

Dr. Mert MANGUT

PERSONAL DETAILS

Date of Birth	February 4, 1993
Place of Birth	Beyoglu(Istanbul)/Turkey
Phone	+90-548-8442079
Mail	mert.mangut@emu.edu.tr – mertmangut@gmail.com
ORCID	https://orcid.org/0000-0003-3364-1923

RESEARCH INTEREST

Mathematical or theoretical physics, mathematical general relativity, gravitational waves, classical and quantum singularities, quantum field theory, astrophysics, statistical physics, black holes, spectral theory, functional analysis, topology and differential geometry.

ACADEMIC EXPERIENCES

Lecturer and Researcher in Physics 2023 - Now
Eastern Mediterranean University, G. Magusa, North Cyprus

Research and Teaching Assistant in Physics 2018 - 2023
Eastern Mediterranean University, G. Magusa, North Cyprus

EDUCATION

PhD. in Physics 2018 - 2023
Eastern Mediterranean University, G. Magusa, North Cyprus
Thesis: The Physics of Non-spherical Compact Objects

Supervisor : Prof. Dr. İzzet SAKALLI
Co-supervisor : Prof. Dr. Özay GÜRTUĞ

MSc. in Mathematics 2016 - 2018
Maltepe University, Istanbul, Turkey

Thesis: Mathematical Foundations of Quantum Singularity Analysis: Applications in Horava-Lifshitz Theory

Supervisor : Prof. Dr. Özay GÜRTUĞ

BSc. in Mathematics 2012 - 2015

Istanbul University, Istanbul, Turkey

BSc. in Physics 2011 - 2015
Istanbul University, Istanbul, Turkey

TEACHING EXPERIENCE

Undergraduate Courses

- **PHYS 101:** Physics I (Mechanics)
- **PHYS 102:** Physics II (Electricity, Magnetism, and Thermodynamics)
- **PHYS 212:** Mathematical Physics
- **PHYS 220:** Classical Mechanics - I
- **FIZK 109:** Basic Physics for Physiotherapy Student (in Turkish)
- **FIZK 103:** Physics I (Mechanics in Turkish)
- **FIZK 105:** Basic Physics for Radiology Student (in Turkish)
- **FIZK 104:** Physics II (Electricity, Magnetism, and Thermodynamics in Turkish)
- **MATH 101:** Calculus I
- **MATH 102:** Calculus II
- **MATH 107:** Basic Mathematics for Pharmacy, Architecture, Applied sciences and Communication Students

Graduate Courses

- **PHYS 611:** Advanced Mathematical Methods for Engineers and Scientists II

Courses Taught (Detailed by Year)

In addition to my teaching responsibilities at Eastern Mediterranean University (EMU), I have also been regularly appointed as a Visiting Lecturer at Cyprus International University (CIU), where I have taught both physics and mathematics courses at the undergraduate the graduate levels. The following sections summarize my teaching experience at both institutions in a more structured form.

Eastern Mediterranean University (EMU), Famagusta, North Cyprus

1) Lecturer in Physics at EMU for undergraduate students studying in the departments of Engineering, Mathematics and Architecture. (as being PhD student)

Table 1: Teaching

Course	Academic Year	Term	Weekly Hour (Lecture and Tutorial)		
FIZK 103	2020-2021	Spring	**6**	4	2
FIZK 103	2021-2022	Spring	**6**	4	2
PHYS 101 (Gr:03/11)	2022-2023	Fall	**6**	4	2
FIZK 103	2022-2023	Fall	**6**	4	2

2) Lecturer in Physics at EMU for undergraduate students studying in the departments of Engineering, Mathematics, Physics, Medicine and Architecture. (as being Faculty Member)

Table 2: Teaching

Course	Academic Year	Term	Weekly Hour (Lecture and Tutorial)		
FIZK 104	2023-2024	Fall	**6**	4	2
FIZK 109 (Gr:02/01)	2023-2024	Fall/Spring	**6**	4	2
PHYS 101 (Gr:03/09)	2023-2024	Fall	**6**	4	2
FIZK 103	2023-2024	Spring	**6**	4	2
PHYS 102 (Gr:06)	2023-2024	Spring	**6**	4	2
PHYS 212	2023-2024	Spring	**6**	4	2
PHYS 102	2023-2024	Summer	**10**	8	2

