

Prof.Dr. Özgür Akarsu

Kişisel Bilgiler

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Uluslararası Araştırmacı ID'leri

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Publons / Web Of Science ResearcherID: Q-2700-2015

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Eğitim Bilgileri

Post Doktora, Koç Üniversitesi, Fen Fakültesi, Fizik Bölümü, Türkiye 2010 - 2015

Doktora, Ege Üniversitesi, Fen Fakültesi, Astronomi ve Uzay Bilimleri, Türkiye 2005 - 2010

Yüksek Lisans, Ege Üniversitesi, Fen Fakültesi, Astronomi ve Uzay Bilimleri, Türkiye 2003 - 2005

Lisans, Ege Üniversitesi, Fen Fakültesi, Astronomi ve Uzay Bilimleri, Türkiye 1998 - 2003

Araştırma Alanları

Fizik, Astronomi ve Astrofizik

Akademik Unvanlar / Görevler

Prof.Dr., İstanbul Teknik Üniversitesi, Fen-Edebiyat, Fizik Mühendisliği, 2023 - Devam Ediyor

Doç.Dr., İstanbul Teknik Üniversitesi, Fen-Edebiyat, Fizik Mühendisliği, 2015 - 2023

Araştırmacı, The Abdus Salam International Centre for Theoretical Physics, High Energy, Cosmology and Astroparticle Physics, 2019 - 2019

Araştırmacı, The Abdus Salam International Centre for Theoretical Physics, High Energy, Cosmology and Astroparticle Physics, 2016 - 2016

Araştırmacı, Koç Üniversitesi, Fen Fakültesi, Fizik Bölümü, 2010 - 2015

Araştırmacı, The Abdus Salam International Centre for Theoretical Physics, High Energy, Cosmology and Astroparticle Physics, 2014 - 2014

Araştırmacı, The Abdus Salam International Centre for Theoretical Physics, High Energy, Cosmology and Astroparticle Physics, 2012 - 2012

Araştırmacı, University of Cambridge, Centre For Mathematical Sciences, Department Of Applied Mathematics And Theoretical Physics, 2008 - 2009

Verdiği Dersler

Kozmoloji II, Doktora, 2021 - 2022, 2020 - 2021, 2018 - 2019

Kozmoloji I, Doktora, 2021 - 2022, 2020 - 2021, 2018 - 2019

Yönetilen Tezler

Akarsu Ö., A remedy for major cosmological tensions: Dark energy with an oscillating inertial mass density, Yüksek Lisans, C.KIBRIS(Öğrenci), 2022

Akarsu Ö., Testing Spatial Curvature and Anisotropic Expansion of the Universe on Top of the Lambda-CDM Model, Yüksek Lisans, M.ÖZYİĞİT(Öğrenci), 2022

Akarsu Ö., Rastall's theory of gravity extension of the standard Lambda-CDM model, Yüksek Lisans, B.ÖZTÜRK(Öğrenci), 2021

Turgut O. T., Akarsu Ö., Some new cosmological applications of the energy-momentum squared gravity, Doktora, N.MERVE(Öğrenci), 2021

SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

I. Omnipotent dark energy: A phenomenological answer to the Hubble tension

Adil S. A., Akarsu Ö., Di Valentino E., Nunes R. C., Özülker E., Sen A. A., Specogna E.
Physical Review D, cilt.109, sa.2, 2024 (SCI-Expanded)

II. T2- inflation: Sourced by energy-momentum squared gravity

Mansoori S. A. H., Felegary F., Roshan M., Akarsu Ö., Sami M.
Physics of the Dark Universe, cilt.42, 2023 (SCI-Expanded)

III. Weak field and slow motion limits in energy-momentum powered gravity

Akarsu Ö., Çamlıbel A. K., Katırcı N., Semiz İ., Uzun N. M.
Physics of the Dark Universe, cilt.42, 2023 (SCI-Expanded)

