



## Personal Information

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## Education Information

Doctorate, Hacettepe University, Fen Bilimleri Enstitüsü, Fizik Mühendisliği Bölümü, Turkey 1996 - 2003

Undergraduate, Hacettepe University, Eğitim Fakültesi, Fizik Eğitimi Anabilimdalı, Turkey 1988 - 1993

## Research Areas

Physics, Natural Sciences

## Academic Titles / Tasks

Professor, Hacettepe University, Eğitim Fakültesi, Matematik Ve Fen Bilimleri Eğitimi, 2017 - Continues

## Jury Memberships

Appointment to Academic Staff-Professorship, profesörlük kadrosuna atama, Mersin üniversitesi, January, 2018

Associate Professor Exam, doçentlik yayın aşaması, yök doçentlik jürisi, November, 2016

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Three-dimensional eigenvalues of harmonic oscillator and Coulomb-type potentials from one-dimensional generalized Morse potential: perturbative analysis based on generalized Laguerre polynomials**  
Arda A.  
EUROPEAN PHYSICAL JOURNAL PLUS, vol.138, no.11, pp.1007, 2023 (SCI-Expanded)
- II. **Relativistic thermostatistical analysis for a combined potential within spatially dependent mass scheme**  
ARDA A., Sedehi H. R., Sever R.  
EUROPEAN PHYSICAL JOURNAL PLUS, vol.137, no.4, 2022 (SCI-Expanded)
- III. **Solutions of Pauli-Dirac equation in terms of Laguerre polynomials within perturbative scheme**  
ARDA A.

CANADIAN JOURNAL OF PHYSICS, vol.99, no.9, pp.778-782, 2021 (SCI-Expanded)

- IV. **Thermodynamic properties of a charged particle in non-uniform magnetic field**  
Rastegar Sedehi H. R., ARDA A., Sever R.  
OPTICAL AND QUANTUM ELECTRONICS, vol.53, no.3, 2021 (SCI-Expanded)
- V. **Bound-state solutions of the Dirac equation for the Kratzer potential with pseudoscalar-Coulomb term**  
Arda A., Sever R.  
EUROPEAN PHYSICAL JOURNAL PLUS, vol.134, no.1, 2019 (SCI-Expanded)
- VI. **Analytical solution of two-body spinless Salpeter equation for Hellmann potential**  
Arda A.  
INDIAN JOURNAL OF PHYSICS, vol.91, no.8, pp.903-907, 2017 (SCI-Expanded)
- VII. **Feinberg- Horodecki Equation with Pöschl-Teller Potential: Space-like Coherent States**  
Arda A., Sever R.  
ZEITSCHRIFT FÜR NATURFORSCHUNG SECTION A-A JOURNAL OF PHYSICAL SCIENCES, vol.72, no.6, pp.541-545, 2017 (SCI-Expanded)
- VIII. **Klein-Gordon equation for a charged particle in space-varying electromagnetic fields-A systematic study via the Laplace transform**  
DAS T., Arda A.  
CHINESE JOURNAL OF PHYSICS, vol.55, no.2, pp.310-317, 2017 (SCI-Expanded)
- IX. **Thermodynamic quantities for the Klein-Gordon equation with a linear plus inverse-linear potential: Biconfluent Heun functions**  
Arda A., Tezcan C., Sever R.  
PRAMANA-JOURNAL OF PHYSICS, vol.88, no.2, 2017 (SCI-Expanded)
- X. **Solution of Effective-Mass Dirac Equation with Scalar-Vector and Pseudoscalar Terms for Generalized Hulthén Potential**  
Arda A.  
ADVANCES IN HIGH ENERGY PHYSICS, 2017 (SCI-Expanded)
- XI. **Exact Solutions of Effective-Mass Dirac-Pauli Equation with an Electromagnetic Field**  
Arda A., Sever R.  
FEW-BODY SYSTEMS, vol.58, no.1, 2017 (SCI-Expanded)
- XII. **Schrodinger equation with a non-central potential: Some statistical quantities**  
Arda A., Tezcan C., Sever R.  
EUROPEAN PHYSICAL JOURNAL PLUS, vol.131, no.9, 2016 (SCI-Expanded)
- XIII. **Klein-Gordon and Dirac Equations with Thermodynamic Quantities**  
Arda A., Tezcan C., Sever R.  
FEW-BODY SYSTEMS, vol.57, no.2, pp.93-101, 2016 (SCI-Expanded)
- XIV. **Effective Mass Quantum Systems with Displacement Operator: Inverse Square Plus Coulomb-Like Potential**  
Arda A., Sever R.  
FEW-BODY SYSTEMS, vol.56, no.10, pp.697-702, 2015 (SCI-Expanded)
- XV. **Approximate Solutions of Dirac Equation with Hyperbolic-Type Potential**  
Arda A., Sever R.  
COMMUNICATIONS IN THEORETICAL PHYSICS, vol.64, no.3, pp.269-273, 2015 (SCI-Expanded)
- XVI. **Exact Analytical Solution of the N-Dimensional Radial Schrodinger Equation with Pseudoharmonic Potential via Laplace Transform Approach**  
DAS T., Arda A.  
ADVANCES IN HIGH ENERGY PHYSICS, 2015 (SCI-Expanded)
- XVII. **PT-/non-PT-symmetric and non-Hermitian Hellmann potential: approximate bound and scattering states with any l-values**  
Arda A., Sever R.  
PHYSICA SCRIPTA, vol.89, no.10, 2014 (SCI-Expanded)