Table 3: Teaching

Course	Academic Year	Term	Weekly Hour (Lecture and Tutorial)		
FIZK 104	2024-2025	Fall	**6**	4	2
PHYS 101 (Gr:07/12)	2024-2025	Fall	**6**	4	2
PHYS 611	2024-2025	Fall	**3**	3	-
PHYS 102 (Gr:03)	2024-2025	Spring	**6**	4	2
PHYS 212	2024-2025	Spring	**6**	4	2
PHYS 220	2024-2025	Spring	**6**	4	2
FIZK 105	2024-2025	Spring	**3**	3	-
PHYS 102	2023-2024	Summer	**10**	8	2

Cyprus International University (CIU), Nicosia, North Cyprus

Lecturer in Physics and Mathematics at CIU for undergraduate students studying in the departments of Engineering, Medicine and Architecture.

Table 4: Teaching

Course	Academic Year	Term	Weekly Hour (Lecture and Tutorial)		
MATH 101 (Gr:08)	2023-2024	Fall	**6**	4	2
MATH 107 (Gr:05/06)	2023-2024	Fall	**3**	3	-
PHYS 101 (Gr:04/10)	2023-2024	Spring	**6**	4	2
MATH 102 (Gr:04/05)	2023-2024	Spring	**6**	4	2

Table 5: Teaching

Course	Academic Year	Term	Weekly Hour (Lecture and Tutorial)		
PHYS 101 (Gr:03/07)	2024-2025	Fall	**6**	4	2
MATH 107 (Gr:01/02)	2024-2025	Fall	**3**	3	-
PHYS 101 (Gr:04/06/10/12)	2024-2025	Spring	**6**	4	2

PUBLICATIONS IN PEER REVIEWED JOURNALS

1. O. Gurtug and **M. Mangut**, **"Quantum Probe of Hořava-Lifshitz Gravity"**, Journal of Mathematical Physics 59, 042503, (2018).
2. O. Gurtug and **M. Mangut**, **"Effect of power-law Maxwell field to the gravitational lensing"**, Physical Review D 99, 084003, (2019).
3. O. Gurtug and **M. Mangut**, **"Gravitational Lensing in a Model of Nonlinear Electrodynamics: The Case for Electrically and Magnetically Charged Compact Objects"**,Annalen der Physik 532, 3, 1900576, (2020).
4. M. Mangut and O. Gurtug , **"Quantum probe of time-like naked singularities for electrically and magnetically charged black holes in a model of nonlinear electrodynamics"**, Modern Physics Letters A 35, 29, 2050242, (2020).
5. H. Gürsel, **M. Mangut** and I. Sakallı , **"Holographic Dissipative Properties of Non-relativistic Black Branes with Hyperscaling Violation"**,Eur. Phys. J. Plus 136, 9 (2021).
6. O. Gurtug, **M. Mangut** and M. Halilsoy , **"Gravitational Lensing in Rotating and Twisting Universes"**,Astroparticle Physics, 128, 102558 (2021).
7. O. Gurtug, M. Halilsoy and **M. Mangut** , **"The charged Zipoy–Voorhees metric with astrophysical applications"**, Eur. Phys. J. C, 82, 671 (2022).
8. M. Mangut , H. Gürsel and I. Sakallı , **"Gravitational lensing in Kerr–Newman anti de Sitter spacetime"**, Astroparticle Physics, 102763 (2022).
9. M. Mangut , H. Gürsel, S. Kanzi and I. Sakallı , **"Probing the Lorentz Invariance Violation via Gravitational Lensing and Analytical Eigenmodes of Perturbed Slowly Rotating Bumblebee Black Holes"**, Universe, 9(5), 225 (2023).
10. O. Gurtug, M. Halilsoy and **M. Mangut** , **"Probing naked singularities in the charged and uncharged $\gamma - metrics$ with quantum wave packets"**, General Relativity and Gravitation, vol. 55, no. 98, 2023.
11. M. Halilsoy, **M. Mangut** and Chia-Li Hsieh , **"Stationary, charged Zipoy-Voorhees metric from colliding wave spacetime"**, General Relativity and Gravitation, vol.55 , no.103 , 2023.
12. M. Halilsoy, Chia-Li Hsieh and **M. Mangut** , **"Colliding null matter with a specific stress tensor"**, Physica Scripta, vol. 99, no: 3, 035023 , 2024.
13. M. Mangut, O. Gürtuğ and I. Sakallı , **"On thermal fluctuations and quantum regularities of $\mathcal{F}(R,\mathcal{G})$ gravity black holes with constant topological Euler density in nonlinear electrodynamics"**, Physica Scripta, vol. 99, no: 5, 055005, 2024.
14. M. Mangut, H. Gürsel and I. Sakallı , **"Exploring Lorentz Symmetry Violation through Gravitational Lensing of Charged Black Holes with Kalb-Ramond Field"**, Chinese Physics C, 49 (6), 065106, 2025.
15. H. Gürsel, **M. Mangut** and E. Sucu , **"Thermodynamics of Einstein-Euler-Heisenberg Black Holes with Thermal Fluctuations and Nonlinear Electro-**