IV. Model-independent reconstruction of the interacting dark energy kernel: Binned and Gaussian process

Escamilla L. A., Akarsu Ö., Di Valentino E., Vazquez J. A.
Journal of Cosmology and Astroparticle Physics, cilt.2023, sa.11, 2023 (SCI-Expanded)

V. Relativistic binary systems in scale-independent energy-momentum squared gravity

Akarsu Ö., Nazari E., Roshan M.
Monthly Notices of the Royal Astronomical Society, cilt.523, sa.4, ss.5452-5467, 2023 (SCI-Expanded)

VI. Relaxing cosmological tensions with a sign switching cosmological constant: Improved results with Planck, BAO, and Pantheon data

Akarsu Ö., Kumar S., Özülker E., Vazquez J. A., Yadav A.
Physical Review D, cilt.108, sa.2, 2023 (SCI-Expanded)

VII. Inevitable manifestation of wiggles in the expansion of the late Universe

Akarsu Ö., Colgáin E. Ó., Özülker E., Thakur S., Yin L.
Physical Review D, cilt.107, sa.12, 2023 (SCI-Expanded)

VIII. Cosmological models in scale-independent energy-momentum squared gravity

Akarsu Ö., Uzun N. M.
Physics of the Dark Universe, cilt.40, 2023 (SCI-Expanded)

IX. Testing spatial curvature and anisotropic expansion on top of the Λ CDM model

Akarsu Ö., Di Valentino E., Kumar S., Özyigit M., Sharma S.
Physics of the Dark Universe, cilt.39, 2023 (SCI-Expanded)

X. Cosmology intertwined: A review of the particle physics, astrophysics, and cosmology associated with the cosmological tensions and anomalies

Abdalla E., Abellán G. F., Aboubrahim A., Agnello A., Akarsu Ö., Akrami Y., Alestas G., Aloni D., Amendola L., Anchordoqui L. A., et al.

JOURNAL OF HIGH ENERGY ASTROPHYSICS, cilt.34, ss.49-211, 2022 (SCI-Expanded)

XI. Relaxing cosmological tensions with a sign switching cosmological constant

Akarsu Ö., Kumar S., Özülker E., Alberto Vazquez J.
PHYSICAL REVIEW D, cilt.104, sa.12, 2021 (SCI-Expanded)

