



Prof. Dr. Ali ÖVGÜN

Theoretical Physicist | Eastern Mediterranean University

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Google Scholar | Web of Science | INSPIRE | arXiv | Scopus | ResearchGate

Contact and Research Profile

Mailing Address AS246, Department of Physics, Eastern Mediterranean University, A. Einstein Street, 99628 Gazimagusa, TRNC via Mersin 10, Türkiye

Research Areas Theoretical physics, quantum gravity, black holes, wormholes, gravitational lensing, black hole shadows, Hawking radiation, quasinormal modes, cosmology, inflation, dark matter, dark energy, compact stars, and quantum optics in curved spacetime.

Professor of Physics with research centered on quantum gravity, black hole physics, cosmology and quantum phenomena in curved spacetime.

Academic Appointments and Research Visits

Professor of Physics June 2026-Now

Eastern Mediterranean University

Associate Professor August 2020-June 2026

Eastern Mediterranean University

Assistant Professor Sept.2018-July 2020

Eastern Mediterranean University, Gazimagusa, TÜRKİYE

Postdoctoral Fellow 2017-2020

Instituto de Física, Pontificia Universidad Católica de Valparaíso (PUCV), CHILE

Research visitor July/August 2022

Prof. Durmus A. Demir, Sabanci University, Istanbul, TÜRKİYE.

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

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

BSc. Physics (English)

09/2006-07/2010

Izmir Institute of Technology, TÜRKİYE

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 Ph.D. Astroparticle Physics (as a Visiting Scholar)

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,

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

Languages

Turkish (mother tongue)

English (fluent) (YÖKDİL Exam: 92.50/100)

Spanish (beginner)

Russian (beginner)

Italian (beginner)

Software

MAPLE, L^AT_EX, PYTHON, LINUX, FORTRAN, MATHEMATICA, Xvs, RNPLETAL, EDCRGTC, RICCI, GRTENSOR, CADABRA, MAXIMA, xACT.

International Projects

- 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 \$.
- EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY** **2019-2023**
CA18108- Quantum gravity phenomenology in the multi-messenger approach (QG-MM),
Working Group Membership: WG 1 Theoretical frameworks for gravity effects below the Planck energy, WG 2 Phenomenology of quantum gravity, WG 6 Gravitational waves.
- EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY** **2022-2026**
CA21136 - Addressing observational tensions in cosmology with systematics and fundamental physics (CosmoVerse),
Working Group Membership: WG 3 Fundamental Physics.
- EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY** **2022-2026**
CA21106 - COSMIC WISPerS in the Dark Universe: Theory, astrophysics and experiments (CosmicWISPerS),
Working Group Membership: WG 2 WISPerS Dark Matter and Cosmology, WG 3 WISPerS in Astrophysics.
- EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY** **2023-2027**
CA22113 - Fundamental challenges in theoretical physics (THEORY-CHALLENGES),
Working Group Membership: WG 2 Gravity and Holography, WG 3 Low-dimensional systems.
- EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY** **2024-2028**
CA23130 - Bridging high and low energies in search of quantum gravity (BridgeQG),
Working Group Membership: WG 1 High-energy quantum gravity theory, WG 2 High-energy quantum gravity experiment, WG 5 Connection between low-energy and high-energy quantum gravity
- EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY** **2024-2028**
CA23115 - Relativistic Quantum Information (RQI) ,
Working Group Membership: WG 2 Gravitational quantum physics and metrology
- TUBİTAK 2515 (The Scientific and Technological Research Council of Türkiye)** **2026-2029**
Symmergent Kütleşimi Çerçevesinde Manyetik Yüklü Kara Deliklerin Geometrik Ve Termodinamik Analizi
Research Leader: Dr. Beyhan Pulice, Sabanci University, Türkiye, **Overseas researcher:** Prof. Dr. Ali Övgün. **Budget:** 1,296,000 TL.

Memberships

- Turkish Astronomical Society (TAD)
- European Astronomical Society (EAS)
- International Society for Quantum Gravity (ISQG)
- Institute of Physics (IOP) UK
- American Physical Society (APS)
- The European Physical Society (EPS)

- Canadian Association of Physicists (CAP)
- The Cyprus Physicists Society
- Southeastern European Network in Mathematical and Theoretical Physics (SEENET-MTP)
- American Mathematical Society (AMS)

Honors, Awards and Grants

- 2005-2010 Scholarship from TRNC Ministry of National Education.
- 2010 Scholarship for MSc EuroMasters in Physics from University of Southampton, UK.
- 2010 Scholarship from AtoSim Erasmus Mundus Master of Science, EU.
- 2010-2011 Scholarship from NExT PhD school, University of Southampton, UK.
- 2011-2016 Research Assistantships, Eastern Mediterranean University.
- 2014-2016 EMU IGSR Publication Awards.
- 2017-2020 Postdoctoral Fellowship, CONICYT-Chile through FONDECYT postdoctorado No. 3170035, Pontificia Universidad Catolica de Valparaiso, CHILE.
- WEBOFSCIENCE PUBLONS 2018 Peer Review Awards, USA.
- EMU 2018 Outstanding Publication Awards
- EMU 2018 Citation Awards
- WEBOFSCIENCE PUBLONS 2019 Top Peer Reviewer in Physics Awards, USA.
- IOP 2019 Outstanding Reviewer for Classical and Quantum Gravity
- EMU 2019-2024 Citation Awards
- EMU 2019 Outstanding Publication Awards
- Among World's Top 2% Scientists – Stanford University 2019 Releases List
- Ranking of first 6000 academicians along with their major and scientific area of interests in TÜRKİYE based on H-index and citations, 2021 Scientists – Prof. Murat Alper
- Among World's Top 2% Scientists – Stanford University 2020 Releases List
- Among World's Top 2% Scientists – Stanford University 2021 Releases List
- Among World's Top 2% Scientists – Stanford University 2022 Releases List
- Among World's Top 2% Scientists – Stanford University 2023 Releases List
- Highly Ranked Scholar 0.05% Scientists – ScholarGPS 2023 Releases List
- Highly Ranked Scholar 0.05% Scientists – ScholarGPS 2024 Releases List
- 2026 The Republic of Turkey's Ministry of Culture and Tourism, Presidency for Turks Abroad and Related Communities (YTB) TURKIYE ALUMNI SCIENTIFIC AND ACADEMIC ACHIEVEMENTS AWARD
- 2026 Prof. Dr. Engin Arık Scientist Award by the Turkish Physical Society in recognition of his scientific and academic research, original contributions to physical science, and international scientific collaborations.

Supervisorships

- PhD Supervisor: YASHMITHA KUMARAN (Present Postdoc at UNAM, Mexico)
[Weak Deflection Angle via Gauss-Bonnet Theorem](#), 2018-2023.
- MSc Supervisor: FLORA BABAYEVA (Present Teacher at Azerbaijan British College)
[Shadow Cast of The Schwarzschild-like Black Holes](#), 2020-2022.
- MSc Supervisor: HAMZA SABER ZEBARI (Present Teacher at Iraq)
[Newtonian Cosmology](#), 2018-2020.
- MSc Supervisor: GABRIEL WIRDZELII JOSEPH (Present Instructor at Taraba State University, Nigeria)
[Cosmology with Varying Physical Constants](#), 2018-2020.
- MSc Supervisor: HUSEYIN KARYAL (PhD Student at EMU)
[Geodesics of Black Holes in Bumblebee Gravity Theory](#), 2018-2020.
- Msc Project: ILIM IRFAN CIMDIKER (SABANCI UNIVERSITY-TÜRKİYE) (Present Phd Student at University of Szczecin, Poland)
[Black Hole Shadow in Symmergent Gravity](#), PHYSICS OF DARK UNIVERSE 2021. (Supervisor: Prof.Dr.Durmus Ali Demir)
- BSc Project: CEREN H. BAYRAKTAR (IYTE-TÜRKİYE) (Present Msc Student at University of Göttingen))
[Thermodynamics of regular black holes with cosmic strings](#), European Physical Journal - Plus 2018. (Supervisor: Prof.Dr.Durmus Ali Demir)
- BSc Project: MERT OKYAY (MIAMI UNI.-USA) (Present Phd Student at University of Colorado Boulder)
[Nonlinear electrodynamics effects on the black hole shadow, deflection angle, quasinormal modes and greybody factors](#), Journal of Cosmology and Astroparticle Physics 2022.
- BSc Project: CEM KALKANLI (İTÜ-TÜRKİYE)
[Black Hole Physics](#).