- XVIII. **Step-up and Step-down Operators of a Two-Term Molecular Potential Via Nikiforov-Uvarov Method**  
Arda A., Sever R.  
FEW-BODY SYSTEMS, vol.55, no.4, pp.265-271, 2014 (SCI-Expanded)
- XIX. **Pseudospin and Spin Symmetric Solutions of the Dirac Equation: Hellmann Potential, Wei-Hua Potential, Varshni Potential**  
Arda A., Sever R.  
ZEITSCHRIFT FUR NATURFORSCHUNG SECTION A-A JOURNAL OF PHYSICAL SCIENCES, vol.69, pp.163-172, 2014 (SCI-Expanded)
- XX. **Approximate Analytical Solutions of the Dirac Equation for Yukawa Potential Plus Tensor Interaction with Any kappa-Value**  
Arda A., Sever R.  
FEW-BODY SYSTEMS, vol.54, no.11, pp.1829-1837, 2013 (SCI-Expanded)
- XXI. **Scattering of a spinless particle by an asymmetric Hulthen potential within the effective mass formalism**  
Aydogdu O., Arda A., Sever R.  
JOURNAL OF MATHEMATICAL PHYSICS, vol.53, no.10, 2012 (SCI-Expanded)
- XXII. **EXACT SPIN AND PSEUDO-SPIN SYMMETRIC SOLUTIONS OF THE DIRAC-KRATZER PROBLEM WITH A TENSOR POTENTIAL VIA LAPLACE TRANSFORM APPROACH**  
Arda A., Sever R.  
MODERN PHYSICS LETTERS A, vol.27, no.30, 2012 (SCI-Expanded)
- XXIII. **Approximate analytical solutions of a two-term diatomic molecular potential with centrifugal barrier**  
Arda A., Sever R.  
JOURNAL OF MATHEMATICAL CHEMISTRY, vol.50, no.7, pp.1920-1930, 2012 (SCI-Expanded)
- XXIV. **Exact Solutions of the Morse-like Potential, Step-Up and Step-Down Operators via Laplace Transform Approach**  
Arda A., Sever R.  
COMMUNICATIONS IN THEORETICAL PHYSICS, vol.58, no.1, pp.27-30, 2012 (SCI-Expanded)
- XXV. **Non-central potentials, exact solutions and Laplace transform approach**  
Arda A., Sever R.  
JOURNAL OF MATHEMATICAL CHEMISTRY, vol.50, no.6, pp.1484-1494, 2012 (SCI-Expanded)
- XXVI. **Effective-mass Dirac equation for Woods-Saxon potential: Scattering, bound states, and resonances**  
Aydogdu O., Arda A., Sever R.  
JOURNAL OF MATHEMATICAL PHYSICS, vol.53, no.4, 2012 (SCI-Expanded)
- XXVII. **Exact solutions of the Schrodinger equation via Laplace transform approach: pseudoharmonic potential and Mie-type potentials**  
Arda A., Sever R.  
JOURNAL OF MATHEMATICAL CHEMISTRY, vol.50, no.4, pp.971-980, 2012 (SCI-Expanded)
- XXVIII. **Effective-mass Klein-Gordon-Yukawa problem for bound and scattering states**  
Arda A., Sever R.  
JOURNAL OF MATHEMATICAL PHYSICS, vol.52, no.9, 2011 (SCI-Expanded)
- XXIX. **Scattering and bound state solutions of the asymmetric Hulthen potential**  
Arda A., Aydogdu O., Sever R.  
PHYSICA SCRIPTA, vol.84, no.2, 2011 (SCI-Expanded)
- XXX. **Bound State Solutions of Schrodinger Equation for Generalized Morse Potential with Position-Dependent Mass**  
Arda A., Sever R.  
COMMUNICATIONS IN THEORETICAL PHYSICS, vol.56, no.1, pp.51-54, 2011 (SCI-Expanded)
- XXXI. **Effective-mass Klein-Gordon equation for non-PT/non-Hermitian generalized Morse potential**  
Arda A., Sever R.  
PHYSICA SCRIPTA, vol.82, no.6, 2010 (SCI-Expanded)
- XXXII. **Scattering of the Woods-Saxon potential in the Schrodinger equation**

