

CURRICULUM VITAE

ALIKRAM NUHBALAOĞLU ALIEV

I. PERSONAL

Date of Birth: December 12, 1954

Place of Birth: Azerbaijan

Alma Mater: M. V. Lomonosov Moscow State University

Marital Status: Married, two children

Academic Position: Professor

Administrative Experience: Head of Department, Vice Dean, University Senate Member

Office Address: Yeni Yüzyıl University, Faculty of Engineering and Architecture,

Department of Electrical and Electronics Engineering, Cevizlibağ-Topkapı, 34010 Istanbul, Turkey

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II. EDUCATION AND DEGREES

1978 : BSc. Diploma and Master of Science in Theoretical and Mathematical Physics,

M. V. Lomonosov Moscow State University

1984 : PhD in Theoretical and Mathematical Physics, M. V. Lomonosov Moscow State University

1993 : Doctor of Physical and Mathematical Sciences (*Equivalent to Professor in Russia*),

M. V. Lomonosov Moscow State University

III. PROFESSIONAL EXPERIENCE

1978 – 1980 : Research Assistant at the Faculty of Physics, M. V. Lomonosov Moscow State University

1980 – 1983 : PhD Student at the Faculty of Physics, M. V. Lomonosov Moscow State University

1984 – 1985 : Research Scientist, Azerbaijan Academy of Sciences

1986 – 1988 : Advanced Research Scientist (*Equivalent to Associate Professor in T. C., Accepted by Inter-University Council of Turkey in 2003*), Azerbaijan Academy of Sciences

1988 – 1989 : Joint Member of the Faculty of Physics (*with the rank of Associate Professor*),

M. V. Lomonosov Moscow State University

1989 – 1991 : Advanced Research Scientist, Azerbaijan Academy of Sciences

1991 – 1993 : Joint Member of the Faculty of Physics (*with the rank of Associate Professor*),

M. V. Lomonosov Moscow State University

1994 – 1997 : Research Scientist, TÜBİTAK, Marmara Research Center, Institute for Fundamental Sciences, Gebze

1997 – 2011 : Senior Research Scientist, TÜBİTAK, Feza Gürsey Institute for Fundamental Sciences, Istanbul

2011 – 2012 : Professor, Department of Mathematics, Doğuş University, Istanbul

2012– : Professor, Department of Electrical and Electronics Engineering, Yeni Yüzyıl University, Istanbul

Fluent Languages: Turkish, Russian, English

IV. THESES

1. “Exact Solutions of Einstein-Maxwell Equations for Magnetized Black Holes”,

M. Sc. Thesis, 63 pages (M. V. Lomonosov Moscow State University, 1978)

2. “Rotating Black Holes in the Presence of External Magnetic Fields”,

PhD Thesis, 147 pages (M. V. Lomonosov Moscow State University, 1983)

3. “Physics of Magnetized Black Holes and Cosmic Strings”,

Doctor of Phys&Math Sciences Thesis, 195 pages (M. V. Lomonosov Moscow State University, 1993)

V. TEACHING EXPERIENCE

1980 – 1983 : Teaching courses at the Department of Mathematics, M. V. Lomonosov Moscow State University:

- *The Classical Theory of Electromagnetic Fields*
- *Quantum Mechanics*

1986 – 1988 : Teaching graduate students and young scientists at Azerbaijan Academy of Sciences:

- *Physical and Mathematical Principles of General Relativity*
- *Riemannian Geometry and Tensor Analysis*

2003 : Teaching graduate and post-graduate students at Feza Gürsey Institute: (Summer School on Gravitation and Cosmology, June 1 - July 31)

- *Differential Geometry and Advanced General Relativity*
- *Theory of Hypersurfaces and Mathematical Cosmology*

2001 – 2005 : Teaching graduate students at the Department of Physics, Istanbul Technical University:

- *General Relativity*
- *Electromagnetic Theory*
- *Group Theory and Applications*
- *Selected Topics in Physics*

2011 – 2012 : Teaching undergraduate students at Doğuş University:

- *Differential and Integral Calculus*
- *Introduction to Linear Algebra*

2012– : Teaching undergraduate students at Yeni Yüzyıl University:

- *Mathematics 1, Mathematics 2, Mathematics 3*
- *Electromagnetic Theory I, Electromagnetic Theory II*