Editorial Roles

- Guest Editor: Turkish Journal of Physics
- Associate Editor, High-Energy and Astroparticle Physics Frontiers in Physics & Frontiers in Astronomy and Space Sciences
- Review Editor: Frontiers in Physics: Special Issue on Quasinormal Modes in Relativistic Stars and Black Holes
- Review Editor: Frontiers in Physics: High-Energy and Astroparticle Physics
- Guest Associate Editor: Frontiers in Physics: in Stellar and Solar Physics
- Guest Editor: UNIVERSE: Special Issue "Recent Progress of Black Holes Physics"
- Guest Editor: SYMMETRY: Special Issue "Recent Progress of Black Holes Physics"
- Review Editor: Trends in Theoretical Physics Journal (TTP)
- Review Editor: Optimum Science Journal

Selected Journals Refereed

My Web of Science Profile for complete list

- Physical Review D
- Classical and Quantum Gravity
- Physics Letters B
- The European Physical Journal C
- Nuclear Physics B
- Journal of Cosmology and Astroparticle Physics
- Fortschritte der Physik- Progress of Physics
- Annals of physics
- Annalen der Physik
- The European Physical Journal Plus
- Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences
- EPL (Europhysics Letters)
- Physics of the Dark Universe
- General Relativity and Gravitation
- International Journal of Geometric Methods in Modern Physics
- Canadian Journal of Physics

Grant and Project Reviewing

- European Research Executive Agency, HORIZON Marie Skłodowska-Curie Postdoctoral Fellowships (HORIZON MSCA-PF)
- TUBITAK UPAG - Uluslararası Isbirliği Projeleri Arastırma Destek Grubu Projeleri
- TUBITAK 1001 - Bilimsel ve Teknolojik Araştırma Projelerini
- TUBITAK 2515 - COST Aksiyon Üyeleri Ar-Ge Destek Program
- TUBITAK 1002 - Hızlı Destek Programı
- TUBITAK BİDEB 2021 Bilim İnsanı Destekleme Programları Doktora Sonrası Araştırmacı Projeleri
- TUBITAK 2218- Yurt İçi Doktora Sonrası Araştırma Burs Programı
- Swiss National Science Foundation (SNSF) Projects
- CHILE CONICYT FONDECYT (Fondo Nacional de Desarrollo Científico y Tecnológico)

Administrative Service

- Member of Faculty Board: October 2023-December 2026
- Chair of the Social Media Committee of the Physics and Chemistry Departments: October 2018-Present
- Chair of the Graduation Committee of the Physics and Chemistry Departments: October 2018-Present

- Member of the Faculty BAP-C Committee of EMU: October 2018-Present
- TÜBİTAK Panelist & Advisor: 2018-Present

Volunteer and Outreach Activities

- Head of IYTE Physics Society, (2007-2010).
- Giving a talk about Black holes at High School Students, Erenköy Lisesi (29 April 2019)
- Giving a talk about black holes to students from Turkey at "Biricik Bilim Fizik ve Matematik Haftası", (15-16 May 2021)
- Giving lecture at 2nd Astronomy Summer Workshop for High School Students, Famagusta EMU(3-4 August 2023)
- Being a guest on the TV Program titled "Yaşama Sanatı" on BRT (state television of the Turkish Republic of Northern Cyprus) to discuss the topic "Astrophysics and Our Universe" (07/09/2023)

Conferences and Summer Schools

- 2007-May, Eskişehir/TÜRKİYE, UFOK-III (3rd National Student Conference of Turkish Physical Society).
- 2007-July, Karlsruhe/Germany, Conference & Summer School- SUSY07.
- 2007-August, Bodrum/TÜRKİYE, ISCBPU-V (5th International Student Conference of Balkan Physical Union).
- 2008-July, ICTP - The Abdus Salam International Centre for Theoretical Physics, Trieste/Italy, Summer School-COSMOLOGY 08.
- 2008-September, Akyaka-Mugla/TÜRKİYE, ISSCSMB08 International Summer School and Conference on Standard Model and Beyond (organized by METU, TUBITAK and ICTP).
- 2009-June, METU Ankara/TÜRKİYE, UFOK-5 (5th National Student Conference of Turkish Physical Society).
- 2009-July, TUBITAK Feza Gursey Theoretical Physics Institute Istanbul/TÜRKİYE, IARS II. National Summer Student School on High Energy Physics (YEF09).
- 2009-July, TUBITAK Feza Gursey Theoretical Physics Institute Istanbul/TÜRKİYE, 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/TÜRKİYE, 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/TÜRKİYE, 12th Quantization, Dualities and Integrable Systems.
- 2013-May, METU NCC, Workshop on Recent Developments in High Energy Physics.
- 2014-April, Koc University, Istanbul/TÜRKİYE, 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.

- 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, TÜRKİYE.
- 2019-March, The 2nd Physics Days 2019, EMU Famagusta.
- 2021 February, 4. Yüksek Enerji Fiziği, Astrofizik ve Kozmoloji Çalıştayı 2021 (YEFAK2021), Istanbul University, TÜRKİYE.
- 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, TÜRKİYE.
- 2023 October, ICTP Workshop on String Theory, Holography, and Black Holes , ICTP - The Abdus Salam International Centre for Theoretical Physics, Trieste, ITALY.
- 2023 December, Invited speaker, 7 th UMT INTERNATIONAL CONFERENCE ON Pure and Applied Mathematics (7th UICPAM-2023), University of Management and Technology Department of Mathematics, PAKISTAN.
- Invited Plenary talk at International Conference on Gravitation and Cosmology (ICGC24) 29-31 January 2024, Department of Mathematics and Statistics, The University of Lahore, PAKISTAN.
- Chairing of the session at the Fifth IUCSS Summer School and Workshop on the Lorentz- and CPT-violating Standard-Model Extension, Indiana University, Bloomington USA, May 2024.
- Invited Plenary Talk, CSG-2024 Conference “COMPUTER SCIENCE AND GRAVITATION – 2024” Baku, Azerbaijan, 19-23 August 2024.

- Invited Plenary Talk, , Hradec Králové International Physics Days 2024, 13 — 14 December 2024, Česká republika.
- Chairing of the session at the Third IUCSS Workshop on Gravitational Aspects of Lorentz Violation, Indiana University, Bloomington USA, 13-14 March 2025.
- Invited Talk, PPGF / UAF - II Workshop: Buracos Negros e Análogos Gravitacionais 2025, 12-14 August, UFCG, Campina Grande, Brazil.
- Invited Talk, Probing the Baryonic-to-Quark Matter Transition with Regular Black Hole Models. Invited Talk, the 41st International Physics Congress of the Turkish Physical Society, Bodrum, Türkiye, 1-5 Eylül 2025.

