Prof. HALİL BABACAN

Personal Information

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Education

Doctorate, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Turkey 1996 - 2002
Postgraduate, Manisa Celal Bayar University, Fen Bilimleri Enstitüsü, Turkey 1994 - 1996
Undergraduate, Bogazici University, Faculty Of Education, Department Of Mathematics And Science Education, Turkey 1986 - 1993

Foreign Languages

English

Research Areas

Avesis Research Areas: Physics, Nuclear physics, General Nuclear Reactions, Properties of Nuclei, Nuclear Structure, Special nuclear reactions
WoS Research Areas: Nuclear Science & Technology, Physics, Physics Nuclear
Scopus Research Areas: Nuclear and High Energy Physics, Nuclear Energy and Engineering

Academic Positions

Professor, Manisa Celal Bayar University, Mühendislik Ve Doğa Bilimleri Fakültesi, Fizik, 2018 - Present
Associate Professor, Manisa Celal Bayar University, Mühendislik Ve Doğa Bilimleri Fakültesi, Fizik, 2013 - 2018
Assistant Professor, Manisa Celal Bayar University, Mühendislik Ve Doğa Bilimleri Fakültesi, Fizik, 2002 - 2013
Research Assistant, Middle East Technical University, 1998 - 2002
Research Assistant, Manisa Celal Bayar University, Mühendislik Ve Doğa Bilimleri Fakültesi, Fizik, 1994 - 1998

Academic and Administrative Experience

Manisa Celal Bayar University, 2019 - Present
Manisa Celal Bayar University, 2023 - 2026
Manisa Celal Bayar University, 2023 - 2026
Manisa Celal Bayar University, 2023 - 2026
Manisa Celal Bayar University, 2019 - 2022

Manisa Celal Bayar University, 2019 - 2022

Courses

Undergraduate
TEORİK MEKANİK, Undergraduate, 2015-2016
PHYSICS I, Undergraduate, 2015-2016
BASIC COMPUTER SCIENCE, Undergraduate, 2015-2016
Undergraduate Double Major
KUANTUM ALAN TEORİSİ I, Undergraduate Double Major, 2015-2016
İLERİ NÜKLEER FİZİK I, Undergraduate Double Major, 2015-2016

Supervised Theses

BABACAN H., RADYOTERAPİDE KULLANILAN ZIRHLAMA MATERYALİNİN VE DOKU BENZERİ FANTOMLARIN OPTİK ÖZELLİKLERİNİN MONTE CARLO METODU İLE İNCELENMESİ, Postgraduate, S.ŞERMİN(Student), 2021
BABACAN H., Bazı lityum izotoplarının saçılma tesir kesitlerinin çiftlenmiş kanallar metoduyla hesaplanması, Doctorate, D.CANBULA(Student), 2018
BABACAN H., Bazı çekirdeklerin ışınım şiddet fonksiyonlarının elde edilmesi, Postgraduate, S.ERŞAN(Student), 2016
BABACAN H., Bazı hafif egzotik çekirdeklerin reaksiyon gözlenebilirlerinin yarı-klasik yaklaşımla hesaplanması, Doctorate, B.CANBULA(Student), 2014
BABACAN H., Tüm çekirdek bölgesi için seviye yoğunluğu parametrelerinin yarı-klasik yaklaşımlar yardımıyla incelenmesi, Postgraduate, D.CANBULA(Student), 2012
BABACAN H., Nükleer seviye yoğunluğunun yarı-klasik yaklaşımla farklı potansiyeller için incelenmesi, Postgraduate, R.BULUR(Student), 2012
BABACAN H., Bazı çekirdekler için seviye yoğunluğunun mikroskobik ve makroskobik modeller yardımıyla incelenmesi, Postgraduate, B.CANBULA(Student), 2010
BABACAN H., Seviye yoğunluğunun makroskobik model yardımıyla hesaplanması, Postgraduate, R.ATICI(Student), 2007
BABACAN H., Rezonans ve vektör mezonların tek ve çift polarizasyon gözlenebilirliklerinin etkin Lagranjiyen yaklaşımı ile incelenmesi, Postgraduate, C.İPEK(Student), 2006

Articles

I. **Probing 6He induced reactions with nuclear level density**
CANBULA D., CANBULA B., BABACAN H.
Kerntechnik, vol.88, no.6, pp.725-736, 2023 (SCI-Expanded, Scopus)
II. **Analysis of elastic, quasielastic, and inelastic scattering of lithium isotopes on a Si 28 target**
CANBULA B., CANBULA D., BABACAN H.
Physical Review C - Nuclear Physics, vol.91, no.4, 2015 (SCI-Expanded, Scopus)
III. **An investigation of the role of spectroscopic factors in the breakup reaction of 11Be**
CANBULA B., Bulur R., CANBULA D., BABACAN H.
Nuclear Science and Techniques, vol.26, no.2, 2015 (SCI-Expanded, Scopus)
IV. **Renormalization of the γ-ray strength functions of light nuclei**
CANBULA B., Erşan S., BABACAN H.
International Journal of Modern Physics E, vol.24, no.3, 2015 (SCI-Expanded, Scopus)
V. **A Laplace-like formula for the energy dependence of the nuclear level density parameter**
CANBULA B., Bulur R., CANBULA D., BABACAN H.
Nuclear Physics A, vol.929, pp.54-70, 2014 (SCI-Expanded, Scopus)

