Assoc. Prof. MESUT KARAKOÇ

Personal Information

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International Researcher IDs
ScholarID: dORZ704AAAAJ
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Publons / Web Of Science ResearcherID: D-6478-2015
ScopusID: 8846166500
Yoksis Researcher ID: 145421

Education Information

Post Doctorate, Texas A&M University, Science, Physics And Astronomy, United States Of America 2011 - 2013
Doctorate, Michigan State University, Nscl, Nükleer Fizik, United States Of America 2010 - 2010
Doctorate, Erciyes University, Fen Bilimleri Enstitüsü, Nükleer Fizik, Turkey 2005 - 2010
Postgraduate, Erciyes University, Fen Bilimleri Enstitüsü, Fizik, Turkey 2002 - 2005
Undergraduate, Karadeniz Technical University, Fen Edebiyata Fakültesi, Fizik, Turkey 1997 - 2002

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, 40Ar-›40K ve 40Ti-›40Sc Gamow-Teller Geçişlerinin Karşılaştırmalı Analizi, Erciyes Üniversitesi, (2010)., Erciyes University, Fen Bilimleri Enstitüsü, Nükleer Fizik, 2010
Postgraduate, Folding Potansiyelin Elde Edilmesi 12C+24Mg Reaksiyonuna Uygulanması, Erciyes Üniversitesi, (2005)., Erciyes University, Fen Bilimleri Enstitüsü, Nükleer Fizik, 2005

Research Areas

Physics, Nuclear physics, General Nuclear Reactions, Nuclear Structure, Experimental Methods of Particle and Nuclear Physics, Natural Sciences

Academic Titles / Tasks

Associate Professor, Akdeniz University, Faculty of Science, Department of Physics, 2018 - Continues
Assistant Professor, Akdeniz University, Faculty of Science, Department of Physics, 2010 - 2018
Assistant Professor, Texas A&M University, Science (Post Doc), Physics And Astronomy, 2011 - 2013

Academic and Administrative Experience

Deputy Head of Department, Akdeniz University, 2017 - 2020
Akdeniz University, Akdeniz Üniversitesi Nükleer Bilimler Uygulama Ve Araştırma Merkezi, 2013 - 2016

Courses

Titremşim ve Dalgalar Laboratuvarı, Undergraduate, 2018 - 2019
Bilgisayar Programlama, Undergraduate, 2018 - 2019, 2015 - 2016
Fizikte Bilgisayar Uygulamaları, Undergraduate, 2018 - 2019
Bilgisayar Programlama, Undergraduate, 2017 - 2018, 2016 - 2017
Fizik II, Undergraduate, 2017 - 2018, 2016 - 2017
Titreşim ve Dalgalar, Undergraduate, 2017 - 2018
Titreşim ve Dalgalar Laboratuvarı, Undergraduate, 2017 - 2018
FİZİKTE BİLGİSAYAR UYGULAMALARI, Postgraduate, 2016 - 2017
Fizik I, Undergraduate, 2017 - 2018
Fizik I, Undergraduate, 2016 - 2017
Nükleer Fizikte Deneysel Ölçüm Teknikleri I, Postgraduate, 2015 - 2016
Fizikte Sayısal Metotlar, Postgraduate, 2015 - 2016, 2014 - 2015
Bitirme Çalışması, Undergraduate, 2014 - 2015
Fizik II, Undergraduate, 2015 - 2016, 2014 - 2015, 2013 - 2014
Nükleer Reaksiyon Yazılımları Ve Uygulamaları, Doctorate, 2015 - 2016
Hesaplamalı Fizik, Undergraduate, 2015 - 2016, 2014 - 2015, 2013 - 2014
Sayısal Analiz II, Doctorate, 2013 - 2014
Temel Nükleer Yapı, Associate Degree, 2013 - 2014
Nükleer Fizik I, Undergraduate, 2013 - 2014
Mesleki İngilizce II, Undergraduate, 2013 - 2014
Mesleki İngilizce I, Undergraduate, 2013 - 2014
Sayısal Elektronik Lab., Undergraduate, 2010 - 2011
Temel Elektronik Lab., Undergraduate, 2010 - 2011

