



# Assoc. Prof. Dr. Ali Övgün

*Curriculum Vitae (Sunday 23<sup>rd</sup> April, 2023)*

## PERSONAL DETAILS

*Birthdate*            March 22, 1988  
*Address*             AS246, Physics Department, EMU, Albert Einstein Street, 99628,  
Gazimagusa, Mersin 10 TURKEY  
*Mail*                 ali.ovgun@emu.edu.tr  
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**Google Scholar Profile**

**Publons Profile**

**Inspirehep Profile**

**arXiv Profile**

**Scopus Profile**

**Researchgate Profile**

## RESEARCH INTEREST

Theoretical Physics, Quantum Gravity, Modified Gravity Theories, Black holes, Wormholes, Gravitational lensing, Cosmology, Shadow cast, Gravitational waves, Quasinormal modes, Greybody factors, Hawking Radiation, Black hole chemistry, AdS/CFT correspondence, Holographic Superconductors, Entanglement, Complexity

## ACADEMIC EXPERIENCES

**Associate Professor** 2020-Now  
*Eastern Mediterranean University, Gazimagusa, TURKEY*

**Postdoctoral Fellows** 2017-2020  
*Instituto de Física, Pontificia Universidad Católica de Valparaíso (PUCV), CHILE*

**Research visitor** July/August  
2022  
*Prof. Durmus A. Demir, Sabanci University, Istanbul, TURKEY.*

**School of Prospects in Theoretical Physics 2018 From Qubits to Spacetime (PITP 2018)** July 2018  
*Institute for Advanced Study, 1 Einstein Drive, Princeton, USA.*

**Research visitor** April/May  
2018

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*Prof. Leonard Susskind, Stanford Institute for Theoretical Physics, Stanford University, Stanford, California 94305, USA.*

**Research visitor**

April 2018

*Prof. Douglas Singleton, Physics Department, California State University, Fresno, CA 93740, USA.*

**Research visitor**

Jan/Feb 2018

*Prof. Robert B. Mann, Department of Physics and Astronomy, University of Waterloo, Waterloo, Ontario, N2L 3G1, CANADA*

**Research visitor**

Jan/Feb 2018

*Perimeter Institute for Theoretical Physics, Waterloo, Ontario, N2L 2Y5, CANADA*

**Research visitor**

Oct/2017

*Theoretical Physics -The European Organization for Nuclear Research-CERN Theory Division, Geneva, SWITZERLAND*

**Research Assistant in Physics**

09/2011-  
07/2016

*Eastern Mediterranean University, Full-time,*

working alongside teachers to support learning activities, acting as a specialist assistant for particular subjects and leading classes under the direction of the teacher

## **EDUCATION**

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**BSc. Physics**

09/2006-  
07/2010

*Izmir Institute of Technology, TURKEY*

CGPA: 3.28/4.00 With honors degree and graduated from undergrad as the 2nd. best student.

Thesis title: Time in Quantum Tunneling.

Supervisor: Prof. Dr. Durmus A. Demir

**NExT PhD school visitor**

09/2010-  
06/2011

*University of Southampton, UNITED KINGDOM*

I took QFT, QFT2, Cosmology and GR courses.

**MSc. Physics**

09/2011-  
02/2013

*Eastern Mediterranean University,*

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CGPA:3.43/4.00, Thesis title: Dark Matter Modification of  $f(R)$  or Wimps Miracle  
Supervisor: Prof. Dr. Mustafa Halilsoy

### Ph.D. Physics

02/2013-  
06/2016

*Eastern Mediterranean University,*

CGPA:3.71/4.00 Thesis title: Studies on Thin-shells and Thin-shell Wormholes  
Supervisor:Prof. Dr. Mustafa Halilsoy

### High School

09/1999-  
07/2005

*19 Mayıs Turk Maarif Koleji, Girne,*

CGPA: 8.6/10 Majored in Science and Mathematics, with high honors

## SKILLS

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**Languages** Turkish (mother tongue)  
English (fluent) (YÖKDİL Exam: 92.50/100)  
Spanish (beginner)  
Russian (beginner)  
Italian (beginner)

**Software** MAPLE, L<sup>A</sup>T<sub>E</sub>X, PYTHON, LINUX, FORTRAN, MATHEMATICA  
XVS, RNPLETAL, EDCRGTC, RICCI, GRTENSOR, CADABRA, MAXIMA, xACT.

## INTERNATIONAL PROJECTS

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**CONICYT FONDECYT Postdoctorado Grant No. 3170035- CHILE** 2017-2020

*Information Extraction From Black Holes And Wormholes By Their Quasinormal-Modes, Greybodies And Hawking Radiations,*

*Sponsoring researcher and institution: Prof. Dr. Joel Saavedra  
Pontificia Universidad Catolica De Valparaiso, Chile.*

*Budget: 120,000 \$.*

## HONORS, AWARDS AND GRANTS

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1. 2005-2010 Scholarship from TRNC Ministry of National Education.
2. 2010 Scholarship for MSc EuroMasters in Physics from University of Southampton, UK.
3. 2010 Scholarship from AtoSim Erasmus Mundus Master of Science, EU.
4. 2010-2011 Scholarship from NExT PhD school, University of Southampton, UK.
5. 2011-2016 Research Assistantships, Eastern Mediterranean University.
6. 2014-2016 EMU IGSR Publication Awards.

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7. [2017-2020 Postdoctoral Fellowship, CONICYT-Chile through FONDECYT postdoctorado No. 3170035, Pontificia Universidad Catolica de Valparaiso, CHILE.](#)
  8. [WEBOFSCIENCE PUBLONS 2018 Peer Review Awards, USA.](#)
  9. [EMU 2018 Outstanding Publication Awards](#)
  10. [EMU 2018 Citation Awards](#)
  11. [WEBOFSCIENCE PUBLONS 2019 Top Peer Reviewer in Physics Awards, USA.](#)
  12. [IOP 2019 Outstanding Reviewer for Classical and Quantum Gravity](#)
  13. [EMU 2019 Citation Awards](#)
  14. [EMU 2019 Outstanding Publication Awards](#)
  15. [Among World's Top 2% Scientists – Stanford University 2019 Releases List](#)
  16. [Ranking of first 6000 academicians along with their major and scientific area of interests in Turkey based on H-index and citations, 2021 Scientists – Prof. Murat Alper](#)
  17. [Among World's Top 2% Scientists – Stanford University 2020 Releases List](#)
  18. [Working Group Membership of COST Action COST Action CA18108, Quantum gravity phenomenology in the multi-messenger approach \(QG-MM\)](#)
  19. [Among World's Top 2% Scientists – Stanford University 2021 Releases List](#)

## **SUPERVISORSHIPS**

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- PhD Supervisor: YASHMITHA KUMARAN  
[Weak Deflection Angle via Gauss-Bonnet Theorem](#), 2018-Now.
- MSc Supervisor: FLORA BABAYEVA  
[Shadow Cast of The Schwarzschild-like Black Holes](#), 2020-2022.
- MSc Supervisor: HAMZA SABER ZEBARI  
[Newtonian Cosmology](#), 2018-2020.
- MSc Supervisor: GABRIEL WIRDZELII JOSEPH  
[Cosmology with Varying Physical Constants](#), 2018-2020.
- MSc Co-Supervisor: HUSEYIN KARYAL  
[Geodesics of Black Holes in Bumblebee Gravity Theory](#), 2018-2020.

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- Msc Student: ILIM IRFAN CIMDIKER (SABANCI UNIVERSITY-TURKEY)  
[Black Hole Shadow in Symmergent Gravity](#), PHYSICS OF DARK UNIVERSE 2021. (Supervisor: Prof.Dr.Durmus Ali Demir)
  - BSc Student: CEREN H. BAYRAKTAR (IYTE-TURKEY)  
[Thermodynamics of regular black holes with cosmic strings](#), European Physical Journal - Plus 2018. (Supervisor: Prof.Dr.Durmus Ali Demir)
  - BSc Student: MERT OKYAY (MIAMI UNI.-USA)  
[Nonlinear electrodynamics effects on the black hole shadow, deflection angle, quasi-normal modes and greybody factors](#), Journal of Cosmology and Astroparticle Physics 2022.

