 (SCI-Expanded)
- XXIV. **Consistent neural network empirical physical formula constructions for nonlinear scattering intensities of dye-doped nematic liquid crystals with ultraviolet pump laser-driven Fredericksz threshold shifts**  
POLAT Ö, YILDIZ N, AKKOYUN S.  
OPTIK, vol.158, pp.204-210, 2018 (SCI-Expanded)
- XXV. **Transition energy and half-life determinations of photonuclear reaction products of erbium nuclei**  
Bayram T, AKKOYUN S, Uruk S, Dapo H, Dulger F, BOZTOSUN İ.  
INTERNATIONAL JOURNAL OF MODERN PHYSICS E-NUCLEAR PHYSICS, vol.25, no.12, 2016 (SCI-Expanded)
- XXVI. **Energy level and half-life determinations from photonuclear reaction on Ga target**  
AKKOYUN S, Bayram T, Dulger F, Dapo H, BOZTOSUN İ.  
INTERNATIONAL JOURNAL OF MODERN PHYSICS E-NUCLEAR PHYSICS, vol.25, no.8, 2016 (SCI-Expanded)
- XXVII. **Estimation of the femur length from its proximal measurements in Anatolian Caucasians by artificial neural networks**  
OTAG İ, OTAG A, AKKOYUN S, ÇİMEN M.  
AUSTRALIAN JOURNAL OF FORENSIC SCIENCES, vol.48, no.3, pp.279-286, 2016 (SCI-Expanded)
- XXVIII. **Probing for leptophilic gauge boson Z(l) at ILC with root s=1 TeV by using ANN**  
Kara S. O, AKKOYUN S, Bayram T.  
INTERNATIONAL JOURNAL OF MODERN PHYSICS A, vol.29, no.30, 2014 (SCI-Expanded)
- XXIX. **Estimations of fission barrier heights for Ra, Ac, Rf and Db nuclei by neural networks**  
AKKOYUN S, Bayram T.  
INTERNATIONAL JOURNAL OF MODERN PHYSICS E-NUCLEAR PHYSICS, vol.23, no.10, 2014 (SCI-Expanded)
- XXX. **Estimations of beta-decay energies through the nuclidic chart by using neural network**  
AKKOYUN S, Bayram T, TÜRKER T.  
RADIATION PHYSICS AND CHEMISTRY, vol.96, pp.186-189, 2014 (SCI-Expanded)
- XXXI. **A way in determination of patellar position: Ligamentum patellae angle and a neural network application**  
OTAG İ, OTAG A, AKKOYUN S, ÇİMEN M.  
BIOCYBERNETICS AND BIOMEDICAL ENGINEERING, vol.34, no.3, pp.184-188, 2014 (SCI-Expanded)
- XXXII. **A study on ground-state energies of nuclei by using neural networks**  
Bayram T, AKKOYUN S, Kara S. O.  
ANNALS OF NUCLEAR ENERGY, vol.63, pp.172-175, 2014 (SCI-Expanded)
- XXXIII. **Identification and rejection of scattered neutrons in AGATA**  
Senyigit M, Atac A, Akkoyun S, Kaskas A, Bazzacco D, Nyberg J, Recchia F, Brambilla S, Camera F, Crespi F. C. L., et al.  
NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT, vol.735, pp.267-276, 2014 (SCI-Expanded)
- XXXIV. **Construction of consistent neural network empirical physical formulas for detector counts in neutron exit channel selection**  
AKKOYUN S, YILDIZ N.  
MEASUREMENT, vol.46, no.9, pp.3192-3197, 2013 (SCI-Expanded)
- XXXV. **Global properties of K hindrance probed by the gamma decay of the warm rotating W-174 nucleus**  
Vandone V, Leoni S, Benzoni G, Blasi N, Bracco A, Brambilla S, Boiano C, Bottoni S, Camera F, Corsi A, et al.  
PHYSICAL REVIEW C, vol.88, no.3, 2013 (SCI-Expanded)
- XXXVI. **NEW PARAMETERS FOR NUCLEAR CHARGE RADIUS FORMULAS**  
Bayram T, AKKOYUN S, Kara S. O, Sinan A.  
ACTA PHYSICA POLONICA B, vol.44, no.8, pp.1791-1799, 2013 (SCI-Expanded)