VI. **Effects of single-particle potentials on the level density parameter**
CANBULA B., Bulur R., CANBULA D., BABACAN H.
European Physical Journal A, vol.50, no.11, 2014 (SCI-Expanded, Scopus)

VII. **Calculation of the level density parameter using semi-classical approach**
CANBULA B., BABACAN H.
Nuclear Physics A, vol.858, no.1, pp.32-47, 2011 (SCI-Expanded, Scopus)

VIII. **An alternative approach to calculate the density of states in nonextensive statistical mechanics**
BABACAN H.
Physics Letters, Section A: General, Atomic and Solid State Physics, vol.375, no.3, pp.360-362, 2011 (SCI-Expanded, Scopus)

IX. **Calculation of generalized level densities for nuclei in mass region $20 < A < 50$**
BABACAN H., Kayacan O.
Mathematical and Computational Applications, vol.15, no.2, pp.230-239, 2010 (Scopus, TRDizin)

X. **Generalized statistical mechanics for nucleus**
BABACAN H., Kayacan O., Atici R.
Mathematical and Computational Applications, vol.13, no.2, pp.81-90, 2008 (Scopus, TRDizin)

XI. **The effect of the pairing interaction on the energies of isobar analogue resonances in 112-124Sb and isospin admixture in 100-124Sn isotopes**
Babacan T., Salamov D., Kücükbursa A., BABACAN H., MARAŞ İ., Aygör H. A., ÜNAL A.
Journal of Physics G: Nuclear and Particle Physics, vol.30, no.6, pp.759-770, 2004 (SCI-Expanded, Scopus)

XII. **Associative photoproduction of Roper resonance and ω meson**
BABACAN H., Babacan T.
Physical Review C - Nuclear Physics, vol.67, no.5, pp.552081-552088, 2003 (SCI-Expanded, Scopus)

XIII. **ω-Meson photoproduction on nucleons in the near-threshold region**
BABACAN H., Babacan T., Gokalp A., YILMAZ O.
European Physical Journal A, vol.13, no.3, pp.355-362, 2002 (SCI-Expanded, Scopus)

XIV. **A theoretical study of ρ0-photoproduction on nucleons near threshold**
BABACAN H., Babacan T., Gokalp A., YILMAZ O.
Acta Physica Polonica B, vol.33, no.2, pp.691-706, 2002 (SCI-Expanded, Scopus)

Papers Presented at Peer-Reviewed Scientific Conferences

I. **The role of the spin-orbit interaction in elastic scattering of weakly bound lithium isotope**
CANBULA D., CANBULA B., BABACAN H.
NUFRA 2015: The Fifth International Conference on Nuclear Fragmentation, KEMER/ANTALYA, Turkey, 4 - 11 October 2015, (Summary Text)

II. **Calculation of the asymptotic level density parameter with different single particle potentials**
CANBULA D., CANBULA B., BABACAN H.
VIII. International Workshop on Nuclear Structure Properties, Sakarya, Turkey, 7 - 10 September 2015, (Summary Text)

III. **Nuclear Level Density: An Essential Tool for Nuclear Structure and Reactions**
CANBULA B., CANBULA D., BABACAN H.
Fifth International Conference on Nuclear Fragmentation From Basic Research to Applications, Antalya, Turkey, 4 - 11 October 2015, vol.1, pp.37, (Summary Text)

IV. **The role of the spin-orbit interaction in elastic scattering of weakly bound Lithium isotopes**
CANBULA D., CANBULA B., BABACAN H.
Fifth International Conference on Nuclear Fragmentation From Basic Research to Applications, Antalya, Turkey, 4 - 11 October 2015, vol.1, pp.54, (Summary Text)

V. **The Role of the Renormalization Coefficients in Photonuclear Reactions**
CANBULA B., CANBULA D., BABACAN H.

8th International Workshop on Nuclear Structure Properties, Sakarya, Turkey, 7 - 10 September 2015, vol.1, pp.46, (Summary Text)

VI. **Calculation of the asymtotic level density parameter with different single particle potentials**
CANBULA D., CANBULA B., BABACAN H.
8th International Workshop on Nuclear Structure Properties, Sakarya, Turkey, 7 - 10 September 2015, vol.1, pp.47, (Summary Text)

VII. **Nuclear level density as a tool for probing the inelastic scattering of 6He**
CANBULA B., BABACAN H.
NUBA Conference Series 1: Nuclear Physics and Astrophysics, Antalya, Turkey, 15 - 21 September 2014, vol.590, (Full Text)

VIII. **IAn investigation of the role of spectroscopic factors in the breakup reaction of 11 Be**
CANBULA B., BULUR R., CANBULA D., BABACAN H.
WND-2014: The 4th International Workshop on Nuclear Dynamics in Heavy-Ion Reactions, Lanzhou, China, 15 - 19 August 2014, (Full Text)