## **SINGLE AUTHOR PAPERS**

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1. **Weak gravitational lensing of regular black holes with cosmic strings using the Gauss-Bonnet theorem**,  
[Physical Review D 99, 104075 \(2019\)](#),  
arXiv:1902.04411.
2. **Light deflection by Damour-Solodukhin wormholes and Gauss-Bonnet theorem**,  
[Physical Review D 98, 044033 \(2018\)](#),  
arXiv: 1805.06296.
3. **Black hole with confining electric potential in scalar-tensor description of regularized 4-dimensional Einstein-Gauss-Bonnet gravity**,  
[Physics Letters B 820, 136517 \(2021\)](#),  
arXiv:2105.05035.
4. **Inflation and Acceleration of the Universe by Nonlinear Magnetic Monopole Fields**,  
[The European Physical Journal C 77:105 \(2017\)](#),  
arXiv:1604.01837.
5. **Evolving topologically deformed wormholes supported in the dark matter halo**,  
[The European Physical Journal Plus 136: 987 \(2021\)](#),  
arXiv:1803.04256.
6. **Rotating Thin-Shell Wormhole**,  
[The European Physical Journal Plus 131: 389 \(2016\)](#),  
arXiv:1604.08477.
7. **Entangled Particles Tunneling From a Schwarzschild Black Hole immersed in an Electromagnetic Universe with GUP**,  
[International Journal of Theoretical Physics 55: 2919-2927 \(2016\)](#),  
arXiv:1508.04100.

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8. **P-V criticality of a specific black hole in  $f(R)$  gravity coupled with Yang-Mills field**,  
[Advances in High Energy Physics 2018, 8153721, \(2018\)](#),  
arXiv:1710.06795.
  9. **The Bekenstein-Hawking Corpuscular Cascading from the Backreacted Black Hole**,  
[Advances in High Energy Physics 2017, 1573904, \(2017\)](#),  
arXiv:1609.07804.
  10. **Deflection angle of photon through dark matter by black holes and wormholes using the Gauss-Bonnet theorem**,  
[Universe 5\(5\), 115 \(2019\) \(invited\): Special Issue "Gravitational Lensing and Optical Geometry: A Centennial Perspective"](#)  
arXiv:1806.05549.
  11. **Weak Deflection Angle of Black-bounce Traversable Wormholes Using Gauss-Bonnet Theorem in the Dark Matter Medium**,  
[Turkish Journal of Physics 44, 465-471 \(2020\) \(invited\)](#),  
arXiv:2011.04423.

## **JOURNALS EDITOR**

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1. Turkish Journal of Physics
2. Review Editor: Frontiers in Physics: Special Issue on Quasinormal Modes in Relativistic Stars and Black Holes
3. Review Editor: Frontiers in Physics: High-Energy and Astroparticle Physics
4. Guest Associate Editor: Frontiers in Physics: in Stellar and Solar Physics
5. Guest Editor: UNIVERSE: Special Issue "Recent Progress of Black Holes Physics"
6. Guest Editor: SYMMETRY: Special Issue "Recent Progress of Black Holes Physics"

## **SOME HIGH IMPACT JOURNALS REFEREED**

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My Web of Science Profile for complete list

1. Physical Review D
2. Classical and Quantum Gravity
3. Physics Letters B
4. The European Physical Journal C
5. Nuclear Physics B
6. Journal of Cosmology and Astroparticle Physics
7. Fortschritte der Physik- Progress of Physics

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8. Annals of physics
  9. Annalen der Physik
  10. The European Physical Journal Plus
  11. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences
  12. EPL (Europhysics Letters)
  13. Physics of the Dark Universe
  14. General Relativity and Gravitation
  15. International Journal of Geometric Methods in Modern Physics
  16. Canadian Journal of Physics

## **TUBITAK AND OTHER INTERNATIONAL PROJECTS REFEREED**

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- TUBITAK UPAG - Uluslararası Isbirliği Projeleri Arastırma Destek Grubu Projeleri
- TUBITAK 1001 - Bilimsel ve Teknolojik Araştırma Projelerini
- TUBITAK 1002 - Hızlı Destek Programı
- TUBITAK BİDEB 2021 Bilim İnsani Destekleme Programları Doktora Sonrası Arastirmacı Projeleri
- TUBITAK 2218- Yurt İci Doktora Sonrası Arastırma Burs Programı
- CHILE FONDECYT

## **TOTAL 133 PUBLICATIONS IN PEER REVIEWED JOURNALS**

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Sorted by Journal Name

### **PHYSICAL REVIEW D**

1. **Probing hairy black holes caused by gravitational decoupling using quasinormal modes and greybody bounds,**  
[Physical Review D \(2023\)](#),  
arXiv:2203.11551, Jointly with Yi Yang, Dong Liu, Zheng-Wen Long, Zhaoyi Xu.
2. **Finite-Distance Gravitational Deflection of Massive Particles by the Kerr-like Black Hole in the Bumblebee Gravity Model,**  
[Physical Review D 101, 024040 \(2020\)](#),  
arXiv:2001.02074, Jointly with Zonghai Li.

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3. **Effect of Non-Linear Electrodynamics on Weak Field Deflection Angle by Black Hole**,  
[Physical Review D 101, 103521 \(2020\)](#),  
arXiv:2005.09464, Jointly with Wajiha Javed and Ali Hamza.
  4. **Circular orbit of a particle and weak gravitational lensing**,  
[Physical Review D 101, 124058 \(2020\)](#),  
arXiv:2006.13047,  
Jointly with Li Zonghai and Zhang Guodong.
  5. **Exact traversable wormhole solution in bumblebee gravity**,  
[Physical Review D 99, 024042 \(2019\)](#),  
arXiv: 1804.09911, Jointly with Kimet Jusufi and Izzet Sakalli.
  6. **Effect of the Brane-Dicke coupling parameter on weak gravitational lensing by wormholes and naked singularities**,  
[Physical Review D 99, 084012 \(2019\)](#),  
arXiv: 1903.11657, Jointly with Wajiha Javed and Rimsha Babar.
  7. **Weak gravitational lensing of regular black holes with cosmic strings using the Gauss-Bonnet theorem**,  
[Physical Review D 99, 104075 \(2019\)](#),  
arXiv:1902.04411.
  8. **Effect of the hair on deflection angle by asymptotically flat black holes in Einstein-Maxwell-dilaton theory**,  
[Physical Review D 100, 044052, \(2019\)](#),  
arXiv:1908.05241, Jointly with Wajiha Javed and Jameela Abbas.
  9. **Effect of the dilaton field on deflection angle of massive photons by Black Holes in Einstein-Maxwell-Dilaton-Axion Theory**,  
[Physical Review D 100, 104032 \(2019\)](#),  
arXiv:1910.11697, Jointly with Wajiha Javed and Rimsha Babar.
  10. **Light deflection by Damour-Solodukhin wormholes and Gauss-Bonnet theorem**,  
[Physical Review D 98, 044033 \(2018\)](#),  
arXiv:1805.06296.
  11. **Holographic Thermodynamics of Accelerating Black Holes**,  
[Physical Review D 98, 104038 \(2018\)](#),  
arXiv:1805.02687, Jointly with Andres Anabalon, Michael Appels, Ruth Gregory, David Kubiznak, Robert B. Mann.
  12. **Gravitational Lensing by Rotating Wormholes**,  
[Physical Review D 97, 024042 \(2018\)](#),  
arXiv:1708.06725, Jointly with Kimet Jusufi.
  13. **Effect of the cosmological constant on the deflection angle by a rotating cosmic string**,  
[Physical Review D 97, 064030 \(2018\)](#),  
arXiv:1712.01771, Jointly with Kimet Jusufi.



