

# Assoc. Prof. Dr. Ali Övgün

Curriculum Vitae (Wednesday 30th October, 2024)

# PERSONAL DETAILS

Birthdate March 22, 1988

Mailing- AS246, Physics Department, EMU, A. Einstein Street, N. Cyprus 99628, Mersin 10, TÜRKİYE

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Google Scholar Profile Web of Science Profile Inspirehep Profile arXiv Profile Scopus Profile Researchgate Profile

# **RESEARCH INTEREST**

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

# **ACADEMIC EXPERIENCES**

Associate Professor

Eastern Mediterranean University

2020-Now

Postdoctoral Fellows

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

2017-2020

Research visitor

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

July/August 2022

School of Prospects in Theoretical Physics 2018 From Qubits to Spacetime (PITP 2018)

Institute for Advanced Study, 1 Einstein Drive, Princeton, USA.

July 2018

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,  $\overline{USA}$ .

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, SWITZER-LAND

## 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

 $19\ May is\ Turk\ Maar if\ Koleji,\ Girne,$ 

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, LATEX, 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 (Cosmo-Verse),

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 (Cosmic WISPers), Working Group Membership: WG 2 WISPs Dark Matter and Cosmology, WG 3 WISPs 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.

# **MEMBERSHIPS**

- 1. American Physical Society (APS)
- 2. The European Physical Society (EPS)
- 3. Canadian Association of Physicists (CAP)
- 4. The Cyprus Physicists Society
- 5. Southeastern European Network in Mathematical and Theoretical Physics (SEENET-MTP)
- 6. Turkish Astronomical Society (TAD)
- 7. American Mathematical Society (AMS)

# HONORS, AWARDS AND GRANTS

- 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.
- ${\it 4. \ 2010-2011 \ Scholarship \ from \ NExT \ PhD \ school, \ University \ of \ Southampton, \ UK.}$
- $5.\ \ 2011\mbox{-}2016\ \mbox{Research Assistantships, Eastern Mediterranean University.}$
- ${\bf 6.~~2014\text{-}2016~~EMU~~IGSR~~Publication~~Awards}.$
- 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 Top2% Scientists Stanford University 2019 Releases List

- 16. 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
- 17. Among World's Top 2% Scientists Stanford University 2020 Releases List
- 18. Among World's Top 2% Scientists Stanford University 2021 Releases List
- 19. Among World's Top 2% Scientists Stanford University 2022 Releases List

# **SUPERVISORSHIPS**

- PhD Supervisor: YASHMITHA KUMARAN Weak Deflection Angle via Gauss-Bonnet Theorem, 2018-2023.
- 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 Supervisor: HUSEYIN KARYAL Geodesics of Black Holes in Bumblebee Gravity Theory, 2018-2020.
- Msc Project: ILIM IRFAN CIMDIKER (SABANCI UNIVERSITY-TÜRKİYE) Black Hole Shadow in Symmergent Gravity, PHYSICS OF DARK UNIVERSE 2021. (Supervisor: Prof.Dr.Durmus Ali Demir)
- BSc Project: CEREN H. BAYRAKTAR (IYTE-TÜRKİYE)

  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)
   Nonlinear electrodynamics effects on the black hole shadow, deflection angle, quasinormal modes and greybody factors, Journal of Cosmology and Astroparticle Physics 2022.

# **JOURNALS EDITOR**

- 1. Guest Editor: 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"
- 7. Review Editor: Trends in Theoretical Physics Journal (TTP)
- 8. Review Editor: Optimum Science Journal

# SOME HIGH IMPACT JOURNALS REFEREED

## 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
- 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

- European Research Executive Agency, HORIZON Marie Skłodowska-Curie Postdoctoral Fellowships (HORIZON MSCA-PF)
- $\bullet\,$ TUBITAK UPAG Uluslararasi Isbirligi Projeleri Arastirma Destek Grubu Projeleri
- $\bullet\,$  TUBITAK 1001 - Bilimsel ve Teknolojik Araştırma Projelerini
- TUBITAK 1002 Hızlı Destek Programı
- TUBITAK BIDEB 2021 Bilim Insani Destekleme Programlari Doktora Sonrasi Arastirmaci Projeleri
- TUBITAK 2218- Yurt Ici Doktora Sonrası Arastirma Burs Programi
- CHILE FONDECYT

# **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 2015-Now

Physics I: Mechanics for scientists and engineers,

PHYS102
Physics II: Thermodynamics and Electromagnetism for scientists and engineers,

PHYS111
Principles of Physics for Pharmacy Department,

PHYS201 2018-Now

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Physics III: Modern Physics for scientists and engineers,

FIZK101

Matematik Lisans Programı Fizik I: Mekanik, Elektromanyetizma,

2015-Now

Matematik Lisans Programı Fizik II: Termodinamik, Elektromanyetizma,

2015-Now

2015-Now

2015-Now İnşaat Mühendisliği Lisans Programı (Türkçe) Bilgisayar Mühendisliği Lisans Programı (Türkçe) Fizik I: Mekanik,