IX. **Extracted Collective Enhancement Factors of the Nuclear Level Density**
CANBULA B., Bulur R., CANBULA D., BABACAN H.
VII. International Workshop on Nuclear Structure Properties, Sinop, Turkey, 27 - 29 October 2014, pp.26, (Summary Text)

X. **An investigation of the effects of the level density models on the fission reaction calculations for some actinides**
SENCAR İ., CANBULA B., BABACAN H.
VII. International Workshop on Nuclear Structure Properties, Sinop, Turkey, 27 October 2014

XI. **An investigation of the role of spectroscopic factors in the break up reaction of 11Be**
CANBULA B., Bulur R., CANBULA D., BABACAN H.
The 4th International Workshop on Nuclear Dynamics in Heavy Ion Reactions, Lanzhou, China, 15 - 19 August 2014, (Summary Text)

XII. **Fisyon bariyeri hesaplamalarında şekil bağımlılığının incelenmesi**
SENCAR İ., CANBULA B., BABACAN H.
İzmir Genç Fizikçiler Kongresi, İzmir, Turkey, 14 - 16 July 2014, vol.1, pp.22, (Summary Text)

XIII. **Hafif Egzotik Çekirdekler için Seviye Yoğunluğu Parametresinin İncelenmesi**
CANBULA B., Bulur R., CANBULA D., BABACAN H.
İzmir Yüksek Enerji Fiziği ve Uygulamaları Çalıştayı, İzmir, Turkey, 19 - 23 June 2012, vol.1, pp.55, (Summary Text)

XIV. **Hafif egzotik çekirdekler için seviye yoğunluğu parametresinin incelenmesi**
CANBULA B., BULUR R., CANBULA D., BABACAN H.
İzmir Yüksek Enerji Fiziği ve Uygulamaları Çalıştayı, İzmir, Turkey, 19 - 23 June 2012, vol.1, pp.55, (Summary Text)

XV. **Kollektif Nükleer Seviye Yoğunluğu Parametresi**
CANBULA D., Bulur R., CANBULA B., BABACAN H.
GEFİK-2012 İzmir Genç Fizikçiler Kongresi, İzmir, Turkey, 13 - 15 June 2012, vol.1, pp.39, (Summary Text)

XVI. **PYATOV YÖNTEMİ KULLANILARAK 54 56Fe VE 58 62Ni İZOTOPLARINDA GAMOW TELLER GEÇİŞ ÖZELLİKLERİNİN İNCELENMESİ**
ÇAKMAK Ş., SAVAŞCI E., BABACAN T., SELAM C., MARAŞ İ., BABACAN H.
II.ADIM FİZİK GÜNLERİ, Turkey, 25 - 27 April 2012, (Summary Text)

XVII. **Polarization phenomena in vector meson photoproduction on nucleons near threshold**
BABACAN H., BABACAN T., GÖKALP A., YILMAZ O.
14th International Spin Physics Symposium, Osaka (Japan), 16 - 21 October 2000, vol.570, pp.551-555, (Full Text)

XVIII. **Associative Photoproduction of Roper Resonance with Vector Mesons**
BABACAN T., BABACAN H., GÖKALP A., YILMAZ O.
I. Euresia Conference on Nuclear Science and Its Applications, İzmir, Turkey, 23 - 27 October 2000, (Summary Text)

XIX. **Photoproduction of Vector Mesons on Nucleons: Relative Role of Possible Threshold Mechanisms**
BABACAN T., BABACAN H., GÖKALP A., YILMAZ O.

I. Euresia Conference on Nuclear Science and Its Applications, 23 - 27 October 2000, (Summary Text)

XX. **Bazı Kr İzotoplarının B E2 Geçişlerinin Etkileşen Bozon Modeli IBM 2 Yardımıyla İncelenmesi**
BABACAN H., ULUER İ., BABACAN T., TEK Z.
II. SPİL FEN BİLİMLERİ KONGRESİ, Turkey, 25 October 1997, (Full Text)

Funded Projects

CANBULA B., BABACAN H., TUBITAK Project, Çekirdeklerin Uyarılmış Seviyelerinin Bozunma Genişlikleri ve Ortalama Yaşam Sürelerinin Hesaplanması, 2016 - 2018

CANBULA B., BABACAN H., Nükleer Seviye Yoğunluğu Parametresinin Spin ve Parite Bağımlılığının İncelenmesi, 2015 - 2016

BABACAN H., TUBITAK Project, 113F203 A 40 Hafif Kütle Bölgesi Için Gama Işınım Şiddet Fonksiyonlarının Renormalizasyonu, 2013 - 2015

BABACAN H., Nükleer Seviye Yoğunluklarının Bütün Çekirdek bölgeleri İçin Nonekstensif İstatistik Mekanik Çerçevesinde İncelenmesi, 2005 - 2008

Metrics

Publication: 34
Citation (WoS): 84
Citation (Scopus): 92
H-Index (WoS): 5
H-Index (Scopus): 6