VI. POST-DOCTORAL ADVISEES

- 1997 – 2001** : Dr. Neşe Özdemir - TÜBİTAK, Feza Gürsey Institute
- 2000 – 2001** : Dr. Kamuran Saygılı - TÜBİTAK, Feza Gürsey Institute
- 2004 – 2005** : Dr. Hakan Cebeci - TÜBİTAK-BİDEB, Feza Gürsey Institute
- 2007 – 2008** : Dr. Özgür Delice - TÜBİTAK-BİDEB, Feza Gürsey Institute
- 2008 – 2009** : Dr. Dilek Çiftçi - TÜBİTAK-BİDEB, Feza Gürsey Institute
- 2010 – 2011** : Dr. Çetin Şentürk - TÜBİTAK-BİDEB, Feza Gürsey Institute
- 2010 – 2011** : Dr. Ümit Ertem - TÜBİTAK-BİDEB, Feza Gürsey Institute
- 2010 – 2011** : Dr. Burak Kaynak - TÜBİTAK(1001-Project), Feza Gürsey Institute

VII. M. S. THESES ADVISEES

- 2003 – 2005** : Emir Gümrükçüoğlu - Istanbul Technical University
- 2006 – 2009** : Pamir Talazan - Istanbul Technical University

VIII. GRANT SUPPORT

- 2006 – 2009** : Research Grant of TÜBİTAK under Project No 105T437
- *Black Holes in Higher Dimensional Gravity and Cosmology*
- 2010 – 2014** : Research Grant of TÜBİTAK under Project No 110T312
- *Physical and Mathematical Aspects of Higher Dimensional Gravity*

IX. MEMBERSHIPS AND PROFESSIONAL ACTIVITIES

- Member of USSR Gravitational Society, **1984 – 1993**

- Member of the International Coordinating Committee of the Tri-Annual Marcel Grossmann Meetings on General Relativity and Gravitation, **2012**–

- Member of Science Academy, Turkey **2014**–

- Expert-Referee and Adjudicator of Leading Research Journals:

- *Physical Review Letters*

- *Physical Review D*

- *Physics Letters B*

- *Modern Physics Letters A*

- *Journal of Physics A*

- *International Journal of Modern Physics D*

- *Classical and Quantum Gravity*

- *General Relativity and Gravitation*

- *Journal of Cosmology and Astroparticle Physics*

X. SOME OF CONFERENCES AND WORKSHOPS ORGANIZED

- *Erdal İnönü Days*, June 5-6, 2001, Feza Gürsey Institute
- *Research Semester on Gravitation and Cosmology*, June 1-July 31, 2003, Feza Gürsey Institute
- *A Study Week on Braneworld Gravity and Cosmology*, June 20-25, 2004, Feza Gürsey Institute
- *Research School on Cosmology*, June 6 - July 6, 2005, Feza Gürsey Institute
- *Erdal İnönü Days*, June 5-6, 2006, Boğaziçi University
- *Cosmology Days*, Feza Gürsey Institute, International Seminar Series, October-November 2007

XI. SOME OF SPECIAL TALKS AT CONFERENCES AND WORKSHOPS

- *Black Holes in Braneworlds*

International School on Modern Problems of Theoretical and Mathematical Physics, September 20-25, 2004, Georgia

- *Braneworld Gravity*

O. M. Stewart Colloquium and Seminar Series at University of Missouri-Columbia, November 1-14, 2004, USA

- *New Physics of Black Holes Localized on 3-Branes*

Zelmanov Memorial Lectures at M. V. Lomonosov Moscow State University, September 7, 2005, Russia

- *Self-Dual Geometries and Gravitational Instantons*

5th Workshop on Quantization, Dualities and Integrable Systems, Pamukkale University, January 23-28, 2006, Turkey

- *Rotating Black Holes in Higher Dimensional Einstein-Maxwell Gravity*

11th Marsel Grossmann Meeting on General Relativity, July 23-29, 2006, Berlin, Germany

- *Electromagnetic Properties of Kerr-AdS Black Holes in Four and Higher Dimensions*

6th Workshop on Quantization, Dualities and Integrable Systems, METU, April 20-22, 2007, Turkey