- XXXVII. **An analysis of E(5) shape phase transitions in Cr isotopes with covariant density functional theory**  
 Bayram T., AKKOYUN S.  
 PHYSICA SCRIPTA, vol.87, no.6, 2013 (SCI-Expanded)
- XXXVIII. **A method for determination of gamma-ray direction in space**  
 Akkoyun S.  
 ACTA ASTRONAUTICA, vol.87, pp.147-152, 2013 (SCI-Expanded)
- XXXIX. **Time-of-flight discrimination between gamma-rays and neutrons by using artificial neural networks**  
 Akkoyun S.  
 ANNALS OF NUCLEAR ENERGY, vol.55, pp.297-301, 2013 (SCI-Expanded)
- XL. **An artificial neural network application on nuclear charge radii**  
 Akkoyun S., Bayram T., Kara S. O., Sinan A.  
 JOURNAL OF PHYSICS G-NUCLEAR AND PARTICLE PHYSICS, vol.40, no.5, 2013 (SCI-Expanded)
- XLI. **Response of AGATA segmented HPGe detectors to gamma rays up to 15.1 MeV**  
 Crespi F. C. L., Avigo R., Camera F., Akkoyun S., Atac A., Bazzacco D., Bellato M., Benzoni G., Blasi N., Bortolato D., et al.  
 NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS  
 DETECTORS AND ASSOCIATED EQUIPMENT, vol.705, pp.47-54, 2013 (SCI-Expanded)
- XLII. **An approximation to the cross sections of Z (l) boson production at CLIC by using neural networks**  
 AKKOYUN S., Kara S. O.  
 CENTRAL EUROPEAN JOURNAL OF PHYSICS, vol.11, no.3, pp.345-349, 2013 (SCI-Expanded)
- XLIII. **Neural network consistent empirical physical formula construction for neutron-gamma  
 discrimination in gamma ray tracking**  
 YILDIZ N., AKKOYUN S.  
 ANNALS OF NUCLEAR ENERGY, vol.51, pp.10-17, 2013 (SCI-Expanded)
- XLIV. **Consistent empirical physical formula construction for recoil energy distribution in HPGe detectors  
 by using artificial neural networks**  
 AKKOYUN S., YILDIZ N.  
 RADIATION MEASUREMENTS, vol.47, no.8, pp.571-576, 2012 (SCI-Expanded)
- XLV. **Neural network consistent empirical physical formula construction for density functional theory  
 based nonlinear vibrational absorbance and intensity of 6-choloronicotinic acid molecule**  
 YILDIZ N., Karabacak M., KURT M., AKKOYUN S.  
 SPECTROCHIMICA ACTA PART A-MOLECULAR AND BIOMOLECULAR SPECTROSCOPY, vol.90, pp.55-62, 2012 (SCI-Expanded)
- XLVI. **AGATA-Advanced GAMMA Tracking Array**  
 Akkoyun S., Algora A., Alikhani B., Ameil F., de Angelis G., Arnold L., Astier A., Atac A., Aubert Y., Aufranc C., et al.  
 NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS  
 DETECTORS AND ASSOCIATED EQUIPMENT, vol.668, pp.26-58, 2012 (SCI-Expanded)
- XLVII. **Discrimination of gamma rays due to inelastic neutron scattering in AGATA**  
 Atac A., Kaskas A., Akkoyun S., Senyigit M., Huyuk T., Kara S. O., Nyberg J.  
 NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS  
 DETECTORS AND ASSOCIATED EQUIPMENT, vol.607, no.3, pp.554-563, 2009 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Predictions on Flexible CdTe Solar Cell Performances by Artificial Neural Networks**  
 Ganbarova S., AKKOYUN S., mamedov v., mamedov H.  
 CUMHURIYET SCIENCE JOURNAL, vol.44, 2023 (Peer-Reviewed Journal)
- II. **Gebelerin Prenatal Emzirme Özyeterliliğinin Yapay Sinir Ağları Modeli ile Değerlendirilmesi**  
 AKKOYUN S., EVCİLİ F.  
 Sağlık Hizmetleri Araştırma Dergisi, vol.1, no.1, pp.7-13, 2023 (Peer-Reviewed Journal)

