

Asst. Prof. Mehtap YALÇINKAYA

Personal Information

Email: yalcinm@istanbul.edu.tr

Web: <http://aves.istanbul.edu.tr/yalcinm/>

Address: İstanbul Üniversitesi Fen Fakültesi Fizik Bölümü Nükleer Fizik Anabilim Dalı 34134 Vezneciler / İstanbul

International Researcher IDs

ORCID: 0000-0002-1133-3308

Publons / Web Of Science ResearcherID: AAD-3138-2020

Yoksis Researcher ID: 135868

Education Information

Doctorate, Istanbul University, Institute of Graduate Studies In Sciences, Fizik, Turkey 1998 - 2002

Postgraduate, Istanbul Technical University, Nükleer Enerji Enstitüsü, Turkey 1994 - 1998

Undergraduate, Istanbul University, Faculty Of Science, Fizik, Turkey 1989 - 1994

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, 14N235U Füzyon-Fisyon Reaksiyonu ile oluşan nötron-zengin çekirdeklerin incelenmesi, Istanbul University, Institute of Graduate Studies In Sciences, 2002

Research Areas

Physics, Nuclear physics, Nuclear Structure, Natural Sciences

Academic Titles / Tasks

Assistant Professor, Istanbul University, Faculty of Science, Department of Physics, 2018 - Continues

Assistant Professor, Istanbul University, Faculty of Science, Department of Physics, 2008 - 2018

Academic and Administrative Experience

Deputy Head of Department, Istanbul University, Faculty Of Science, Department Of Physics, 2019 - 2020

Deputy Director of Research Institute, Istanbul University, Faculty Of Science, Department Of Physics, 2007 - 2009

Courses

İLERİ FİZİK UYGULAMALARI II, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017, 2015 - 2016

NÜKLEER FİZİKTE HESAPLAMA YÖNTEMLERİ I, Doctorate, 2023 - 2024, 2021 - 2022

NÜKLEER FİZİKTE HESAPLAMA YÖNTEMLERİ II, Doctorate, 2022 - 2023

KUANTUM MEKANİĞİ II, Undergraduate, 2022 - 2023

NÜKLEER TEKNİKLERİN ENDÜSTRİYEL UYGULAMALARI, Postgraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021

KUANTUM BİLGİ TEKNOLOJİLERİNE GİRİŞ, Undergraduate, 2023 - 2024

GAMA IŞINI ENERJİ ÖLÇÜMLERİ VE SPEKTRUM ANALİZİ, Postgraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022

KUANTUM MEKANİĞİ I, Undergraduate, 2023 - 2024, 2022 - 2023

Bilgisayar 4, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017, 2015 - 2016

Bilgisayar 3, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020

İLERİ FİZİK UYGULAMALARI I, Undergraduate, 2022 - 2023, 2021 - 2022

ÇEKİRDEK FİZİĞİ II, Undergraduate, 2021 - 2022, 2020 - 2021

KUANTUM FİZİĞİ I, Undergraduate, 2022 - 2023

BİTİRME TEZİ II, Undergraduate, 2020 - 2021

ÇEKİRDEK FİZİĞİ I, Undergraduate, 2021 - 2022, 2020 - 2021

BİTİRME TEZİ I, Undergraduate, 2020 - 2021

EXPERIMENTAL NUCLEAR PHYSICS, Postgraduate, 2020 - 2021

General Physics 1, Undergraduate, 2019 - 2020

Experimental Nuclear Physics, Postgraduate, 2019 - 2020

Bilgisayar3, Undergraduate, 2019 - 2020

Physics2, Undergraduate, 2017 - 2018

Physics1, Undergraduate, 2018 - 2019

Computer III, Undergraduate, 2017 - 2018

Physics I, Undergraduate, 2017 - 2018

General Physics, Undergraduate, 2017 - 2018

Grafik tasarımı, Undergraduate, 2015 - 2016

Web Tabanlı Programlama, Undergraduate, 2015 - 2016

Computer2, Undergraduate, 2015 - 2016

Advising Theses

Yalçinkaya M., Nötron Zengin Çekirdeklerinin Kabuk Modeli Hesaplamaları, Postgraduate, A.HLAL(Student), 2023