Invited Talks and Seminars

- Testing Modified Gravity through Black Hole Shadows and Deflection of Light. Invited Talk, Cosmo@BPHC Seminar Series, India, 7 April 2026.
- Probing the Baryonic-to-Quark Matter Transition with Regular Black Hole Models. Invited Talk, the 41st International Physics Congress of the Turkish Physical Society, Bodrum, Türkiye, 1-5 Eylül 2025.
- Probing Black Holes: Shadow Imaging and Weak Deflection Angles, Invited Talk, PPGF / UAF - II Workshop: Buracos Negros e Análogos Gravitacionais 2025, 12-14 August, UFCG, Campina Grande, Brazil.
- Lorentz-Violation Effects on Bumblebee Black-Hole Shadows: Insights From EHT Data and Deflection Angles, Invited Talk, The Third IUCSS Workshop on Gravitational Aspects of Lorentz Violation, Indiana University, Bloomington USA, 13 March 2025.
- Shadow of the Regular Black Holes, Invited Talk, A Life Dedicated to Theoretical Physics: In Memory of Durmuş Ali Demir | 24 Feb 2025, Sabanci University, Istanbul, Türkiye.
- Exact regular black hole solutions with de sitter core and its shadow, Invited Plenary Talk, Hradec Králové International Physics Days 2024, 13 — 14 December 2024, Česká republika.
- Influence Of Geometrical Deformation And Dark Matter Medium On Photon Sphere And Shadow Radius Of Black Holes, Invited Plenary Talk, CSG-2024 Conference “COMPUTER SCIENCE AND GRAVITATION – 2024” Baku, Azerbaijan, 19-23 August 2024.
- Probing Schwarzschild-like Black Holes in Metric-Affine Bumblebee Gravity with Accretion Disk, Deflection Angle, Greybody Bounds, and Neutrino Propagation, Fifth IUCSS Summer School and Workshop on the Lorentz- and CPT-violating Standard-Model Extension Indiana University, Bloomington USA, May 2024.
- Unveiling the Impact of Fuzzy Dark Matter on Supermassive Black Holes: Probing the Quantum Realm. Invited Plenary talk at International Conference on Gravitation and Cosmology (ICGC24) 29-31 January 2024, Department of Mathematics and Statistics, The University of Lahore, PAKISTAN 2024 January.
- Black hole in quantum wave dark matter. Invited speaker at 7th UMT INTERNATIONAL CONFERENCE ON Pure and Applied Mathematics (7 th UICPAM-2023), University of Management and Technology Department of Mathematics, PAKISTAN 2023 December.
- Can we spot modified gravity black holes? Invited talk in the Bilkent University, Applied Mathematics Department, TÜRKİYE 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, TÜRKİYE 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, TÜRKİYE, 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, TÜRKİYE, 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,
- 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/TÜRKİYE, April 2014, Workshop QDIS13.
- Thin-shell wormholes from the regular Hayward black hole, IYTE Izmir/TÜRKİYE, 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/TÜRKİYE, May 2007, 3rd National Conference of Physics Students (UFOK-3).
- The Dark Side of the Cosmos, Izmir/TÜRKİYE, December 2008, IYTE Physics Society.
- String Theory, METU Ankara/TÜRKİYE, June 2009, 5th National Conference of Physics Students

Single-Author Papers

- Weak gravitational lensing of regular black holes with cosmic strings using the Gauss-Bonnet theorem,
[Physical Review D 99, 104075 \(2019\)](#),
arXiv:1902.04411.
- Light deflection by Damour-Solodukhin wormholes and Gauss-Bonnet theorem,
[Physical Review D 98, 044033 \(2018\)](#),
arXiv: 1805.06296.
- 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.
- Weak Gravitational Lensing in Ricci-Coupled Kalb–Ramond Bumblebee Gravity: Global Monopole and Axion-Plasmon Medium Effects,
[Physics of the Dark Universe 48, 101905 \(2025\)](#),
arXiv:2504.07130.
- Probing Weak-Force Corrections to Black Hole Geometry via Long Range Potentials: Feinberg-Sucher and Ferrer-Presentakowski Potentials,
[Physics of the Dark Universe 101941 \(2025\)](#),
arXiv:2505.06382.
- Quasinormal Mode Spectroscopy via Horizon-Brightened Quantum Optics,
[The European Physical Journal C 86, 293 \(2026\)](#),
arXiv:2511.07488.
- Inflation and Acceleration of the Universe by Nonlinear Magnetic Monopole Fields,
[The European Physical Journal C 77:105 \(2017\)](#),
arXiv:1604.01837.
- Horizon brightened acceleration radiation near de Sitter horizons via minimal and derivative coupled detectors,
[International Journal of Geometric Methods in Modern Physics \(2026\)](#),
10.1142/S0219887826501975.
- Evolving topologically deformed wormholes supported in the dark matter halo,
[The European Physical Journal Plus 136: 987 \(2021\)](#),
arXiv:1803.04256.
- Rotating Thin-Shell Wormhole,
[The European Physical Journal Plus 131: 389 \(2016\)](#),
arXiv:1604.08477.
- 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.
- 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.
- The Bekenstein-Hawking Corpuscular Cascading from the Backreacted Black Hole,
[Advances in High Energy Physics 2017, 1573904, \(2017\)](#),

arXiv:1609.07804.

- 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.
- 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.

Publications (200+ Web of Science (SCI) Indexed)

PHYSICAL REVIEW D

- Ringdown of a black hole sourced by a Burkert-density effective anisotropic source,
[Phys. Rev. D \(2026\) <https://doi.org/10.1103/g39l-hnjp>](#),
arXiv:/2511.07858 Jointly with Yi Yang, Gaetano Lambiase, Dong Liu, and Zheng-Wen Long.
- Optical and orbital characterization of spherically symmetric static black holes of self-gravitating new nonlinear electrodynamics model,
[Phys. Rev. D \(2026\) <https://doi.org/10.1103/p6lp-rktr>](#),
arXiv:2603.10097 Jointly with Yosef Verbin, and Ilim Irfan Cimdiker.
- Reference-renormalized curvature-primitive Gauss-Bonnet formalism for finite-distance weak gravitational lensing in static spherical spacetimes,
[Phys. Rev. D \(2026\)](#),
arXiv:2604.16807 Jointly with Reggie C. Pantig.
- Horizon Brightened Acceleration Radiation from Massive Vector Fields,
[Phys. Rev. D \(2026\)](#),
arXiv:2512.08598 Jointly with Reggie C. Pantig.
- Gravitational Black Hole Shadow Spectroscopy,
[Phys. Rev. D \(2025\)](#),
arXiv:2509.05594 Jointly with Reggie C. Pantig.
- New Black Hole Solutions of Second and First Order Formulations of Nonlinear Electrodynamics,
[Phys. Rev. D 111, 084061 \(2025\)](#),
arXiv:2412.20989 Jointly with Yosef Verbin, Beyhan Pulice and Hyat Huang.
- Rotating black hole mimicker surrounded by the string cloud,
[Physical Review D \(2024\)](#),
arXiv:2307.09344, Jointly with Yi Yang, Dong Liu, Gaetano Lambiase, Zheng-Wen Long.
- 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.
- 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.
- 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.

- **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.
- **Exact traversable wormhole solution in bumblebee gravity,**
[Physical Review D 99, 024042 \(2019\)](#),
arXiv: 1804.09911, Jointly with Kimet Jusufi and Izzet Sakalli.
- **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.
- **Weak gravitational lensing of regular black holes with cosmic strings using the Gauss-Bonnet theorem,**
[Physical Review D 99, 104075 \(2019\)](#),
arXiv:1902.04411.
- **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.
- **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.
- **Light deflection by Damour-Solodukhin wormholes and Gauss-Bonnet theorem,**
[Physical Review D 98, 044033 \(2018\)](#),
arXiv:1805.06296.
- **Holographic Thermodynamics of Accelerating Black Holes,**
[Physical Review D 98, 104038 \(2018\)](#),
arXiv:1805.02687, Jointly with Andres Anabalón, Michael Appels, Ruth Gregory, David Kubiznak, Robert B. Mann.
- **Gravitational Lensing by Rotating Wormholes,**
[Physical Review D 97, 024042 \(2018\)](#),
arXiv:1708.06725, Jointly with Kimet Jusufi.
- **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.
- **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.
- **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.
- **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.
- **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.