- III. **Excited Energy Spectra for He and Be Isotopes from Different Shell Model Interactions**  
Bektemir İ., AKKOYUN S.  
Nükleer Bilimler Enstitüsü, Ankara University, 2023 (Peer-Reviewed Journal)
- IV. **Production cross-section and reaction yield of  $^{82}\text{Sr}$  for  $^{82}\text{Sr}/^{82}\text{Rb}$  generator**  
ŞENTÜRK Ş., BAYRAM T., AKKOYUN S.  
CUMHURIYET SCIENCE JOURNAL, vol.43, no.4, pp.716-720, 2022 (Peer-Reviewed Journal)
- V. **Plasma Shielding Effects on Nuclear Spectra:  $^{18}\text{Ne}$  Application**  
AKKOYUN S., BAHAR M. K.  
Bulletin of the Russian Academy of Sciences: Physics, vol.86, no.11, pp.1387-1390, 2022 (Scopus)
- VI. **Nükleer Kabuk Modeli ile Ne İzotoplarının Nükleer Yapısının İncelenmesi**  
AKKOYUN S., BAYRAM T.  
Academic Platform Journal of Engineering and Science, vol.9, no.3, pp.296-301, 2021 (Peer-Reviewed Journal)
- VII. **Distance Education in Pandemic: Health Services Vocational School Students' Views and Suggestions**  
EVCİLİ F., GÜÇLÜ G., AKKOYUN S.  
Turkish Journal of Science and Health, vol.2, no.2, pp.82-88, 2021 (Peer-Reviewed Journal)
- VIII. **Production Cross-Section of  $^{51}\text{Cr}$  Radioisotope Using Artificial Neural Networks**  
Akkoyun S., Bayram T.  
Turkish Journal of Science and Health, vol.2, no.1, pp.133-138, 2021 (Peer-Reviewed Journal)
- IX.  **$^{51}\text{Cr}$  Radyoizotopunun Üretim Tesir Kesitinin Yapay Sinir Ağları ile Elde Edilmesi**  
AKKOYUN S., BAYRAM T.  
Türk Fen ve Sağlık Dergisi, vol.2, no.1, pp.133-138, 2021 (Peer-Reviewed Journal)
- X. **Calculations of Yield Cross-Sections of  $^{51}\text{Cr}$ ,  $^{99}\text{Mo}$  and  $^{133}\text{Xe}$  Radioisotopes via Neutron Induced Reactions**  
BAYRAM T., AKKOYUN S., ŞENTÜRK Ş., HAYDER A.  
Journal of Investigations on Engineering and Technology, vol.3, no.2, pp.55-57, 2020 (Peer-Reviewed Journal)
- XI.  **$N = Z$  even-even proton-rich nuclei and nuclear structure**  
Laouet N., Benrachi F., AKKOYUN S.  
SN Applied Sciences, vol.2, no.11, 2020 (ESCI)
- XII. **Nuclear Shell Model Calculations for Ca Isotopes**  
AKKOYUN S., BAYRAM T., Ayhan Y.  
Bitlis Eren Üniversitesi Fen Bilimleri Dergisi, 2020 (Peer-Reviewed Journal)
- XIII. **Estimations of Cross-Sections for Photonuclear Reaction on Calcium Isotopes by Artificial Neural Networks**  
AKKOYUN S., KAYA H.  
Sakarya Üniversitesi Fen Bilimleri Enstitüsü Dergisi, 2020 (Peer-Reviewed Journal)
- XIV. **Estimation of the future fracture epidemiology in the patients applying to the emergency department with long short time memory metho**  
AKKOYUN S.  
Cumhuriyet Science Journal, 2020 (Peer-Reviewed Journal)
- XV. **Estimation of the future fracture epidemiology in the patients applying to the emergency department with long short time memory method**  
PAZARCI Ö., TORUN Y., AKKOYUN S.  
Cumhuriyet Science Journal, vol.41, no.3, pp.741-746, 2020 (Peer-Reviewed Journal)
- XVI. **Ca İzotopları için Nükleer Kabuk Modeli Hesaplamaları**  
AKKOYUN S., BAYRAM T., AYHAN Y.  
Bitlis Eren Üniversitesi Fen Bilimleri Dergisi, vol.9, no.3, pp.1102-1107, 2020 (Peer-Reviewed Journal)
- XVII. **Nuclear Shell Model Calculations for  $A=49$  Isobars**  
AKKOYUN S.  
Türk Fen ve Sağlık Dergisi, 2020 (Peer-Reviewed Journal)
- XVIII. **Investigation of Nuclear Structures of Self-conjugate Zn, Ge, Se, Kr, Sr Nuclei**