XII. Snowmass2021-Letter of interest cosmology intertwined IV: The age of the universe and its curvature

- Di Valentino E., Anchordoqui L. A., Akarsu Ö., Ali-Haimoud Y., Amendola L., Arendse N., Asgari M., Ballardini M., Basilakos S., Battistelli E., et al.
ASTROPARTICLE PHYSICS, cilt.131, 2021 (SCI-Expanded)
- XIII. **Snowmass2021-Letter of interest cosmology intertwined I: Perspectives for the next decade**
 Di Valentino E., Anchordoqui L. A., Akarsu Ö., Ali-Haimoud Y., Amendola L., Arendse N., Asgari M., Ballardini M., Basilakos S., Battistelli E., et al.
ASTROPARTICLE PHYSICS, cilt.131, 2021 (SCI-Expanded)
- XIV. **Cosmology intertwined III: f sigma(8) and S-8**
 Di Valentino E., Anchordoqui L. A., Akarsu Ö., Ali-Haimoud Y., Amendola L., Arendse N., Asgari M., Ballardini M., Basilakos S., Battistelli E., et al.
ASTROPARTICLE PHYSICS, cilt.131, 2021 (SCI-Expanded)
- XV. **Snowmass2021-Letter of interest cosmology intertwined II: The hubble constant tension**
 Di Valentino E., Anchordoqui L. A., Akarsu Ö., Ali-Haimoud Y., Amendola L., Arendse N., Asgari M., Ballardini M., Basilakos S., Battistelli E., et al.
ASTROPARTICLE PHYSICS, cilt.131, 2021 (SCI-Expanded)
- XVI. **Simple-graduated dark energy and spatial curvature**
 Acquaviva G., Akarsu Ö., Katirci N., Vazquez J. A.
PHYSICAL REVIEW D, cilt.104, sa.2, 2021 (SCI-Expanded)
- XVII. **Screening anisotropy via energy-momentum squared gravity: Λ CDM model with hidden anisotropy**
 Akarsu Ö., Barrow J. D., Uzun N. M.
PHYSICAL REVIEW D, cilt.102, sa.12, 2020 (SCI-Expanded)
- XVIII. **Rastall gravity extension of the standard Lambda CDM model: theoretical features and observational constraints**
 Akarsu Ö., Katirci N., Kumar S., Nunes R. C., Öztürk B., Sharma S.
EUROPEAN PHYSICAL JOURNAL C, cilt.80, sa.11, 2020 (SCI-Expanded)
- XIX. **Graduated dark energy: Observational hints of a spontaneous sign switch in the cosmological constant**
 Akarsu Ö., Barrow J. D., Escamilla L. A., Alberto Vazquez J.
PHYSICAL REVIEW D, cilt.101, sa.6, 2020 (SCI-Expanded)
- XX. **Weak field limit of higher dimensional massive Brans-Dicke gravity: Observational constraints**
 Akarsu Ö., Chopovsky A., Shulga V., Yalçınkaya E., Zhuk A.
PHYSICAL REVIEW D, cilt.101, sa.2, 2020 (SCI-Expanded)
- XXI. **Anisotropic massive Brans-Dicke gravity extension of the standard Lambda CDM model**
 Akarsu Ö., Katirci N., Özdemir N., Vazquez J. A.
EUROPEAN PHYSICAL JOURNAL C, cilt.80, sa.1, 2020 (SCI-Expanded)
- XXII. **Screening Lambda in a new modified gravity model**
 Akarsu Ö., Barrow J. D., Board C. V. R., Uzun N. M., Vazquez J. A.
EUROPEAN PHYSICAL JOURNAL C, cilt.79, sa.10, 2019 (SCI-Expanded)
- XXIII. **Constraints on a Bianchi type I spacetime extension of the standard Lambda CDM model**
 Akarsu Ö., Kumar S., Sharma S., Tedesco L.
PHYSICAL REVIEW D, cilt.100, sa.2, 2019 (SCI-Expanded)
- XXIV. **Cosmological implications of scale-independent energy-momentum squared gravity: Pseudo nonminimal interactions in dark matter and relativistic relics**
 Akarsu Ö., Katirci N., KUMAR S., NUNES R. C., SAMI M.
PHYSICAL REVIEW D, cilt.98, sa.6, 2018 (SCI-Expanded)
- XXV. **Scalar perturbations in cosmological f (R) models: the cosmic screening approach**
 Akarsu Ö., BRILENKOV R., Eingorn M., SHULGA V., Zhuk A.
EUROPEAN PHYSICAL JOURNAL C, cilt.78, sa.8, 2018 (SCI-Expanded)
- XXVI. **Constraint on energy-momentum squared gravity from neutron stars and its cosmological implications**
 Akarsu Ö., Barrow J. D., Çıkıntıoğlu S., Ekşi K. Y., Katirci N.