- *Black Holes: New Challenges and Opportunities*

Erdal İnönü Memorial Lectures at Feza Gürsey Institute, May 30, 2008, Turkey

- *Observing Black Holes: Quasi-Periodic Oscillations*

26th International Congress on Physics, Turkish Physical Society, September 24-27, 2009, Bodrum, Turkey

- *Black Holes in Einstein-Maxwell-Chern-Simons Theory*

12th Marsel Grossmann Meeting on General Relativity, July 12-18, 2009, Paris, France

- *Recent Advances in Three-Dimensional Massive Gravity*

13th Workshop on High-Energy Physics, Ankara University, December 27 - 30, 2011, Turkey

- *Exact Solutions in 3D Massive Gravity: A Novel Approach*

11th Workshop on Quantization, Dualities and Integrable Systems, Pamukkale University, April 21-23, 2012, Turkey

- *Hidden Symmetries and Geodesics of Kerr Spacetime in Kaluza-Klein Theory*

12th Workshop on Quantization, Dualities and Integrable Systems, Koç University, April 20-22, 2013, Turkey

- *The role of black holes in modern science: New developments and challenges*

30th International Congress on Physics, Turkish Physical Society, September 2-5, 2013, Istanbul, Turkey

- *Physical properties and astrophysical appearance of rotating Kaluza-Klein black holes,*

Workshop on Collapsing Objects, Fudan University, October 21-24, 2013, Shanghai, China

- *Superradiance and black hole bomb in 5D minimal ungauged supergravity,*

13th Workshop on Quantization, Dualities and Integrable Systems, Koç University, April 19-20, 2014, Turkey

XII. HONORS AND AWARDS

1977 – 1978 : Honorable Studentship of M. V. Lomonosov Moscow State University for Excellence in Studying Physics and Mathematics

1986 : Award of Azerbaijan Academy of Sciences for Excellence in Research on the Theory of Black Holes

1999 : Award of TÜBİTAK-Feza Gürsey Institute for Excellence in Research on Topologically Massive Gravity

2012 : Istanbul Kültür University, Prof. Dr. Önder Öztunalı Science Prize

2013 : Middle East Technical University, Prof. Dr. Mustafa Parlar Foundation Science Prize

XIII. BASIC RESEARCH INTERESTS

- Radiation of Relativistic Particles in Strong Electromagnetic and Gravitational Fields (**1979 - 1983**)
- Exact Solutions of the Coupled System of Einstein-Maxwell Equations for Black Holes (**1980, 1984, 1989**)

- Integrability of Geodesic Equation in the Spacetime of Rotating Black Holes: Non-Linear Mechanics and Mechanisms for Wave Amplification **(1985 - 1988)**
- Theoretical Models for Magnetized Black Holes **(1987 - 1989, 2002)**
- Physics of Cosmic Strings **(1988 - 1993)**
- “No-Go” Theorems and Spinor Structure of Topologically Massive Gravity **(1994 - 1996, 2000)**
- Quantum Field Theory in Curved Spaces of Special Topologies: One-Loop Quantum Corrections to Classical Geometries **(1996 - 1998)**
- Hyper-Kahler Geometries and Gravitational Instantons **(1997 - 1999, 2006)**
- Exact Solutions for Impulsive Spherical Gravitational Waves **(2001)**
- Gravity in Braneworlds **(2004 - 2006, 2009 -)**
- Einstein–Chern-Simons Gravity: Exact Solutions and Decoupling Theorems **(2010 -)**
- Physical and Mathematical Aspects of Higher-Dimensional Gravity:
Black Holes and Uniqueness Theorems **(2004 -)**
- Particles and Strings Dynamics in Higher-Dimensional Gravity: Liouville Integrability, Hidden Symmetries and Supersymmetries **(2008 -)**
- Quantum Gravity at a Lifshitz Point: Hořava-Lifshitz Gravity **(2010 -)**
- Exact Solutions in Lower Dimensional Gravity Theories: New Massive Gravity **(2010 -)**
- Group-Theoretical Approach to Non-Linear Equations of Gravity Theories **(1980, 1984, 1989, 1997-1999, 2008-)**