- AKKOYUN S., BAYRAM T.  
International Journal of Advances in Engineering and Pure Sciences, 2020 (Peer-Reviewed Journal)
- XIX. **Shell Model Calculations for Proton-rich Zn Isotopes via New Generated Effective Interaction by Artificial Neural Networks**  
AKKOYUN S., BAYRAM T.  
Cumhuriyet Science Journal, vol.40, no.3, pp.570-577, 2019 (Peer-Reviewed Journal)
- XX. **Shell Model Calculations for some pf Shell Nuclei**  
AKKOYUN S., BAYRAM T., BÖYÜKATA M.  
ALKÜ Fen Bilimleri Dergisi, vol.1, pp.18-22, 2019 (Peer-Reviewed Journal)
- XXI. **Neural Network Estimation for Attenuation Coefficients for Gamma-ray Angular Distribution**  
YILDIZ N., AKKOYUN S., KAYA H.  
Physics of Particles and Nuclei Letters, 2019 (Scopus)
- XXII. **Consistent Empirical Physical Formula Construction for Gamma Ray Angular Distribution Coefficients by Layered Feedforward Neural Network**  
AKKOYUN S., YILDIZ N., KAYA H.  
Cumhuriyet Science Journal, vol.39, no.4, 2018 (Peer-Reviewed Journal)
- XXIII. **Ground-state properties of some N=Z nuclei**  
AKKOYUN S., BAYRAM T., şentürk ş.  
Journal of Nuclear Science, vol.4, no.2, pp.45-49, 2018 (Peer-Reviewed Journal)
- XXIV. **Test of  $^3\text{He}$  target to be used for transfer reactions in inverse kinematics**  
AKKOYUN S.  
LNL Annual Report, 2018 (Peer-Reviewed Journal)
- XXV. **Surface Energy Coefficient Determination in Global Mass Formula from Fission Barrier Energy**  
AKKOYUN S., BAYRAM T.  
Cumhuriyet Science Journal, vol.38, pp.711-715, 2017 (Peer-Reviewed Journal)
- XXVI. **Giant Dipole Resonence Energy Predictions For  $^{116,117,118,119,120,124}\text{Sn}$  and  $^{233,234,235,236,238}\text{U}$  Isotopes**  
AKKOYUN S., BAYRAM T., Özgüven Y.  
Afyon Kocatepe University Journal of Sciences and Engineering, vol.17, no.2, pp.426-431, 2017 (Peer-Reviewed Journal)
- XXVII. **Dental İmplantlara Alternatif Değerlendirme Metodu Olarak Kayıp Dişlerin Boyutlarının Yapay Sinir Ağrı Yöntemiyle Tahmini**  
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## Supported Projects