Yalçinkaya M., Sıvı damlası modeli ve kabuk etkileriyle fisyon karakteristiklerinin mathematica ile hesaplanması, Postgraduate, H.SADO(Student), 2022

Yalçinkaya M., Alfa ve beta bozunumu yapan bazı çekirdeklerin nükleer yük yarıçaplarının ve yüzey kalınlıklarının mathematica ile hesaplanması, Postgraduate, M.FAKE(Student), 2022

YALÇINKAYA M., Gama Işını Spektroskopisi için bir Hibrid Dedektör Sisteminin Kurulumu ve Karakterizasyonu, Postgraduate, T.Arıcı(Student), 2013

Jury Memberships

Doctoral Examination, Doctoral Examination, İstanbul Üniversitesi, November, 2022

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, İstanbul Sabahattin Zaim Üniversitesi, June, 2022

PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, İstanbul Sabahattin Zaim Üniversitesi, December, 2021

Post Graduate, Tez Savunma Jürisi, İZU, December, 2019

Post Graduate, Tez Savunma Jurisi, Kocaeli Üniversitesi, July, 2019
Doctoral Examination, Doktora Yeterlilik Sınavı Jürisi, İstanbul Sabahattin Zaim Üniversitesi, December, 2018
Post Graduate, Tez Savunma Jürisi, İstanbul Sabahattin Zaim Üniversitesi, December, 2017
Post Graduate, Tez Savunma Jürisi, İstanbul Sabahattin Zaim Üniversitesi, December, 2017
Post Graduate, Tez Savunma Jurisi, Kocaeli Üniversitesi, June, 2017
Post Graduate, İbrahim Öksüz, Kocaeli Üniversitesi, June, 2016
Post Graduate, Asli Arslan, Mimar Sinan , June, 2014
Post Graduate, Zeren Korkulu, Kocaeli Üniversitesi, July, 2010
Post Graduate, Esmâ Mızrak, Kocaeli Üniversitesi, July, 2010
Doctorate, Caner Yalçın, Kocaeli Üniversitesi, June, 2010

