

# CURRICULUM VITAE

Prof. Dr. ALIKRAM NUHBALAOĞLU ALIEV

## I. PERSONAL

**Alma Mater:** M. V. Lomonosov Moscow State University

**Marital Status:** Married, two children

**Academic Position:** Prof. Dr.

**Administrative Experience:** Head of Department, Vice Dean, University Senate Member, Istanbul Yeni Yüzyıl University; Advisor to the President of TÜBİTAK (The Scientific and Technological Research Council of Turkey)

**Present Position:** Director, TÜBİTAK Research Institute for Fundamental Sciences

**E-mail:** alikram.n.aliev@gmail.com

## II. EDUCATION AND DEGREES

**1978 :** BSc. Diploma and Master of Science in Theoretical and Mathematical Physics, M. V. Lomonosov Moscow State University

**1976:** Minor BSc. Program: Radio-Technical and Electronic Systems Engineer, Department of Military Education, 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, Şamahı Astrophysical Observatory

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

**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, Şamahı Astrophysical Observatory

**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 Research Institute for Fundamental Sciences, Gebze

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

**2011 – 2012** : Professor, Department of Mathematics, Istanbul Dođuş University

**2012/13 – January 2017** : Professor, Department of Electrical and Electronics Engineering, Istanbul Yeni Yüzyıl University

**2017 – January 2018** : Advisor to the President of TÜBİTAK, Ankara

**2018 – Present** : Director, TÜBİTAK Research Institute for Fundamental Sciences, Gebze

**Fluent Languages:** Turkish, Russian, English

#### IV. THESES

1. “The interaction of charged particles with electromagnetic radiation in the vicinity of black holes”, M. Sc. Thesis, 63 pages (M. V. Lomonosov Moscow State University, 1978)
2. “Physical processes in the vicinity of a rotating black hole in the presence of an external magnetic field”, PhD Thesis, 147 pages (M. V. Lomonosov Moscow State University, 1983)
3. “Physical processes in the vicinity 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 undergraduate students at the Faculty of Mathematics,

M. V. Lomonosov Moscow State University:

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

**1986 – 1988** : Lecture Series at Şamahı Astrophysical Observatory, Azerbaijan Academy of Sciences:

- *Physical and Mathematical Principles of General Relativity*
- *Riemanian Geometry and Tensor Analysis*
- *Physics and Astrophysics of Black Holes*

**2003** : Teaching graduate and post-graduate students at TÜBİTAK Feza Gürsey Institute for Fundamental Sciences: (Research Semester 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*
- *Croup Theory and its Applications in Physics*
- *Selected Topics in Physics: Physical and Mathematical Cosmology*

**2011 – 2012** : Teaching undergraduate students at Istanbul Dođuř University:

- *Differential and Integral Calculus 1, Differential and Integral Calculus 2*
- *Introduction to Linear Algebra*

**2012 – 2017** : Teaching undergraduate students at Istanbul Yeni Yüzyıl University:

- *Mathematics 1, Mathematics 2, Mathematics 3; Differential Equations*
- *Electromagnetic Theory 1, Electromagnetic Theory 2*
- *Electromagnetic Wave Theory*

**2015 – 2016** : (on Sabbatical leave) Teaching undergraduate students at Bilkent University:

- *Phys 481: Theory of Relativity*

## VI. POST-DOCTORAL ADVISEES

**1997 – 2001** : Dr. Neře Özdemir - TÜBİTAK Feza Gürsey Institute for Fundamental Sciences

**2000 – 2001** : Dr. Kamuran Saygılı - TÜBİTAK Feza Gürsey Institute for Fundamental Sciences

**2004 – 2005** : Dr. Hakan Cebeci - TÜBİTAK-BİDEB Feza Gürsey Institute for Fundamental Sciences

**2007 – 2008** : Dr. Özgür Delice - TÜBİTAK-BİDEB Feza Gürsey Institute for Fundamental Sciences

**2008 – 2009** : Dr. Dilek Çiftçi - TÜBİTAK-BİDEB Feza Gürsey Institute for Fundamental Sciences

**2010 – 2011** : Dr. Çetin Şentürk - TÜBİTAK-BİDEB Feza Gürsey Institute for Fundamental Sciences

**2010 – 2011** : Dr. Ümit Ertem - TÜBİTAK-BİDEB Feza Gürsey Institute for Fundamental Sciences

**2010 – 2011** : Dr. Burak Kaynak - TÜBİTAK Feza Gürsey Institute for Fundamental Sciences

## VII. M. S. THESES ADVISEES

**2003 – 2005** : Emir Gümrükçüođlu - 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 Tri-Annual Marcel Grossmann Meetings on General Relativity, **2012–**
- Member of Science Academy Association of Turkey, **2014–**
- Expert-Referee and Adjudicator of the 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*
  - *The European Physical Journal C*

