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Personal Information

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Education Information

Doctorate, University Of Massachusetts Lowell, Science Faculty, Physics/ General Physics, United States Of America 1993 - 1997

Post Graduate, University Of Missouri-Columbia, Science Faculty, Physics/ General Physics, United States Of America 1991 - 1993

Under Graduate, Erciyes Üniversitesi, Fen-Edebiyat Fakültesi, Fizik, Turkey 1986 - 1990

Foreign Languages

English, C1 Advanced

Certificates, Courses and Trainings

Education Management and Planning, Eğitim Formasyonu, Erciyes Üniversitesi, 1990

Dissertations

Doctorate, Computer Modeling For the Two- and Three-Dimensional Avalanche Photodiode, University Of Massachusetts Lowell, Science Faculty, Physics/ General Physics, 1997

Post Graduate, Absorption and Scattering from the Spherical Particles, University Of Missouri-Columbia, Science Faculty, Physics/ General Physics, 1993

Research Areas

Physics, General Physics, Mathematical Methods in Physics, Condensed Matter 1: Structural, Mechanical and Thermal Properties, Equations of State, Phase Equilibria, and Phase Transitions, Intensive Article 2: Electronic Structure, Electric, Magnetic and Optical Properties, Magnetic Properties and Materials, Natural Sciences

Academic Titles / Tasks

Professor, Erciyes Üniversitesi, Fen Fakültesi, Fizik , 2009 - Continues

Associate Professor, Erciyes Üniversitesi, Fen Fakültesi, Fizik , 2003 - 2009

Assistant Professor, Erciyes Üniversitesi, Fen Fakültesi, Fizik , 1998 - 2003

Lecturer PhD, Erciyes Üniversitesi, Fen Fakültesi, Fizik , 1997 - 1998

Research Assistant, University Of Massachusetts Lowell, Science Faculty, Physics, 1996 - 1997

Research Assistant, University Of Missouri-Columbia, Science Faculty, Physics, 1992 - 1993

Academic and Administrative Experience

Erciyes Üniversitesi, 2009 - 2013

Erciyes Üniversitesi, 2009 - 2012

Erciyes Üniversitesi, 2009 - 2012

Courses

Dalgalar ve Titreşimler, Under Graduate, 2011 - 2012

Kuantum Mekaniği I, Post Graduate, 2008 - 2009

Advising Theses

ALBAYRAK E., The Obtaining of the Phase Diagrams for AFM/AFM and FM/AFM Cases of Spin-1 Ising Model on a Two-Layer Bethe Lattice, Doctorate, Ş.Akkaya(Student), 2011

ALBAYRAK E., The Phase Diagrams of spin-1/2 Ising AFM/AFM ve FM/AFM Models on the Two-Layer Bethe Lattice with External Magnetic Field, Post Graduate, T.Cengiz(Student), 2010

ALBAYRAK E., The Phase Diagrams of the Spin-(1/2,1,1/2) ve Spin-(1,1/2/,1) Ising Models on the Bethe Lattice, Post Graduate, A.Aker(Student), 2010

ALBAYRAK E., The Phase Diagrams of Spin-3/2 Ising Models for the AFM/AFM ve FM/AFM Cases on Two-layer Bethe Lattices, Doctorate, A.Yiğit(Student), 2010

ALBAYRAK E., The Phase Diagrams for the Spin-(S=1/2, ?=1), Spin-(S=1, ?=3/2) and Spin-(S=3/2, ?=1/2) Ising Models on a Two-Layer Bethe Lattice, Post Graduate, T.Bulut(Student), 2008

ALBAYRAK E., The Exact Phase Diagrams of the Spin-2 Ising model on a Two-Layer Bethe Lattice with and without Crystal Fields, Post Graduate, Ş.Akkaya(Student), 2007

ALBAYRAK E., The Exact Phase Diagrams of the Spin-3/2 Ising model on a Two-Layer Bethe Lattice with and without Crystal Fields, Post Graduate, Ş.Yılmaz(Student), 2007

ALBAYRAK E., The Critical Behaviors of the mixed spin-1 and spin-2 Blume-Capel Ising Ferromagnetic System, Post Graduate, A.Yiğit(Student), 2006

ALBAYRAK E., The Analysis of mixed-spin spin-1/2 and spin-3/2 Ising System on the Bethe Lattice with Recursion Relations, Post Graduate, A.Alçı(Student), 2004

