Prof. Dr. HAMZA POLAT

Kişisel Bilgiler

E-posta: hamza.polat@deu.edu.tr
Web: https://avesis.deu.edu.tr/hamza.polat

Uluslararası Araştırmacı ID'leri
ORCID: 0000-0002-6781-7379
Yoksis Araştırmacı ID: 3967

Eğitim Bilgileri

Doktora, İnönü Üniversitesi, Fen Bilimleri Enstitüsü, Fizik (Dr), Türkiye 1985 - 1987
Yüksek Lisans, Hacettepe Üniversitesi, Mühendislik Fakültesi, Fizik Mühendisliği Bölümü, Türkiye 1980 - 1982
Lisans, Hacettepe Üniversitesi, Mühendislik Fakültesi, Fizik Mühendisliği Bölümü, Türkiye 1974 - 1979

Yaptığı Tezler

Doktora, Magnetik Alanda Basit Antiferromagnetik Ising Spin Sistemlerinin Kritik Sıcaklık İle Değişimi, İnönü Üniversitesi, Fen Bilimleri Enstitüsü, Fizik (Dr), 1987
Yüksek Lisans, Püskürtme Yöntemi ile CdS Filmlerinin Elde Edilmesi, Hacettepe Üniversitesi, Mühendislik Fakültesi, Fizik Mühendisliği Bölümü, 1982

Akademik Unvanlar / Görevler

Prof. Dr., Dokuz Eylül Üniversitesi, Fen Fakültesi, Fizik Bölümü, 1997 - Devam Ediyor
Doç. Dr., Dokuz Eylül Üniversitesi, Fen Fakültesi, Fizik Bölümü, 1997 - 2003
Yrd. Doç. Dr., Bolu Abant İzzet Baysal Üniversitesi, Fen-Edebiyat Fakültesi, Fizik Bölümü, 1994 - 1997

Akademik İdari Deneyim

Dokuz Eylül Üniversitesi, 2009 - Devam Ediyor
Dokuz Eylül Üniversitesi, 2012 - 2015
Dokuz Eylül Üniversitesi, 2011 - 2014

Verdiği Dersler

Termal Fizik, Lisans, 2013 - 2014
İstatistik Mekanik-I, Yüksek Lisans, 2013 - 2014
İstatistik Mekanik, Yüksek Lisans, 2012 - 2013
Fizikte Stokastik Süreçler, Yüksek Lisans, 2012 - 2013

Yönetilen Tezler

POLAT H., The general application of the quantum Monte Carlo method to spin systems, Doktora, U.KANBUR(Öğrenci), 2021
POLAT H., Sayısal matris mekaniği ile keyfi potansiyellere genişletilmiş Kronig - Penney modeli, Yüksek Lisans, S.ÖZER(Öğrenci), 2018
POLAT H., Effective-field theory and monte-carlo simulation of the ising model under a time dependent oscillating longitudinal field, Doktora, E.VATANSEVER(Öğrenci), 2016
POLAT H., Hysteretic response characteristics of the ising-type nanomagnetic materials, Doktora, B.OZAN(Öğrenci), 2015
POLAT H., Improved effective field theory analysis of critical phenomena in Ising model with quenched disorder effects, Doktora, Y.YÜKSEL(Öğrenci), 2013
POLAT H., Monte Carlo study of compensation and critical temperatures in ferrimagnetic mixed Ising systems, Doktora, E.KIŞ(Öğrenci), 2012
POLAT H., Kesikli kuantum yürüyüş modeli ve uygulamaları., Doktora, M.GÖNÜLOL(Öğrenci), 2011
POLAT H., Magnetic properties of the spin-1 Blume-Emery-Griffiths model in the presence of magnetic field, Yüksek Lisans, Y.YÜKSEL(Öğrenci), 2008
POLAT H., Spin-s ising model in a magnetic field: an effective - field theory analysis, Yüksek Lisans, Y.CANPOLAT(Öğrenci), 2007
POLAT H., Cluster variation method in ising system, Yüksek Lisans, C.AKYÜZ(Öğrenci), 2003
POLAT H., Phase diagrams of the spin-1, Yüksek Lisans, Ü.AKINCI(Öğrenci), 2002
POLAT H., Phase diagrams of the spin-1/2 ising system on two dimensional lattices, Yüksek Lisans, Ü.AKINCI(Öğrenci), 2002

SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

I. **Thermal properties of rung-disordered two-leg quantum spin ladders: Quantum Monte Carlo study**
Kanbur U., POLAT H., VATANSEVER E.
PHYSICAL REVIEW E, cilt.102, sa.4, 2020 (SCI-Expanded)

II. **Universality in the three-dimensional random bond quantum Heisenberg antiferromagnet**
Kanbur U., Vatansever E., POLAT H.
PHYSICAL REVIEW B, cilt.102, sa.6, 2020 (SCI-Expanded)