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **First spectroscopic study of odd-odd Cu 78**
Pedersen L., Sahin E., Gorgen A., Bello Garrote F., Tsunoda Y., Otsuka T., Niikura M., Nishimura S., Xu Z., Baba H., et al.
Physical Review C, vol.107, no.4, 2023 (SCI-Expanded)
- II. **beta decay of Ni-75 and the systematics of the low-lying level structure of neutron-rich odd-A Cu isotopes**
Garrote F. L. B., Sahin E., Tsunoda Y., Otsuka T., Gorgen A., Niikura M., Nishimura S., de Angelis G., Benzoni G., Morales A., et al.
PHYSICAL REVIEW C, vol.102, no.3, 2020 (SCI-Expanded)
- III. **Transition strengths in the neutron-rich Ni-73, Ni-74, Ni-75 isotopes**
Gottardo A., de Angelis G., Doornenbal P., Coraggio L., Gargano A., Itaco N., Kaneko K., Van Isacker P., Furumoto T., Benzoni G., et al.
PHYSICAL REVIEW C, vol.102, no.1, 2020 (SCI-Expanded)
- IV. **Inclusive cross sections for one- and multi-nucleon removal from Sn, Sb, and Te projectiles beyond the N=82 shell closure**
VAQUERO V., JUNGCLAUS A., RODRIGUEZ-SANCHEZ J. L., Tostevin J. A., DOORNENBAL R., WIMMER K., CHEN S., NACHER E., SAHIN E., SHIGA Y., et al.
PHYSICS LETTERS B, vol.795, pp.356-361, 2019 (SCI-Expanded)
- V. **In-beam gamma-ray spectroscopy of Te-136 at relativistic energies**
VAQUERO V., JUNGCLAUS A., DOORNENBAL P., WIMMER K., MORO A. M., Ogata K., FURUMOTO T., CHEN S., NACHER E., SAHIN E., et al.
PHYSICAL REVIEW C, vol.99, no.3, 2019 (SCI-Expanded)
- VI. **Is seniority a partial dynamic symmetry in the first $vg(9/2)$ shell?**
MORALES A. I., BENZONI G., WATANABE H., DE ANGELIS G., NISHIMURA S., CORAGGIO L., GARGANO A., ITACO N. g., OTSUKA T., TSUNODA Y., et al.
PHYSICS LETTERS B, vol.781, pp.706-712, 2018 (SCI-Expanded)
- VII. **Shell Evolution towards Ni-78: Low-Lying States in Cu-77**
SAHIN E., GARROTE F. L. B., TSUNODA Y., OTSUKA T., DE ANGELIS G., GORGEN A., NIIKURA M., NISHIMURA S., XU Z. Y., BABA H., et al.
PHYSICAL REVIEW LETTERS, vol.118, no.24, 2017 (SCI-Expanded)
- VIII. **Gamma Decay of Unbound Neutron-Hole States in Sn-133**
VAQUERO V., JUNGCLAUS A., DOORNENBAL P., WIMMER K., GARGANO A., Tostevin J. A., CHEN S., NACHER E., SAHIN E., SHIGA Y., et al.
PHYSICAL REVIEW LETTERS, vol.118, no.20, 2017 (SCI-Expanded)
- IX. **Type II shell evolution in A=70 isobars from the N >= 40 island of inversion**
MORALES A. I., BENZONI G., WATANABE H., TSUNODA Y., OTSUKA T., NISHIMURA S., BROWNE F., Daido R., DOORNENBAL P., Fang Y., et al.

PHYSICS LETTERS B, vol.765, pp.328-333, 2017 (SCI-Expanded)

- X. **Low-lying excitations in Ni-72**
MORALES A. I., BENZONI G., WATANABE H., NISHIMURA S., BROWNE F., Daido R., DOORNENBAL P., Fang Y., LORUSSO G., PATEL Z., et al.
PHYSICAL REVIEW C, vol.93, no.3, 2016 (SCI-Expanded)
- XI. **Decay properties of Mn-68, Mn-69, Mn-70: Probing collectivity up to N=44 in Fe isotopic chain**
BENZONI G., MORALES A. I., WATANABE H., NISHIMURA S., CORAGGIO L., ITACO N., GARGANO A., Browne F., Daido R., DOORNENBAL P., et al.
PHYSICS LETTERS B, vol.751, pp.107-112, 2015 (SCI-Expanded)
- XII. **Shell evolution beyond N=40: Cu-69, Cu-71, Cu-73**
SAHIN E., DONCEL M., SIEJA K., DE ANGELIS G., GADEA A., QUINTANA B., GORGEN A., MODAMIO V., MENGONI D., VALIENTE-DOBON J. J., et al.
PHYSICAL REVIEW C, vol.91, no.3, 2015 (SCI-Expanded)
- XIII. **Structure of the N=50 As, Ge, Ga nuclei**
SAHIN E., DE ANGELIS G., DUCHENE G., FAUL T., GADEA A., Lisetskiy A. F., ACKERMANN D., ALGORA A., Aydin S., AZAIEZ F., et al.
NUCLEAR PHYSICS A, vol.893, pp.1-12, 2012 (SCI-Expanded)
- XIV. **The generalized geometrical model for the photoionization of polarized atoms: application to linear dichroism in the 2p photoemission from Na 3(2)S and Na*3(2)P initial states**
GRUM-GRZHIMAILO A. N., GRYZLOVA E. V., CUBAYNES D., HEINECKE E., Yalcinkaya M., ZIMMERMANN P., MEYER M.
JOURNAL OF PHYSICS B-ATOMIC MOLECULAR AND OPTICAL PHYSICS, vol.42, no.17, 2009 (SCI-Expanded)
- XV. **Photoionization from the 2p subshell of the laser-excited aligned Na*2p(6)3p P-2(3/2) state**
CUBAYNES D., GUILBAUD S., WUILLEUMIER F. J., MEYER M., HEINECKE E., RIEK K., ZIMMERMANN P., Yalcinkaya M., FRITZSCHE S., STRAKHOVA S. I., et al.
PHYSICAL REVIEW A, vol.80, no.2, 2009 (SCI-Expanded)
- XVI. **Outstanding spin-orbit-activated interchannel coupling in the Cs and Ba 3d photoemission**
RICHTER T., HEINECKE E., ZIMMERMANN P., GODEHUSEN K., Yalcinkaya M., CUBAYNES D., MEYER M.
PHYSICAL REVIEW LETTERS, vol.98, no.14, 2007 (SCI-Expanded)
- XVII. **An experimental and theoretical study of the valence shell photoelectron spectrum of tetrafluoromethane**
HOLLAND D., POTTS A., TROFIMOV A., BREIDBACH J., SCHIRMER J., FEIFEL R., RICHTER T., GODEHUSEN K., MARTINS M., TUTAY A., et al.
CHEMICAL PHYSICS, vol.308, pp.43-57, 2005 (SCI-Expanded)