ALBAYRAK E., The Analysis of Spin-1 Blume-Emery-Griffiths Model by Using the Recursion Relations on the Bethe Lattice, Post Graduate, Ö.Özkan(Student), 2002

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- I. **Effects of the random single-ion anisotropy on the spin-1 Blume-Emery-Griffiths model**
Kple J, Hontinfinde F, ALBAYRAK E.
Journal of Magnetism and Magnetic Materials, vol.537, 2021 (Journal Indexed in SCI)
- II. **Random transverse crystal-field effects on the magnetic properties of the spin-3/2 Blume-Capel model**
Kple J, Hontinfinde F, ALBAYRAK E.
PHYSICA B-CONDENSED MATTER, vol.619, 2021 (Journal Indexed in SCI)
- III. **$\pm J$ Blume-Capel Model with external magnetic field in the cluster variation method**

- ALBAYRAK E.
Physica A: Statistical Mechanics and its Applications, vol.575, 2021 (Journal Indexed in SCI)
- IV. **Random crystal field effects on antiferromagnetic spin-1 Blume-Capel model**
Albayrak E.
Modern Physics Letters B, vol.35, no.2150286, pp.2150286, 2021 (Journal Indexed in SCI Expanded)
- V. **Trimodal-random field Blume-Capel model**
ALBAYRAK E.
MODERN PHYSICS LETTERS B, vol.35, no.16, 2021 (Journal Indexed in SCI)
- VI. **Random crystal field effects on antiferromagnetic spin-1 Blume-Capel model**
ALBAYRAK E.
Modern Physics Letters B, vol.35, 2021 (Journal Indexed in SCI)
- VII. **The thermal properties of the mixed spin-1/2, 1, 3/2 Ising model on the Bethe lattice**
Kple J., Albayrak E., Hontinfinde F.
MODERN PHYSICS LETTERS B, vol.35, no.4, 2021 (Journal Indexed in SCI)
- VIII. **Anisotropic Heisenberg model for the mixed spin-3/2 and spin-1/2 under random crystal field**
Takou D. S., Karimou M., Hontinfinde F., Albayrak E.
CONDENSED MATTER PHYSICS, vol.24, no.1, 2021 (Journal Indexed in SCI)
- IX. **The random field Blume-Capel model on the Bethe lattice**
Albayrak E.
Chinese Journal of Physics, vol.68, pp.100-105, 2020 (Journal Indexed in SCI)
- X. **The study of mixed spin-1 and spin-1/2: Entropy and isothermal entropy change**
ALBAYRAK E.
Physica A: Statistical Mechanics and its Applications, vol.559, 2020 (Journal Indexed in SCI)
- XI. **Staggered Quadrupolar Phase in the Bond-Diluted Spin-1 Blume-Emery-Griffiths Model**
Kple J., Hontinfinde F., Albayrak E.
INTERNATIONAL JOURNAL OF THEORETICAL PHYSICS, vol.59, no.12, pp.3915-3935, 2020 (Journal Indexed in SCI)
- XII. **The critical behaviors of the mixed spin-1/2 and spin-2 model in a random crystal field**
Barut O., Yigit A., Albayrak E.
Journal of Magnetism and Magnetic Materials, vol.513, 2020 (Journal Indexed in SCI)
- XIII. **Spin-1 Ising model with nearest and next-nearest bilinear and biquadratic interactions on the Bethe lattice**
ALBAYRAK E.
Physica B: Condensed Matter, vol.594, 2020 (Journal Indexed in SCI)
- XIV. **Mixed Spin-1/2 and 5/2 Blume-Capel Model on the Bethe Lattice in the $\pm J$ Distribution with an Adjusting Parameter**
ALBAYRAK E., Ozcan F. S.
Journal of Superconductivity and Novel Magnetism, vol.33, no.7, pp.2179-2188, 2020 (Journal Indexed in SCI Expanded)
- XV. **Antiferromagnetic Spin-3/2 Ising Model Under the Influence of Random Crystal Field**
Kaman R., Yigit A., ALBAYRAK E.
BRAZILIAN JOURNAL OF PHYSICS, vol.50, no.3, pp.245-253, 2020 (Journal Indexed in SCI)
- XVI. **Triple mixed-spin Ising model**
ALBAYRAK E.
International Journal of Modern Physics B, vol.34, no.13, 2020 (Journal Indexed in SCI)
- XVII. **The Ising model with nearest- and next-nearest-neighbor interactions on the Bethe lattice: The exact recursion relations**
ALBAYRAK E.
MODERN PHYSICS LETTERS B, vol.34, no.10, 2020 (Journal Indexed in SCI)
- XVIII. **Isothermal Entropy Change for the Spin-1 Blume-Capel Model on the Bethe Lattice**
Albayrak E.
INTERNATIONAL JOURNAL OF THEORETICAL PHYSICS, 2019 (Journal Indexed in SCI)

