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International Researcher IDs

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Publons / Web Of Science ResearcherID: D-4750-2015

ScopusID: 22133607000

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Education Information

Doctorate, Istanbul Technical University, Fen-Edebiyat Fakültesi, Fizik Mühendisliği Bölümü, Turkey 2002 - 2008

Postgraduate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Fizik Mühendisliği (YI) (Tezli), Turkey 1999 - 2002

Undergraduate, Istanbul Technical University, Fen-Edebiyat Fakültesi, Fizik Mühendisliği Bölümü, Turkey 1994 - 1999

Dissertations

Doctorate, A study of wave equations in five dimensional spacetimes with computational methods, İstanbul Teknik Üniversitesi, Fen-Edebiyat Fakültesi, Fizik Mühendisliği Bölümü, 2008

Postgraduate, Üç boyutlu anti-de sitter uzayında Einstein denklemlerinin skaler alan varlığında çözümleri, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Fizik Mühendisliği (YI) (Tezli), 2002

Research Areas

Basic Sciences, Physics, General Physics, Mathematical Methods in Physics, Basic Particles and Areas, General Theory of Particles and Fields

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Solutions of a charged scalar field in five-dimensional helicoid solution with electromagnetic field**
Birkandan T.
General Relativity and Gravitation, vol.55, no.8, 2023 (SCI-Expanded)
- II. **A massless scalar particle coupled to the Wahlquist metric**
Birkandan T., Hortaçsu M.
European Physical Journal C, vol.81, no.5, 2021 (SCI-Expanded)
- III. **Three-dimensional DKP oscillator in a curved Snyder space**
Hamil B., Merad M., Birkandan T.
International Journal of Modern Physics A, vol.36, 2021 (SCI-Expanded)
- IV. **Particle creation in the context of the emergent universe**

- Hamil B., Merad M., Birkandan T.
REVISTA MEXICANA DE FISICA, vol.67, no.2, pp.219-225, 2021 (SCI-Expanded)
- V. Effects of extended uncertainty principle on the relativistic Coulomb potential
Hamil B., Merad M., Birkandan T.
INTERNATIONAL JOURNAL OF MODERN PHYSICS A, vol.36, no.3, 2021 (SCI-Expanded)
- VI. Bound-state solutions of the two-dimensional Dirac equation with Aharonov-Bohm-Coulomb interaction in the presence of extended uncertainty principle
Hamil B., Merad M., Birkandan T.
PHYSICA SCRIPTA, vol.95, 2020 (SCI-Expanded)
- VII. The Duffin-Kemmer-Petiau oscillator in the presence of minimal uncertainty in momentum
Hamil B., Merad M., Birkandan T.
PHYSICA SCRIPTA, vol.95, 2020 (SCI-Expanded)
- VIII. The Effects of the Modified (Anti-)Snyder Model on the Thermodynamic Properties of an Ideal Gas
Hamil B., Merad M., Birkandan T.
INTERNATIONAL JOURNAL OF THERMOPHYSICS, vol.41, 2020 (SCI-Expanded)
- IX. Pair creation in curved Snyder space
Hamil B., Merad M., Birkandan T.
INTERNATIONAL JOURNAL OF MODERN PHYSICS A, vol.35, 2020 (SCI-Expanded)
- X. Relativistic oscillators in new type of the extended uncertainty principle
Merad A., Aouachria M., Merad M., Birkandan T.
INTERNATIONAL JOURNAL OF MODERN PHYSICS A, vol.34, no.32, 2019 (SCI-Expanded)
- XI. Applications of the extended uncertainty principle in AdS and dS spaces
Hamil B., Merad M., Birkandan T.
European Physical Journal Plus, vol.134, no.6, 2019 (SCI-Expanded)
- XII. Symbolic and numerical analysis in general relativity with open source computer algebra systems
Birkandan T., GÜZELGÜN C., ŞIRİN E., USLU M. C.
GENERAL RELATIVITY AND GRAVITATION, vol.51, no.1, 2019 (SCI-Expanded)
- XIII. The zero mass limit of Kerr and Kerr-(anti-)de-Sitter space-times: exact solutions and wormholes
Birkandan T., Hortacsu M.
GENERAL RELATIVITY AND GRAVITATION, vol.50, no.3, 2018 (SCI-Expanded)
- XIV. Singular inverse square potential in coordinate space with a minimal length
BOUAZIZ D., Birkandan T.
ANNALS OF PHYSICS, vol.387, pp.62-74, 2017 (SCI-Expanded)
- XV. Heun-type solutions for Schwarzschild metric with electromagnetic fields
Birkandan T., Hortacsu M.
EPL, vol.119, no.2, 2017 (SCI-Expanded)
- XVI. Energy-dependent harmonic oscillator in noncommutative space
BENCHIKHA A., MERAD M., Birkandan T.
MODERN PHYSICS LETTERS A, vol.32, no.20, 2017 (SCI-Expanded)
- XVII. Duffin-Kemmer-Petiau oscillator with Snyder-de Sitter algebra
FALEK M., MERAD M., Birkandan T.
JOURNAL OF MATHEMATICAL PHYSICS, vol.58, no.2, 2017 (SCI-Expanded)
- XVIII. Quantum field theory applications of heun type functions
Birkandan T., Hortaşsu M.
Reports on Mathematical Physics, vol.79, no.1, pp.81-87, 2017 (SCI-Expanded)
- XIX. An analysis of the wave equation for the U(1)(2) gauged supergravity black hole
Birkandan T., CVETIC M.
CLASSICAL AND QUANTUM GRAVITY, vol.32, no.8, 2015 (SCI-Expanded)
- XX. Wave equation for the Wu black hole
Birkandan T., CVETIC M.
JOURNAL OF HIGH ENERGY PHYSICS, no.9, 2014 (SCI-Expanded)