- Akkoyun S., Project Supported by Higher Education Institutions, Si, S ve Ar İzotopları için Nükleer Enerji Seviyeleri ve Taban Durum Nükleer Özelliklerinin Hesaplanması, 2018 - 2019
- AKKOYUN S., Project Supported by Higher Education Institutions, Ağır Çift-Çift Çekirdeklerin ( $Z=80-100$ ) Taban Durum Nükleer Özelliklerinin Belirlenmesi, 2016 - 2017
- Akkoyun S., Bayram T., TUBITAK Project, Relativistik Ortalama Alan Modeli İçin Nükleer Etkileşme Parametrelerinin İyileştirilmesi, 2015 - 2017
- AKKOYUN S., Project Supported by Higher Education Institutions, Yarı Deneysel Kütle Formülü Katsayılarının Yapay Sinir Ağları Metodu ile İyileştirilmesi, 2015 - 2016
- AKKOYUN S., Project Supported by Higher Education Institutions, Erbiyum Çekirdeklerinin Fotonükleer Reaksiyon Ürünlerinin Enerji Seviyelerinin ve Yarı Ömürlerinin Deneysel Olarak Belirlenmesi, 2015 - 2016
- Kavak K. Ş., Başbüyük H. H., Cirhinlioğlu Z., Korkmaz E. M., Özdemir Ö., İşidan H., Kaya Ö., Akkoyun S., Altuntaş E. E., Turan M., et al., TUBITAK Project, Development of Awareness Raising and Producing Acceptance Potential in National and International Research Projects Supported by TUBITAK for Academic Staff of Cumhuriyet University, 2014 - 2016
- KORKMAZ E. M., AKKOYUN S., İŞIDAN H., ÖZDEMİR Ö., TUBITAK Project, Cumhuriyet Üniversitesi Akademik Kadroları için TÜBİTAK Tarafından Desteklenen Ulusal ve Uluslararası Araştırma Projelerinde Farkındalık Yaratma ve Üretme Kabul Potansiyellerinin Geliştirilmesi, 2014 - 2016
- AKKOYUN S., Project Supported by Higher Education Institutions, Galyum İzotoplarının Fotonükleer Reaksiyon Ürünlerine ait Enerji Seviyelerinin ve Yarı Ömürlerinin Deneysel olarak Belirlenmesi, 2014 - 2015
- Akkoyun S., Billur A. A., Project Supported by Higher Education Institutions, Proton spinine gluon katkısının tek üst kuark üretimi yöntemiyle incelenmesi, 2012 - 2013
- AKKOYUN S., Project Supported by Higher Education Institutions, Agata Hpge İz Sürme Dedektörlerinde Nötronların Gama Işınlarından Ayırt Edilmelerinin Teorik ve Deneysel İncelenmesi, 2012 - 2013
- Nyberg A., TUBITAK Project, Gamma Spektroskopisinde İz Sürme Tekniğinin Geliştirilmesi ve AGATA Projesine Aktif Katılım, 2006 - 2009

## Activities in Scientific Journals

Cumhuriyet Science Journal, Editor, 2012 - Continues

## Scientific Refereeing

APPLIED RADIATION AND ISOTOPES, SCI Journal, December 2020

## **Tasks In Event Organizations**

Akkoyun S., Şeker A., Delibaş E., Yeşilyurt S., International Cumhuriyet Artificial Intelligence Applications Conference (CAIAC) 2021, Scientific Congress, Sivas, Turkey, Eylül 2021

Akkoyun S., 9th International Workshop on Nuclear Stucture Properties, Scientific Congress, Sivas, Turkey, Eylül 2016

## **Metrics**

Publication: 176

Citation (WoS): 600

Citation (Scopus): 719

H-Index (WoS): 9

H-Index (Scopus): 12

## **Congress and Symposium Activities**

I. International Underground Resources and Energy Conference, Invited Speaker, Yozgat, Turkey, 2016

## **Scholarships**

2219-Post-doc (Italy) , TUBITAK, 2017 - 2018

## **Non Academic Experience**

doğa dersanesi