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14. **Deflection of light by rotating regular black holes using the Gauss-Bonnet theorem**,  
[Physical Review D 97, 124024 \(2018\)](#),  
arXiv:1804.00643, Jointly with Kimet Jusufi, Joel Saavedra, Pablo A. Gonzalez and Yerko Vasquez.
  15. **Light Deflection by a Rotating Global Monopole Spacetime**,  
[Physical Review D 95, 104012 \(2017\)](#),  
arXiv:1702.05600, Jointly with Ayan Banerjee, Kimet Jusufi, and Marcus C. Werner.
  16. **Effect of Lorentz Symmetry Breaking on the Deflection of Light in a Cosmic String Spacetime**,  
[Physical Review D 96, 024040 \(2017\)](#),  
arXiv:1705.06197, Jointly with Kimet Jusufi and Izzet Sakalli.
  17. **Light Deflection by Charged Wormholes in Einstein-Maxwell-Dilaton Theory**,  
[Physical Review D 96, 084036 \(2017\)](#),  
arXiv:1707.01416, Jointly with Kimet Jusufi and Ayan Banerjee.
  18. **Relativistic Bose-Einstein condensates thin-shell wormholes**,  
[Physical Review D 96, 084022 \(2017\)](#),  
arXiv:1710.05886, Jointly with M. G. Richarte, I. G. Salako, J. P. Morais Graca and H. Moradpour.

## PHYSICS LETTERS B

1. **Effect of the magnetic charge on weak deflection angle and greybody bound of the black hole in Einstein-Gauss-Bonnet gravity**,  
[Physics Letters B 829, 137114 \(2022\)](#),  
arXiv:2204.07864, Jointly with Wajiha Javed and Muhammad Aqib.
2. **Black hole with confining electric potential in scalar-tensor description of regularized 4-dimensional Einstein-Gauss-Bonnet gravity**,  
[Physics Letters B 820, 136517 \(2021\)](#),  
arXiv:2105.05035.

## JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS

1. **Dehnen halo effect on a black hole in an ultra-faint dwarf galaxy**,  
[Journal of Cosmology and Astroparticle Physics 08, 056 \(2022\)](#),  
arXiv:2202.07404. Jointly with Pantig, C. Reggie.
2. **Nonlinear electrodynamics effects on the black hole shadow, deflection angle, quasinormal modes and greybody factors**,  
[Journal of Cosmology and Astroparticle Physics 01, 009 \(2022\)](#),  
arXiv:2108.07766. Jointly with Okyay, Mert.
3. **Inflation from a nonlinear magnetic monopole field nonminimally coupled to curvature**,  
[Journal of Cosmology and Astroparticle Physics 06, 003 \(2018\)](#),  
arXiv:1803.11358, Jointly with Giovanni Otalora, Joel Saavedra and Nelson Videla.

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4. **Shadow cast and deflection angle of Kerr-Newman-Kasuya spacetime,** [Journal of Cosmology and Astroparticle Physics 10, 041 \(2018\)](#), arXiv:1807.00388, Jointly with Izzet Sakalli and Joel Saavedra.

### CLASSICAL AND QUANTUM GRAVITY

1. **Matter-antimatter asymmetry induced by non-linear electrodynamics,** [Classical and Quantum Gravity 38 135019 \(2021\)](#), arXiv:2105.07695, Jointly with Hachemi, Benaoum.
2. **Testing Generalized Einstein-Cartan-Kibble-Sciama Gravity using Weak Deflection Angle and Shadow Cast,** [Classical and Quantum Gravity 37 225003 \(2020\)](#), arXiv:2005.00982, Jointly with Izzet Sakalli.

### FORTSCHRITTE DER PHYSIK - PROGRESS OF PHYSICS

1. **Black hole in quantum wave dark matter,** [Fortschritte der Physik - Progress of Physics 71, 2200164 \(2023\)](#), arXiv:2210.00523, Jointly with Reggie C. Pantig.
2. **Traversable wormholes in the extended teleparallel theory of gravity with matter coupling,** [Fortschritte der Physik - Progress of Physics 69, 2100048 \(2021\)](#), arXiv:2104.13760, Jointly with G. Mustafa, Mushtaq Ahmad, M. Farasat Shamir and Ibrar Hussain.

### ANNALEN DER PHYSIK

1. **Non-linear Electrodynamics in Blandford-Znajek Energy Extraction,** [Annalen der Physik \(2023\)](#), arXiv:2210.11162, Jointly with Amodio Carleo, Gaetano Lambiase.

### EUROPEAN PHYSICAL JOURNAL C

1. **Inflation Driven by Non-Linear Electrodynamics,** [The European Physical Journal C \(2023\)](#), arXiv:2206.13157, Jointly with H. B. Benaoum, Genly Leon, and H. Quevedo.
2. **Testing Symmergent gravity through the shadow image and weak field photon deflection by a rotating black hole using the M87\* and Sgr. A\* results,,** [The European Physical Journal C 83, 250 \(2023\)](#), arXiv:2208.02969, Jointly with Reggie Pantig and Durmus A. Demir.
3. **Shadow, lensing, quasinormal modes, greybody bounds and neutrino propagation by dyonic ModMax black holes,** [The European Physical Journal C 82, 1155 \(2022\)](#), arXiv:2208.06664, Jointly with Leonardo Mastrototaro, Gaetano Lambiase and Reggie C. Pantig.

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4. **Dark matter effect on the weak deflection angle by black holes at the center of Milky Way and M87 galaxies,**  
[The European Physical Journal C 82, 391 \(2022\)](#),  
arXiv:2201.03365. Jointly with Reggie C. Pantig.
  5. **Weak Gravitational Lensing in Dark Matter and Plasma Mediums for Wormhole-like Static Aether Solution,**  
[The European Physical Journal C 82, 1057 \(2022\)](#),  
arXiv:2212.00804, Jointly with Wajiha Javed, Sibgha Riaz and Reggie C. Pantig.
  6. **Motion and collision of particles near DST Black holes,**  
[The European Physical Journal C 79, 528 \(2019\)](#),  
arXiv:1811.08551, Jointly with P. A. Gonzalez, Marco Olivares, Joel Saavedra and Yerko Vasquez.
  7. **Deflection angle of photon from magnetized black hole and effect of nonlinear electrodynamics,**  
[The European Physical Journal C 79, 694 \(2019\)](#),  
arXiv:1908.09632, Jointly with Wajiha Javed and Jameela Abbas.
  8. **Falsifying cosmological models based on a non-linear electrodynamics,**  
[The European Physical Journal C 78, 462 \(2018\)](#),  
arXiv:1709.09794, Jointly with Genly Leon, Juan Magana and Kimet Jusufi.
  9. **Novel nonlinear electrodynamics black hole and related phenomena in the extended thermodynamics,**  
[The European Physical Journal C 78, 840 \(2018\)](#),  
arXiv:1807.10447, Jointly with Xiao-Mei Kuang and Bo Liu.
  10. **The Effect of the Gauss-Bonnet term to Hawking Radiation from arbitrary dimensional Black Brane,**  
[The European Physical Journal C 77, 613 \(2017\)](#), arXiv:1707.00169,  
Jointly with Xiao-Mei Kuang and Joel Saavedra.
  11. **Charged Thin-shell Gravastars in Noncommutative Geometry,**  
[The European Physical Journal C 77, 566 \(2017\)](#),  
arXiv:1704.00603, Jointly with Ayan Banerjee and Kimet Jusufi.
  12. **Inflation and Acceleration of the Universe by Nonlinear Magnetic Monopole Fields,**  
[The European Physical Journal C 77, 105 \(2017\)](#),  
arXiv:1604.01837.
  13. **Thin-shell wormholes from the regular Hayward black hole,**  
[The European Physical Journal C 74, 2796 \(2014\)](#),  
arXiv:1312.6665, Jointly with Mustafa Halilsoy and S.Habib Mazharimousavi.