- XIX. **The mixed spin-1/2 and spin-1 model with alternating coordination number**
ALBAYRAK E.
INTERNATIONAL JOURNAL OF MODERN PHYSICS B, vol.33, no.11, 2019 (Journal Indexed in SCI)
- XX. **Phase diagrams and critical behaviours of the mixed spin-5/2 and spin-7/2 Ising system**
Karimou M., Yessoufou R. A. , Ngantso G. D. , Hontinfinde F., ALBAYRAK E.
CONDENSED MATTER PHYSICS, vol.22, no.3, 2019 (Journal Indexed in SCI)
- XXI. **The ferri-ferro-ferrimagnetic quaternary alloy**
Albayrak E.
PHYSICA B-CONDENSED MATTER, vol.552, pp.71-77, 2019 (Journal Indexed in SCI)
- XXII. **The Amorphous Spin-1 Ising Model on the Bethe Lattice**
ALBAYRAK E.
ACTA PHYSICA POLONICA A, vol.134, no.6, pp.1176-1179, 2018 (Journal Indexed in SCI)
- XXIII. **The Random Change of Coordination Number in the Blume-Capel Model**
ALBAYRAK E.
JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM, vol.31, no.11, pp.3595-3599, 2018 (Journal Indexed in SCI)
- XXIV. **The random distribution of the coordination numbers in the mixed spin-1/2 and spin-2 Blume-Capel model**
ALBAYRAK E.
CHINESE JOURNAL OF PHYSICS, vol.56, no.5, pp.2291-2296, 2018 (Journal Indexed in SCI)
- XXV. **Phase diagrams of the random nearest-neighbor mixed spin-1/2 and spin-3/2 Blume-Capel model**
ALBAYRAK E.
MODERN PHYSICS LETTERS B, vol.32, no.27, 2018 (Journal Indexed in SCI)
- XXVI. **The quaternary alloy on the Bethe lattice**
ALBAYRAK E.
INTERNATIONAL JOURNAL OF MODERN PHYSICS B, vol.32, no.21, 2018 (Journal Indexed in SCI)
- XXVII. **The magnetic phase diagrams of the ternary alloy AB(p)C(1-p) on the Bethe lattice**
ALBAYRAK E.
MODERN PHYSICS LETTERS B, vol.32, no.16, 2018 (Journal Indexed in SCI)
- XXVIII. **Spin-1/2 Ising model on a AFM/FM two-layer Bethe lattice in a staggered magnetic field**
KPLE J., MASSOU S., HONTINFINDE F., ALBAYRAK E.
CHINESE JOURNAL OF PHYSICS, vol.56, no.3, pp.1252-1261, 2018 (Journal Indexed in SCI)
- XXIX. **The crystal-field dependency of sound attenuation in the spin-3/2 ising model**
Cengiz T., ALBAYRAK E.
CHINESE JOURNAL OF PHYSICS, vol.56, no.3, pp.844-852, 2018 (Journal Indexed in SCI)
- XXX. **Random crystal field effects on the integer and half-integer mixed-spin system**
Yigit A., ALBAYRAK E.
Superlattices and Microstructures, vol.117, pp.65-71, 2018 (Journal Indexed in SCI)
- XXXI. **The single-ion anisotropy effects in the mixed-spin ternary-alloy**
ALBAYRAK E.
Physics Letters, Section A: General, Atomic and Solid State Physics, vol.382, no.13, pp.880-886, 2018 (Journal Indexed in SCI)
- XXXII. **The spin-1 Blume-Capel model on the Bethe lattice in $\pm J$ distribution with an adjustable parameter between FM and AFM phases**
ALBAYRAK E.
Chinese Journal of Physics, vol.56, no.2, pp.622-629, 2018 (Journal Indexed in SCI)
- XXXIII. **The Mixed Spin-1/2 and Spin-1 Ising-Heisenberg Model in the Mean-Field Approximation: a New Approach**
ALBAYRAK E.
CHINESE PHYSICS LETTERS, vol.35, no.3, 2018 (Journal Indexed in SCI)
- XXXIV. **Random Crystal Field Effects on the Mixed-Spin 1/2 and 5/2 Blume-Capel Model**