XIV. PUBLICATIONS

A. Papers in Referred Journals

- [1] The interaction of charged particles with radiation in strong gravitational and electromagnetic fields
(with D. V. Gal'tsov and A. A. Sokolov) *Vestn. Mosk. Univer. Fiz.-Astron.* **21**, 10–16 (1980); **Translated in** *Moscow University Phys. Bull. (USA)* **35**, 9–14 (1980)
- [2] Rotating black hole in a strong magnetic field (with D. V. Gal'tsov and A. A. Sokolov)
Izv. Vuz. Fiz. **23**, 7–12 (1980); **Translated in** *Sov. Phys. J. (USA)* **23**, 179–183 (1980)
- [3] Radiation from relativistic particles in non-geodesic motion in a strong gravitational field (with D. V. Gal'tsov)
General Relat. and Gravit. **13**, 899–912 (1981)
- [4] Radiation emission by relativistic particles in a strong gravitational field (with D. V. Gal'tsov and A. A. Sokolov)
Vestn. Mosk. Univer. Fiz.-Astron. **23**, 88–91 (1982); **Translated in** *Moscow University Phys. Bull. (USA)* **37**, 102–104 (1982)
- [5] Synchrotron radiation in curved space-time (with D. V. Gal'tsov, A. A. Sokolov and I. M. Ternov)
Izv. Vuz. Fiz. **26**, 37–42 (1983); **Translated in** *Sov. Phys. J. (USA)* **26**, 36–40 (1983)
- [6] Black hole in an asymmetric electromagnetic field: New ponderomotive effects-spin precession and drift
(with D. V. Gal'tsov and V. I. Petukhov) *Phys. Lett.* **A105**, 346–349 (1984)
- [7] Negative absorption near a magnetized black hole: Black hole masers (with D. V. Gal'tsov and V. I. Petukhov)
Astrophys. Space Sci. **124**, 137–157 (1986)
- [8] On the observability of the magnetic precession of the black hole accretion disks (with D. V. Gal'tsov)
Astrophys. Space Sci. **135**, 81–86 (1987)
- [9] Energetics of the magnetized black holes: Effective ergospheres and superradiance (with D. V. Gal'tsov)
Astrophys. Space Sci. **143**, 301–316 (1988)
- [10] Effective ergospheres of magnetized black holes and the Kerr-Newman-Ernst solution (with D. V. Gal'tsov)
Zh. Eksp.Theor. Fiz. **94**, 15–29 (1988); **Translated in** *Sov. Phys. JETP (USA)* **67**, 1525–1532 (1989)
- [11] Physical interpretation of the Kerr-Newman-Ernst solution (with D.V.Gal'tsov)
Izv. Vuz. Fiz. **32**, 39–45 (1989); **Translated in** *Sov. Phys. J. (USA)* **32**, 790–794 (1989)

- [12] Magnetized black holes (with D. V. Gal'tsov)
Usp. Fiz. Nauk **157**, 129–162 (1989); **Translated** in *Sov. Phys. Usp. (USA)* **32**, 75–92 (1989)
- [13] Exact solutions for magnetized black holes (with D. V. Gal'tsov)
Astrophys. Space Sci. **155**, 181–192 (1989)
- [14] Gravitational effects in the field of a central body threaded by a cosmic string (with D. V. Gal'tsov)
Piz'ma Astron. Zh. **14**, 116–120 (1988); **Translated** in *Sov. Astron. Lett. (USA)* **14**, 48–49 (1988)
- [15] Gravitational radiation in the field of a cosmic string (with D. V. Gal'tsov)
Zh. Eksp.Theor. Fiz. **95**, 3–15 (1989); **Translated** in *Sov. Phys. JETP (USA)* **68**, 1201–1206 (1989)
- [16] Gravitational Aharonov-Bohm radiation in the string generated conical space-time (with D. V. Gal'tsov)
Ann. Phys. (USA) **193**, 142–165 (1989)
- [17] Absence of gravitational radiation in the collision of two straight cosmic strings (with D. V. Gal'tsov)
Int. J. Mod. Phys. A **5**, 203–210 (1990)
- [18] Polar circular orbits in the space-time of black holes
Class. Quant. Gravity **10**, 1741–1749 (1993)
- [19] Gravitational radiation in the space-time of a supermassive cosmic string
Class. Quant. Gravity **10**, 2531–2538 (1993)
- [20] Spinor formulation of topologically massive gravity (with Y. Nutku)
Class. Quant. Gravity **12**, 2913–2925 (1995)
- [21] A theorem on topologically massive gravity (with Y. Nutku)
Class. Quant. Gravity **13**, L29–L32 (1996)
- [22] On the electromagnetic perturbations of multiconical spacetimes
Mod. Phys. Lett. A **11**, 2171–2176 (1996)
- [23] Casimir effect in the spacetime of multiple cosmic strings
Phys. Rev. D **55**, 3903–3906 (1997)
- [24] General minimal surface solution for gravitational instantons (with J. Kalaycı and Y. Nutku)
Phys. Rev. D **56**, 1332–1333 (1997)