Advising Theses

Karakoç M., Bağımsız sınırlayıcılar ve vektörel çekim alanı etkisindeki parçacığın kaotik dinamiği, Postgraduate, B.EMRE(Student), 2022
KARAKOÇ M., Fotoaktivasyon analizi yöntemi ile diş numunelerindeki element çeşitliliğin tespit edilmesi, Postgraduate, A.Ünlü(Student), 2018
Karakoç M., Nano-bor katkılı kompozitlerin nötron ve gama radyasyon soğurma özelliklerinin belirlenmesi, Doctorate, Ş.GÖZDE(Student), 2018
KARAKOÇ M., Fotonükleer reaksiyon yöntemi ile Tungsten izotoplarının enerji seviyeleri ve yarı ömürlerinin belirlenmesi, Postgraduate, F.Dülger(Student), 2016
Karakoç M., Galyum ürün çekirdeklerinin enerji seviyelerinin ve kalay numunelerinin derisimlerinin fotonükleer reaksiyonlarla belirlenmesi, Postgraduate, A.Cesur(Student), 2015

Jury Memberships

Post Graduate, Yüksek Lisans , Akdeniz Ünviersitesi, July, 2019
Post Graduate, Yüksek Lisans Tez Savunması, Süleyman Demirel Üniversitesi, January, 2013

Published journal articles indexed by SCI, SSCI, and AHCI

I. **BiFold: A Python code for the calculation of double-folded (bifold) potentials with density-in/dependent nucleon-nucleon interactions**
Karakoç M.
COMPUTER PHYSICS COMMUNICATIONS, vol.284, pp.1-10, 2023 (SCI-Expanded)

II. **AIMpy: A Python code to solve Schrodinger-like equations with the asymptotic iteration method**
KARAKOÇ M.
INTERNATIONAL JOURNAL OF MODERN PHYSICS C, vol.32, no.2, 2021 (SCI-Expanded)

III. **The macroscopic analysis of alpha-alpha scattering for the population of the monopole "breathing" mode**
KÜÇÜK Y., KARAKOÇ M., VITTURI A.
EUROPEAN PHYSICAL JOURNAL A, vol.57, no.1, 2021 (SCI-Expanded)

IV. **New measurements and reanalysis of(14)N elastic scattering on(10)B target***
NASSURLLA M., BURTEBAYEV N., SADYKOV T. K., BOZTOSUN İ., AMANGELDI N., ALIMOV D., KERİMKULOV Z., BURTEBAYEVA J., NASSURLLA M., KURAKHMEDOV A., et al.
CHINESE PHYSICS C, vol.44, no.10, 2020 (SCI-Expanded)

V. **Physical, mechanical and neutron shielding properties of h-BN/Gd2O3/HDPE ternary nanocomposites**
Irim S. G., Wis A. A., Keskin M. A., Baykara O., ÖZKOÇ G., Avci A., Dogru M., KARAKOÇ M.
RADIATION PHYSICS AND CHEMISTRY, vol.144, pp.434-443, 2018 (SCI-Expanded)

VI. **SCATTERING OF 15N IONS BY 10,11B NUCLEI AT THE ENERGY OF 43 MeV**
KARAKOÇ M., ALIMOV D., BOZTOSUN İ., BURTEBAYEV N.
ACTA PHYSICA POLONICA B, vol.11, pp.99-107, 2017 (SCI-Expanded)

VII. **Measuring decay of praseodymium isotopes activated by a clinical LINAC**
Boztosun I., dapo H., Karakoc M.
MODERN PHYSICS LETTERS A, vol.31, no.36, 2016 (SCI-Expanded)

VIII. **Photonuclear reactions with zinc: A case for clinical linacs**
Boztosun I., Dapo H., Karakoç M., Özmen S. F., Cecen Y., Çoban A. Y., Caner T., Bayram E., Saıto T. R., Akdogan T., et al.
EUROPEAN PHYSICAL JOURNAL PLUS, vol.130, no.9, 2015 (SCI-Expanded)