- PHYSICAL REVIEW D, cilt.97, sa.12, 2018 (SCI-Expanded)
- XXVII. Black branes and black strings in the astrophysical and cosmological context**
 Akarsu Ö., CHOPOVSKY A., Zhuk A.
 PHYSICS LESSIONS B, cilt.778, ss.190-196, 2018 (SCI-Expanded)
- XXVIII. Brane world models with bulk perfect fluid and broken 4D Poincare invariance**
 Akarsu Ö., CHOPOVSKY A., Eingorn M., FAKHR S. H., Zhuk A.
 PHYSICAL REVIEW D, cilt.97, sa.4, 2018 (SCI-Expanded)
- XXIX. Cosmic acceleration in a dust only universe via energy-momentum powered gravity**
 Akarsu Ö., Katirci N., KUMAR S.
 PHYSICAL REVIEW D, cilt.97, sa.2, 2018 (SCI-Expanded)
- XXX. Anisotropic inflation with a non-minimally coupled electromagnetic field to gravity**
 Adak M., Akarsu Ö., Dereli T., Sert O.
 JOURNAL OF COSMOLOGY AND ATSTROPATICLE PHYSICS, sa.11, 2017 (SCI-Expanded)
- XXXI. Inflation and Late Time Acceleration Designed by Stueckelberg Massive Photon**
 Akarsu Ö., Arik M., Katirci N.
 FOUNDATIONS OF PHYSICS, cilt.47, sa.6, ss.769-796, 2017 (SCI-Expanded)
- XXXII. Broken scale invariance, alpha-attractors and vector impurity**
 Akarsu Ö., BORAN S., Kahya E. O., Özdemir N., Özkan M.
 EUROPEAN PHYSICAL JOURNAL C, cilt.77, sa.5, 2017 (SCI-Expanded)
- XXXIII. Accelerated expansion of the Universe in a higher dimensional modified gravity with Euler-Poincare terms**
 Akarsu O., Dereli T., Oflaz N.
 CLASSICAL AND QUANTUM GRAVITY, cilt.32, sa.21, 2015 (SCI-Expanded)
- XXXIV. Are dark energy models with variable EoS parameter w compatible with the late inhomogeneous Universe?**
 Akarsu O., BOUHMADI-LOPEZ M., BRILENKOV M., BRILENKOV R., Eingorn M., ZHUK A.
 JOURNAL OF COSMOLOGY AND ATSTROPATICLE PHYSICS, sa.7, 2015 (SCI-Expanded)
- XXXV. A divergence-free parametrization for dynamical dark energy**
 Akarsu O., Dereli T., VAZQUEZ J. A.
 JOURNAL OF COSMOLOGY AND ATSTROPATICLE PHYSICS, sa.6, 2015 (SCI-Expanded)
- XXXVI. General solution of a cosmological model induced from higher dimensions using a kinematical constraint**
 Akarsu O., Dereli T., Katirci N., Sheftel M. B.
 GENERAL RELATIVITY AND GRAVITATION, cilt.47, sa.5, 2015 (SCI-Expanded)
- XXXVII. Accelerated expansion of the universe a la the Stueckelberg mechanism**
 Akarsu O., Arik M., Katirci N., Kavuk M.
 JOURNAL OF COSMOLOGY AND ATSTROPATICLE PHYSICS, sa.7, 2014 (SCI-Expanded)
- XXXVIII. Probing kinematics and fate of the Universe with linearly time-varying deceleration parameter**
 Akarsu O., Dereli T., KUMAR S., XU L.
 EUROPEAN PHYSICAL JOURNAL PLUS, cilt.129, sa.2, 2014 (SCI-Expanded)
- XXXIX. Accelerating anisotropic cosmologies in Brans-Dicke gravity coupled to a mass-varying vector field**
 Akarsu O., Dereli T., Oflaz N.
 CLASSICAL AND QUANTUM GRAVITY, cilt.31, sa.4, 2014 (SCI-Expanded)
- XL. Cosmology with hybrid expansion law: scalar field reconstruction of cosmic history and observational constraints**
 Akarsu O., KUMAR S., MYRZAKULOV R., SAMI M., XU L.
 JOURNAL OF COSMOLOGY AND ATSTROPATICLE PHYSICS, sa.1, 2014 (SCI-Expanded)
- XLI. A four-dimensional lambda CDM-type cosmological model induced from higher dimensions using a kinematical constraint**
 Akarsu O., Dereli T.
 GENERAL RELATIVITY AND GRAVITATION, cilt.45, sa.6, ss.1211-1226, 2013 (SCI-Expanded)