- ALBAYRAK E., KARIMOU M.
INTERNATIONAL JOURNAL OF THEORETICAL PHYSICS, vol.57, no.3, pp.715-725, 2018 (Journal Indexed in SCI)
- XXXV. **The phase diagrams of the mixed-spin ternary-alloy consisting of half-integer spins: Standard-random approach**
ALBAYRAK E.
Physica B: Condensed Matter, vol.531, pp.70-74, 2018 (Journal Indexed in SCI)
- XXXVI. **The bimodal random crystal field and biquadratic exchange interaction effects for the spin-3/2 Ising model on the Bethe lattice**
KARIMOU M., ALBAYRAK E., TESSILIMY A., HONTINFINDE F., YESSOUFOU R.
CHINESE JOURNAL OF PHYSICS, vol.55, no.6, pp.2371-2383, 2017 (Journal Indexed in SCI)
- XXXVII. **Anisotropic Heisenberg model for the mixed spin-2 and spin-1/2 in the Oguchi approximation on the simple cubic lattice**
ALBAYRAK E.
PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS, vol.486, pp.161-167, 2017 (Journal Indexed in SCI)
- XXXVIII. **Equal Random Crystal Field of Mixed Spin-1 and Spin-3/2 System**
Yigit A., ALBAYRAK E.
JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM, vol.30, no.11, pp.3103-3108, 2017 (Journal Indexed in SCI)
- XXXIX. **Bond Dilution Effects on Bethe Lattice the Spin-1 Blume-Capel Model**
Albayrak E.
COMMUNICATIONS IN THEORETICAL PHYSICS, vol.68, no.3, pp.361-365, 2017 (Journal Indexed in SCI)
- XL. **Mixed Spin-2 and Spin-1/2 Anisotropic Heisenberg Model in the Oguchi Approximation**
ALBAYRAK E.
JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM, vol.30, no.9, pp.2555-2561, 2017 (Journal Indexed in SCI)
- XLI. **The +/- J model for the mixed-spin 1/2 and 5/2 system**
ALBAYRAK E., KARIMOU M.
CHINESE JOURNAL OF PHYSICS, vol.55, no.4, pp.1361-1368, 2017 (Journal Indexed in SCI)
- XLII. **Square Ising Nanowire on the Bethe Lattice**
ALBAYRAK E.
ACTA PHYSICA POLONICA A, vol.131, no.6, pp.1470-1473, 2017 (Journal Indexed in SCI)
- XLIII. **Magnetic phase diagrams of Fe-Mn-Al alloy on the Bethe lattice**
ALBAYRAK E.
CHINESE PHYSICS B, vol.26, no.2, 2017 (Journal Indexed in SCI)
- XLIV. **+/- J Blume-Capel model in the cluster variation method**
ALBAYRAK E.
CHINESE JOURNAL OF PHYSICS, vol.54, no.6, pp.978-982, 2016 (Journal Indexed in SCI)
- XLV. **The Random J-Model with Biquadratic Interaction**
Yigit A., ALBAYRAK E.
JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM, vol.29, no.10, pp.2535-2541, 2016 (Journal Indexed in SCI)
- XLVI. **The +/- J model for the mixed-spin 1/2 and 3/2 Blume-Capel model**
ALBAYRAK E.
PHYSICA B-CONDENSED MATTER, vol.494, pp.91-95, 2016 (Journal Indexed in SCI)
- XLVII. **Core-shell structured square mixed-spin 1 and 1/2 Ising nanowire on the Bethe lattice**
ALBAYRAK E.
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.401, pp.532-538, 2016 (Journal Indexed in SCI)
- XLVIII. **Core-shell structured triangular Ising nanowire on the Bethe lattice**
ALBAYRAK E.
PHYSICS LETTERS A, vol.380, no.3, pp.458-464, 2016 (Journal Indexed in SCI)
- XLIX. **Random Blume-Emery-Griffiths model on the Bethe lattice**