- **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

- **Signatures of a de Sitter-core black hole in ringing, transmission and optical appearance,**
[Physics Letters B 879 \(2026\) 140606](#),
arXiv:2412.05072, Jointly with N.Heidari, A. A. Araújo Filho and V. Vertogradov.
- **Black Hole Solutions in Dark Photon Models,**
[Physics Letters B Volume 876, 140437 \(2026\)](#),
arXiv:2505.01649, Jointly with Reggie C. Pantig.
- **Black hole in the Dekel-Zhao dark matter profile,**
[Physics Letters B \(2025\)](#),
arXiv:2501.12559, Jointly with Reggie C. Pantig.
- **General Approach on Shadow Radius and Photon Spheres in Asymptotically Flat Spacetimes and the Impact of Mass-Dependent Variations,**
[Physics Letters B 829, 137114 \(2024\)](#),
arXiv:2404.18536, Jointly with Vitalii Vertogradov.
- **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.
- **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.

PHYSICS LETTERS A

- **HBAR entropy of Infalling Atoms into a GUP-corrected Schwarzschild Black Hole and equivalence principle,,**
[Physics Letters A 568, 131201 \(2026\)](#),
arXiv:2506.10621.

NUCLEAR PHYSICS B

- **Semi-analytic trajectory analysis of light in generic static spacetimes,**
[Nuclear Physics B Volume 1029, August 2026, 117557](#),
Jointly with Reggie C. Pantig.
- **Horizon brightened acceleration radiation from a Simpson–Visser black bounce spacetime,**
[Nuclear Physics B Volume 1029, August 2026, 117550](#),
Jointly with Reggie C. Pantig.
- **Axisymmetric non-commutative black hole: classical and quantum gravity signatures,**
[Nuclear Physics B Volume 1020, November 2025, 117174](#),
arXiv:2502.12039 Jointly with A. A. Araújo Filho and N. Heidari.
- **Shedding Light on Gravity: Black Hole Shadows and Lensing Signatures in Lorentz Gauge Theory,**
[Nucl. Phys. B \(2025\)](#),
arXiv::2504.04331. Jointly with Mohsen Fathi.
- **Strange Quark Stars and Condensate Dark Stars in Bumblebee Gravity,**
[Nucl. Phys. B 116956 \(2025\)](#),

arXiv:2409.05801. Jointly with Grigoris Panotopoulos.

- **Traversable Wormholes in Minimally Geometrical Deformed Trace-Free Gravity using Gravitational Decoupling,**
[Nuclear Physics B \(2024\)](#),
arXiv:2401.16814. Jointly with Piyachat Panyasiripan, Narakorn Kaewkhao, and Phongpichit Channuie.
- **Images and Stability of Black Hole with cloud of strings and quintessence in EGUP framework,**
[Nuclear Physics B \(2024\)](#),
Jointly with Muhammad Danish Sultan Sultan, Shahid Chaudhary, and Atiq ur Rehman.

JOURNAL OF HIGH ENERGY PHYSICS

- **Josephson's effect in the Schwarzschild background,**
[Journal of High Energy Astrophysics \(2026\)](#),
arXiv:2510.26048, Jointly with Reggie C. Pantig

JOURNAL OF HIGH ENERGY ASTROPHYSICS

- **Particle Dynamics and Quasi-Periodic Oscillations in the Dyonic ModMax: Constraint using Quasars Data,**
[Journal of High Energy Astrophysics \(2025\)](#),
Jointly with Husanboy Hoshimov, Akbar Davlatoliev, Farruh Atamurotov and Ahmadjon Abdujabbarov.

JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS

- **Can finite-density QCD matter support a regular black-hole core?,**
[Journal of Cosmology and Astroparticle Physics \(2026\)](#),
arXiv:2605.27170, Jointly with V. Vertogradov and G. Lambiase.
- **Equatorial periodic orbits and gravitational wave signatures in Euler-Heisenberg black holes surrounded by perfect fluid dark matter,**
[Journal of Cosmology and Astroparticle Physics \(2026\)](#),
arXiv:2604.11866, Jointly with Dhruva Jyoti Gogoi and Jyatsnasree Bora.
- **Regular Black Hole Models in the Transition from Baryonic Matter to Quark Matter,**
[Journal of Cosmology and Astroparticle Physics \(2025\)](#),
arXiv:2504.07561, Jointly with V. Vertogradov.
- **Geodesics, accretion disk, gravitational lensing, time delay, and effects on neutrinos induced by a non-commutative black hole,**
[Journal of Cosmology and Astroparticle Physics \(2025\)](#),
arXiv:2412.08369, Jointly with A. A. Araujo Filho and N. Heidari.
- **Probing Schwarzschild-like Black Holes in Metric-Affine Bumblebee Gravity with Accretion Disk, Deflection Angle, Greybody Bounds, and Neutrino Propagation,**
[Journal of Cosmology and Astroparticle Physics \(2023\)](#),
arXiv:2309.13594. Jointly with Gaetano Lambiase Leonardo Mastrototaro, and Reggie C. Pantig.
- **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.
- **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.
- **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.

- 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

- Boundary-only weak deflection angles from isothermal optical geometry, [Classical and Quantum Gravity \(2026\)](#)", arXiv:2601.06864, Jointly with Reggie Pantig.
- White Paper and Roadmap for Quantum Gravity Phenomenology in the Multi-Messenger Era, [Classical and Quantum Gravity \(2025\)](#), Jointly with R. Alves Batista et al.
- Exact Regular Black Hole Solutions with de Sitter Cores and Hagedorn Fluid, [Classical and Quantum Gravity \(2025\)](#), Jointly with Vitalii Vertogradov.
- Constraints on charged Symmergent black hole from shadow and lensing, [Classical and Quantum Gravity \(2023\) \(invited\): Special Issue "Focus on Quantum Gravity Phenomenology in the Multi-Messenger Era: Challenges and Perspectives"](#), Jointly with Beyhan Pulice, Reggie Pantig and Durmuş A. Demir.
- Thin accretion disk images of the black hole in symmergent gravity using the M87* results, [Classical and Quantum Gravity \(2023\) \(invited\): Special Issue "Focus on Quantum Gravity Phenomenology in the Multi-Messenger Era: Challenges and Perspectives"](#), Jointly with İlim İrfan Çimdiker and Durmuş A. Demir.
- Horizon-scale tests of gravity theories and fundamental physics from the Event Horizon Telescope image of Sagittarius A*, [Classical and Quantum Gravity \(2023\)](#), arXiv:2205.07787, Jointly with Sunny Vagnozzi, Rittick Roy, Yu-Dai Tsai, Luca Visinelli, Misba Afrin, Alireza Allahyari, Parth Bambhaniya, Dipanjan Dey, Sushant G. Ghosh, Pankaj S. Joshi, Kimet Jusufi, Mohsen Khodadi, Rahul Kumar Walia, Cosimo Bambi.
- Matter-antimatter asymmetry induced by non-linear electrodynamics, [Classical and Quantum Gravity 38 135019 \(2021\)](#), arXiv:2105.07695, Jointly with Hachemi, Benaoum.
- 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

- Boundary-Only Weak Deflection by Regular Black Holes, Black-Bounces, Wormholes, and Static Quadrupolar Spacetimes, [Fortschritte der Physik - Progress of Physics, \(2026\)](#), Jointly with Reggie C. Pantig.
- The Sound of an Orbit: A Quantum Spectrum at the ISCO, [Fortschritte der Physik - Progress of Physics, e70048 \(2025\)](#), arXiv:2507.14254, Jointly with Reggie C. Pantig.
- Asymptotically-Flat Black Hole Solutions in Symmergent Gravity, [Fortschritte der Physik - Progress of Physics, \(2024\)](#), arXiv:2403.02373, Jointly with Beyhan Pulice, Durmus Demir and Reggie C. Pantig.
- Black hole in quantum wave dark matter,

Fortschritte der Physik - Progress of Physics 71, 2200164 (2023),
arXiv:2210.00523, Jointly with Reggie C. Pantig.

