

## TƏRCÜMEYİ HAL

Azər İnşalla oğlu Əhmədov

Nəzəri Fizika kafedrasının dosenti

Fizika üzrə elmlər doktoru

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### QISA BİOQRAFİK MƏLUMAT

1964-ci il aprel ayının 29-da Biləsuvar rayonunda anadan olub.

### TƏHSİLİ VƏ ELMİ DƏRƏCƏ VƏ ELMİ ADLARI

1982 - 1989: tələbə, Fizika fakultəsi, Bakı Dövlət Universiteti

1989: Fərqlənmə diplomu. (Ali təhsil), Bakı Dövlət Universiteti

1992 - 1995: Fizika fakultəsi, Nəzəri Fizika kafedrası, Bakı Dövlət Universiteti, aspirant

1996: Fizika-riyaziyyat elmləri namizədi, İnküziv və Eksklüziv Hadron

Fotoyaranmalarının Bəzi Müasir Nəzəriyyələrdə Öyrənilməsi "Nəzəri və riyazi fizika", Bakı Dövlət Universiteti

2016: Fizika üzrə elmlər doktoru (2212.01-Nəzəri fizika)

### ƏMƏK FƏALİYYƏTİ

10.1990- dən 11.2005-dək: Böyük elmi işçi, Yüksək Enerjilər fizikası Laboratoriyası  
Bakı Dövlət Universiteti

11.2005 – dən hal-hazıra qədər: Böyük elmi işçi, Fizika Problemləri İnstitutu  
Bakı Dövlət Universiteti

26.09.2007–dən hal-hazıra qədər: dosent, Fizika fakultəsi, Nəzəri Fizika kafedrası  
Bakı Dövlət Universiteti

### TƏDQIQAT SAHƏSİ

Perturbativ kvant xromodinamikası, Holografik kvant xromodinamikası,  
Supersimmetriyanın fenomenologiyası

### BEYNƏLXALQ SEMİNAR, SİMPOZİUM VƏ KONFRANSLARDA İŞTİRAKI

- 09.07.2018-13.07.2018, The 32nd International Colloquium on Group Theoretical Methods in Physics (Group32)
- 05.06. 2017 - 11.06. 2017, The XXVth International Colloquium on Integrable Systems (ISQS-25), Prague Czech Republic
- 3-10 August, 2016, 38-th International conference on High Energy Physics (ICHEP2016), Chicago - USA.

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4. 14.06. 2016- 18.06. 2016, The XXIVth International Colloquium on Integrable Systems (ISQS-24), Prague
  5. 22.06. 2015-28.06. 2015, The XXIIIth International Colloquium on Integrable Systems (ISQS-23), Prague
  6. 2008, October, Ankara, Turkey, The fifth Eurasian Conference on Nuclear Science and its Application.
  7. 2007, April, Tehran, Iran; IPM String School and Workshop
  8. 2005, July, Nathiagali, Pakistan; 30<sup>th</sup> International Nathiagali Summer College on Physics
  9. 2003, June–July, ICTP, Trieste, Italy; Summer School on Particle Physics
  10. 2003, September-October, Anzali, Iran; IPM String School and Workshop
  11. 2002, April, Shiraz, Iran; IPM String School and Workshop
  12. 2002, July, Nathiagali, Pakistan; 27<sup>th</sup> International Nathiagali Summer College on Physics
  13. 2000, July, Burban, Pakistan; 25<sup>th</sup> International Nathiagali Summer College on Physics
  14. 1998, July, ICTP, Trieste, Italy; Summer School in HEP and Cosmology
  15. 1997, July, Islamabad, Pakistan; 22<sup>nd</sup> International Nathiagali Summer College on Physics
  16. 1995, September, Serpukhov, Russia; VI Workshop on High Energy Spin Physics
  17. 1993, September, Serpukhov, Russia; V Workshop on High Energy Spin Physics
  18. 1992, November, Tabriz, Iran; Regional Conference on Mathematics and Theoretical Physics
  19. 1991, September, Serpukhov, Russia; IV Workshop on High Energy Spin Physics