- XXI. **Addendum to: Conformal invariance and near-extreme rotating AdS black holes**
 Birkandan T., Cvetic M.
 PHYSICAL REVIEW D, vol.90, no.6, 2014 (SCI-Expanded)
- XXII. **Conformal invariance and near-extreme rotating AdS black holes**
 Birkandan T., Cvetic M.
 PHYSICAL REVIEW D, vol.84, no.4, 2011 (SCI-Expanded)
- XXIII. **A Newman-Penrose calculator for instanton metrics**
 Birkandan T.
 INTERNATIONAL JOURNAL OF MODERN PHYSICS C, vol.19, no.8, pp.1277-1290, 2008 (SCI-Expanded)
- XXIV. **Comment on "Dirac equation in the background of the Nutku helicoid metric" [J. Math. Phys. 48, 092301 (2007)]**
 Birkandan T., Hortacsu M.
 JOURNAL OF MATHEMATICAL PHYSICS, vol.49, no.5, 2008 (SCI-Expanded)
- XXV. **Dirac equation in the background of the Nutku helicoid metric**
 Birkandan T., HORTACSU M.
 JOURNAL OF MATHEMATICAL PHYSICS, vol.48, no.9, 2007 (SCI-Expanded)
- XXVI. **Examples of Heun and Mathieu functions as solutions of wave equations in curved spaces**
 Birkandan T., HORTACSU M.
 JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL, vol.40, no.5, pp.1105-1116, 2007 (SCI-Expanded)
- XXVII. **Three dimensional gravity in the presence of scalar fields**
 Birkandan T., HORTACSU M.
 GENERAL RELATIVITY AND GRAVITATION, vol.35, no.3, pp.457-466, 2003 (SCI-Expanded)

Articles Published in Other Journals

- I. **Symbolic Analysis of Second-order Ordinary Differential Equations with Polynomial Coefficients**
 BİRKANDAN T.
 Turkish Journal of Mathematics and Computer Science, vol.14, no.2, pp.281-291, 2022 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

- I. **Computations of general Heun functions from their integral series representations**
 Birkandan T., Giscard P. L., Tamar A.
 Days on Diffraction 2021, Sankt-Peterburg, Russia, 31 May - 04 June 2021, pp.12-18
- II. **Specific form of the wave equation for nonextremal black holes**
 BİRKANDAN T., CVETIC M.
 The Fourteenth Marcel Grossmann Meeting, University of Rome "La Sapienza", Italy, Italy, 12 - 18 July 2015
- III. **Physical problems admitting Heun-to-hypergeometric reduction**
 AYDINER P., Birkandan T.
 International Conference Days on Diffraction, St Petersburg, Russia, 25 - 29 May 2015, pp.27-32
- IV. **EXAMPLES OF HEUN AND MATHIEU FUNCTIONS AS SOLUTIONS OF WAVE EQUATIONS IN CURVED SPACES**
 Birkandan T., Hortacsu M.
 30th Spanish Relativity Conference, Tenerife, Spain, 10 - 14 September 2007, vol.30, pp.265-268

Supported Projects

Birkandan T., Project Supported by Higher Education Institutions, EKSTREMAL OLMAYAN KARA DELİKLERDE

DENKLEMİNİN ÖZEL DURUMU, 2015 - 2018

Birkandan T., Project Supported by Higher Education Institutions, Heun'dan Hipergeometriğe İndirgenme Durumlarını İçeren Fiziksel Problemler, 2015 - 2018

Birkandan T., Project Supported by Higher Education Institutions, Hesaplamalı Yöntemlerle genel Görellik ve Kuantum Alan Kuramı Uygulamaları, 2013 - 2015

Scientific Refereeing

Open Physics, SCI Journal, August 2017

Open Physics, SCI Journal, September 2016

Dokuz Eylül Üniversitesi Fen ve Mühendislik Dergisi, National Scientific Refreed Journal, August 2016

Open Physics, SCI Journal, November 2015

Advances in Mathematics, SCI Journal, June 2013

Central European Journal of Physics, SCI Journal, January 2012

Europhysics Letters (EPL), SCI Journal, November 2011

Journal of Mathematical Physics, SCI Journal, March 2008

Metrics

Publication: 32

Citation (WoS): 127

Citation (Scopus): 130

H-Index (WoS): 7

H-Index (Scopus): 7