- **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

- **Constraints via the Event Horizon Telescope for black hole solutions with dark matter under the generalized uncertainty principle minimal length scale effect,**
Annalen der Physik (2023),
arXiv:2309.07442, Jointly with Lemuel John F. Sese and Reggie C. Pantig.
- **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

- **An Obstruction and Residual-Completion Theory for Newman–Janis Deformations,**
The European Physical Journal C (2026),
arXiv:2607.20565 Jointly with Reggie C. Pantig.
- **Josephson Effects in Slowly Rotating Spacetimes,**
The European Physical Journal C (2026),
arXiv:2603.07553 Jointly with Nurmukhammed Aytimbetov, Reggie C. Pantig, Bobomurat Ahmedov and Javlon Rayimbaev.
- **Horizon-Brightened Acceleration Radiation and Optical Signatures of Generic Regular Black Holes from Nonlinear Electrodynamics,**
The European Physical Journal C (2026),
arXiv:2602.15077 Jointly with Reggie C. Pantig, Bobomurat Ahmedov, and Uktamjon Uktamov.
- **Quasinormal Mode Spectroscopy via Horizon-Brightened Quantum Optics,**
The European Physical Journal C 86, 293 (2026),
arXiv:2511.07488.
- **Acceleration Radiation from Derivative-Coupled Atoms Falling in Modified Gravity Black Holes,**
Eur. Phys. J. C (2025) 85:1183),
arXiv:2508.11734 Jointly with Reggie C. Pantig.
- **Quasinormal modes and greybody factors of charged symmergent black hole,**
Eur. Phys. J. C 85, 1243 (2025),
arXiv:2410.00691 Jointly with Dhruba Jyoti Gogoi and Beyhan Pulice.
- **Analyzing Deflection Angles and Photon Sphere Dynamics of Magnetically Charged Black Holes in Nonlinear Electrodynamics,**
The European Physical Journal C (2025),
arXiv: Jointly with Hira Waseem, Nikko John Leo S. Lobos, and Reggie C. Pantig.
- **Modified particle dynamics and thermodynamics in a traversable wormhole in bumblebee gravity,**
The European Physical Journal C (2025),
arXiv: 2409.17351, Jointly with A. A. Araujo Filho and J. A. A. S. Reis.
- **Influence of GUP corrected Casimir energy on ZTF wormholes in modified teleparallel gravity with minimal matter coupling formalism,**
The European Physical Journal C (2024),
Jointly with Mohammed Muzakkir Rizwan, Zinnat Hassan and P.K. Sahoo.
- **Topological dyonic black holes of massive gravity with generalized quasitopological elec-**

tromagnetism,

[The European Physical Journal C \(2024\)](#),

Jointly with Ali Askar.

- **Black hole surrounded by the pseudo-isothermal dark matter halo**,
[The European Physical Journal C \(2024\)](#),
arXiv:2308.05544, Jointly with Yi Yang, Dong Liu, Gaetano Lambiase, Zheng-Wen Long.
- **Shadow and deflection angle of asymptotic, magnetically-charged, non-singular black hole**,
[The European Physical Journal C \(2023\)](#),
arXiv:2306.04705, Jointly with Yashmitha Kumaran.
- **Motion of spinning particles around dynamic phantom AdS black holes**,
[The European Physical Journal C \(2023\)](#),
Jointly with Muhammad Umair Shahzad and Sana Khalid.
- **Quasinormal Modes of Black holes in $f(Q)$ gravity**,
[The European Physical Journal C \(2023\)](#),
arXiv:2303.07424, Jointly with Dhruba Jyoti Gogoi and Mouhssine Koussour.
- **Gravitational ringing and superradiant instabilities of the Kerr-like black holes in a dark matter halo**,
[The European Physical Journal C \(2023\)](#),
arXiv:2204.11563, Jointly with Dong Liu, Yi Yang, Zheng-Wen Long and Zhaoyi Xu.
- **Investigating the Connection between Generalized Uncertainty Principle and Asymptotically Safe Gravity in Black Hole Signatures through Shadow and Quasinormal Modes**,
[The European Physical Journal C \(2023\)](#),
arXiv:2304.00183, Jointly with Gaetano Lambiase, Reggie C. Pantig, Dhruba Jyoti Gogoi.
- **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.
- **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.
- **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.
- **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.
- **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.
- **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.
- **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.

- 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.
- 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.
- 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.
- 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.
- Inflation and Acceleration of the Universe by Nonlinear Magnetic Monopole Fields,
[The European Physical Journal C 77, 105 \(2017\)](#),
arXiv:1604.01837.
- 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

- Gauss-Bonnet lensing of spinning massive particles in static spherically symmetric spacetimes,
[Annals of Physics 488, 170421 \(2026\)](#),
arXiv:2603.00650, Jointly with Reggie C. Pantig.
- Multimodal signatures of asymptotic (A)dS Kalb-Ramond black holes: Constraints through the shadow, weak deflection angle, and topological photon spheres,
[Annals of Physics \(2025\)](#),
arXiv: 2503.18585, Jointly with Reggie C. Pantig.
- Shadow and greybody bounding of a regular scale-dependent black hole solution,
[Annals of Physics \(2024\)](#),
arXiv: 2402.14190, Jointly with Angel Rincon and Reggie C. Pantig.
- Observational Signatures: Shadow cast by the effective metric of photons for black holes with rational non-linear electrodynamics,
[Annals of Physics \(2024\)](#),
Jointly with Akhil Uniyal, Sayan Chakrabarti and Mohsen Fathi.
- Criticality and Topological Classes of Neutral Gauss-Bonnet AdS Black Holes in 5D,
[Annals of Physics \(2023\)](#),
Jointly with M. Umair Shahzad, Aqsa Mehmood, Sana Sharif.
- Quasinormal Modes and Bounding Greybody Factors of GUP-corrected Black Holes in Kalb-Ramond Gravity,
[Annals of Physics \(2023\)](#),
arXiv:2304.07761, Jointly with Anshuman Baruah, and Atri Deshamukhya.
- 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.

- 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.
- 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.
- Schwarzschild-like black hole with a topological defect in bumblebee gravity,
[Annals of Physics 436, 168721 \(2022\)](#),
arXiv:2012.02611, Jointly with Ibrahim Gullu.
- 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.
- Deriving Hawking Radiation via Gauss-Bonnet Theorem,
[Annals of Physics 413, 168071 \(2020\)](#),
arXiv:1902.04465, Jointly with Izzet Sakalli.
- 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.
- 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 Gylchev and Kimet Jusufi.
- 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.
- 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.
- Gravitational Lensing Under the Effect of Weyl and Bumblebee Gravities: Applications of Gauss-Bonnet Theorem,
[Annals of Physics 399, 193-203 \(2018\)](#),
arXiv:1805.09431, Jointly with Kimet Jusufi and Izzet Sakalli.

GENERAL RELATIVITY AND GRAVITATION

- 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.
- 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.
- 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.

- 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.
- 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

- Weak field deflection angle and analytical parameter estimation of the Lorentz-violating Bumblebee parameter through the black hole shadow using EHT data, [EPL 148, 49001 \(2024\)](#), arXiv:2408.09620, Jointly with Gaetano Lambiase and Reggie C. Pantig,.
- Hawking Radiation and Deflection of Light from Rindler Modified Schwarzschild Black Hole, [EPL 118, 60006 \(2017\)](#), arXiv:1702.04636, Jointly with Izzet Sakalli.
- Uninformed Hawking Radiation, [EPL 110, 10008 \(2015\)](#), arXiv:1409.5539, Jointly with Izzet Sakalli.