<b>LIST OF SELECTED PUBLICATIONS</b>
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1. **A. I. Ahmadov**, Maria Naeem, M.V.Qocayeva and V.A.Tarverdiyeva.  
Analytical Bound State Solutions of the Schrödinger Equation for the Manning- Rosen plus Hulthén Potential Within SUSY Quantum Mechanics.  
**Int. J. Mod. Phys. A33 (2018) no.03, 1850021**
  2. **A. I. Ahmadov**, Maria Naeem, M.V.Qocayeva and V.A.Tarverdiyeva.  
Analytical Solutions of the Schrödinger Equation for the Manning-Rosen plus Hulthén Potential Within SUSY Quantum Mechanics.  
**J. Phys. Conf.Ser. 965 (2018) no.1, 012001**
  3. Shi-Hai Dong, Ye-Jiao Shi, Guo-Hua Sun, Farida Tahir, **A. I. Ahmadov**, Bing He.  
Quantum information measures for infinite spherical well.  
**Mod.Phys.Lett. A33 (2018) no.16, 1850088**
  4. **A. I. Ahmadov**, C. Aydin, O. Uzun. Direct Photon Production in Pion-Proton Collisions.  
**Journal of Physics: Conf. Series 804, 012001 (2017).**
  5. Abdel Magied Diab, **A. I. Ahmadov**, Abdel Nasser Tawfik and Eiman Abou El Dahab. SU(4) Polyakov linear-sigma model at finite temperature and density. Published in PoS ICHEP2016 (2016) 634; **Arxiv: nucl-th/1611.02693**
  6. M. Demirci and **A. I. Ahmadov**. Neutralino pair production via photon-photon collisions at the
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7. **A. I. Ahmadov**, C. Aydin , R. Myrzakulov and O. Uzun. Higher-twist mechanism and inclusive gluon production in pion-proton collisions.  
**J. Phys. Conf. Ser.** **670**, no.1, 012001 (2016).
  8. **A. I. Ahmadov**, C. Aydin , R. Myrzakulov and O. Uzun. Higher-twist mechanism and inclusive gluon production in pion-proton collisions.  
**Int. J. Modern. Phys. A****30**, 1550219 (2015).
  9. M. Demirci and **A. I. Ahmadov**. Search Neutralino Pair Production at CERN LHC.  
**Phys. Rev. D.** **89**, 075015 (2014).
  10. **A. I. Ahmadov**, C. Aydin and O. Uzun. Inclusive gluon production in pion-proton collisions and the principle maximum conformality renormalization scale.  
**Phys. Rev. D.** **89**, 014018 (2014).
  11. **A.I.Ahmadov**, C. Aydin and O. Uzun. Analytical solutions of the Klein-Fock-Gordon equation with the Manning-Rosen potential plus a Ring-Shaped like potential.  
**Int. J. Modern. Phys. A****29**, 1450002 (2014).
  12. **A. I. Ahmadov** and M. Demirci. Single neutralino production at the LHC.  
**Phys. Rev. D** **88**, 015017 (2013).
  13. **A. I. Ahmadov**, C. Aydin and O. Uzun, Higher Twist Effects in the Direct Photon Production and the Role of Infrared Renormalons.  
**Phys. Rev. D** **87**, 014006 (2013).
  14. **A. I. Ahmadov** and M. Demirci. Electroweak Corrections to the Neutralino Pair Production at CERN LHC, **Int. J. Modern Physics A****28**, 1350077 (2013).
  15. **A. I.Ahmadov**, C.Aydin and F.Keskin. Pion wave functions from holographic QCD and the role of infrared renormalons in photon-photon collisions.  
**Phys. Rev. D** **85**, 034009 (2012).
  16. **A. I. Ahmadov**, C. Aydin and F. Keskin. Pion wave functions from holographic QCD and the role of infrared renormalons in photon-photon collisions.  