- XLII. **The dynamical evolution of 3-space in a higher dimensional steady state universe**
 Akarsu O., Dereli T.
 GENERAL RELATIVITY AND GRAVITATION, cilt.45, sa.5, ss.959-986, 2013 (SCI-Expanded)
- XLIII. **Late time acceleration of the 3-space in a higher dimensional steady state universe in dilaton gravity**
 Akarsu O., Dereli T.
 JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS, sa.2, 2013 (SCI-Expanded)
- XLIV. **A Comparison of the LVDP and Lambda CDM Cosmological Models**
 Akarsu O., Dereli T.
 INTERNATIONAL JOURNAL OF THEORETICAL PHYSICS, cilt.51, sa.10, ss.2995-3000, 2012 (SCI-Expanded)
- XLV. **Bianchi type-II models in the presence of perfect fluid and anisotropic dark energy**
 KUMAR S., Akarsu O.
 EUROPEAN PHYSICAL JOURNAL PLUS, cilt.127, sa.6, 2012 (SCI-Expanded)
- XLVI. **Cosmological Models with Linearly Varying Deceleration Parameter**
 Akarsu O., Dereli T.
 INTERNATIONAL JOURNAL OF THEORETICAL PHYSICS, cilt.51, sa.2, ss.612-621, 2012 (SCI-Expanded)
- XLVII. **Some Anisotropic Universes in the Presence of Imperfect Fluid Coupling with Spatial Curvature**
 Akarsu O., Kilinc C. B.
 INTERNATIONAL JOURNAL OF THEORETICAL PHYSICS, cilt.50, sa.6, ss.1962-1977, 2011 (SCI-Expanded)
- XLVIII. **de Sitter expansion with anisotropic fluid in Bianchi type-I space-time**
 Akarsu O., Kilinc C. B.
 ASTROPHYSICS AND SPACE SCIENCE, cilt.326, sa.2, ss.315-322, 2010 (SCI-Expanded)
- XLIX. **Bianchi type III models with anisotropic dark energy**
 Akarsu O., Kilinc C. B.
 GENERAL RELATIVITY AND GRAVITATION, cilt.42, sa.4, ss.763-775, 2010 (SCI-Expanded)
- L. **LRS Bianchi type I models with anisotropic dark energy and constant deceleration parameter**
 Akarsu O., Kilinc C. B.
 GENERAL RELATIVITY AND GRAVITATION, cilt.42, sa.1, ss.119-140, 2010 (SCI-Expanded)

Düger Dergilerde Yayınlanan Makaleler

- I. **S₈ increases with effecti v e redshift in Λ CDM cosmology**
 Adil S., Akarsu Ö., Malekjani M., Colgáin E., Pourojaghi S., Sen A., Sheikh-Jabbari M.
 Monthly Notices of the Royal Astronomical Society: Letters, cilt.528, sa.1, 2024 (Scopus)

Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

- I. **ACDM cosmology with a quiescent anisotropy in a higher dimensional steady state universe**
 Akarsu Ö., Dereli T., Katirci N.
 A Life in Mathematical Physics: Conference in Honour of Tekin Dereli, DERELI-FS 2021, Virtual, Online, 26 - 28 Kasım 2021, cilt.2191

Metrikler

Yayın: 53
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 Atıf (Scopus): 2286
 H-İndeks (WoS): 20
 H-İndeks (Scopus): 20

Ödüller

Akarsu Ö., Üstün Başarılı Genç Bilim İnsanı (GEBİP) Ödülü, Türkiye Bilimler Akademisi (Tüba), Aralık 2018
Akarsu Ö., Bilim Akademisi Genç Bilim İnsanları (BAGEP) Ödülü, Bilim Akademisi, Nisan 2016