magnetic Fields", Class. Quantum Gravity, 42, 135015, 2025.
16. O. Gurtug, M. Halilsoy and **M. Mangut** , **Comment on "Charged Zipoy-Voorhees metric in string theory"**, AOP, 481, 170186, 2025.

RELEVANT EXPERIENCE

Speaker and Organization Committee Member at EMU 4rd Astronomy Workshop Aug 2025

Eastern Mediterranean University, G. Magusa, North Cyprus

Title: The Life Cycle of Neutron Stars

Participant in the Phenomenology Group Seminar at the Cavendish Laboratory Sep 2024

University of Cambridge, Cambridge, United Kingdom

Title: Quarkonium fragmentation from HF-NRevo: A low-to-high-energy approach by Dr. Francesco Giovanni Celiberto

Speaker and Organization Committee Member at EMU 3rd Astronomy Workshop Aug 2024

Eastern Mediterranean University, G. Magusa, North Cyprus

Title: Heartbeats of Our Galaxy: The Evolutionary Journey of Stars

Organization Committee Member at EMU 2nd Astronomy and Space Science Club Seminar May 2024

Eastern Mediterranean University, G. Magusa, North Cyprus

Title: A Brief Introduction to Cosmology by Prof. Lawrence M. Krauss

Organization Committee Member at EMU 1st Astronomy and Space Science Club Seminar May 2024

Eastern Mediterranean University, G. Magusa, North Cyprus

Title: Discovering Our Universe: Past, Present and Future by Dr. Alex Lockwood

Speaker and Organization Committee Member at EMU 2nd Astronomy Workshop Aug 2023

Eastern Mediterranean University, G. Magusa, North Cyprus

Title: The Internal Structure of Stars

Speaker at The Madrid Winter Workshop on Theoretical Physics Dec 2022

Departament of Theoretical Physics and the Instituto de Particulas y Fisica del Cosmos (IPARCOS) of the Complutense University of Madrid, Spain

Title: On Charged Zipoy-Voorhees Metrics

Speaker and Organization Committee Member at EMU 1st Astronomy Workshop Aug 2022

Eastern Mediterranean University, G. Magusa, North Cyprus

Title: Stellar Evolution

Speaker at 19th Workshop on Quantization, Dualities and Integrable Systems April 2021

University of Turkish Aeronautical Association, Ankara, Turkey (online due to COVID-19)

Title: Effect of power-law Maxwell field to the gravitational lensing for using Rindler and Ishak method

Local Organization Committee Member at 2nd International Conference of Mathematical Sciences July 2018
Maltepe University, Istanbul, Turkey

Analytic Topology and Applications; Functional Analysis; Sequences, series, summability; Mathematical Methods in Physics

Poster Presentation of Undergraduate Project June 2015
Physics Department, Faculty of Science, Istanbul University, Istanbul, Turkey

Title: Quasi Periodic Oscillations in Reissner - Nordström Spacetime

Summer School of Physics at Feza Gursey Institute Aug 2013
Bogazici University, Istanbul, Turkey

Organization Committee Member at 3rd Physics Workshop Feb 2013
Istanbul University, Istanbul, Turkey

Astroparticles, High Energy Physics and Solid State Physics

MEMBERSHIPS

1. American Mathematical Society (AMS).
2. Turkish Mathematical Society (TMS).

SCHOLARSHIPS, ACHIEVEMENTS & AWARDS

Honour Price & Nature Index-2022 Publications April 2022
Eastern Mediterranean University, G. Magusa, North Cyprus

Honour Price & First Degree in Graduation, Institute of Science June 2018
Maltepe University, Istanbul, Turkey

Honour Price & First Degree in Graduation, Faculty of Science June 2015
Istanbul University, Istanbul, Turkey

Scholarship for Higher Education 2012 - 2015
TEV (Turkish Education Foundation)

Award of Achievement in Higher Education 2014 - 2015

TEV (Turkish Education Foundation)