PHYSICS OF THE DARK UNIVERSE

- Shadow of the generalized Vaidya black hole, [Physics of the Dark Universe Volume 53, 2026, 102402](#), arXiv: 2607.17483 Jointly with Vitalii Vertogradov.
- Redshift spectroscopy as a probe of regular black holes, black bounces, and scalar-hair compact objects, [Physics of the Dark Universe Volume 53, 102392 \(2026\)](#), Jointly with Reggie C. Pantig and Joel Saavedra.
- Dispersive and absorbing effects of dusty plasma on black hole lensing, shadows, and eikonal ringdown, [Physics of the Dark Universe Volume 52, 102341 \(2026\)](#), Jointly with Reggie C. Pantig and Gaetano Lambiase.
- Acceleration Radiation of Freely Falling Atoms: Nonlinear Electrodynamical Effects, [Physics of the Dark Universe Volume 52, June 2026, 102279](#), Jointly with Reggie C. Pantig, Bobomurat Ahmedov, and Uktamjon Uktamov.
- Probing Quantum Gravity in Stellar Spacetimes: Phenomenological Insights, [Physics of the Dark Universe Volume 52, 102243 \(2026\)](#), arXiv:2505.18997, Jointly with Reggie C. Pantig and Gaetano Lambiase.
- Gravitational Aharonov-Bohm Phase in Kalb-Ramond Spacetimes, [Physics of the Dark Universe Volume 50, December 2025, 102179](#), Jointly with Reggie C. Pantig.
- Charged black holes in Kalb-Ramond gravity: Weak Deflection Angle, Shadow cast, Quasinormal Modes and Neutrino annihilation, [Physics of the Dark Universe \(2025\)](#), arXiv:2505.17947, Jointly with Reggie C. Pantig and Angel Rincon.
- Phenomenology of Schwarzschild-like Black Holes with a Generalized Compton Wavelength,

- Physics of the Dark Universe (2025)**,
arXiv:2504.18226,
Jointly with Reggie C. Pantig and Gaetano Lambiase.
- **Probing Weak-Force Corrections to Black Hole Geometry via Long Range Potentials: Feinberg-Sucher and Ferrer-Nowakowski Potentials**,
Physics of the Dark Universe 101941 (2025),
arXiv:2505.06382.
 - **Weak Gravitational Lensing in Ricci-Coupled Kalb–Ramond Bumblebee Gravity: Global Monopole and Axion-Plasmon Medium Effects**,
Physics of the Dark Universe 48, 101905 (2025),
arXiv:2504.07130.
 - **The CosmoVerse White Paper: Addressing observational tensions in cosmology with systematics and fundamental physics**,
Physics of the Dark Universe (2025),
arXiv:2504.01669, Jointly with Eleonora Di Valentino et al.
 - **Traversable Wormholes in Einstein-Euler-Heisenberg Gravity: Geometry, Energy Conditions, and Gravitational Lensing** ,
Physics of the Dark Universe (2025),
Jointly with Phongpichit Channuie, Allah Ditta, and Narakorn Kaewkhao.
 - **Spinning Particle Dynamics Around a Black Hole in Lorentz Gauge theory** ,
Physics of the Dark Universe (2025),
Jointly with Dilmurod Umarov, Farruh Atamurotov, and Ahmadjon Abdujabbarov.
 - **Shadow and quasinormal modes of the rotating Einstein-Euler-Heisenberg black holes**,
Physics of the Dark Universe (2025),
arXiv:2406.18300,
Jointly with Gaetano Lambiase and Reggie C. Pantig.
 - **Absorption, Scattering, Geodesics, Shadows and Lensing Phenomena of Black Holes in Effective Quantum Gravity**,
Physics of the Dark Universe (2025),
Jointly with N. Heidari, A. A. Araujo Filho and R. C. Pantig.
 - **Spacetime-curvature induced uncertainty principle: linking the large-structure global effects to the local black hole physics**,
Physics of the Dark Universe (2025),
arXiv:2412.00303,
Jointly with Reggie C. Pantig, Gaetano Lambiase and Nikko John Leo S. Lobos.
 - **Properties of an axisymmetric Lorentzian non-commutative black hole**,
Physics of the Dark Universe (2025),
arXiv:2411.04674,
Jointly with A. A. Araujo Filho, J. R. Nascimento, A. Yu. Petrov, P. J. Porfirio.
 - **Effects of non-commutative geometry on black hole properties**,
Physics of the Dark Universe (2024),
Jointly with A. A. Araujo Filho, J. R. Nascimento, A. Yu. Petrov, P. J. Porfirio,.
 - **An Effective Model for the Quantum Schwarzschild Black Hole: Weak Deflection Angle, Quasinormal Modes and Bounding of Greybody Factor**,
Physics of the Dark Universe (2024),
Jointly with Angel Rincon, and Reggie C. Pantig.
 - **Traces of quantum gravitational correction at third-order curvature through the black hole shadow and particle deflection at the weak limit**,
Physics of the Dark Universe (2024),

arXiv:2406.18292,

Jointly with Gaetano Lambiase, and Reggie C. Pantig.

- **Analyzing the Influence of Geometrical Deformation on Photon Sphere and Shadow Radius: A New Analytical Approach - Spherically Symmetric Spacetimes,** [Physics of the Dark Universe \(2024\)](#),
arXiv:2404.04046,
Jointly with Vitalii Vertogradov.
- **The Effect of Quark-antiquark Confinement on the Deflection Angle by the NED Black Hole,** [Physics of the Dark Universe \(2024\)](#),
Jointly with Erdem Sucu.
- **Topological behaviour of 3D Regular Black Hole with zero point length,** [Physics of the Dark Universe \(2024\)](#),
arXiv:2306.09231,
Jointly with Muhammad Umair Shahzad and Aqsa Mehmood.
- **Quasinormal modes and greybody factors of symmergent black hole,** [Physics of the Dark Universe \(2023\)](#),
arXiv:2306.09231,
Jointly with Dhruva Jyoti Gogoi, Durmuş Demir.
- **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.
- **Black Hole Shadow in Symmergent Gravity,** [Physics of the Dark Universe 34, 100900 \(2021\)](#),
arXiv:2110.11904,
Jointly with İrfan Çimdiker, Durmuş Demir.

THE EUROPEAN PHYSICAL JOURNAL PLUS

- **Lorentz-violating modifications to particle dynamics, thermodynamics and vacuum energy in bumblebee gravity,** [The European Physical Journal Plus 141:843 \(2026\)](#),
arxiv: 2601.07102 Jointly with A. A. Araújo Filho, K. E. L. de Farias, E. Passos, F. A. Brito, Hassan Hassanabadi, V. B. Bezerra, and Amilcar R. Queiroz.
- **Black hole with global monopole charge in self-interacting Kalb-Ramond field,** [The European Physical Journal Plus \(2025\)](#),
Jointly with Mohsen Fathi.
- **Thermodynamic Topological classification of D-dimensional dyonic AdS black holes with quasitopological electromagnetism in Einstein-Gauss-Bonnet gravity,** [The European Physical Journal Plus \(2024\)](#),
Jointly with M. Umair Shahzad and Aqsa Mehmood.
- **Effect of scalar field on dynamical evolution of thin-shell with Hairy Schwarzschild black hole,** [The European Physical Journal Plus \(2023\)](#),
Jointly with Faisal Javed and Ghulam Mustafa.
- **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.
- **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.
- **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.
 - **Evolving topologically deformed wormholes supported in the dark matter halo**,
[The European Physical Journal Plus 136, 987 \(2021\)](#),
arXiv:1803.04256.
 - **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.
 - **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.
 - **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.
 - **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.
 - **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.
 - **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.
 - **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.
 - **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.
 - **Rotating Thin-Shell Wormhole**,
[The European Physical Journal Plus 131, 389 \(2016\)](#),
arXiv:1604.08477.
 - **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.
 - **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.

