

Prof. Emre Onur Kahya

Personal Information

Email: eokahya@itu.edu.tr

International Researcher IDs

ORCID: 0000-0003-2760-7091

ScopusID: 10638895200

Yoksis Researcher ID: 117407

Education Information

Postgraduate, Computer Science, Canada 2019 - 2020

Doctorate, University of Florida, Fizik, United States Of America 2002 - 2008

Postgraduate, Middle East Technical University, Faculty Of Arts And Sciences, Department Of Physics, Turkey 2000 - 2002

Undergraduate, Middle East Technical University, Faculty Of Arts And Sciences, Department Of Physics, Turkey 1996 - 2000

Foreign Languages

English

Dissertations

Postgraduate, Identifying Electrons with Deep Learning Methods, Université de Montreal, Computer Science, 2020

Doctorate, Quantum Gravitational Correction to Scalar Field Equations During Inflation, University of Florida, Fizik, 2008

Postgraduate, Higher dimensional metrics of colliding gravitational plane waves, Orta Doğu Teknik Üniversitesi, Fen-Edebiyat Fakültesi, Fizik Bölümü, 2002

Research Areas

Artificial Intelligence, Computer Learning and Pattern Recognition, Neural Networks, Physics, Basic Particles and Areas, General Theory of Particles and Fields, Natural Sciences

Academic Titles / Tasks

Professor, Istanbul Technical University, Fen-Edebiyat, Fizik Mühendisliği, 2018 - Continues

Associate Professor, Istanbul Technical University, Fizik Mühendisliği Bölümü, 2012 - 2018

Lecturer PhD, Istanbul Technical University, Fizik Mühendisliği Bölümü, 2012 - 2012

Lecturer PhD, Friedrich-Schiller-Universität Jena, Fizik, 2009 - 2012

Lecturer PhD, Koc University, Faculty Of Science, Department Of Physics, 2008 - 2009

Research Assistant, University of Florida, Department Of Physics, 2002 - 2008

Research Assistant, Middle East Technical University, Faculty Of Arts And Sciences, Department Of Physics, 2000 - 2002

Courses

Group Theory II, Doctorate, 2016 - 2017

Electromagnetic Theory, Undergraduate, 2016 - 2017

Group Theory I, Doctorate, 2015 - 2016

Cosmology II, Doctorate, 2013 - 2014

Cosmology I, Doctorate, 2012 - 2013

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **On the classification and feature relevance of multiband light curves**
Edeş Huyal F. K., Çataltepe Z., Kahya E. O.
Astronomical Journal, vol.161, no.4, 2021 (SCI-Expanded)
- II. **Superconformal generalizations of auxiliary vector modified polynomial $f(R)$ theories**
Boran S., Kahya E. O., Özdemir N., Özkan M., Zorba U.
JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS, vol.2020, no.4, 2020 (SCI-Expanded)
- III. **Constraints on differential Shapiro delay between neutrinos and photons from IceCube-170922A**
Boran S., Desai S., Kahya E. O.
EUROPEAN PHYSICAL JOURNAL C, vol.79, no.3, 2019 (SCI-Expanded)
- IV. **Loop corrections to primordial non-Gaussianity**
Boran S., Kahya E. O.
PHYSICAL REVIEW D, vol.97, no.4, 2018 (SCI-Expanded)
- V. **GW170817 falsifies dark matter emulators**
Boran S., Desai S., Kahya E. O., Woodard R. P.
PHYSICAL REVIEW D, vol.97, no.4, 2018 (SCI-Expanded)
- VI. **Galactic Shapiro delay to the Crab pulsar and limit on weak equivalence principle violation**
Desai S., Kahya E. O.
EUROPEAN PHYSICAL JOURNAL C, vol.78, no.2, 2018 (SCI-Expanded)
- VII. **One loop corrected conformally coupled scalar mode equations during inflation**
Boran S., Kahya E. O., Park S.
PHYSICAL REVIEW D, vol.96, no.10, 2017 (SCI-Expanded)
- VIII. **Quantum gravity corrections to the conformally coupled scalar self-mass-squared on de Sitter background. II. Kinetic conformal cross terms**
BORAN S., Kahya E. O., Park S.
PHYSICAL REVIEW D, vol.96, no.2, 2017 (SCI-Expanded)
- IX. **Broken scale invariance, alpha-attractors and vector impurity**
Akarsu Ö., BORAN S., Kahya E. O., Özdemir N., Özkan M.
EUROPEAN PHYSICAL JOURNAL C, vol.77, no.5, 2017 (SCI-Expanded)
- X. **Constraints on frequency-dependent violations of Shapiro delay from GW150914**
Kahya E. O., DESAI S.
PHYSICS LETTERS B, vol.756, pp.265-267, 2016 (SCI-Expanded)
- XI. **Galactic one-way Shapiro delay to PSR B1937+21**
Desai S., Kahya E. O.
MODERN PHYSICS LETTERS A, vol.31, no.13, 2016 (SCI-Expanded)
- XII. **Constructing an inflaton potential by mimicking modified Chaplygin gas**
Kahya E. O., POURHASSAN B., URAZ S.
PHYSICAL REVIEW D, vol.92, no.10, 2015 (SCI-Expanded)
- XIII. **The universe dominated by the extended Chaplygin gas**
Kahya E. O., POURHASSAN B.
MODERN PHYSICS LETTERS A, vol.30, no.13, 2015 (SCI-Expanded)