## **ANNALS OF PHYSICS**

1. **Quasiperiodic oscillations, weak field lensing and shadow cast around black holes in Symmergent gravity,**

- 
- [Annals of Physics \(2023\)](#),  
arXiv:2206.06599, Jointly with Javlon Rayimbaev, Reggie C. Pantig, Ahmadjon Abdujabbarov and Durmus Demir.
2. **Testing dynamical torsion effects on the charged black hole's shadow, deflection angle and greybody with M87\* and Sgr A\* from EHT,**  
[Annals of Physics 448, 169197 \(2023\)](#),  
arXiv:2206.02161, Jointly with Reggie C. Pantig.
  3. **Strong gravitational lensing and shadow constraint from M87\* of slowly rotating Kerr-like black hole,**  
[Annals of Physics 447, 169147 \(2022\)](#),  
arXiv:2205.11003, Jointly with Xiao-Mei Kuang.
  4. **Schwarzschild-like black hole with a topological defect in bumblebee gravity,**  
[Annals of Physics 436, 168721 \(2022\)](#),  
arXiv:2012.02611, Jointly with Ibrahim Gullu.
  5. **Shadow and weak deflection angle of extended uncertainty principle black hole surrounded with dark matter,**  
[Annals of Physics 436, 168722 \(2022\)](#),  
arXiv:2104.04304, Jointly with Reggie C. Pantig, Paul K. Yu and Emmanuel T. Rodulfo.
  6. **Deriving Hawking Radiation via Gauss-Bonnet Theorem,**  
[Annals of Physics 413, 168071 \(2020\)](#),  
arXiv:1902.04465, Jointly with Izzet Sakalli.
  7. **Effect of the Quintessential Dark Energy on Weak Deflection Angle by Kerr-Newmann Black Hole,**  
[Annals of Physics 418, 168183 \(2020\)](#),  
arXiv:2007.16027, Jointly with Wajiha Javed and Jameela Abbas.
  8. **Weak Gravitational lensing by phantom black holes and phantom wormholes using the Gauss-Bonnet theorem.,**  
[Annals of Physics 406, 152-172 \(2019\)](#),  
arXiv:1806.03719, Jointly with Galin Gyulchev and Kimet Jusufi.
  9. **Weak gravitational lensing by Kerr-MOG Black Hole and Gauss-Bonnet theorem,**  
[Annals of Physics 411, 167978 \(2019\)](#),  
arXiv:1806.06453, Jointly with Izzet Sakalli and Joel Saavedra.
  10. **Quasinormal Modes and Greybody Factors of  $f(R)$  gravity minimally coupled to a cloud of strings in  $2 + 1$  Dimensions,**  
[Annals of Physics 395, 138-151 \(2018\)](#),  
arXiv:1801.02555, Jointly with Kimet Jusufi.
  11. **Gravitational Lensing Under the Effect of Weyl and Bumblebee Gravities: Applications of Gauss-Bonnet Theorem,**

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**Annals of Physics 399, 193-203 (2018)**

arXiv:1805.09431, Jointly with Kimet Jusufi and Izzet Sakalli.

## **GENERAL RELATIVITY AND GRAVITATION**

1. **Probing Effective Loop Quantum Gravity on Weak Gravitational Lensing, Hawking Radiation and Bounding Greybody Factor by Black Holes,** **General Relativity and Gravitation 54, 135 (2022),** arXiv:2210.17277, Jointly with Wajiha Javed and Mehak Atique.
2. **Quantum Tunneling and Quasinormal Modes in the Spacetime of Alcubierre Warp Drive,** **General Relativity and Gravitation 50, 10 (2018),** arXiv:1709.03923, Jointly with Kimet Jusufi and Izzet Sakalli.
3. **Hawking radiation and propagation of massive charged scalar field on a three-dimensional Godel black hole,** **General Relativity and Gravitation 50, 62 (2018),** arXiv:1711.01865. Jointly with Pablo A. Gonzalez, Joel Saavedra and Yerko Vasquez.
4. **Analytical Solutions in a Cosmic String Born-Infeld-dilaton Black Hole Geometry: Quasinormal Modes and Quantization,** **General Relativity and Gravitation 50, 125 (2018),** arXiv: 1803.10583, Jointly with Kimet Jusufi and Izzet Sakalli.
5. **Quantum Tunneling of Massive Spin-1 Particles From Non-stationary Metrics,** **General Relativity and Gravitation 48, 1 (2016),** arXiv:1507.01753, Jointly with Izzet Sakalli.

## **EPL**

1. **Hawking Radiation and Deflection of Light from Rindler Modified Schwarzschild Black Hole,** **EPL 118, 60006 (2017),** arXiv:1702.04636, Jointly with Izzet Sakalli.
2. **Uninformed Hawking Radiation,** **EPL 110, 10008 (2015),** arXiv:1409.5539, Jointly with Izzet Sakalli.

## **PHYSICS OF THE DARK UNIVERSE**

1. **Probing non-linear electrodynamics black hole with thin accretion disk, shadow, and deflection angle with M87\* and Sgr A\* from EHT,** **Physics of the Dark Universe (2023),** arXiv:2205.11072, Jointly with Akhil Uniyal and Reggie Pantig.
2. **Black Hole Shadow in Symmergent Gravity,** **Physics of the Dark Universe 34, 100900 (2021),** arXiv:2110.11904, Jointly with İrfan Çimdiker, Durmuş Demir.

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## THE EUROPEAN PHYSICAL JOURNAL PLUS

1. **4D scale-dependent Schwarzschild-AdS/dS black holes: Study of Shadow and weak deflection angle and Greybody bounding,**  
[The European Physical Journal Plus \(2023\)](#),  
arXiv:2206.02161, Jointly with Angel Rincon and Reggie C. Pantig.
2. **Weak deflection angle of Kazakov-Solodukhin black hole in plasma medium using Gauss-bonnet theorem and its greybody bonding,**  
[The European Physical Journal Plus 137, 148 \(2022\)](#),  
arXiv:2201.09879, Jointly with Wajiha Javed and Iqra Hussain.
3. **Epicyclic frequencies and stability of thin-shell around the traversable phantom wormholes in Rastall gravity,**  
[The European Physical Journal Plus 137, 61 \(2022\)](#),  
Jointly with F. Javed, G. Mustafa and M. Farasat Shamir.
4. **Evolving topologically deformed wormholes supported in the dark matter halo,**  
[The European Physical Journal Plus 136, 987 \(2021\)](#),  
arXiv:1803.04256.
5. **Weak Gravitational Lensing by Stringy Black Holes,**  
[The European Physical Journal Plus 135, 314 \(2020\)](#),  
arXiv:2004.00408, Jointly with Wajiha Javed, Muhammad Bilal Khadim and Jameela Abbas.
6. **Weak gravitational lensing by Bocharova-Bronnikov-Melnikov-Bekenstein black holes using Gauss-Bonnet theorem,**  
[The European Physical Journal Plus 135, 595 \(2020\)](#),  
arXiv:2007.14844,  
Jointly with Wajiha Javed and Muhammad Bilal Khadim.
7. **Gravitational lensing by wormholes supported by electromagnetic, scalar, and quantum effects,**  
[The European Physical Journal Plus 134, 428 \(2019\)](#),  
arXiv:1802.07680, Jointly with Kimet Jusufi, Izzet Sakalli and Ayan Banerjee.
8. **Tunneling of Massive Vector Particles from Types of BTZ-like Black Holes,**  
[The European Physical Journal Plus 134, 511 \(2019\)](#),  
arXiv: 1910.07949, Jointly with Wajiha Javed , Riasat Ali and Rimsha Babar.
9. **The Effect of GUP to Massive Vector and Scalar Particles Tunneling From a Warped DGP Gravity BH,**  
[The European Physical Journal Plus 132, 298 \(2017\)](#), arXiv:1703.08073,  
Jointly with Kimet Jusufi.
10. **Stability of Effective Thin-shell Wormholes Under Lorentz Symmetry Breaking Supported by Dark Matter and Dark Energy,**  
[The European Physical Journal Plus 132, 543 \(2017\)](#), arXiv:1706.07656,  
Jointly with Kimet Jusufi.

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11. **Anisotropic stellar models admitting conformal motion,**  
[The European Physical Journal Plus 132, 150 \(2017\)](#),  
arXiv:1702.06825, Jointly with A. Banerjee, S. Banerjee, and S. Hansraj.
  12. **Black hole radiation of massive spin-2 particles in (3+1) dimensions,**  
[The European Physical Journal Plus 131, 184 \(2016\)](#),  
arXiv:1605.02689, Jointly with Izzet Sakalli.
  13. **Rotating Thin-Shell Wormhole,**  
[The European Physical Journal Plus 131, 389 \(2016\)](#),  
arXiv:1604.08477.
  14. **Massive vector particles tunneling from noncommutative charged black holes and their GUP-corrected thermodynamics,**  
[The European Physical Journal Plus 131, 177 \(2016\)](#),  
arXiv:1512.05268, Jointly with Kimet Jusufi.
  15. **Tunnelling of vector particles from Lorentzian wormholes in 3+1 dimensions,**  
[The European Physical Journal Plus 130, 110 \(2015\)](#),  
arXiv:1505.02093, Jointly with Izzet Sakalli.