- Albayrak E.
PHYSICA B-CONDENSED MATTER, vol.479, pp.107-111, 2015 (Journal Indexed in SCI)
- L. **The phase diagrams of the +/- K model on the Bethe lattice**
Albayrak E.
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.386, pp.20-24, 2015 (Journal Indexed in SCI)
- LI. **The Effects of the Random Transverse Crystal Field on the Spin-1 Model**
Albayrak E.
ACTA PHYSICA POLONICA A, vol.127, no.3, pp.818-822, 2015 (Journal Indexed in SCI)
- LII. **+/- J model on the Bethe lattice with crystal field interaction**
Albayrak E.
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.355, pp.18-21, 2014 (Journal Indexed in SCI)
- LIII. **Phase diagrams of the spin-3/2 random transverse crystal field model**
Albayrak E.
PHYSICA SCRIPTA, vol.89, no.1, 2014 (Journal Indexed in SCI)
- LIV. **Phase diagrams of spin-3/2 Ising model in the presence of random crystal field within the effective field theory based on two approximations**
Yigit A., ALBAYRAK E.
CHINESE PHYSICS B, vol.22, no.10, 2013 (Journal Indexed in SCI)
- LV. **Mixed spin-1/2 and spin-3/2 Ising model with random crystal field distribution**
Yigit A., ALBAYRAK E.
PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS, vol.392, no.19, pp.4216-4221, 2013 (Journal Indexed in SCI)
- LVI. **Spin-1 Blume-Capel model with longitudinal random crystal and transverse magnetic fields: A mean-field approach**
Albayrak E.
CHINESE PHYSICS B, vol.22, no.7, 2013 (Journal Indexed in SCI)
- LVII. **THE QUANTUM REFRIGERATOR IN A TWO-QUBIT XXZ HEISENBERG MODEL**
Albayrak E.
INTERNATIONAL JOURNAL OF MODERN PHYSICS B, vol.27, no.13, 2013 (Journal Indexed in SCI)
- LVIII. **The mixed spin-1/2 and spin-1 Blume-Capel model with random crystal field on the Bethe lattice: Two approaches**
Albayrak E.
SOLID STATE COMMUNICATIONS, vol.159, pp.76-78, 2013 (Journal Indexed in SCI)
- LIX. **THE ENTANGLED QUANTUM HEAT ENGINE IN THE VARIOUS HEISENBERG MODELS FOR A TWO-QUBIT SYSTEM**
Albayrak E.
INTERNATIONAL JOURNAL OF QUANTUM INFORMATION, vol.11, no.2, 2013 (Journal Indexed in SCI)
- LX. **Bimodal random crystal field distribution effects on the ferrimagnetic mixed spin-1/2 and spin-3/2 Blume-Capel model**
Yigit A., ALBAYRAK E.
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.329, pp.125-128, 2013 (Journal Indexed in SCI)
- LXI. **Spin-1 Blume-Capel model with random crystal field effects**
Albayrak E.
PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS, vol.392, no.4, pp.552-557, 2013 (Journal Indexed in SCI)
- LXII. **Phase diagrams of the spin-2 Ising model in the presence of a quenched diluted crystal field distribution**
Yigit A., ALBAYRAK E.
CHINESE PHYSICS B, vol.21, no.11, 2012 (Journal Indexed in SCI)
- LXIII. **Trilayer Bethe lattices in the form of spin-(1/2,3/2,1/2)**
ALBAYRAK E., Ak F.