- XIV. **Higher order corrections of the extended Chaplygin gas cosmology with varying G and Lambda**
Kahya E. O., KHURSHUDYAN M., POURHASSAN B., MYRZAKULOV R., PASQUA A.
EUROPEAN PHYSICAL JOURNAL C, vol.75, no.2, 2015 (SCI-Expanded)
- XV. **Quantum gravity corrections to the conformally coupled scalar self-mass-squared on de Sitter background**
Boran S., Kahya E. O., PARK S.
PHYSICAL REVIEW D, vol.90, no.12, 2014 (SCI-Expanded)
- XVI. **Observational constraints on the extended Chaplygin gas inflation**
Kahya E. O., POURHASSAN B.
ASTROPHYSICS AND SPACE SCIENCE, vol.353, no.2, pp.677-682, 2014 (SCI-Expanded)
- XVII. **Interacting two-component fluid models with varying EoS parameter**
Khurshudyan M., POURHASSAN B., Kahya E. O.
INTERNATIONAL JOURNAL OF GEOMETRIC METHODS IN MODERN PHYSICS, vol.11, no.6, 2014 (SCI-Expanded)
- XVIII. **Extended Chaplygin gas model**
Pourhassan B., Kahya E. O.
RESULTS IN PHYSICS, vol.4, pp.101-102, 2014 (SCI-Expanded)
- XIX. **FRW Cosmology with the Extended Chaplygin Gas**
Pourhassan B., Kahya E. O.
ADVANCES IN HIGH ENERGY PHYSICS, 2014 (SCI-Expanded)
- XX. **Testing a Dilaton Gravity Model Using Nucleosynthesis**
Boran S., Kahya E. O.
ADVANCES IN HIGH ENERGY PHYSICS, 2014 (SCI-Expanded)
- XXI. **The coincidence limit of the graviton propagator in de Donder gauge on de Sitter background**
Kahya E. O., Miao S. P., WOODARD R. P.
JOURNAL OF MATHEMATICAL PHYSICS, vol.53, no.2, 2012 (SCI-Expanded)
- XXII. **A useful guide for gravitational wave observers to test modified gravity models**
Kahya E. O.
PHYSICS LETTERS B, vol.701, no.3, pp.291-295, 2011 (SCI-Expanded)
- XXIII. **The zeta-zeta correlator is time dependent**
Kahya E. O., Önemli V. K., Woodard R. P.
PHYSICS LETTERS B, vol.694, no.2, pp.101-107, 2010 (SCI-Expanded)
- XXIV. **Completely regular quantum stress tensor with $w < -1$**
Kahya E. O., Onemli V. K., Woodard R. P.
PHYSICAL REVIEW D, vol.81, no.2, 2010 (SCI-Expanded)
- XXV. **A decisive test to confirm or rule out the existence of dark matter emulators using gravitational wave observations**
Kahya E. O.
CLASSICAL AND QUANTUM GRAVITY, vol.25, no.18, 2008 (SCI-Expanded)
- XXVI. **Reduced time delay for gravitational waves with dark matter emulators**
Desai S., Kahya E. O., Woodard R. P.
PHYSICAL REVIEW D, vol.77, no.12, 2008 (SCI-Expanded)
- XXVII. **Scalar field equations from quantum gravity during inflation**
Kahya E. O., WOODARD R. P.
PHYSICAL REVIEW D, vol.77, no.8, 2008 (SCI-Expanded)
- XXVIII. **Quantum gravity corrections to the one loop scalar self-mass during inflation**
Kahya E. O., Woodard R. P.
PHYSICAL REVIEW D, vol.76, no.12, 2007 (SCI-Expanded)
- XXIX. **A generic test of modified gravity models which emulate dark matter**
Kahya E. O., WOODARD R. P.
PHYSICS LETTERS B, vol.652, pp.213-216, 2007 (SCI-Expanded)
- XXX. **Quantum stability of a $w < -1$ phase of cosmic acceleration**

- Kahya E. O., ONEMLI V. K.
PHYSICAL REVIEW D, vol.76, no.4, 2007 (SCI-Expanded)
- XXXI. **One loop corrected mode functions for scalar QED during inflation**
Kahya E. O., WOODARD R. P.
PHYSICAL REVIEW D, vol.74, no.8, 2006 (SCI-Expanded)
- XXXII. **Charged scalar self-mass during inflation**
Kahya E. O., WOODARD R.
PHYSICAL REVIEW D, vol.72, no.10, 2005 (SCI-Expanded)
- XXXIII. **Higher dimensional metrics of colliding gravitational plane waves**
Gurses M., Kahya E. O., KARASU A.
PHYSICAL REVIEW D, vol.66, no.2, 2002 (SCI-Expanded)

Supported Projects

Kahya E. O., Edeş Huyal F. K., Project Supported by Higher Education Institutions, Yapay Öğrenmede Optimizasyon Yöntemleri, 2019 - 2023

Kahya E. O., Project Supported by Higher Education Institutions, Quantum Effects on Conformally Coupled Scalars during Inflation, 2016 - 2018

Kahya E. O., Project Supported by Higher Education Institutions, İlk Non-Gaussianite'ye İlme Katkıları, 2016 - 2018

Kahya E. O., Horizon Europe Project, QFT&Cosmo, 2009 - 2012

Metrics

Publication: 40

Citation (WoS): 949

Citation (Scopus): 942

H-Index (WoS): 18

H-Index (Scopus): 18

Awards

Kahya E. O., Araştırma Teşvik Ödülü, Odtü Mustafa Parlar Vakfı, December 2017

Kahya E. O., TÜBİTAK Bilim Teşvik Ödülü, Tübitak, December 2016

Kahya E. O., Yılın Bilim İnsanı Ödülü, Bilim Kahramanları Derneği, June 2015

Kahya E. O., Üstün Başarılı Genç Bilim İnsanı Ödülü, Türkiye Bilimler Akademisi, May 2015

Kahya E. O., Best reviewer of the year, Elsevier, Astroparticle Physics, June 2010