IX. **Gamow-Teller transitions in the A=40 isoquintet of relevance for neutrino captures in Ar-40**
KARAKOÇ M., Zegers R. G. T., Brown B. A., Fujita Y., Adachi T., BOZTOSUN İ., Fujita H., Csatlos M., Deaven J. M., Guess C. J., et al.
PHYSICAL REVIEW C, vol.89, no.6, 2014 (SCI-Expanded)

X. **STUDY OF THE O-15(2p,gamma)Ne-17 CROSS SECTION BY COULOMB DISSOCIATION OF Ne-17 FOR THE rp PROCESS OF NUCLEOSYNTHESIS**
Marganiec J., Wamers F., Aksouh F., Aksyutina Y., Pol H. A., Aumann T., Beceiro S., Bertulani C., Boretzky K., Borge M. J. G., et al.
ACTA PHYSICA POLONICA B, vol.45, no.2, pp.229-234, 2014 (SCI-Expanded)

XI. **Coulomb distortion and medium corrections in nucleon-removal reactions**
Karakoc M., Banu A., Bertulani C. A., Trache L.
PHYSICAL REVIEW C, vol.87, no.2, 2013 (SCI-Expanded)

XII. **Effects of alpha-cluster potentials for the O-16+O-16 fusion reaction and S factor**
KOÇAK G., Karakoc M., BOZTOSUN İ., Balantekin A. B.
PHYSICAL REVIEW C, vol.81, no.2, 2010 (SCI-Expanded)

XIII. **Analytical solution of the Schrodinger equation for Makarov potential with any l angular momentum**
Bayrak O., Karakoc M., Boztosun I., Sever R.

INTERNATIONAL JOURNAL OF THEORETICAL PHYSICS, vol.47, no.11, pp.3005-3014, 2008 (SCI-Expanded)

XIV. **The relativistic Duffin-Kemmer-Petiau sextic oscillator**
YAŞUK F., Karakoc M., Boztosun I.
PHYSICA SCRIPTA, vol.78, no.4, 2008 (SCI-Expanded)

XV. **An improvement of the asymptotic iteration method for exactly solvable eigenvalue problems**
Boztosun I., Karakoc M.
CHINESE PHYSICS LETTERS, vol.24, no.11, pp.3028-3031, 2007 (SCI-Expanded)

XVI. **Examination of the O-16+Si-28 system with microscopic and phenomenological potentials**
Kocak G., Karakoc M., Boztosun I.
PHYSICS OF ATOMIC NUCLEI, vol.70, no.2, pp.290-299, 2007 (SCI-Expanded)

XVII. **Accurate iterative and perturbative solutions of the Yukawa potential**
Karakoc M., Boztosun I.
INTERNATIONAL JOURNAL OF MODERN PHYSICS E, vol.15, no.6, pp.1253-1262, 2006 (SCI-Expanded)

XVIII. **Microscopic potential description of the elastic scattering and fusion cross-section data of the C-12+Mg-24 system**
Karakoc M., Boztosun I.
INTERNATIONAL JOURNAL OF MODERN PHYSICS E-NUCLEAR PHYSICS, vol.15, no.6, pp.1317-1332, 2006 (SCI-Expanded)

XIX. **Asymptotic iteration method solutions to the relativistic Duffin-Kemmer-Petiau equation**
Boztosun I., Karakoc M., Yasuk F., DURMUŞ A.
JOURNAL OF MATHEMATICAL PHYSICS, vol.47, no.6, 2006 (SCI-Expanded)

XX. **alpha-alpha double folding cluster potential description of the C-12+Mg-24 system**
Karakoc M., Boztosun I.
PHYSICAL REVIEW C, vol.73, no.4, 2006 (SCI-Expanded)

Articles Published in Other Journals

I. **BOZTOSUN İ., Dapo H., Özmen S.F., Çeçen Y., Karakoç M., Çoban A., Cesur A., Caner T., Bayram E., Keller G.B., Küçük B., Güvendi A., Derman M., Kaya D., 2014. "The results of the first photonuclear reaction performed in Turkey: The zinc example"**
BOZTOSUN İ., KARAKOÇ M.
Turkish Journal of Physics, vol.38, pp.1-9, 2014 (Scopus)