- PHYSICA B-CONDENSED MATTER, vol.407, no.13, pp.2642-2649, 2012 (Journal Indexed in SCI)
- LXIV. **The crystal field effects on sound attenuation for a spin-1 Ising model on the Bethe lattice**
Cengiz T., ALBAYRAK E.
JOURNAL OF STATISTICAL MECHANICS-THEORY AND EXPERIMENT, 2012 (Journal Indexed in SCI)
- LXV. **The mixed-spins 1/2 and 3/2 Blume-Capel model with a random crystal field**
Albayrak E.
CHINESE PHYSICS B, vol.21, no.6, 2012 (Journal Indexed in SCI)
- LXVI. **The Bethe lattice treatment of sound attenuation for a spin-3/2 Ising model**
Cengiz T., ALBAYRAK E.
PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS, vol.391, no.10, pp.2948-2956, 2012 (Journal Indexed in SCI)
- LXVII. **The mixed-spin ternary-alloy consisting of half-integer spins**
Albayrak E.
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.324, no.10, pp.1809-1813, 2012 (Journal Indexed in SCI)
- LXVIII. **THE COUPLED SPIN-1 BLUME-CAPEL SUBLATTICES WITH DIFFERENT BILINEAR INTERACTIONS**
ALBAYRAK E., Erdinc A.
INTERNATIONAL JOURNAL OF MODERN PHYSICS B, vol.26, no.8, 2012 (Journal Indexed in SCI)
- LXIX. **THE SPIN-1 BLUME-CAPEL MODEL WITH ALTERNATINGLY CHANGING BILINEAR EXCHANGE INTERACTIONS BETWEEN SUBLATTICES**
Albayrak E.
INTERNATIONAL JOURNAL OF MODERN PHYSICS B, vol.26, no.5, 2012 (Journal Indexed in SCI)
- LXX. **Critical properties of mixed spin-1 and spin-5/2 with equal and unequal crystal fields**
Yigit A., ALBAYRAK E.
CHINESE PHYSICS B, vol.21, no.2, 2012 (Journal Indexed in SCI)
- LXXI. **The mixed-spin ferro-ferrimagnetic ternary alloy**
Albayrak E.
PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS, vol.248, no.12, pp.2945-2949, 2011 (Journal Indexed in SCI)
- LXXII. **Random crystal field effects for spin-3/2 Blume-Capel model**
Albayrak E.
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.323, no.22, pp.2846-2850, 2011 (Journal Indexed in SCI)
- LXXIII. **Dynamic phase transitions in the kinetic spin-1 Blume-Capel model on the Bethe lattice**
Deviren S. A. , ALBAYRAK E.
PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS, vol.390, no.20, pp.3283-3289, 2011 (Journal Indexed in SCI)
- LXXIV. **The spin-1 Blume-Capel model with random crystal field on the Bethe lattice**
Albayrak E.
PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS, vol.390, no.9, pp.1529-1533, 2011 (Journal Indexed in SCI)
- LXXV. **The Sound Attenuation for the Spin-1 Ising Model on the Bethe Lattice**
ALBAYRAK E., Cengiz T.
JOURNAL OF THE PHYSICAL SOCIETY OF JAPAN, vol.80, no.5, 2011 (Journal Indexed in SCI)
- LXXVI. **The mixed-spin ternary-alloy in the form of AB(p)C(1-p) on the Bethe lattice**
Albayrak E.
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.323, no.7, pp.992-996, 2011 (Journal Indexed in SCI)
- LXXVII. **Thermal entanglement in the XYZ model for a two-qutrit system**
Albayrak E.
OPTICS COMMUNICATIONS, vol.284, no.6, pp.1631-1636, 2011 (Journal Indexed in SCI)
- LXXVIII. **Thermal Entanglement in a Two-Qutrit Spin-1 Anisotropic Heisenberg Model**