- [25] Vacuum fluctuations of a massless spin- $\frac{1}{2}$ field around multiple cosmic strings
(with M. Hortaçsu and N. Özdemir) *Class. Quant. Gravity* **14**, 3215–3224 (1997)
- [26] Semiclassical corrections to the metric of multiple cosmic strings (with N. Özdemir)
Class. Quant. Gravity **15**, 3937–3940 (1998)
- [27] Gravitational instantons admit hyper-Kähler structure (with Y. Nutku)
Class. Quant. Gravity **16**, 189–210 (1999)
- [28] Gravitational instantons from minimal surfaces (with J. Kalaycı, M. Hortaçsu and Y. Nutku)
Class. Quant. Gravity **16**, 631–642 (1999)
- [29] Topologically massive magnetic monopoles (with Y. Nutku and K. Saygılı)
Class. Quant. Gravity **17**, 4111–4123 (2000)
- [30] Impulsive spherical gravitational waves (with Y. Nutku)
Class. Quant. Gravity **18**, 891–906 (2001)
- [31] Motion of charged particles around a rotating black hole in a magnetic field (with N. Özdemir)
Monthly Notes of Royal Astron. Soc. **336**, 241–248 (2002)
- [32] Five-dimensional rotating black hole in a uniform magnetic field: The gyromagnetic ratio (with V. P. Frolov)
Phys. Rev. D **69**, 084022, 1–10 (2004)
- [33] Gravitational field equations on and off a 3-braneworld (with A. E. Gümrükcüoğlu)
Class. Quant. Gravity **21**, 5081–5095 (2004)
- [34] Charged rotating black holes on a 3-brane (with A. E. Gümrükcüoğlu)
Phys. Rev. D **71**, 104027, 1–14 (2005)
- [35] A slowly rotating charged black hole in five dimensions
Mod. Phys. Lett. A **21**, 751–757 (2006)
- [36] Gravitational field equations in a braneworld with Euler-Poincaré term
(with H. Cebeci and T. Dereli)
Class. Quant. Gravity **23**, 591–601 (2006)
- [37] Self-dual fields harbored by a Kerr-Taub-bolt instanton (with C. Saçlıoğlu)
Phys. Lett. B **632**, 725–727 (2006)

- [38] Rotating black holes in higher dimensional Einstein-Maxwell gravity
Phys. Rev. D **74**, 024011, 1–9 (2006)
- [39] Gyromagnetic ratios of charged Kerr-Anti-de Sitter black holes
Class. Quant. Gravity **24**, 4669–4677 (2007)
- [40] Electromagnetic properties of Kerr-anti-de Sitter black holes
Phys. Rev. D **75**, 084041, 1–14 (2007)
- [41] Exact solutions in five-dimensional axi-dilaton gravity with Euler-Poincare term
(with H. Cebeci and T. Dereli)
Class. Quant. Gravity **24**, 3425–3436 (2007)
- [42] Rotating Spacetimes with asymptotic nonflat structure and the gyromagnetic ratio
Phys. Rev. D **77**, 044038, 1–11 (2008)
- [43] Kerr-Taub-NUT Spacetime with Maxwell and dilaton fields (with H. Cebeci and T. Dereli)
Phys. Rev. D **77**, 124022, 1–6 (2008)
- [44] Stationary strings in the spacetime of rotating black holes in five-dimensional minimal gauged supergravity
(with H. Ahmedov)
Phys. Rev. D **78**, 064023, 1–7 (2008)
- [45] Superradiant instability of five-dimensional rotating charged AdS black holes (with Ö. Delice)
Phys. Rev. D **79**, 024013, 1–12 (2009)
- [46] Note on rotating charged black holes in Einstein-Maxwell-Chern-Simons theory (with D. Çiftci)
Phys. Rev. D **79**, 044004, 1–8 (2009)
- [47] Uniqueness of rotating charged black holes in five-dimensional minimal gauged supergravity (with H. Ahmedov)
Phys. Lett. B **679**, 396–400 (2009)
- [48] Gravitational effects of rotating braneworld black holes (with P. Talazan)
Phys. Rev. D **80**, 044023, 1–10 (2009)
- [49] Supersymmetry in the spacetime of higher-dimensional rotating black holes (with H. Ahmedov)
Phys. Rev. D **79**, 084019, 1–7 (2009)