## **INTERNATIONAL JOURNAL OF GEOMETRIC METHODS IN MODERN PHYSICS**

1. **Quasinormal Modes of Extended Gravity Black Holes Through Higher Order WKB Method,**  
[International Journal of Geometric Methods in Modern Physics \(2023\)](#),  
,  
Preprints 2020, 2020090669, Jointly with Abdul Jawad , Shahid Chaudhary , Muhammad Yasir , Izzet Sakalli.
2. **Weak Lensing, Hawking Radiation and Greybody Factor Bound by a Charged Black Holes with Nonlinear Electrodynamics Corrections,**  
[International Journal of Geometric Methods in Modern Physics 20, 03, 2350040 \(2023\)](#),  
Preprints 2022, 2022080354, Jointly with Wajiha Javed, Mehak Atique, and Reggie C. Pantig.
3. **Effects of Variable Equations of State on the Stability of Nonlinear Electrodynamics Thin-Shell Wormholes,**  
[International Journal of Geometric Methods in Modern Physics 20, 01, 2350010 \(2023\)](#),  
arXiv:2212.09607, Jointly with Faisal Javed, G. Fatima and G. Mustafa.
4. **Effect of Horndeski theory on weak deflection angle using the Gauss-Bonnet theorem,**  
[International Journal of Geometric Methods in Modern Physics 19, 12, 2250192 \(2022\)](#),  
Preprints 2020, 2020010074, Jointly with Yashmitha Kumara, Wajiha Javed and Jameela Abbas.

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5. **Weak deflection angle of light in two classes of black holes in non-linear electrodynamics via Gauss-Bonnet theorem,**  
[International Journal of Geometric Methods in Modern Physics 19, 06, 2250094 \(2022\)](#),  
arXiv:2008.06711, Jointly with Hasan El Moumni and Karima Masmar.
  6. **Quasinormal modes of dS and AdS Black Holes: Feedforward neural network method,**  
[International Journal of Geometric Methods in Modern Physics 18, 10, 2150154 \(2021\)](#),  
arXiv:1904.09509, Jointly with Izzet Sakalli, Halil Mutuk.
  7. **Weak Deflection Angle by Asymptotically Flat Black Holes in Horndeski Theory Using Gauss-Bonnet Theorem,**  
[International Journal of Geometric Methods in Modern Physics 18, 01, 2150003 \(2021\)](#),  
arXiv:2102.02812, Jointly with Wajiha Javed, Jameela Abbas, Yashmitha Kumaran.
  8. **PV criticality of AO black hole in the presence of higher order quantum and GUP corrections,**  
[International Journal of Geometric Methods in Modern Physics 17, 10, 2050156 \(2020\)](#),  
arXiv:1811.02193, Jointly with Behnam Pourhassan, and Izzet Sakalli.
  9. **Weak Gravitational Lensing by Einstein-Non-Linear-Maxwell-Yukawa Black Hole,**  
[International Journal of Geometric Methods in Modern Physics 17, 12, 2050182 \(2020\)](#),  
arXiv:2009.11082, Jointly with Wajiha Javed and Muhammad Bilal Khadim.
  10. **Light Deflection by Quantum Improved Kerr Black Holes Pierced by a Cosmic String,**  
[International Journal of Geometric Methods in Modern Physics 16, 08, 1950116 \(2019\)](#),  
arXiv:1707.02824, Jointly with Kimet Jusufi.
  11. **Gravitational Lensing Effect on the Hawking Radiation of Dyonic Black Holes,**  
[International Journal of Geometric Methods in Modern Physics 11, 1450074 \(2014\)](#),  
arXiv:1405.5392, Jointly with Izzet Sakalli and Seyedeh Fatemeh Mirekhtiary.

## RESULTS IN PHYSICS

1. **Thermodynamics and logarithmic corrections of symmergent black hole,**  
[Results in Physics 46, 106300 \(2023\)](#),  
Jointly with Riasat Ali, Rimsha Babar and Zunaira Akhtar.

## CHINESE PHYSICS C



- 
1. **Weak deflection angle and shadow cast by the charged-Kiselev black hole with cloud of strings in plasma,**  
[Chinese Physics C 47, 025102 \(2023\)](#),  
Jointly with Farruh Atamurotov, Ibrar Hussain and Ghulam Mustafa.
  2. **Shadows and gravitational weak lensing by the Schwarzschild black hole in the string cloud background with quintessential field,**  
[Chinese Physics C 46, 125107 \(2022\)](#),  
arXiv:2207.07608, Jointly with Ghulam Abbas, Farruh Atamurotov, Ibrar Hussain, Sanjar Shaymatov.
  3. **Tunneling of Massive Vector Particles under the Influence of Quantum Gravity,**  
[Chinese Physics C 44, 1, 015104 \(2020\)](#),  
arXiv:1909.02405, Jointly with Wajiha Javed, Riasat Ali, Rimsha Babar.
  4. **Weak Deflection Angle of Extended Uncertainty Principle Black Holes,**  
[Chinese Physics C 44, 2, 025101 \(2020\)](#),  
arXiv:1905.11710, Jointly with Yashmitha Kumaran.
  5. **Effect of null aether field on weak deflection angle of black holes,**  
[Chinese Physics C 44, 125105 \(2020\)](#),  
arXiv:1908.04261, Jointly with Izzet Sakalli and Joel Saavedra.
  6. **Quasinormal modes of Schwarzschild Black Hole Immersed In an Electromagnetic Universe,**  
[Chinese Physics C 42, 10, 105102 \(2018\)](#),  
arXiv:1708.08331, Jointly with Izzet Sakalli and Joel Saavedra.

## **INTERNATIONAL JOURNAL OF THEORETICAL PHYSICS**

1. **Eruptive Massive Vector Particles of 5-Dimensional Kerr Godel Space-time,**  
[International Journal of Theoretical Physics 57, 322 \(2018\)](#),  
arXiv:1705.00061, Jointly with Izzet Sakalli.
2. **Hawking radiation of scalar and vector particles from 5D Myers-Perry black holes,**  
[International Journal of Theoretical Physics 56, 1725 \(2017\)](#),  
arXiv:1610.07069, Jointly with Kimet Jusufi.
3. **Entangled Particles Tunneling From a Schwarzschild Black Hole immersed in an Electromagnetic Universe with GUP,**  
[International Journal of Theoretical Physics 55, 2919-2927 \(2016\)](#),  
arXiv:1508.04100.

## **ASTROPHYSICS AND SPACE SCIENCE**

1. **GUP Assisted Hawking Radiation of Rotating Acoustic Black Holes,**  
[Astrophysics and Space Science 361, 330 \(2016\)](#),  
arXiv:1602.04304, Jointly with Izzet Sakalli and Kimet Jusufi.

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2. **Tunneling of Massive Vector Particles From Rotating Charged Black Strings**,  
[Astrophysics and Space Science 361, 207 \(2016\)](#),  
arXiv:1512.08023, Jointly with Kimet Jusufi.
  3. **Existence of traversable wormholes in the spherical stellar systems**,  
[Astrophysics and Space Science 361, 214 \(2016\)](#),  
arXiv:1509.01237, Jointly with Mustafa Halilsoy.
  4. **Gravitinos Tunneling From Traversable Lorentzian Wormholes**,  
[Astrophysics and Space Science 359, 32 \(2015\)](#),  
arXiv:1506.00599, Jointly with Izzet Sakalli.

### **THE JOURNAL OF EXPERIMENTAL AND THEORETICAL PHYSICS**

1. **Hawking Radiation of Spin-1 Particles From Three Dimensional Rotating Hairy Black Hole**,  
[The Journal of Experimental and Theoretical Physics 121, 3, 404-407 \(2015\)](#),  
arXiv:1503.01316, Jointly with Izzet Sakalli.

### **JOURNAL OF ASTROPHYSICS AND ASTRONOMY**

1. **Hawking Radiation of Mass Generating Particles from Dyonic Reissner Nordstrom Black Hole**,  
[Journal of Astrophysics and Astronomy 37, 21 \(2016\)](#),  
arXiv:1601.04040, Jointly with Izzet Sakalli.