- Albayrak E.
CHINESE PHYSICS LETTERS, vol.28, no.2, 2011 (Journal Indexed in SCI)
- LXXXIX. **The spin-(1,1/2,1) sandwiched trilayer Bethe lattices**
ALBAYRAK E., Aker A.
PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS, vol.389, no.24, pp.5677-5688, 2010 (Journal Indexed in SCI)
- LXXX. **Sandwiched trilayer of Bethe lattices in the form of spin-(1/2,1,1/2)**
ALBAYRAK E., Aker A.
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.322, no.21, pp.3281-3289, 2010 (Journal Indexed in SCI)
- LXXXI. **Thermal entanglement in two-qutrit spin-1 anisotropic Heisenberg model with inhomogeneous magnetic field**
Albayrak E.
CHINESE PHYSICS B, vol.19, no.9, 2010 (Journal Indexed in SCI)
- LXXXII. **THE GROUND-STATE PHASE DIAGRAMS OF SPIN-3/2 ISING MODEL ON A FM/AFM TWO-LAYER LATTICE WITH CRYSTAL FIELD**
ALBAYRAK E., Yigit A., Cengiz T.
MODERN PHYSICS LETTERS B, vol.24, no.22, pp.2335-2343, 2010 (Journal Indexed in SCI)
- LXXXIII. **Dynamic phase transitions in the kinetic Ising model on the Bethe lattice**
Deviren S. A. , ALBAYRAK E.
PHYSICAL REVIEW E, vol.82, no.2, 2010 (Journal Indexed in SCI)
- LXXXIV. **The temperature-dependent phase diagrams of the spin-3/2 Ising model on a FM/AFM two-layer lattice with a crystal field**
ALBAYRAK E., Yigit A., Cengiz T.
PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS, vol.389, no.13, pp.2522-2532, 2010 (Journal Indexed in SCI)
- LXXXV. **Thermal entanglement in the anisotropic Heisenberg model with Dzyaloshinskii-Moriya interaction in an inhomogeneous magnetic field**
Albayrak E.
EUROPEAN PHYSICAL JOURNAL B, vol.72, no.4, pp.491-496, 2009 (Journal Indexed in SCI)
- LXXXVI. **The statistical mechanics of spin-1 Ising model with AFM/AFM interactions on a bilayer Bethe lattice**
ALBAYRAK E., Akkaya S., Cengiz T.
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.321, no.22, pp.3726-3733, 2009 (Journal Indexed in SCI)
- LXXXVII. **The Crystal Field Effects in the Spin-1 Ising Model with FM/AFM Interactions on a Two-layer Bethe Lattice**
ALBAYRAK E., Akkaya S.
JOURNAL OF THE KOREAN PHYSICAL SOCIETY, vol.55, no.4, pp.1363-1371, 2009 (Journal Indexed in SCI)
- LXXXVIII. **Spin-3/2 Ising model AFM/AFM two-layer lattice with crystal field**
ALBAYRAK E., Yigit A.
CHINESE PHYSICS B, vol.18, no.10, pp.4193-4207, 2009 (Journal Indexed in SCI)
- LXXXIX. **The spin-3/2 Ising model on a two-layer Bethe lattice with AFM/AFM interactions**
ALBAYRAK E., Yigit A.
PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS, vol.246, no.9, pp.2172-2181, 2009 (Journal Indexed in SCI)
- XC. **The Phase Diagrams of Spin-1/2 Ising Model on a Two-Layer Bethe Lattice with AFM/AFM Interactions**
ALBAYRAK E., YİĞİT A.
ACTA PHYSICA POLONICA A, vol.116, no.2, pp.127-134, 2009 (Journal Indexed in SCI)
- XCI. **Crystal field effects on a spin-1 Ising model with AFM-AFM interactions on a two-layer Bethe lattice**
ALBAYRAK E., Akkaya S.

- PHYSICA SCRIPTA, vol.79, no.6, 2009 (Journal Indexed in SCI)
- XCII. **The FM/AFM bilayer Bethe lattice with FM or AFM interlayer interactions**
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Edit Congress and Symposium Activities

The Effective Field Treatment of Spin-3/2 Ising Model with a Special Random Crystal Field Distribution, Attendee, İstanbul, Turkey, 2012

The Critical Properties of Mixed Spin-1 and Spin-5/2 with Equal and Unequal Crystal Fields (POSTER), Attendee, Amsterdam, Netherlands, 2012

The Effect of External Magnetic Field on Sound Attenuation of the Spin-3/2 Ising Model (POSTER), Attendee, Amsterdam, Netherlands, 2012

The Bethe Lattice Treatment of Ultrasonic Attenuation (POSTER), Attendee, Amsterdam, Netherlands, 2012

The Sound Attenuation for the Spin-1 Ising Model on the Bethe Lattice, Attendee, İstanbul, Turkey, 2011

The Mixed-spin Ternary-alloy in the Form of ABpC1-p on the Bethe Lattice, Attendee, İstanbul, Turkey, 2011

Bethe Lattice Study of the Mixed Spin-2 and Spin-5/2 Ising Model, Attendee, İstanbul, Turkey, 2011

The Crystal Field Effects on Temperature-Dependent Phase Diagrams of the Spin-3/2 Ising Model with FM/AFM Interactions on a Two-Layer Bethe Lattice, Attendee, İstanbul, Turkey, 2010

The crystal field effects in the spin-1 Ising model with FM/AFM interactions on a two-layer Bethe lattice, Attendee, İstanbul, Turkey, 2010