Articles Published in Other Journals

- I. **EXPERIMENTAL LEVEL SCHEME OF 78Cu**
Pedersen L., Sahin E., Gorgen A., Garrote F. B., Tsunoda Y., Otsuka T., Niikura M., Nishimura S., Xu Z., Baba H., et al.
Acta Physica Polonica B, Proceedings Supplement, vol.14, no.6, 2023 (Scopus)
- II. **NaI(Tl) detektörü için enerji kalibrasyonunun ve enerji çözünürlüğünün elde edilmesi**
YALÇINKAYA M., İşgör S.
Journal of Balıkesir University Institute of Science and Technology, vol.19, no.3, pp.117-120, 2017 (Peer-Reviewed Journal)
- III. **Intermediate energy Coulomb excitation of 73,74,75Ni**
Gottardo A., BENZONI G., DE ANGELIS G., Lee J., DOORNENBAL P., YALÇINKAYA M.
RIKEN Accel. Prog. Rep, vol.47, pp.36, 2013 (Peer-Reviewed Journal)
- IV. **Quadrupole collectivity in the Ni isotopes: relativistic Coulex of 73,74,75Ni**
Gottardo A., BENZONI G., DE ANGELIS G., Lee J., DOORNENBAL P., YALÇINKAYA M.
LNL Annual Rep., vol.239, pp.38-39, 2013 (Peer-Reviewed Journal)
- V. **Linear dichroism in the 2p photoionization of atomic Na**

YALÇINKAYA M., CUBAYNES D., HEINECKE E., RIEK K., MEYER M., ZIMMERMANN P.

Bessy-Annual Report, vol.2008, pp.464-465, 2008 (Peer-Reviewed Journal)