- [50] Stationary spinning strings and symmetries of classical spacetimes (with H. Ahmedov)
Phys. Lett. B **675**, 257–261 (2009)
- [51] Decoupling and reduction in Chern-Simons modified gravity (with H. Ahmedov)
Phys. Lett. B **690**, 196–200 (2010)
- [52] Black string and Gödel type solutions of Chern-Simons modified gravity (with H. Ahmedov)
Phys. Rev. D **82**, 024043, 1–7 (2010)
- [53] The general type N solution of new massive gravity (with H. Ahmedov)
Phys. Lett. B **694**, 143–148 (2010)
- [54] Slowly rotating black hole solutions to Hořava-Lifshitz gravity (with Ç. Şentürk)
Phys. Rev. D **82**, 104016, 1–7 (2010)
- [55] Type D solutions of 3D new massive gravity (with H. Ahmedov)
Phys. Rev. D **83**, 084032, 1–12 (2011)
- [56] Black strings in Hořava-Lifshitz gravity (with Ç. Şentürk)
Phys. Rev. D **84**, 044010, 1–10 (2011)
- [57] Exact solutions in 3D new massive gravity (with H. Ahmedov)
Phys. Rev. Lett. **106**, 021301, 1–4 (2011)
- [58] Type N spacetimes as solutions of extended new massive gravity (with H. Ahmedov)
Phys. Lett. B **711**, 117–121 (2012)
- [59] Strong gravity effects of rotating black holes: Quasiperiodic oscillations (with G. Daylan Esmer and P. Talazan)
Class. Quant. Gravity **30**, 045010, 1–15 (2013)
- [60] Hidden symmetries and geodesics of Kerr spacetime in Kaluza-Klein theory (with G. Daylan Esmer)
Phys. Rev. D **87**, 084022, 1–12 (2013)
- [61] Superradiance and black hole bomb in five-dimensional minimal ungauged supergravity
J. Cosmol. Astropart. Phys. **11**, 029, 1–15 (2014)

B. Conference Proceedings and Books

- [62] The drift of charged particles in a strong gravitational field (with V. I. Petukhov)
 In: *Proceedings of the 5th All-Union Conference on Modern Problems in General Relativity and Gravitation*,
 Moscow State University Press (1981) p.71, Moscow, USSR
- [63] Synchrotron radiation in the Kerr field (with D. V. Gal'tsov and A. A. Sokolov)
 In: *Proceedings of the 5th All-Union Conference on Modern Problems in General Relativity and Gravitation*,
 Moscow State University Press (1981) p.94, Moscow, USSR
- [64] Quantum theory of synchrotron radiation in curved space-time (with D. V. Gal'tsov and A. A. Sokolov)
 In: *Proceedings of the 9th International Conference on General Relativity and Gravitation*
 (1983) p.725, Padova, Italy
- [65] Black hole immersed into an external asymmetric electromagnetic field (with D. V. Gal'tsov and V. I. Petukhov)
 In: *Proceedings of the 6th All-Union Conference on Modern Problems in General Relativity and Gravitation*,
 Moscow State Pedagogical University Press (1984) p.107, Moscow, USSR
- [66] The influence of an external magnetic field on quantum processes near black holes
 (with D. V. Gal'tsov, A. A. Sokolov and I. M. Ternov)
 In: *Proceedings of the 6th All-Union Conference on Modern Problems in General Relativity and Gravitation*,
 Moscow State Pedagogical University Press (1984) p.102, Moscow, USSR
- [67] Physics of magnetized black holes (with D. V. Gal'tsov)
 In: *Proceedings of the 1st International Conference on Gravitation and Cosmology* (1987) p.11, Goa, India
- [68] Dynamics of gravitating systems in the presence of cosmic strings (with D. V. Gal'tsov and E. Masar)
 In: *Proceedings of the 1st International Conference on Gravitation and Cosmology* (1987) p.16, Goa, India
- [69] Exact Kerr-Newman-Ernst solution and its physical interpretation (with D. V. Gal'tsov)
 In Book: *Exact solutions of the gravitational field equations*, Tartu University Press (1988) p.88, Estonia, USSR
- [70] Black holes and electromagnetic fields: Fluxes across the event horizon
 In: *Proceedings of the 7th All-Union Conference on Modern Problems in General Relativity and Gravitation*,
 Erevan University Press (1988) p.64, Erevan, USSR