FIZK104

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

FIZK105

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,

2015-Now

İlköğretim Matematik Öğretmenliği Lisans Programı (Türkçe) Fizik II,

FIZK203 2015-Now

Sınıf Öğretmenliği Lisans Programı (Türkçe) Fizik I,

FIZK205 2015-Now

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

2022-Now Introduction to General Relativity,

PHYS386 2023-Now

Astrophysics I,

PHYS472 2024-Now Nuclear and Particle Physics,

PHYS503 2016-NowIntroduction to Cosmology,

# ADMINISTRATIVE TASKS

- Member of Faculty Board: October 2023-Present
- Member of Social Media Committee of EMU: October 2018-Present
- Member of Faculty BAP-C Committee of EMU: October 2018-Present
- $\bullet\,$ TÜBİTAK Panelist & Advisor: 2018-Present

# **VOLUNTEER EXPERIENCES**

- 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)

# PRESS/ MEDIA

- 1. KIBRIS POSTASI: DAÜ Öğretim Üyesi Doç. Dr. Ali Övgün, İtalya'da çalıştaya katıldı
- 2. EMU NEWS: Important Representation in the USA from EMU Physics Department Academic Staff Member Assoc. Prof. Dr. Ali Övgün.
- 3. **EMU NEWS**: EMU Physics Department Academic Staff Member Assoc. Prof. Dr. Ali Övgün Delivers a Speech in Bilkent University as an Invited Speaker.
- 4. Space.com: Is Time Travel Possible? Scientists Explore the Past and Future
- 5. **DISCOVERY NEWS**: Wormhole Wonders: Hunting Down Spacetime Shortcuts
- 6. 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.
- 9. EMU NEWS: EMU Physics Program PhD Student Publishes an Article on Hawking Radiation.
- 10. **EMU NEWS**: EMU Physics Department Academic Staff Members Sakalli and Ovgun's Article Becomes the Most Read Publication in Cyprus.
- 11. EMU NEWS: Important Accomplishment From EMU Department of Physics Academician.
- 12. EMU NEWS: EMU Graduate Dr. Ali Ovgun To Work at CERN
- 13. KIBRIS GAZETESI: DAU Akademisyeninden Buyuk Basari.
- 14. KIBRIS GAZETESI: DAU Ogretim Gorevlisi Avrupa Fizik Dergisi'nde
- 15. KIBRIS GAZETESI: DAU Mezunu, CERN'de Calisacak
- 16. DAU HABER: Dr. Ali Ovgun CERN'de Calisacak
- 17. China DWnews
- 18. SecretChina
- 19. **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
- 21. DETAY KIBRIS: Yrd. Doç. Dr. Ali Övgün'e IOP CQG dergisinden 2019 üstün hakem ödülü
- 22. EMU NEWS: 12 EMU Academic Staff Members Listed Among the World's Most Influential Scientists
- 23. **DETAY KIBRIS**: Dünyanın En Etkili Bilim İnsanları Listesinde DAÜ Fen Ve Edebiyat Fakültesi'nden 5 Akademisyen Yer Aldı
- 24. EMU NEWS: 14 Academics from EMU Appear in the World's Most Influential Scientists List in Stanford University's Study

- 25. KIBRIS GAZETESI: DAÜ'den 14 akademisyen 'Dünyanın En Etkili Bilim İnsanları' listesinde yer aldı
- 26. YENİ ŞAFAK: DAÜ'den 13 akademisyen Stanford Üniversitesi'nin araştırmasında dünyanın en etkili Bilim İnsanları listesinde yer aldı
- 27. KIBRIS POSTASI: DAÜ Fizik Bölümü Akademisyenleri, Nobellerin Toplantısı'nda oturum başkanlığı yaptı
- 28. **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
- 29. **DAÜ HABER**: DAÜ Fizik Bölümü Öğretim Üyesi Doç. Dr. Ali Övgün Dünyanın Önde Gelen Bilim İnsanlarıyla Karadelik Araştırmaları Yapacak
- 30. **DAÜ HABER**: Doğu Akdeniz Üniversitesi'nden 14 akademisyen "Dünyanın En Etkili Bilim İnsanları" listesinde ver aldı!
- 31. **EMU NEWS**: 6 Academicians from EMU Faculty of Arts and Sciences Appear in Stanford University's The World's Most Influential Scientists List
- 32. **DAÜ HABER**: DAÜ Fen ve Edebiyat Fakültesi'nden 6 Akademisyen Stanford Üniversitesi'nin Araştırmasında Dünyanın En Etkili Bilim İnsanları Listesinde Yer Aldı
- 33. ADVANCED SCIENCE NEWS: Detecting ultralight dark matter particles using supermassive black holes

# **CONFERENCES & SUMMER SCHOOLS**

- 2007-May, Eskisehir/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).
- $\bullet\,$  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.

# **TALKS**

- 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.
- Unvelling 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 (UFOK-5).

# SINGLE AUTHOR PAPERS

1. Weak gravitational lensing of regular black holes with cosmic strings using the Gauss-Bonnet theorem.

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