III. **Nonequilibrium dynamics of a mixed spin-1/2 and spin-3/2 Ising ferrimagnetic system with a time dependent oscillating magnetic field source**
VATANSEVER E., POLAT H.
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, cilt.392, ss.42-49, 2015 (SCI-Expanded)

IV. **Non-equilibrium phase transition properties of disordered binary ferromagnetic alloy**
VATANSEVER E., AKINCI Ü., POLAT H.
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, cilt.389, ss.40-47, 2015 (SCI-Expanded)

V. **Dynamic phase transitions in a ferromagnetic thin film system: A Monte Carlo simulation study**
VATANSEVER E., POLAT H.
THIN SOLID FILMS, cilt.589, ss.778-782, 2015 (SCI-Expanded)

VI. **Magnetic response of a disordered binary ferromagnetic alloy to an oscillating magnetic field**
VATANSEVER E., POLAT H.
PHYSICS LETTERS A, cilt.379, ss.1568-1575, 2015 (SCI-Expanded)

VII. **Dynamic hysteretic features of Ising-type thin films**
Aktas B. O., AKINCI Ü., POLAT H.
PHYSICAL REVIEW E, cilt.90, sa.1, 2014 (SCI-Expanded)

VIII. **Critical phenomena in dynamical Ising-typed thin films by effective-field theory**
Aktas B. O., AKINCI Ü., POLAT H.
THIN SOLID FILMS, cilt.562, ss.680-691, 2014 (SCI-Expanded)

IX. **Non-equilibrium dynamics of a ferrimagnetic core-shell nanocubic particle**
VATANSEVER E., POLAT H.

PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS, cilt.394, ss.82-89, 2014 (SCI-Expanded)

X. **Time dependent magnetic field effects on the +/- J Ising model**
VATANSEVER E., AKINCI Ü., POLAT H.
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, cilt.344, ss.89-95, 2013 (SCI-Expanded)

XI. **Monte Carlo investigation of a spherical ferrimagnetic core-shell nanoparticle under a time dependent magnetic field**
VATANSEVER E., POLAT H.
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, cilt.343, ss.221-227, 2013 (SCI-Expanded)

XII. **Investigation of critical phenomena and magnetism in amorphous Ising nanowire in the presence of transverse fields**
YÜKSEL Y., AKINCI Ü., POLAT H.
PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS, cilt.392, sa.10, ss.2347-2358, 2013 (SCI-Expanded)

XIII. **Nonequilibrium dynamics of a spin-3/2 Blume-Capel model with quenched random crystal field**
VATANSEVER E., POLAT H.
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, cilt.332, ss.28-37, 2013 (SCI-Expanded)

XIV. **Investigation of oscillation frequency and disorder induced dynamic phase transitions in a quenched-bond diluted Ising ferromagnet**
VATANSEVER E., AKINCI Ü., YÜKSEL Y., POLAT H.
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, cilt.329, ss.14-23, 2013 (SCI-Expanded)

XV. **Investigation of bond dilution effects on the magnetic properties of a cylindrical Ising nanowire**
YÜKSEL Y., AKINCI Ü., POLAT H.
PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS, cilt.250, sa.1, ss.196-206, 2013 (SCI-Expanded)

XVI. **Effective field investigation of dynamic phase transitions for site diluted Ising ferromagnets driven by a periodically oscillating magnetic field**
AKINCI Ü., YÜKSEL Y., VATANSEVER E., POLAT H.
PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS, cilt.391, sa.23, ss.5810-5817, 2012 (SCI-Expanded)

XVII. **Dynamic phase transition properties and hysteretic behavior of a ferrimagnetic core-shell nanoparticle in the presence of a time dependent magnetic field**
YÜKSEL Y., VATANSEVER E., POLAT H.
JOURNAL OF PHYSICS-CONDENSED MATTER, cilt.24, sa.43, 2012 (SCI-Expanded)

XVIII. **Nonequilibrium phase transitions and stationary-state solutions of a three-dimensional random-field Ising model under a time-dependent periodic external field**
YÜKSEL Y., VATANSEVER E., AKINCI Ü., POLAT H.
PHYSICAL REVIEW E, cilt.85, sa.5, 2012 (SCI-Expanded)

XIX. **Critical behavior and phase diagrams of a spin-1 Blume-Capel model with random crystal field interactions: An effective field theory analysis**
YÜKSEL Y., AKINCI Ü., POLAT H.
PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS, cilt.391, sa.9, ss.2819-2832, 2012 (SCI-Expanded)

XX. **Random field effects on the phase diagrams of spin-1/2 Ising model on a honeycomb lattice**
YÜKSEL Y., AKINCI Ü., POLAT H.
PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS, cilt.391, sa.3, ss.415-422, 2012 (SCI-Expanded)