## X. SOME OF CONFERENCES AND WORKSHOPS ORGANIZED

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

## 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*

E. İnönü Memorial Lectures at TÜBİTAK Feza Gürsey Institute for Fundamental Sciences, 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 Five-Dimensional Minimal Ungauged Supergravity,*

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

- *Superradiance and Instability of Small Rotating Charged AdS Black Holes in All Dimensions,*

Workshop on Black Holes' New Horizons, Banff International Research Station for Mathematical Innovation and

Discovery, May 15-20, 2016, Oaxaca, Mexico

- *Black Hole Bomb in Five-Dimensional Minimal Ungauged Supergravity*,

Renewal Conference: Models of Gravity, University of Oldenburg, October 4-7, 2016, Germany

- *The Many Faces of Black Holes in Four and Higher Dimensions*,

International Workshop: Do Black Holes Exist? Observations, Challenges, Opportunities; Sharjah Center for Astronomy and Space Sciences, March 6-7, 2017, Sharjah, UAE

- *Fundamental Science: New Frontiers and Perspectives*,

International Seminar: Azerbaijan Academy of Sciences, Şamalı Astrophysical Observatory, November 8, 2017, Baku

- *Superradiance and Black Hole Bomb: Profiling the Invisible*,

EMU Physics Days: March 21-22, 2019, Eastern Mediterranean University, KKTC

## XII. HONORS AND PRIZES

**1977 – 1978** : Honorable Studentship for Excellence in Studying Physics (M. V. Lomonosov Moscow State University, Faculty of Physics)

**1986** : Award for Excellence in Research on the Theory of Black Holes (Azerbaijan Academy of Sciences, Şamalı Astrophysical Observatory)

**1999** : Award for Excellence in Research on Topologically Massive Gravity (TÜBİTAK Feza Gürsey Institute for Fundamental Sciences, Istanbul)

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

**2013** : Prof. Dr. Mustafa Parlar Foundation Science Prize (Middle East Technical University, Ankara)

**2015** : TÜBİTAK Science Prize (TÜBİTAK, Ankara)

## XIII. BASIC RESEARCH INTERESTS

- Radiation from Relativistic Particles in Strong Electromagnetic and Gravitational Fields (**1979 - 1989**)
- Exact Solutions to the System of Einstein-Maxwell Equations for Black Holes (**1980, 1984, 1989, 2006 -**)
- Integrability of Geodesics in the Spacetime of Rotating Black Holes: Non-Linear Mechanics and Mechanisms for Wave Amplification (**1985 - 1989, 2006 -**)
- Physical Effects of Cosmic Strings (**1988 - 1993**)
- Exact Solutions for Impulsive Spherical Gravitational Waves (**2001**)
- Group-Theoretical Approach to Equations of Gravity Theories (**1980, 1984, 1989, 1997-1999, 2008 -**)
- “No-Go” Theorems and Spinor Structure of Topologically Massive Gravity (**1994 - 1996, 2000, 2009 -**)
- Black Holes in Lower Dimensional Gravity Theories: New Massive Gravity (**2010 -**)
- Quantum Field Theory in Curved Spaces of Special Topologies (**1996 - 1998**)

- Hyper-Kahler Geometries and Gravitational Instantons (**1997 - 1999, 2006**)
- Black Holes in Braneworld Scenarios of the Universe (**2004 - 2006, 2009 -**)
- Einstein–Chern-Simons Gravity: Exact Solutions and Decoupling Theorems (**2010 -**)
- Quantum Gravity at a Lifshitz Point: Black Holes in Hořava-Lifshitz Gravity (**2010 -**)
- Particles and Strings Dynamics in Higher-Dimensional Gravity: Liouville Integrability, Hidden Symmetries and Supersymmetries of Black Hole Spacetimes (**2008 -**)
- Higher-Dimensional Gravity: New Black Hole Solutions and Physical Consequences (**2004 -**)
- Black Holes in Cosmological Spacetimes: Physical Effects and Astrophysical Appearance (**2004 -**)
- Theoretical Models for Observational Evidence of Black Holes (**1987 - 1989, 2002, 2013 -**)
- Merging Black Holes and Gravitational Waves in the Universe (**2015 -**)
- Physical Phenomena in the Near Horizon Region of Black Holes at the Center of Galaxies: The Event Horizon Telescope Imaging of Black Holes (**2015 -**)



## 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)
- [62] Superradiance and instability of small rotating charged AdS black holes in all dimensions  
*Eur. Phys. J. C* **76**, 58, 1–10 (2016)

## B. Conference Proceedings and Books

- [63] 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
- [64] 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
- [65] 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
- [66] 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
- [67] 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
- [68] 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
- [69] 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
- [70] 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
- [71] 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

- [72] 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
- [73] 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
- [74] Radiative processes near cosmic strings  
In Book: *Lecture Notes in Physics "Strings and Symmetries"*, Springer-Verlag (1994) pp.302-305, Germany
- [75] Effects of vacuum polarization in the space-time of multiple cosmic strings  
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