- Spinoptics effect on the weak deflection angle using Gauss-Bonnet theorem with reference and ribbon geometries,
[International Journal of Geometric Methods in Modern Physics \(2026\)](#),
Jointly with Reggie C. Pantig.
- Physical features of light properties around the hairy black hole SVT solutions in $U(1)$ gauge-invariant,
[International Journal of Geometric Methods in Modern Physics 2650239 \(2026\)](#) ,
Jointly with Riasat Ali, Muhammad Awais and Rimsha Babar.
- Horizon brightened acceleration radiation near de Sitter horizons via minimal and derivative coupled detectors,
[International Journal of Geometric Methods in Modern Physics \(2026\)](#),
<https://doi.org/10.1142/S0219887826501975>.
- Finite distance corrections to vacuum birefringence in strong gravitational and electromagnetic fields,
[International Journal of Geometric Methods in Modern Physics \(2026\)](#),
arXiv:2512.18727 Jointly with Reggie C. Pantig.
- Analytical approach for calculating shadow of dynamical black hole,
[International Journal of Geometric Methods in Modern Physics \(2025\)](#),
arXiv:2412.10930 Jointly with Vitalii Vertogradov.
- Quantum gravity effects on particle creation and evaporation in a non-commutative black hole via mass deformation,
[International Journal of Geometric Methods in Modern Physics \(2025\)](#) ,
arXiv:2409.03566 Jointly with A. A. Araújo Filho and N. Heidari.
- Testing black holes with cosmological constant in Einstein-bumblebee gravity through the black hole shadow using EHT data and deflection angle,
[International Journal of Geometric Methods in Modern Physics \(2025\)](#) ,
arXiv:2410.13661 Jointly with Reggie C. Pantig, Shubham Kala, and Nikko John Leo S. Lobos.
- Analyzing the Influence of Geometrical Deformation on Photon Sphere and Shadow Radius: A New Analytical Approach -Stationary, and Axisymmetric Spacetime,
[International Journal of Geometric Methods in Modern Physics \(2025\)](#) ,
arXiv:2405.05077 Jointly with Vitalii Vertogradov and Reggie Pantig.
- First-order quantum correction of thermodynamics in a charged accelerating AdS black hole with gauge potential,
[International Journal of Geometric Methods in Modern Physics \(2024\)](#) ,
Jointly with Riasat Ali, Rimsha Babar and Houcine Aounallah.
- 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 , İzzet Sakallı.
- 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.
- 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.

- **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.
- **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.
- **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.
- **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.
- **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.
- **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.
- **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.
- **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

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

CHINESE JOURNAL OF PHYSICS

- **Radial integral reformulation of the Gauss bonnet weak deflection angle at Finite Distance,** [Chinese Journal of Physics \(2026\)](#), arXiv:2601.17059, Jointly with Reggie C. Pantig.
- **Acceleration radiation from vibrating atoms in Schwarzschild spacetime,** [Chinese Journal of Physics \(2026\)](#), arXiv:2510.11761, Jointly with Reggie C. Pantig, Syed Masood, and Li-Gang Wang.
- **Imprints of a gravitational wave through the weak field deflection of photons,** [Chinese Journal of Physics \(2024\)](#), arXiv:2406.05782, Jointly with Reggie C. Pantig.

CHINESE PHYSICS C

- **Formation of regular black hole from baryonic matter,** [Chinese Physics C \(2025\)](#), arXiv: 2502.00521, Jointly with Vitalii Vertogradov and Daniil Shatov.
- **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.

- **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.
- **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.
- **Weak Deflection Angle of Extended Uncertainty Principle Black Holes,**
[Chinese Physics C 44, 2, 025101 \(2020\)](#),
arXiv:1905.11710, Jointly with Yashmitha Kumaran.
- **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.
- **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

- **Exploring Light Deflection and Black Hole Shadows in Rastall Theory with Plasma Effects,**
[International Journal of Theoretical Physics 75, \(2025\)](#),
arXiv:2402.07657, Jointly with Riasat Ali, Rimsha Babar, and Xia Tiecheng.
- **Eruptive Massive Vector Particles of 5-Dimensional Kerr Godel Spacetime,**
[International Journal of Theoretical Physics 57, 322 \(2018\)](#),
arXiv:1705.00061, Jointly with Izzet Sakalli.
- **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.
- **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

- **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.
- **Tunneling of Massive Vector Particles From Rotating Charged Black Strings,**
[Astrophysics and Space Science 361, 207 \(2016\)](#),
arXiv:1512.08023, Jointly with Kimet Jusufi.
- **Existence of traversable wormholes in the spherical stellar systems,**
[Astrophysics and Space Science 361, 214 \(2016\)](#),
arXiv:1509.01237, Jointly with Mustafa Halilsoy.
- **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

- 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

- 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

- Quasinormal modes of Kerr-like black bounce spacetime,
[Modern Physics Letters A \(2026\)](#),
arXiv:2205.07530, Jointly with Yi Yang, Dong Liu, Zheng-Wen Long and Zhaoyi Xu.
- 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.
- 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.
- 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.
- 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.
- 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.
- Thin-Shell Wormholes in Neo-Newtonian theory,
[Modern Physics Letters A 32, 23, 1750119 \(2017\)](#),
arXiv:1702.06823, Jointly with Ines Godonou Salako.
- Canonical Acoustic Thin-Shell Wormholes,
[Modern Physics Letters A 32, 7 1750047 \(2017\)](#),
arXiv:1612.03749, Jointly with Kimet Jusufi.

CANADIAN JOURNAL OF PHYSICS

- 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.
- 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.

- 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

- 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

- 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

- 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.
- 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.
- The Bekenstein-Hawking Corpuscular Cascading from the Backreacted Black Hole, [Advances in High Energy Physics 2017, 1573904 \(2017\)](#), arXiv:1609.07804.
- 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.
- 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.
- Stable Dyonic Thin-shell Wormholes in String Theory, [Advances in High Energy Physics 2017, 1215254 \(2017\)](#), arXiv:1611.07501, Jointly with Kimet Jusufi.

UNIVERSE

- 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.
- 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.
- 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.

- **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.
- **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

- **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.
- **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 Kumaran.

NEW ASTRONOMY

- **Nonlinearly charged black holes: Shadow and Thin-accretion disk,**
[New Astronomy \(2024\),](#)
2303.07174, Jointly with Akhil Uniyal, Sayan Chakrabarti and Reggie C. Pantig..
- **Joule Thomson Expansion, Maxwell Equal Area Law and Topological Interpretation of Phantom RN AdS Black Holes,**
[New Astronomy \(2024\),](#)
Jointly with Muhammad Umair Shahzad, Aqsa Mehmood and Ramish Gohar.
- **Particle dynamics and thermodynamical analysis of the rotating ModMax black holes,**
[New Astronomy \(2024\),](#)
Jointly with Khurshid Karshiboev, Farruh Atamurotov, Ahmadjon Abdujabbarov and Eldor Karimbaev.
- **Effects of Electric and Magnetic Charges on Weak Deflection Angle and Bounding Greybody of Black Holes in Nonlinear Electrodynamics,**
[New Astronomy \(2023\),](#)
Preprints.org 2022, 2022020245, Jointly with Wajiha Javed and Mehak Atique.
- **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.