XXI. **Thermal and magnetic properties of a ferrimagnetic nanoparticle with spin-3/2 core and spin-1 shell structure**
YÜKSEL Y., AYDINER E., POLAT H.
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, cilt.323, sa.23, ss.3168-3175, 2011 (SCI-Expanded)

XXII. **Effective-field-theory analysis of the three-dimensional random-field Ising model on isometric lattices**
AKINCI Ü., YÜKSEL Y., POLAT H.
PHYSICAL REVIEW E, cilt.83, sa.6, 2011 (SCI-Expanded)

XXIII. **Effects of the bond dilution on the phase diagrams of a spin-1 transverse Ising model with crystal field interaction on a honeycomb lattice**

AKINCI Ü., YÜKSEL Y., POLAT H.
PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS, cilt.390, sa.4, ss.541-552, 2011 (SCI-Expanded)

XXIV. **An introduced effective-field theory study of spin-1 transverse Ising model with crystal field anisotropy in a longitudinal magnetic field**
YÜKSEL Y., POLAT H.
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, cilt.322, sa.24, ss.3907-3916, 2010 (SCI-Expanded)

XXV. **Dependence on dilution of critical and compensation temperatures of a two-dimensional mixed spin-1/2 and spin-1 system**
AYDINER E., YÜKSEL Y., KIS ÇAM E., POLAT H.
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, cilt.321, sa.19, ss.3193-3197, 2009 (SCI-Expanded)

XXVI. **An introduced effective-field approximation and Monte Carlo study of a spin-1 Blume-Capel model on a square lattice**
YÜKSEL Y., AKINCI Ü., POLAT H.
PHYSICA SCRIPTA, cilt.79, sa.4, 2009 (SCI-Expanded)

XXVII. **The magnetic properties of spin-1/2 and spin-1 Ising models in an applied magnetic field by introducing the effective-field approximation**
Canpolat Y., Torguersuel A., POLAT H.
PHYSICA SCRIPTA, cilt.76, sa.6, ss.597-605, 2007 (SCI-Expanded)

XXVIII. **Electron-fluid model for DC size effect under a magnetic field**
POLAT H., Kosker D., Tomak M.
PHYSICA STATUS SOLIDI A-APPLIED RESEARCH, cilt.158, sa.1, ss.161-168, 1996 (SCI-Expanded)

Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

I. **Hysteretic features of the dynamical Ising type thin films**
AKINCI Ü., POLAT H.
20. İstatistik Fizik Günleri, Türkiye, 27 - 29 Haziran 2013

II. **Magnetic and Thermodynamic Properties of the Spin 1 Ising Ferromagnetic Systems**
POLAT H., AKINCI Ü., SÖKMEN İ.
10.İstatistik Fizik Günleri, Türkiye, 3 - 04 Temmuz 2003

III. **Phase Diagrams Of Spin S S Ising Systems**
POLAT H., AKINCI Ü., SÖKMEN İ.
Türk Fizik Derneği 21. Fizik kongresi (TFD-21), Türkiye, 11 - 14 Eylül 2002

IV. **SPIN CORRELATION FUNCTIONS AND PHASE DIAGRAMS OF THE SPIN 1/2 ISING SYSTEMS**
POLAT H., AKINCI Ü., ERZİN S., SOKMEN I.
9. İstatik Fizik Günleri, İstanbul, Türkiye, 8 - 12 Temmuz 2002

V. **Spin Correlation Functions and Phase Diagrams of the Spin Ising Systems**
POLAT H., AKINCI Ü., SÖKMEN İ.
9.İstatistik Fizik Günleri, Türkiye, 4 - 05 Temmuz 2002

VI. **Determination Phase Diagrams of the Two Dimensional Ising Lattices in a Magnetic Field Using by Differential Operator Technique**
AKINCI Ü., POLAT H.
8.İstatistik Fizik Günleri, Türkiye, 5 - 06 Temmuz 2001

Desteklenen Projeler

POLAT H., Yükseköğretim Kurumları Destekli Proje, Ising-Tipi Nanomanyetik Malzemelerin Histeretik Yanıt Karakteristikleri, 2013 - 2013
POLAT H., Yükseköğretim Kurumları Destekli Proje, Saf ve Karma Spin Sistemlerinin Termal ve Manyetik Özelliklerinin

Monte Carlo Simülasyon Tekniği, Geliştirilmiş Etkin Alan Teorisi ve Genetik Algoritmaları ile Karşılaştırmalı Analizi, 2009 - 2011

Metrikler

Yayın: 34
Atıf (WoS): 625
Atıf (Scopus): 610
H-İndeks (WoS): 16
H-İndeks (Scopus): 15