- VI. **Experimental Observation of Spin-orbit Activated Interchannel Coupling Effect in Cesium**
GODEHUSEN K., ZIMMERMANN P., YALÇINKAYA M., RICHTER T.
Bessy Annual Report, vol.2005, pp.82-83, 2005 (Peer-Reviewed Journal)
- VII. **3p Photoelectron and Photoion Spectroscopy of Molecular FeCl₂ Using Synchrotron Radiation**
YALÇINKAYA M., TUTAY A., AL-HADA M., Görgülür Ö., MARTINS M., Glaser L., RICHTER T., ZIMMERMANN P.
Balkan Physics Letters, vol.2004, pp.348-351, 2004 (Peer-Reviewed Journal)
- VIII. **Photoexcitation and Photofragmentation of the 3d-transition metal compounds FeCl₂ and FeBr₂**
AL-HADA M., MARTINS M., Görgülür Ö., ZIMMERMANN P., RICHTER T., YALÇINKAYA M., TUTAY A.
Bessy Annual Report, vol.2004, pp.51-52, 2004 (Peer-Reviewed Journal)
- IX. **Counting Solitons of the MKdV Equation under the Sech-Type Initial Potential**
Saygin H., YALÇINKAYA M.
Balkan Physics Letters, vol.6, pp.46-48, 1998 (Peer-Reviewed Journal)
- X. **Soliton for Modified Korteweg-De Vries Equation**
YALÇINKAYA M., Saygin H.
Balkan Physics Letters, vol.5, pp.69-76, 1997 (Peer-Reviewed Journal)

Books & Book Chapters

- I. **STUDY OF NEUTRON SEPARATION ENERGIES OF SPHERICAL Y ISOTOPES USING LIQUID DROP MODEL WITH NEW COEFFICIENTS AND TERMS**
YALÇINKAYA M.
in: NEW DEVELOPMENTS IN SCIENCE AND MATHEMATICS, KASIMOĞULLARI Rahmi, MANİSA Kaan, Editor, Hyper Yayınevi, İstanbul, pp.86-91, 2022
- II. **Kuantum Mekaniği Mathematica Uygulamalı**
Rızaoğlu E., Yalçinkaya M., Gültekin Ö.
Alfa Basım Yayım, İstanbul, 2021
- III. **Nükleer ve Parçacık Fiziği**
YALÇINKAYA M.
Nobel Yayınevi, Ankara, 2014

Refereed Congress / Symposium Publications in Proceedings

- I. **Study Of Neutron Separation Energies Of Spherical Y Isotopes Using Liquid Drop Model With New Coefficients And Terms**
Yalçinkaya M.
International Dumlupınar Science and Mathematics Congress2022 (IDUSMAC-2022) ", Kütahya, Turkey, 5 - 07 September 2022, pp.86-92

Supported Projects

Hafızoğlu Alkan N., Şahin Yalçın L., Ganioglu Nutku E., Yalçinkaya M., İsel P., Kaya E., Acar D., Project Supported by Higher Education Institutions, İstanbul Tarihi Yarımadasında Radon Konsantrasyonları ve Gama Doz Hızlarının Ölçülerek Radyolojik Haritalarının Oluşturulması, 2022 - 2025

KUŞOĞLU A., YALÇINKAYA M., Project Supported by Higher Education Institutions, Coulomb Filyon Reaksiyonunda Spin-Yönelimi ve g-faktör Ölçümleri için Uygulanabilirliği, 2019 - 2020

KUŞOĞLU A., YALÇINKAYA M., Project Supported by Higher Education Institutions, Nadir İzotop İncelemeleri İçin g

Faktör Ölçümleri, 2018 - 2019

YALÇINKAYA M., EU Supported Other Project, NEDA (NEutron Detector Array), 2012 - 2015

KUŞOĞLU A., YALÇINKAYA M., Project Supported by Higher Education Institutions, Nötron Zengin Osmiyum

İzotoplarında Şekil Faz Geçişinin İncelenmesi, 2011 - 2014

YALÇINKAYA M., EU Supported Other Project, Neutron Detector developments for Nuclear Structure, Astrophysics and Applications, 2011 - 2013

YALÇINKAYA M., BOSTAN İ. M., KUŞOĞLU A., TUBITAK Project, Uygulamalı ve Temel Araştırmalarda Yeni Bir Sintilatör Malzemesi Olarak LantanyumBromür, 2010 - 2012

YALÇINKAYA M., Project Supported by Higher Education Institutions, Outstanding Spin-Orbit- Activated Interchannel Coupling in the Cs and Ba 3d Photoemission, 2008 - 2011