- Arda A., Aydogdu O., Sever R.  
JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL, vol.43, no.42, 2010 (SCI-Expanded)
- XXXIII. **Approximate analytical solutions of the effective mass Dirac equation for the generalized Hulthén potential with any kappa-value**  
Arda A., Sever R., Tezcan C.  
CENTRAL EUROPEAN JOURNAL OF PHYSICS, vol.8, no.5, pp.843-849, 2010 (SCI-Expanded)
- XXXIV. **New exact solution of the one-dimensional Dirac equation for the Woods-Saxon potential within the effective mass case**  
PANELLA O., BIONDINI S., Arda A.  
JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL, vol.43, no.32, 2010 (SCI-Expanded)
- XXXV. **Effective Mass Schrodinger Equation via Point Canonical Transformation**  
Arda A., Sever R.  
CHINESE PHYSICS LETTERS, vol.27, no.7, 2010 (SCI-Expanded)
- XXXVI. **Effective Mass Dirac-Morse Problem with any kappa-value**  
Arda A., Sever R., Tezcan C., Akcay H.  
CHINESE PHYSICS LETTERS, vol.27, no.4, 2010 (SCI-Expanded)
- XXXVII. **Approximate Pseudospin and Spin Solutions of the Dirac Equation for a Class of Exponential Potentials**  
Arda A., Sever R., Tezcan C.  
CHINESE JOURNAL OF PHYSICS, vol.48, no.1, pp.27-37, 2010 (SCI-Expanded)
- XXXVIII. **Analytical Solutions to the Klein-Gordon Equation with Position-Dependent Mass for q-Parameter Poschl-Teller Potential**  
Arda A., Sever R., Tezcan C.  
CHINESE PHYSICS LETTERS, vol.27, no.1, 2010 (SCI-Expanded)
- XXXIX. **Approximate analytical solutions of the pseudospin symmetric Dirac equation for exponential-type potentials**  
Arda A., Sever R., Tezcan C.  
ANNALEN DER PHYSIK, vol.18, pp.736-746, 2009 (SCI-Expanded)
- XL. **Exact Solutions of Effective Mass Dirac Equation with Non-PT-Symmetric and Non-Hermitian Exponential-type Potentials**  
Arda A., Sever R.  
CHINESE PHYSICS LETTERS, vol.26, no.9, 2009 (SCI-Expanded)
- XLI. **APPROXIMATE I-STATE SOLUTIONS TO THE KLEIN-GORDON EQUATION FOR MODIFIED WOODS-SAXON POTENTIAL WITH POSITION DEPENDENT MASS**  
Arda A., Sever R.  
INTERNATIONAL JOURNAL OF MODERN PHYSICS A, vol.24, pp.3985-3994, 2009 (SCI-Expanded)
- XLII. **APPROXIMATE I-STATE SOLUTIONS OF A SPIN-0 PARTICLE FOR WOODS-SAXON POTENTIAL**  
Arda A., Sever R.  
INTERNATIONAL JOURNAL OF MODERN PHYSICS C, vol.20, no.4, pp.651-665, 2009 (SCI-Expanded)
- XLIII. **Approximate Solution of the Effective Mass Klein-Gordon Equation for the Hulthén Potential with Any Angular Momentum**  
Arda A., Sever R.  
INTERNATIONAL JOURNAL OF THEORETICAL PHYSICS, vol.48, no.4, pp.945-951, 2009 (SCI-Expanded)
- XLIV. **Approximate analytical solutions of the Klein-Gordon equation for the Hulthén potential with the position-dependent mass**  
Arda A., Sever R., Tezcan C.  
PHYSICA SCRIPTA, vol.79, no.1, 2009 (SCI-Expanded)
- XLV. **Bound states of the Klein-Gordon equation for Woods-Saxon potential with position dependent mass**  
Arda A., Sever R.  
INTERNATIONAL JOURNAL OF MODERN PHYSICS C, vol.19, no.5, pp.763-773, 2008 (SCI-Expanded)
- XLVI. **Quantum mechanical treatment of the problem of constraints in non-extensive formalism revisited**