### **MODERN PHYSICS LETTERS A**

1. **Effect of the GUP on the Hawking Radiation of Black hole in 2+1 Dimensions with Quintessence and Charged BTZ-like**,  
[Modern Physics Letters A 35, 13, 2050104 \(2020\)](#),  
Preprints 2019, 201908, Jointly with Rimsha Babar and Wajiha Javed.
2. **Shadow cast of non-commutative black holes in Rastall gravity**,  
[Modern Physics Letters A 35, 20, 2050163 \(2020\)](#),  
arXiv:1906.05954, Jointly with Izzet Sakalli, Joel Saavedra and Carlos Leiva.
3. **Weak Deflection Angle by Casimir Wormhole Using Gauss-Bonnet Theorem and Its Shadow**,  
[Modern Physics Letters A 35, 39, 2050322 \(2020\)](#),  
arXiv:2101.04515, Jointly with Wajiha Javed and Ali Hamza.
4. **Hawking radiation from cubic and quartic black holes via tunneling of GUP corrected scalar and fermion particles**,  
[Modern Physics Letters A 34, 1950057 \(2019\)](#),  
arXiv: 1808.09795, Jointly with Wajiha Javed and Riasat Ali.
5. **Charged fermions tunneling from stationary axially symmetric black holes with generalized uncertainty principle**,  
[Modern Physics Letters A 33, 1, 1950184 \(2019\)](#),  
arXiv:1812.01983, Jointly with Muhammad Rizwan and Muhammad Zubair Ali.

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6. **Thin-Shell Wormholes in Neo-Newtonian theory**,  
[Modern Physics Letters A 32, 23, 1750119 \(2017\)](#),  
arXiv:1702.06823, Jointly with Ines Godonou Salako.
  7. **Canonical Acoustic Thin-Shell Wormholes**,  
[Modern Physics Letters A 32, 7 1750047 \(2017\)](#),  
arXiv:1612.03749, Jointly with Kimet Jusufi.

### CANADIAN JOURNAL OF PHYSICS

1. **Weak and Strong Warm Logamediate Anisotropic Inflationary Universe Model**,  
[Canadian Journal of Physics 98, \(11\), 1029-1038 \(2020\)](#),  
Preprints 2019, 2019060252, Jointly with Wajiha Javed, Iqra Nawazish and Mohsin Raza Khan.
2. **Formation of Wormholes by Dark Matter in the Galaxy Dragonfly 44**,  
[Canadian Journal of Physics 97, \(3\), 241-247 \(2019\)](#),  
arXiv:1806.01135,  
Jointly with Sayeedul Islam, Farook Rahaman and Mustafa Halilsoy.
3. **Particle Acceleration by Static Black Holes in a Model of  $f(R)$  Gravity**,  
[Canadian Journal of Physics 95, 11, 1037-1041 \(2017\)](#),  
arXiv:1507.00633, Jointly with Mustafa Halilsoy.

### THEORETICAL AND MATHEMATICAL PHYSICS

1. **On a Particular Thin-shell Wormhole**,  
[Theoretical and Mathematical Physics 190, 120 \(2017\)](#),  
arXiv:1507.03949, Jointly with Izzet Sakalli.

### INTERNATIONAL JOURNAL OF MODERN PHYSICS D

1. **Exploring Existence of Traversable Wormhole Solutions in the Presence of Some Corrected Casimir Energy Models**,  
[International Journal of Modern Physics D 31, 16, 2250114 \(2022\)](#),  
Jointly with A. Jawad, U. Rehman, S. Rani.

### ADVANCES IN HIGH ENERGY PHYSICS

1. **P-V criticality of a specific black hole in  $f(R)$  gravity coupled with Yang-Mills field**,  
[Advances in High Energy Physics 2018, 8153721 \(2018\)](#),  
arXiv:1710.06795.
2. **Tunneling of Glashow-Weinberg-Salam model particles from Black Hole Solutions in Rastall Theory**,  
[Advances in High Energy Physics 2018, 3131620 \(2018\)](#),  
arXiv:1710.06264, Jointly with Wajiha Javed and Riasat Ali.

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3. **The Bekenstein-Hawking Corpuscular Cascading from the Backreacted Black Hole,**  
[Advances in High Energy Physics 2017, 1573904 \(2017\),](#)  
arXiv:1609.07804.
  4. **Particle Collision near 1+1- Dimensional Horava-Lifshitz Black Hole and Naked Singularity,**  
[Advances in High Energy Physics 2017, 4383617, \(2017\),](#)  
arXiv:1504.03840, Jointly with Mustafa Halilsoy.
  5. **Tunneling of Massive/Massless Bosons From the Apparent Horizon of FRW Universe,**  
[Advances in High Energy Physics 2017, 8798657, \(2017\),](#)  
arXiv:1703.02372, Jointly with Kimet Jusufi and Gordana Apostolovska.
  6. **Stable Dyonic Thin-shell Wormholes in String Theory,**  
[Advances in High Energy Physics 2017, 1215254 \(2017\),](#)  
arXiv:1611.07501, Jointly with Kimet Jusufi.

## UNIVERSE

1. **Strong deflection gravitational lensing for the photons coupled to Weyl tensor in conformal gravity black hole,**  
[Universe \(2023\)\(invited\): Special Issue "Testing General Relativity from the Solar System, Black Holes to Cosmology" ,](#)  
Jointly with Ghulam Abbas, Asif Mahmood, Muhammad Zubair.
2. **Weak Deflection Angle and Greybody Bound of Magnetized Regular Black Hole,**  
[Universe 8, \(5\), 262 \( 2022\), \(invited\): Special Issue "Dark Matter and Dark Energy: Particle Physics, Cosmology, and Experimental Searches"](#)  
arXiv:2205.02229, Jointly with Wajiha Javed and Sibgha Riaz.
3. **Weak deflection angle by Kalb-Ramond Traversable Wormhole in Plasma and Dark Matter Mediums,**  
[Universe 8, \(11\), 599 \(2022\), \(invited\) : Special Issue "Elementary Particles in Astrophysics and Cosmology",](#)  
arXiv:2211.07009, Jointly with Wajiha Javed, Sibgha Riaz and Reggie C. Pantig.
4. **Weak Deflection angle and Shadow by Tidal Charged Black Hole,**  
[Universe 7, \(10\), 385 \(2021\), \(invited\)](#)  
arXiv:2110.11397, Jointly with Wajiha Javed and Ali Hamza.
5. **Deflection angle of photon through dark matter by black holes and wormholes using the Gauss-Bonnet theorem,**  
[Universe 5, \(5\), 115 \(2019\), \(invited\): Special Issue "Gravitational Lensing and Optical Geometry: A Centennial Perspective"](#)  
arXiv:1806.05549.

## SYMMETRY

- 
1. **Weak Deflection Angle, Hawking Radiation and Greybody Bound of Reissner-Nordström Black Hole Corrected by Bounce Parameter**, [Symmetry 15, \(1\), 148 \(2023\)](#), (invited): **Special Issue: Nature and Origin of Dark Matter and Dark Energy**, arXiv:2301.01855, Jointly with Wajiha Javed, Mehak Atique and Reggie Pantig.
  2. **Deflection angle and shadow of the Reissner-Nordström black hole with higher-order magnetic correction in Einstein-nonlinear-Maxwell fields**, [Symmetry 14, \(10\), 2054 \(2022\)](#), (invited): **Special Issue: Numerical Relativity and Gravitational Wave**, arXiv:2210.00468, Jointly with Yashmitha Kumara.

### **NEW ASTRONOMY**

1. **Bounding greybody and deflection angle of improved Schwarzschild black hole**, [New Astronomy 96, 101827 \(2022\)](#), Preprints 2021, 2021110273, Jointly with Wajiha Javed and Muhammad Aqib.

### **INDIAN JOURNAL OF PHYSICS**

1. **Cosmology with variable G and nonlinear electrodynamics**, [Indian Journal of Physics 96, 1861-1866 \(2022\)](#), arXiv:2104.11066, Jointly with Gabriel W. Joseph.

### **TURKISH JOURNAL OF PHYSICS**

1. **Weak Deflection Angle of Black-bounce Traversable Wormholes Using Gauss-Bonnet Theorem in the Dark Matter Medium**, [Turkish Journal of Physics 465-471 \(2020\)](#), (Invited Article) arXiv:2011.04423.
2. **Deriving Weak Deflection Angle by Black Holes or Wormholes using Gauss-Bonnet Theorem**, [Turkish Journal of Physics 45, 247-267 \(2021\)](#), (Invited Review), arXiv:2111.02805, Jointly with Yashmitha Kumaran.