Books & Book Chapters

I. **Parçacık Hızlandırıcıları**
KARAKOÇ M.
in: Nükleer Enerji (Nükleer Süreç Kavramlarına, Sistemlerine ve Uygulamalarına Giris), Yılmaz A.H., Aydın A., Bayram T., Akkoyun S., Billur A.A., Editor, Elsevier Science, Oxford/Amsterdam , İstanbul, pp.123-137, 2014

Refereed Congress / Symposium Publications in Proceedings

I. **Revisiting the 4He(4He,4He)4He∗ inelastic scattering at the MAGNEX facility**
Soukeras V., Cappuzzello F., Agodi C., Becker H., Brischetto G., Calabrese S., Carbone D., Cavallaro M., Chamon L., Ciampi C., et al.
28th International Nuclear Physics Conference, INPC 2022, Cape-Town, South Africa, 11 - 16 September 2022, vol.2586

II. **ENERGY EIGENVALUES OF SPIKED HARMONIC OSCILLATOR POTENTIALS USING AIMpy CODE**

KARAKOÇ M.

TECHNO-SCIENCE 2020 DECEMBER 18-20, 2020, 18 - 20 December 2020

III. **Investigation of interaction processes of light nuclei with N-14**

Alimov D., Burtebayev N., Bortosun I., Kerimkulov Z., Burtebayeva J., KARAKOÇ M., Mukhamejanov Y., Janseitov D., Bahtibayev A., Pattayev A., et al.

7th Conference on Nuclear Physics in Astrophysics (NPA), York, Sierra Leone, 18 - 22 May 2015, vol.940

IV. **SCATTERING OF N-15 IONS BY B-10,B-11 NUCLEI AT THE ENERGY OF 43 MeV**

Burtebayev N., Amangeldi N., Alimov D., Kerimkulov Z., Mauyey B., Nassurlla M., Kok Y., Sakuta S. B., Artemov S. V., Karakhodjaev A. A., et al.

24th Nuclear Physics Workshop on Marie and Pierre Curie Spontaneous Symmetry Breaking in Nuclear Physics, Kazimierz Dolny, Poland, 20 - 24 September 2017, vol.11, pp.99-107

V. **Production of Boron Carbide Nanoparticles by Arc-Discharge in Deionized Water**

KESKİN M. A., KAYBAL H. B., ULUS H., ŞERİFE G. İ., BAYKARA O., AVCI A., KARAKOÇ M.

VII. International Conference Industrial Engineering and Environmental Protection 2017, 12 - 13 October 2017

VI. **Determination of Energy Transitions and Half Life of 57Ni**

ERTUGAY C., Cesur A., ALBAYRAK İ., KARAKOÇ M., dapo H., BOZTOSUN İ.

IX. INTERNATIONAL WORKSHOP ON NUCLEAR STRUCTURE PROPERTIES, 1 - 03 September 2016

VII. **Experimental study of the O-15(2p, gamma) Ne-17 cross section by Coulomb Dissociation for the rp process**

Marganiec J., Wamers F., AKSOUH F. A., AKSYUTİNA Y. A., Pol H. A., AUMANN T. A., BECEİRO S. B., BERTULANİ C. B., BORETZKY K. B., Borge M. J., et al.

6th Nuclear Physics in Astrophysics Conference (NPA), Lisbon, Portugal, 19 - 24 May 2013, vol.665

VIII. **Photonuclear reactions induced by a clinical linac**

BOZTOSUN İ., DAPO H., KARAKOÇ M., ÖZMEN S. F., CECEN Y., ÇOBAN A. Y., CESUR A., CANER T., BAYRAM E., Saito T. R., et al.

1st NUBA International Conference on Nuclear Physics and Astrophysics, Antalya, Turkey, 14 - 21 September 2014, vol.590

IX. **Investigation of the Photo-activation Analysis on Concentrations of Various Materials**

Cesur A., KARAKOÇ M., Boztosun I., Dapo H.