- BAGCI G. B., Arda A., Sever R.  
MODERN PHYSICS LETTERS B, vol.21, no.16, pp.981-985, 2007 (SCI-Expanded)
- XLVII. **On the problem of constraints in nonextensive formalism: A quantum mechanical treatment**  
Bagci G. B., Arda A., Sever R.  
INTERNATIONAL JOURNAL OF MODERN PHYSICS B, vol.20, no.14, pp.2085-2092, 2006 (SCI-Expanded)
- XLVIII. **The forward-backward asymmetry in the  $B \rightarrow \pi l^{(+)}l^{(-)}$  decay**  
Arda A.  
MODERN PHYSICS LETTERS A, vol.20, no.38, pp.2925-2935, 2005 (SCI-Expanded)
- XLIX. **The Hypervirial Pade Summation Method Applied to the Anharmonic Oscillator**  
ARDA A.  
Turkish Journal of Physics, no.28, pp.223, 2004 (SCI-Expanded)
- L. **Sensitivity of the zero position of the forward-backward asymmetry to new physics effects in the  $B \rightarrow K^* \mu^{(+)} \mu^{(-)}$  decay**  
Arda A., BOZ M.  
PHYSICAL REVIEW D, vol.66, no.7, 2002 (SCI-Expanded)

### Articles Published in Other Journals

- I. **Non-Relativistic Phase Shifts via Laplace Transform Approach**  
ARDA A., DAS T.  
Bulgarian Journal of Physics, vol.44, pp.221-230, 2017 (Peer-Reviewed Journal)
- II. **Triangular quantum profiles: transmission probability and energy spectrum**  
Arda A.  
TURKISH JOURNAL OF PHYSICS, vol.41, no.1, pp.72-80, 2017 (ESCI)
- III. **The Zero Position of the Forward-Backward Asymmetry in the  $B \rightarrow K\ell^+\ell^-$  Decay with New Physics Effects**  
ARDA A.  
TURKISH JOURNAL OF PHYSICS, no.28, pp.349, 2004 (Scopus)

### Refereed Congress / Symposium Publications in Proceedings

- I. **Relativistic Approximate Solutions for a Two-Term Potential: Riemann-Type Equation**  
ARDA A.  
International Conference on Quantum Science and Applications (ICQSA), Eskişehir, Turkey, 25 - 27 May 2016, vol.766

### Other Publications

- I. **El-Kaşı'nın Mektubu ve Ord. Prof. Dr. Aydın Sayılı**  
Arda A.  
Other, pp.141-154, 2022
- II. **FIRINCI, DEĞİRMENCİ, MATEMATİKÇİ: George Green**  
Arda A.  
Other, pp.1, 2018

### Supported Projects

ARDA A., Project Supported by Higher Education Institutions, Schrödinger ve Feinberg-Horodecki Denklemlerinin Bazı

Potansiyel Alanları İçin Analitik Çözümleri, 2016 - 2017

## Scientific Refereeing

Modern Physics Letters A, SCI Journal, June 2018

Advances in High Energy physics, SCI Journal, June 2018

Modern Physics Letters A, SCI Journal, January 2018

Sri Lanken Journal of Physics, Other Indexed Journal, January 2018

CANADIAN JOURNAL OF PHYSICS, SCI Journal, July 2017

ZEITSCHRIFT FUR NATURFORSCHUNG SECTION A-A JOURNAL OF PHYSICAL SCIENCES, SCI Journal, May 2016

TURKISH JOURNAL OF PHYSICS, National Scientific Refreed Journal, July 2015

EUROPEAN PHYSICAL JOURNAL C, SCI Journal, November 2013

FOUNDATIONS OF PHYSICS, SCI Journal, June 2012

## Scientific Consultations

TÜBİTAK, Project Consultancy, Hacettepe University, Eğitim Fakültesi, Matematik ve Fen Bilimleri Eğitimi Bölümü, Turkey, 2022 - 2022

## Metrics

Publication: 56

Citation (WoS): 685

Citation (Scopus): 712

H-Index (WoS): 16

H-Index (Scopus): 16

## Congress and Symposium Activities

International Conference on Quantum Science and Applications, Attendee, Eskişehir, Turkey, 2016

The XXIst International Conference on Integrable Systems and Quantum Symmetries, Attendee, Praha, Czech Republic, 2013