### **Thesis**

1. Ph.D Thesis Studies on Thin-shells and Thin-shell Wormholes. arXiv:1610.08118.
2. M.Sc Thesis Dark Matter: Modification of  $f(R)$  or Wimps Miracle. arXiv:1301.5371.

## **TEACHING EXPERIENCE**

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Lecturer in Physics Department at Eastern Mediterranean University (as being a PhD student, Part-time Faculty Member and then Full-time Faculty Member ) for undergraduate/graduate students from a variety of different departments.

**PHYS101**

**2015-Now**

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*Physics I: Mechanics for scientists and engineers,*

**PHYS102**

2018-Now

*Physics II: Thermodynamics and Electromagnetism for scientists and engineers,*

**PHYS111**

2015-Now

*Principles of Physics for Pharmacy Department,*

**PHYS201**

2018-Now

*Physics III: Modern Physics for scientists and engineers,*

**FIZK101**

2015-Now

*Matematik Lisans Programı Fizik I: Mekanik, Elektromanyetizma,*

**FIZK102**

2015-Now

*Matematik Lisans Programı Fizik II: Termodinamik, Elektromanyetizma,*

**FIZK103**

2015-Now

*İnşaat Mühendisliği Lisans Programı (Türkçe) Bilgisayar Mühendisliği Lisans Programı (Türkçe) Fizik I: Mekanik,*

**FIZK104**

2015-Now

*İnşaat Mühendisliği Lisans Programı (Türkçe) Bilgisayar Mühendisliği Lisans Programı (Türkçe) Fizik II: Termodinamik, Elektromanyetizma,*

**FIZK105**

2015-Now

*Radyoterapi Önlisans Programı (Türkçe) Temel Fizik,*

**FIZK109**

2018-Now

*Fizyoterapi ve Rehabilitasyon Lisans Programı (Türkçe) Temel Fizik,*

**FIZK201**

2015-Now

*İlköğretim Matematik Öğretmenliği Lisans Programı (Türkçe) Fizik I: Mekanik,*

**FIZK202**

2015-Now

*İlköğretim Matematik Öğretmenliği Lisans Programı (Türkçe) Fizik II,*

**FIZK203**

2015-Now

*Sınıf Öğretmenliği Lisans Programı (Türkçe) Fizik I,*

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**FIZK205**

2015-Now

*Bilgisayar ve Öğretim Teknolojileri Öğretmenliği Lisans Programı (Türkçe) Fizik II,*

**PHYS324**

2022-Now

*Introduction to General Relativity,*

**PHYS503**

2016-Now

*Introduction to Cosmology,*

## **VOLUNTEER EXPERIENCES**

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- Head of IYTE Physics Society, (2007-2010).

## **PRESS/ MEDIA**

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1. **EMU NEWS:** Important Representation in the USA from EMU Physics Department Academic Staff Member Assoc. Prof. Dr. Ali Övgün.
2. **EMU NEWS:** EMU Physics Department Academic Staff Member Assoc. Prof. Dr. Ali Övgün Delivers a Speech in Bilkent University as an Invited Speaker.
3. **Space.com:** Is Time Travel Possible? Scientists Explore the Past and Future
4. **DISCOVERY NEWS:** Wormhole Wonders: Hunting Down Spacetime Shortcuts
5. **SPACE.COM:** Chasing Wormholes: The Hunt for Tunnels in Space-Time
6. **TUBITAK BILIM VE TEKNIS DERGISI (Kasım 2015):** Samanyolu Gokadasında Solucan Deliği Olasılığı.
7. **EMU NEWS:** Important Research Findings from EMU Physics Department Academic Staff Member and PhD Student.
8. **EMU NEWS:** EMU Physics Program PhD Student Publishes an Article on Hawking Radiation.
9. **EMU NEWS:** EMU Physics Department Academic Staff Members Sakalli and Ovgun's Article Becomes the Most Read Publication in Cyprus.
10. **EMU NEWS:** Important Accomplishment From EMU Department of Physics Academician.
11. **EMU NEWS:** EMU Graduate Dr. Ali Ovgun To Work at CERN
12. **KIBRIS GAZETESİ:** DAU Akademisyeninden Büyük Basarı.
13. **KIBRIS GAZETESİ:** DAU Öğretim Görevlisi Avrupa Fizik Dergisi'nde

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14. **KIBRIS GAZETESİ:** DAU Mezunu, CERN’de Calisacak
  15. **DAU HABER:** Dr. Ali Ovgun CERN’de Calisacak
  16. **China DWnews**
  17. **SecretChina**
  18. **EMU NEWS:** Huge Success from Department of Physics Academic Staff Member Assist. Prof. Dr. Ali Övgün 2018
  19. **EMU NEWS:** EMU Department of Physics Academic Staff Member Asst. Prof. Dr. Ali Övgün Receives Outstanding Reviewer Award 2019
  20. **DETAY KIBRIS:** Yrd. Doç. Dr. Ali Övgün’e IOP CQG dergisinden 2019 üstün hakem ödülü
  21. **EMU NEWS:** 12 EMU Academic Staff Members Listed Among the World’s Most Influential Scientists
  22. **DETAY KIBRIS:** Dünyanın En Etkili Bilim İnsanları Listesinde DAÜ Fen Ve Edebiyat Fakültesi’nden 5 Akademisyen Yer Aldı
  23. **EMU NEWS:** 14 Academics from EMU Appear in the World’s Most Influential Scientists List in Stanford University’s Study
  24. **KIBRIS GAZETESİ:** DAÜ’den 14 akademisyen ‘Dünyanın En Etkili Bilim İnsanları’ listesinde yer aldı
  25. **YENİ ŞAFAK:** DAÜ’den 13 akademisyen Stanford Üniversitesi’nin araştırmasında dünyanın en etkili Bilim İnsanları listesinde yer aldı
  26. **KIBRIS POSTASI:** DAÜ Fizik Bölümü Akademisyenleri, Nobellerin Toplantısı’nda oturum başkanlığı yaptı
  27. **EMU NEWS:** EMU Physics Department Academic Staff Member Assoc. Prof Dr. Ali Övgün to Conduct Research on Black Holes with the World’s Leading Scientists
  28. **DAÜ HABER:** DAÜ Fizik Bölümü Öğretim Üyesi Doç. Dr. Ali Övgün Dünyanın Önde Gelen Bilim İnsanlarıyla Karadelik Araştırmaları Yapacak
  29. **DAÜ HABER:** Doğu Akdeniz Üniversitesi’nden 14 akademisyen “Dünyanın En Etkili Bilim İnsanları” listesinde yer aldı!
  30. **EMU NEWS:** 6 Academicians from EMU Faculty of Arts and Sciences Appear in Stanford University’s The World’s Most Influential Scientists List
  31. **DAÜ HABER:** DAÜ Fen ve Edebiyat Fakültesi’nden 6 Akademisyen Stanford Üniversitesi’nin Araştırmasında Dünyanın En Etkili Bilim İnsanları Listesinde Yer Aldı
  32. **ADVANCED SCIENCE NEWS:** Detecting ultralight dark matter particles using supermassive black holes



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## **CONFERENCES & SUMMER SCHOOLS**