- [71] Gravitational radiation and particles production in the field of a cosmic string
(with D. V. Gal'tsov and E. Masar)
In: *Proceedings of the 7th All-Union Conference on Modern Problems in General Relativity and Gravitation*,
Erevan University Press (1988) p.106, Erevan, USSR
- [72] Gravitational vacuum polarization effects near a cosmic string
In Book: *Modern Problems in Gravitation* (with D. V. Gal'tsov and E. Masar)
Moscow Pedagogical University Press (1991) pp.223-229, Moscow, USSR
- [73] Radiative processes near cosmic strings
In Book: *Lecture Notes in Physics "Strings and Symmetries"*, Springer-Verlag (1994) pp.302-305, Germany
- [74] Effects of vacuum polarization in the space-time of multiple cosmic strings
In: *Book of Abstracts of the 8th Marcel Grossmann Meeting on General Relativity* (1997) Jerusalem, Israel
- [75] Semiclassical metric perturbations around multiple cosmic strings (with N. Özdemir)
In: *Book of Abstracts of the 8th Marcel Grossmann Meeting on General Relativity* (1997) Jerusalem, Israel
- [76] Vacuum fluctuations of a massless vector and spinor fields around multiple cosmic strings
(with M. Hortaçsu and N. Özdemir)
In: *Proceedings of the 15th International Conference on General Relativity and Gravitation*
(1997) p.330, Pune, India
- [77] Slowly rotating black holes in five dimensions
In: *Proceedings of the 17th International Conference on General Relativity and Gravitation*
(2004) p.11, Dublin, Ireland
- [78] Five dimensional rotating black hole in a uniform magnetic field
In: *Proceedings of the 17th International Conference on General Relativity and Gravitation*
(2004) p.258, Dublin, Ireland
- [79] Self-dual fields and gravitational instantons (with C. Saçhoğlu)
In Book: *Proceedings of the 11th Marcel Grossmann Meeting on General Relativity* (2006) pp.2243–2245, Berlin,
Germany

[80] Higher dimensional rotating charged black holes

In Book: *Proceedings of the 11th Marcel Grossmann Meeting on General Relativity* (2006) pp.1409–1411, Berlin, Germany

[81] Rotating braneworld black holes

In Book: *Proceedings of the 11th Marcel Grossmann Meeting on General Relativity* (2006) pp.2830–2832, Berlin, Germany

[82] Epicyclic frequencies and resonant phenomena near black holes

In Book: *Proceedings of the 11th Marcel Grossmann Meeting on General Relativity* (2006) pp.1057–1059, Berlin, Germany

[83] Plane symmetric solutions of gravitational field equations in five dimensions (with H. Cebeci and T. Dereli)

In: *Proceedings of the 5th Workshop on Quantization, Dualities and Integrable Systems* (2006) Pamukkale University, Turkey; Published in Turkish J. Phys. **30**, 401–406, (2006)

[84] Black holes in Einstein-Maxwell-Chern-Simons theory

In: *Book of Abstracts of the 12th Marsel Grossmann Meeting on General Relativity* (2009) Paris, France

C. Preprints

[85] Polar circular orbits in the space-time of black holes Preprint ICTP, IC/92/63 (1992), Trieste, Italy

D. Publications in Turkish

[86] Evren ve kara delikler, *E. İnönü'nün 75'inci Yılına Anı Kitabı'nda (Bilim Konuşmaları)*, sayfa 1-42, Tübitak Yayınları (2003)

[87] Kara delikler dünyası, *Bilim ve Ütopya Dergisi*, No.16, sayfa 193 (2010)

[88] Kara deliklerin saklı simetrileri ve yeganelik özellikleri, *N. Berker'in 60'ıncı Yılına Anı Kitabı'nda*, Sabancı Üniversitesi Yayınları (2011)