COMMUNICATIONS IN THEORETICAL PHYSICS

- **Weak gravitational lensing around dyonic ModMax black hole in plasma,**
[Communications in Theoretical Physics \(2024\),](#)
Jointly with Ziyodulla Turakhonov, Farruh Atamurotov, Ahmadjon Abdujabbarov, and Sunnatillo Urinov.
- **Exploring the Shadow of a Rotating Charged ModMax Black Hole,**
[Communications in Theoretical Physics \(2023\),](#)
Jointly with Khurshid Karshiboev, Farruh Atamurotov, Ahmadjon Abdujabbarov, and Anvar Reyimberganov.
- **Thermal analysis of Rindler Schwarzschild Black Hole via corrected entropy,,**

Communications in Theoretical Physics (2024),
Jointly with Allah Ditta, Xia Tiecheng and Riasat Ali.

INDIAN JOURNAL OF PHYSICS

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

HIGH ENERGY DENSITY PHYSICS

- Thermodynamic analysis of Magnetically charged Euler-Heisenberg black holes with scalar hair via Renyi-entropy using logarithmic correction,
[High Energy Density Physics \(2024\)](#),
Jointly with Allah Ditta, Xia Tiecheng, Asif Mahmood and Riasat Ali.

TURKISH JOURNAL OF PHYSICS

- 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.
- 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

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

PRESS/ MEDIA

- **EMU NEWS:** Prof. Dr. Ali Övgün Receives the TFD 2026 Prof. Dr. Engin Arık Scientist Award
- **EMU NEWS:** EMU Department of Physics Academic Prof. Dr. Ali Övgün Presented with “Scientific and Academic Studies” Award by YTB
- **EMU NEWS:** Prof. Dr. Ali Övgün Receives the 2026 YTB Turkey Alumni Scientific and Academic Achievements Award
- **EMU NEWS:** Ali Övgün Accepted as a Member of the European Astronomical Society (EAS)
- **EMU NEWS:** Ali Övgün Ranks in the Top 0.05% Worldwide in ScholarGPS 2025: Ranked 2 in Black Hole Research!
- **EMU NEWS:** EMU Researcher Övgün Contributes to Major International White Paper on the Dark Universe
- **EMU NEWS:** Most Successful Academics of 2024 Awarded at EMU with the Participation of TRNC Minister of National Education Nazım Çavuşoğlu
- **EMU NEWS:** Innovative Black Hole Project Designed in Collaborations of EMU and Sabanci University Receives 2515 – Cost R&D Project Support from TÜBİTAK
- **KIBRIS POSTASI:** DAÜ Öğretim Üyesi Doç. Dr. Ali Övgün, İtalya’da çalışmaya katıldı
- **EMU NEWS:** Important Representation in the USA from EMU Physics Department Academic Staff Member Assoc. Prof. Dr. Ali Övgün.

- **EMU NEWS:** EMU Physics Department Academic Staff Member Assoc. Prof. Dr. Ali Övgün Delivers a Speech in Bilkent University as an Invited Speaker.
- **Space.com:** Is Time Travel Possible? Scientists Explore the Past and Future
- **DISCOVERY NEWS:** Wormhole Wonders: Hunting Down Spacetime Shortcuts
- **SPACE.COM:** Chasing Wormholes: The Hunt for Tunnels in Space-Time
- **TUBITAK BILIM VE TEKNIS DERGISI (Kasim 2015):** Samanyolu Gokadasinda Solucan Deligi Olasiligi.
- **EMU NEWS:** Important Research Findings from EMU Physics Department Academic Staff Member and PhD Student.
- **EMU NEWS:** EMU Physics Program PhD Student Publishes an Article on Hawking Radiation.
- **EMU NEWS:** EMU Physics Department Academic Staff Members Sakalli and Ovgun's Article Becomes the Most Read Publication in Cyprus.
- **EMU NEWS:** Important Accomplishment From EMU Department of Physics Academician.
- **EMU NEWS:** EMU Graduate Dr. Ali Ovgun To Work at CERN
- **KIBRIS GAZETESI:** DAU Akademisyeninden Buyuk Basari.
- **KIBRIS GAZETESI:** DAU Ogretim Gorevlisi Avrupa Fizik Dergisi'nde
- **KIBRIS GAZETESI:** DAU Mezunu, CERN'de Calisacak
- **DAU HABER:** Dr. Ali Ovgun CERN'de Calisacak
- **China DWnews**
- **SecretChina**
- **EMU NEWS:** Huge Success from Department of Physics Academic Staff Member Assist. Prof. Dr. Ali Övgün 2018
- **EMU NEWS:** EMU Department of Physics Academic Staff Member Asst. Prof. Dr. Ali Övgün Receives Outstanding Reviewer Award 2019
- **DETAY KIBRIS:** Yrd. Doç. Dr. Ali Övgün'e IOP CQG dergisinden 2019 üstün hakem ödülü
- **EMU NEWS:** 12 EMU Academic Staff Members Listed Among the World's Most Influential Scientists
- **DETAY KIBRIS:** Dünyanın En Etkili Bilim İnsanları Listesinde DAÜ Fen Ve Edebiyat Fakültesi'nden 5 Akademisyen Yer Aldı
- **EMU NEWS:** 14 Academics from EMU Appear in the World's Most Influential Scientists List in Stanford University's Study
- **KIBRIS GAZETESI:** DAÜ'den 14 akademisyen 'Dünyanın En Etkili Bilim İnsanları' listesinde yer aldı
- **YENİ ŞAFAK:** DAÜ'den 13 akademisyen Stanford Üniversitesi'nin araştırmasında dünyanın en etkili Bilim İnsanları listesinde yer aldı
- **KIBRIS POSTASI:** DAÜ Fizik Bölümü Akademisyenleri, Nobellerin Toplantısı'nda oturum başkanlığı yaptı
- **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
- **DAÜ HABER:** DAÜ Fizik Bölümü Öğretim Üyesi Doç. Dr. Ali Övgün Dünyanın Önde Gelen Bilim İnsanlarıyla Karadelik Araştırmaları Yapacak
- **DAÜ HABER:** Doğu Akdeniz Üniversitesi'nden 14 akademisyen "Dünyanın En Etkili Bilim İnsanları" listesinde yer aldı!

- **EMU NEWS:** 6 Academicians from EMU Faculty of Arts and Sciences Appear in Stanford University's The World's Most Influential Scientists List
- **DAÜ HABER:** DAÜ Fen ve Edebiyat Fakültesi'nden 6 Akademisyen Stanford Üniversitesi'nin Araştırmasında Dünyanın En Etkili Bilim İnsanları Listesinde Yer Aldı
- **ADVANCED SCIENCE NEWS:** Detecting ultralight dark matter particles using supermassive black holes

Teaching Experience

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 **BSc**

Physics I: Mechanics for scientists and engineers,

PHYS102 **BSc**

Physics II: Thermodynamics and Electromagnetism for scientists and engineers,

FIZK103 **BSc**

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

FIZK104 **BSc**

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

FIZK109 **BSc**

Fizyoterapi ve Rehabilitasyon Lisans Programı (Türkçe) Temel Fizik,

PHYS324 **BSc**

Introduction to General Relativity and Cosmology,

PHYS386 **BSc**

Astrophysics I,

PHYS472 **BSc**

Introduction to Nuclear and Particle Physics,

PHYS492 **BSc**

Cosmology I,

PHYS503 **MSc**

Introduction to Cosmology,

PHYS500 **MSc**

Master Thesis in Physics,

PHYS511 **MSc**

Mathematical Methods for Engineers and Scientists-I,

PHYS521 **MSc**

Classical Mechanics-I,

PHYS522

MSc

Electromagnetic Theory-I,

PHYS600

PhD

PhD Thesis in Physics,

PHYS603

PhD

Selected Topics in General Relativity - I,

PHYS621

PhD

Classical Mechanics-II,

PHYS622

PhD

Electromagnetic Theory-II ,

PHYS699

PhD

PhD Qualifying Exam in Physics,

References

References available upon request.