Sandwiched Trilayer of Bethe Lattices in the form of Spin-(1/2,1,1/2), Attendee, İstanbul, Turkey, 2010

The Spin-3/2 Ising Model AFM/AFM Two-Layer Lattice with Crystal Field, Attendee, Bodrum, Turkey, 2009

The FM/AFM Bilayer Bethe Lattice with FM or AFM Interlayer Interactions (POSTER), Attendee, Bodrum, Turkey, 2009

The Hysteresis Loops of FM/AFM Two-Layer Bethe Lattice (POSTER), Attendee, Bodrum, Turkey, 2009

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The Crystal Field Effects on Spin-1 Ising Model with AFM/AFM interactions on a Two-Layer Bethe Lattice, Attendee, Bodrum, Turkey, 2009

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The Ising on a Bilayer Bethe Lattice with AFM/AFM Interactions for Spin-3/2, Attendee, Bodrum, Turkey, 2008

The Statistical Mechanics of Spin-1 Ising Model with AFM/AFM Interactions on a Bilayer Bethe Lattice (POSTER), Attendee, Bodrum, Turkey, 2008

The Antiferromagnetic Ising Model for a Bilayer Bethe Lattice (POSTER), Attendee, Side-Antalya, Turkey, 2008

Mixed spin-2 and spin-5/2 Blume-Capel model (POSTER), Attendee, Side-Antalya, Turkey, 2008

An Ising Bilayer System Consisting of Spin-3/2 and Spin-1/2 Atoms (POSTER), Attendee, Malatya, Turkey, 2007

Mixed Spin-2 and Spin-5/2 Blume-Emery-Griffiths Model (POSTER), Attendee, Malatya, Turkey, 2007

Mixed Spin-3/2 and Spin-5/2 Ising System on the Bethe Lattice, Attendee, Malatya, Turkey, 2007

The Spin-1 and Spin-3/2 Model on a Bilayer Bethe Lattice with Crystal Field, Attendee, Malatya, Turkey, 2007

The Crystal Field Effects for the Ising Bilayer System Consisting of Spin-3/2 and Spin-1/2 (POSTER), Attendee, Malatya, Turkey, 2007

The Crystal Field Effects on a Bilayer Bethe Lattice, Attendee, İstanbul, Turkey, 2006

The Critical Behaviors of the Mixed Spin-1 and Spin-2 Ising Ferromagnetic System on the Bethe lattice, Attendee, İstanbul, Turkey, 2006

The Exact Phase Diagrams Of Spin-3/2 Ising Model With Crystal-Field Interactions On A Bilayer Bethe Lattice, Attendee, İstanbul, Turkey, 2006

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Enine Alanın Varlığında Üç Kipli-Boyuna Rasgele Alanlı Kuantum Spin-2 Ising Modeli İçin Çift Yaklaşımı (POSTER), Attendee, Muğla, Turkey, 2005

The Quantum Transverse Spin-2 Ising Model with a Bimodal Random-Field in the Pair Approximation, Attendee, İstanbul, Turkey, 2005

Trimodal Random-Field Spin-3/2 Ising systems in a transverse field, Attendee, Bodrum, Turkey, 2004

Mixed Spin-1/2 and spin-1 Blume-Capel model on the Bethe Lattice using the recursion method, Attendee, İstanbul, Turkey, 2002

The Spin-3/2 Blume-Emery-Griffiths model on the Bethe Lattice using the recursion method, Attendee, İstanbul, Turkey, 2001

The Spin-3/2 Blume-Capel model on the Bethe Lattice using the recursion method, Attendee, İstanbul, Turkey, 2000

Phase diagram of the Blume-Emery-Griffiths model on the simple cubic lattice calculated by the linear chain approximation, Attendee, İstanbul, Turkey, 1999

Phase diagrams of the Blume-Emery-Griffiths model calculated by the mean-field approximation including the transverse fields effects, Attendee, İstanbul, Turkey, 1998

Coarse Grid Finite Difference Solution of Maxwell's Equations for a Model of An Avalanche Photodischarge Device (POSTER), Attendee, New England, United States Of America, 1997

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Scholarships

Turkish Ministry of Education Scholarship for the Ph. D. Degree in the USA., Ministry of Education, 1993 - Continues
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Awards

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ALBAYRAK E., Erciyes University Scientific Publication Honorary Reward, Erciyes Üniversitesi, September 2002