1st NUBA International Conference on Nuclear Physics and Astrophysics, Antalya, Turkey, 14 - 21 September 2014, vol.590

X. **Photofission of U-238 Nuclei**

Selek S., Coban A., Boztosun I., Dapo H., KARAKOÇ M.

1st NUBA International Conference on Nuclear Physics and Astrophysics, Antalya, Turkey, 14 - 21 September 2014, vol.590

XI. **FOTOAKTİVASYON ANALİZİNİN ELEMENT DERİŞİMLERİNİN TESPİTİNDE KULLANILABİLİRLİĞİNİN ARAŞTIRILMASI**

CESUR A., BOZTOSUN İ., KARAKOÇ M., HARİS D., ÖZMEN S. F.

ADIM FİZİK GÜNLERİ III, Turkey, 17 - 18 April 2014

XII. **Exclusive measurements of nuclear breakup reactions of Ne-17**

Wamers F., Marganiec J., Aksouh F., Aksyutina Y., Alvarez-Pol H., Aumann T., Beceiro-Novo S., Bertulani C. A., Boretzky K., Borge M. J. G., et al.

International Nuclear Physics Conference (INPC), Firenze, Italy, 2 - 07 June 2013, vol.66

XIII. **Klinik Lineer Hızlandırıcıda Fotonükleer Reaksiyonlar**

BOZTOSUN İ., dapo h., ÖZMEN S. F., ÇEÇEN Y., KARAKOÇ M., Çoban A., Cesur A., CANER T., BAYRAM E., Keller G. B., et al.

14. Medikal fizik Kongresi, Antalya, Turkey, 21 - 24 November 2013, pp.190-192

XIV. **Medium effects in direct reactions**

KARAKOÇ M., Bertuani C.

11th International Conference on Nucleus-Nucleus Collisions (NN), San-Antonio, Northern Mariana Islands, 27 May - 01 June 2012, vol.420

XV. **Medium Effects in Reactions with Rare Isotopes**
Bertulani C. A., KARAKOÇ M.
5th Biannual Conference on Nuclear Physics in Astrophysics (NPA)/24th Nuclear Physics Divisional Conference of the European-Physical-Society (EPS), Eilat, Israel, 3 - 08 April 2011, vol.337

Other Publications

I. **Medium and Coulomb Effects in Breakup Reactions**
KARAKOÇ M.
Presentation, pp.1, 2012

II. **Medium effects in knockout reactions**
KARAKOÇ M.
Presentation, pp.1, 2012

III. **Coulomb distortion and medium corrections in nucleon-removal reactions**
KARAKOÇ M.
Presentation, pp.1, 2012

IV. **Coulomb distortion and medium corrections in breakup reactions**
KARAKOÇ M.
Presentation, pp.1, 2012

V. **Coulomb and medium effects in knockout reactions**
KARAKOÇ M.
Presentation, pp.1, 2011

VI. **The role of isospin-symmetry breaking on the Gamow-Teller transition**
KARAKOÇ M.
Presentation, pp.1, 2011

VII. **The Simultaneous Investigation of the (6)He+(12)C Reaction Observables Using Folding Potential**
BOZTOSUN İ., KARAKOÇ M., KÜÇÜK Y.
Other, pp.281-284, 2008

VIII. **Microscopic Description of the 12C+24Mg System**
KARAKOÇ M.
Presentation, pp.123, 2006

IX. **Transfer Reaksiyonlarının Reaksiyon Gözlenebilirlerini Açıklamadaki Önemi**
KARAKOÇ M.
Presentation, pp.331, 2005

X. **12C+24Mg Reaksiyonunun Double Folding ve Alfa Kümelenme Nükleer Potansiyelleri ile İncelenmesi**
KARAKOÇ M.
Presentation, pp.279, 2004