YALÇINKAYA M., EU Framework Program Project, "Photon Array for Studies with Radioactive Ion and Stable Beams (PARIS)", 2007 - 2011

Activities in Scientific Journals

Book of Abstracts, The First Hellenic-Turkish International Physics Conference, Editor, 2001 - 2001

Book of Abstracts, The Second International Balkan School on Nuclear Physics Conference, Editor, 2000 - 2000

Memberships / Tasks in Scientific Organizations

NUSTAR, Member, 2016 - Continues, Germany

TU-Allumni, Member, 2006 - Continues

Scientific Refereeing

Project Supported by Higher Education Institutions, October 2017

International Journal of Scientific and Technological Research (JSTR), Other Indexed Journal, August 2017

Süleyman Demirel Üniversitesi Fen Dergisi (e-dergi), National Scientific Refreed Journal, March 2016

Metrics

Publication: 31

Citation (WoS): 276

Citation (Scopus): 270

H-Index (WoS): 11

H-Index (Scopus): 11

Congress and Symposium Activities

NUSTAR Collaboration Meeting 2022, Audience, Darmstadt, Germany, 2022

New Frontiers of Natural Sciences 1st International Selçuk Meeting, Audience, Konya, Turkey, 2022

International Dumlupınar Science & Mathematics Congress , Invited Speaker, Kütahya, Turkey, 2022

ADIM Fizik Günleri VI Kongresi, Attendee, Balıkesir, Turkey, 2017

NEDA Collaboration Meeting 2015, Attendee, İstanbul, Turkey, 2015

NEDENSAA NuPNET Collaboration Meeting 2014, Attendee, Turkey, 2014

Workshop on Nuclear Structure, Astrophysics and Reactions, Attendee, İstanbul, Turkey, 2014

Workshop on Synergies between EXOGAM2, NEDA and PARIS detectors, Attendee, Niğde, Turkey, 2013

International Balkan School on Nuclear Physics :Nuclear Structure Challenges with Radiocative Beams, Attendee, Bulgaria, 2012
8th Balkan School on Nuclear Physics, Attendee, Bulgaria, 2012
20th International Nuclear Physics Divisional Conference of the EPS, Europhysics Conference, Attendee, Debrecen, Hungary, 2005
4th International Balkan School on Nuclear Physics, Attendee, Muğla, Turkey, 2004
Bessy Users Meeting 2003, Attendee, Berlin, Germany, 2003
The First Hellenic-Turkish International Physics Conference, Attendee, --Seçiniz--, Turkey, 2001
The Second International Balkan Workshop on Nuclear Physics, Attendee, Edirne, Turkey, 2001
The Second International Balkan School on Nuclear Physics, Attendee, Muğla, Turkey, 2000
VII ICFA School on Instrumentation in Elementary Particle Physics, Attendee, İstanbul, Turkey, 1999
Winter Workshop on Nuclear Physics, Attendee, Bulgaria, 1999
Balkan Physical Union, Balkan School on Nuclear Physics, Attendee, İstanbul, Turkey, 1998
Doğal ve Uygulamalı Bilimlerde Sayısal Yöntemler I. Ulusal Toplantısı, Attendee, Turkey, 1996

Scholarships

The experimental investigation of spin-orbit activated interchannel coupling effects, Official Institutions of Foreign Countries, 2008 - 2009
Deneysel çalışma, University, 2005 - 2007
Deneysel çalışma, Official Institutions of Foreign Countries, 2003 - 2004
Deneysel çalışma, University, 2003 - 2004

Awards

Yalçinkaya M., Yayın Teşvik, Tübitak, August 2020
Yalçinkaya M., Yayın Teşvik, Tübitak, December 2010
Yalçinkaya M., Yayın Teşvik, Tübitak, September 2008

Non Academic Experience

İstanbul Üniversitesi Fen Fakültesi Fizik Bölümü