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- 2007-May, Eskisehir/Turkey, UFOK-III (3rd National Student Conference of Turkish Physical Society).
- 2007-July, Karlsruhe/Germany, Conference & Summer School- SUSY07.
- 2007-August, Bodrum/Turkey, ISCBPU-V (5th International Student Conference of Balkan Physical Union).
- 2008-July, ICTP Trieste/Italy, Summer School-COSMOLOGY 08.
- 2008-September, Akyaka-Mugla/Turkey, ISSCSMB08 International Summer School and Conference on Standard Model and Beyond (organized by METU, TUBITAK and ICTP).
- 2009-June, METU Ankara/Turkey, UFOK-5 (5th National Student Conference of Turkish Physical Society).
- 2009-July, TUBITAK Feza Gursev Theoretical Physics Institute Istanbul/Turkey, IARS II. National Summer Student School on High Energy Physics (YEF09).
- 2009-July, TUBITAK Feza Gursev Theoretical Physics Institute Istanbul/Turkey, Lectures on Neutrino Mass and Grand Unified Theories by Goran Senjanovic (ICTP).
- 2009-August, Ambleside- Lancaster/UK, Linear Collider Physics School 2009.
- 2009-August, Akyaka-Mugla/Turkey, ISSCSMB09 International Summer School and Conference on Standard Model and Beyond(organized by METU, TUBITAK and ICTP).
- 2012-April, METU NCC, Workshop on Recent Developments in High Energy Physics.
- 2013-April, Koc University, Istanbul/Turkey, 12th Quantization, Dualities and Integrable Systems.
- 2013-May, METU NCC, Workshop on Recent Developments in High Energy Physics.
- 2014-April, Koc University, Istanbul/Turkey, 13th Quantization, Dualities and Integrable Systems.
- 2015-May, EMU Famagusta, 14th Quantization, Dualities and Integrable Systems.
- 2015-July, FIAS Frankfurt/Germany, 2nd Karl Schwarzschild Meeting on Gravitational Physics.
- 2017-November, Mini-courses on Black hole Chemistry, Prof. Robert Mann, PUCV, CHILE.
- 2017-November, Gravity at UCEN 2017: Black holes and Cosmology. Universidad Central de Chile, Santiago.

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- 2017-November, SCHOOL ON NUMERICAL METHODS IN GRAVITY AND HOLOGRAPHY by L.Lehrer, T.Andrade and S.Green. Universidad de Concepcion, Chile.
  - 2017-November/December, Sixth Meeting of CosmoConce 2017, Universidad del Bio-Bio, campus Concepcion, Chile.
  - From Qubits to Spacetime, Prospects in Theoretical Physics 2018, July 2018, Institute for Advanced Study, Princeton, USA.
  - 2019-January, 2. Yüksek Enerji Fiziği, Astrofizik ve Kozmoloji Çalıştayı 2019 (YEFAK2019), Istanbul University, TURKEY.
  - 2019-March, The 2nd Physics Days 2019, EMU Famagusta.
  - 2021 February, 4. Yüksek Enerji Fiziği, Astrofizik ve Kozmoloji Çalıştayı 2021 (YEFAK2021), Istanbul University, TURKEY.
  - 2021 March, Chairing of the session at International Webinar on Recent Developments in Cosmology and Modified Gravity (RDCM-2021), BITS-Pilani, INDIA.
  - 2021 March, Invited speaker at IUCSS Workshop on Gravitational Aspects of Lorentz Violation, Indiana University, Bloomington USA.
  - 2021 March, Speaker at Beyond Standard Model: From Theory to Experiment (BSM-2021), The Center for Fundamental Physics (CFP) at Zewail City of Science and Technology and Faculty of Engineering and Natural Sciences at Sabancı University.
  - 2021 May, Chairing of the session at Fourth Summer School and Workshop on the Lorentz- and CPT-violating Standard-Model Extension, Indiana University, Bloomington USA.
  - 2021 August, Chairing of the session at GRAVITEX 2021 Durban, KwaZulu-Natal, South Africa.
  - 2021 October, Chairing of the session at 27th International Conference of International Academy Physical Sciences on Advances in Relativity and Cosmology (PARC-2021).
  - 2022 May, Chairing of the session at Frontiers of Fundamental Physics FFP16 International Symposium.
  - 2022 May, Invited Career Day Speaker, Girne 19 Mayıs TMK, Cyprus.
  - 2022 July, Invited talk in the International Conference on Mathematical Sciences and its Applications (ICMSA-2022), India.
  - 2023 March, Chairing of the session at the Second IUCSS Workshop on Gravitational Aspects of Lorentz Violation, Indiana University, Bloomington USA.
  - 2023 March, Invited talk at the Second IUCSS Workshop on Gravitational Aspects of Lorentz Violation, Indiana University, Bloomington USA.
  - 2023 March, Invited talk at the Bilkent University, Applied Mathematics Department, Turkey.

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## TALKS

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- Can we spot modified gravity black holes? Invited talk in the Bilkent University, Applied Mathematics Department, Turkey 2023 March.
- Can We Spot The Black Holes in Lorentz-Symmetry-Breaking Theories? Invited talk in the Second IUCSS Workshop on Gravitational Aspects of Lorentz Violation, Indiana University, Bloomington USA, March 2023.
- Invited talk in the Sabanci University, Istanbul, Turkey 2022 July.
- Can We Spot The Black Holes in Modified Gravity Theories? Invited talk in the International Conference on Mathematical Sciences and its Applications (ICMSA-2022), India, 2022 July.
- Ağacın Gölgesinden, Karadeliğin Gölgesine, Ankara Üniversitesi Fizik Bölümü Pop Fizik Seminerleri May 26th, 15:30
- Testing Modified Gravity Theories Using Weak Deflection Angle and Black Hole Shadow, Virtual Friday Cosmology Seminar @ Szczecin Cosmology Group - May 20th, 13:30
- Weak field deflection angle by regular black holes with cosmic strings, Beyond Standard Model: From Theory to Experiment (BSM-2021), The Center for Fundamental Physics (CFP) at Zewail City of Science and Technology and Faculty of Engineering and Natural Sciences at Sabancı University, March 2021.
- Black Hole with Global Monopole and Wormhole Solutions in Bumblebee Gravity, IUCSS Workshop on Gravitational Aspects of Lorentz Violation, Indiana University, Bloomington USA, March 2021.
- Testing Modified Gravity Theories Using Weak Deflection Angle and Black Hole Shadow, RDCM-2021, BITS-Pilani, India, March 2021.
- Weak Deflection angle of Extended Uncertainty Principle Black holes, with my PhD Student Yashmitha Kumaran RDCM-2021, BITS-Pilani, India, March 2021.
- Zayıf Sapma Açısı ve Kara Delik Gölgesini Kullanarak Modifiye Yerçekim Teorilerini Test Etmek, YEFAK2021, Istanbul University, Turkey, February 2021.
- Light Deflection by Blackholes/Wormholes Using Gauss-Bonnet Theorem, The 2nd Physics Days 2019, EMU, Famagusta, March 2019.
- Weak gravitational lensing and Gibbons-Werner method, YEFAK2019, Istanbul University, Turkey, January 2019.
- Light Detection by Wormholes and Gibbons-Werner method, Department of Physics and Astronomy, University of Waterloo, Canada, 15 January 2018.
- Thin-shell Wormholes/Gravastars. Universidad del Bio-Bio, campus Concepcion, Chile. 2017-November/December. Sixth Meeting of CosmoConce 2017.
- Hidden gates in universe: Wormholes. Universidad Central de Chile, Santiago. November 2017, Gravity at UCEN 2017: Black holes and Cosmology,

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- Thin-shell Wormholes and Gravastars, Universidad de Valparaiso (UV), Chile, November 2017, Seminarios Astrofisicos.
  - Thin-shell Wormholes and Gravastars, Pontificia Universidad Catolica de Valparaiso (PUCV), Chile, September 2017, Seminario del grupo de Gravitacion, Cosmologia y Astrofisica.
  - Particle Collision near 1+1 Dimensional Horava-Lifshitz Black Holes, FIAS Frankfurt, Germany July 2015, Workshop KSM2015.
  - Particle Collision near 1+1 Dimensional Horava-Lifshitz Black Holes, EMU, May 2015, Workshop QDIS14.
  - Thin-shell wormholes from the regular Hayward black hole, Koc University Istanbul/Turkey, April 2014, Workshop QDIS13.
  - Thin-shell wormholes from the regular Hayward black hole, IYTE Izmir/Turkey, Jan 2014, Seminar.
  - Thin-shell wormholes from the regular Hayward black hole, EMU, Dec 2013, Seminar.
  - Dark Matter Modification of  $f(R)$  or Wimps Miracle, EMU, Jan 2013, Master Thesis Defense.
  - The Mystery of Mass, Eskisehir/Turkey, May 2007, 3rd National Conference of Physics Students (UFOK-3).
  - The Dark Side of the Cosmos, Izmir/Turkey, December 2008, IYTE Physics Society.
  - String Theory, METU Ankara/Turkey, June 2009 , 5th National Conference of Physics Students (UFOK-5).

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## REFERENCES

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