Supported Projects

Karakoç M., TÜBİTAK International Bilateral Joint Cooperation Program Project, rp-süreci çekirdeklerinin yarı-ömürlerinin eş zamanlı ölçüm tekniğiyle belirlenmesi ve pn-QRPA modeli ile teorik tahminlerinin gerçekleştirilmesi, 2017 - 2019

KARAKOÇ M., Project Supported by Higher Education Institutions, Fotoaktivasyon analizinin element derişimlerinin tespitinde kullanılabilirliğinin araştırılması, 2015 - 2016

KARAKOÇ M., Project Supported by Higher Education Institutions, GamowTeller Transitions In The A40 Isoquintet Of Relevance For Neutrino Captures In Ar40, 2014 - 2016

KARAKOÇ M., Other International Funding Programs, Breakup of loosely bound nuclei at intermediate energies for nuclear astrophysics and the development of a position sensitive microstrip detector system and its readout electronics

using ASICs Tech., 2010 - 2013
TUBITAK Project, (3He,t) ve (p,n) Yük Alış-Verişli Çekirdek Tepkimelerinin Gamow-Teller Geçişlerinin Hesaplanmasında Kullanılması, 2009 - 2011
TUBITAK Project, Nükleer Fizik ve Astrofizikteki Reaksiyon Gözlenebilirlerine Transfer ve Quasi-Elastik Reaksiyonların Etkisi, 2006 - 2008
KÜÇÜK Y., KARAKOÇ M., TUBITAK Project, Nükleer Reaksiyon ve Yap Gözlenebilirlerini Açıklama Yolunda Nükleer Potansiyel için Yeni bir Yakla^{3}m, 2003 - 2004

Memberships / Tasks in Scientific Organizations

Akdeniz Üniversitesi Nükleer Bilimler Uygulama ve Araştırma Merkezi [NUBA], Board Member, 2013 - 2016

Scientific Refereeing

CUMHURIYET SCIENCE JOURNAL, National Scientific Refreed Journal, February 2024
TURKISH JOURNAL OF PHYSICS, National Scientific Refreed Journal, February 2024
Bilim Armonisi, National Scientific Refreed Journal, March 2018
Cumhuriyet Science Journal, National Scientific Refreed Journal, January 2018
Journal of Nuclear Sciences, National Scientific Refreed Journal, November 2017
Süleyman Demirel Üniversitesi, Fen Edebiyat Fakültesi Fen Dergisi (E-Dergi), National Scientific Refreed Journal, May 2015

Scientific Consultations

TÜBİTAK, Project Consultancy, Akdeniz University, Faculty Of Science, Department of Physics, Turkey, 2018 - Continues

Metrics

Publication: 47
Citation (WoS): 343
Citation (Scopus): 392
H-Index (WoS): 10
H-Index (Scopus): 11

Congress and Symposium Activities

https://www.giki.edu.pk/News/View/763/GIK-to-organize-First-International-Pak-Turk-Workshop-on-Emerging-Technologies-in-Science-Engineering-on-9th-May-2018, Invited Speaker, Swabi, Pakistan, 2018
First International Pak-Turk Workshop on Emerging Technologies in the Field of Sciences & Engineering, Attendee, Turkey, 2018
2-4 Eylül 2015 Lumidoz-9, Attendee, Antalya, Turkey, 2015
23-30 Ağustos 2015 NUBA Uluslararası Yaz Kursu, Attendee, Turkey, 2015
Nükleer Bilimler ve Uygulamaları Yaz Okulu, Attendee, Antalya, Turkey, 2015
II. Yüklü Parçacık Optiği Kış Okulu, Afyon Kocatepe Üniversitesi, Attendee, Afyon, Turkey, 2015
15-19 Eylül 2014 NUBA Konferans Serileri-1 Nükleer Fizik ve Astrofizik, Attendee, Turkey, 2014
19-25 Haziran 2014 NUBA Uluslararası Nükleer Fizik Yaz Okulu, Attendee, Antalya, Turkey, 2014

Awards

KARAKOÇ M., K.T.Ü. Fizik Bölümü Üçüncüsü, Karadeniz Teknik Üniversitesi [K.T.Ü], June 2002