**Annals of Physics** **327**, 1472 (2012).
  17. **A. I. Ahmadov**, Sh. M. Nagiyev and E. A. Dadashov. Meson production in proton-proton collisions in the naive non-abelianization approximation and the role of infrared renormalons.  
**Int. J. Mod. Phys. E****21**, No.2, 1250014 (2012).
  18. **A. I. Ahmadov** and R. M. Burjaliyev. The meson production in proton-proton collisions in next-to-leading order and infrared renormalons.  
**Int. J. Mod. Phys. E****20**, No.5, pp. 1243 -1270 (2011).
  19. **A. I. Ahmadov**, C. Aydin, E. A. Dadashov and Sh. M. Nagiyev. Single meson production in photon-photon collisions and infrared renormalons.  
**Phys. Rev. D** **81**, 054016 (2010).
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20. **A. I. Ahmadov**, C. Aydin, Sh. M. Nagiyev, Yilmaz A. Hakan and E. A. Dadashov, Infrared renormalons and single meson production in proton-proton collision.  
**Phys. Rev. D80, 016003 (2009).**
21. V. H. Badalov, H. I. Ahmadov, **A. I. Ahmadov**. Analytical solutions of the Shredinger equation with the Woods-Saxon potential for arbitrary  $l$  state.  
**Int. J. Mod. Phys. E18, No.3, pp.631-641 (2009).**
22. **A. I. Ahmadov**, I. Boztosun, A. Soylu and E. A. Dadashov. Higher twist effects in photon-photon collisions.  
**Int. J. Mod. Phys. E, Vol.17, No.6, pp.1041-1059 (2008).**
23. F. S. Sadykhov, Coskun Aydin and **A. I. Ahmadov**. High twist contributions, quantum chromodynamics, and inclusive meson photoproduction at large  $p_T$ .  
**News Baku State University ISSN 1609-0586, №4, pp.181-190 (2007).**
24. **A. I. Ahmadov**, I. Boztosun, R. Kh. Muradov, A. Soylu and E. A. Dadashov. Higher twist effects in proton-proton Collisions.  
**Int. J. Mod. Phys. E 15, No.6, pp.1209-1232 (2006).**
25. **A. I. Ahmadov**, I. Boztosun, R. Kh. Muradov, A. Soylu and E. A. Dadashov. Investigation of the neutralino pair production at LHC.  
**Int. J. Mod. Phys. E 15, No.6, pp.1183-1208 (2006).**
26. **A. I. Ahmadov**. Radiative production at the lightest neutralino in electron-positron annihilation.  
**Physics of Atomic Nuclei, Vol.69, No.1, pp.54-61, (2006).**
27. R. Kh. Muradov and **A. I. Ahmadov**. Contribution of superstring  $Z'$  boson on the polarization effects in proton-proton collisions.  
**Central Eur. J. Phys., 3(3) , pp.433-455 (2005).**
28. **A. I. Ahmadov** and R. Kh. Muradov. Role of generalized Sullivan processes in semi-inclusive  $\Sigma$  production.  
**Russian Physics Journal, Vol.48, No.7, pp.60-69 (2005).**
29. **A. I. Ahmadov**. Radiative Production at the Lightest Neutralino in Electron-Positron Annihilation.  
**Russian Physics Journal, Vol.48, No.6, pp. 48-57 (2005).**
30. **A. I. Ahmadov**. Radiative production at the lightest neutralino.  
**Physics of Particles and Nuclei Letters, Vol.2, No.2, pp.85-91 (2005).**
31. R. Kh. Muradov, **A. I. Ahmadov**, Kh. M. Adilova. Nonperturbative corrections for deep inelastic scattering cross-section ratio  $R = \sigma_L / \sigma_T$ .  
**Baku State University News, ISSN 1609-0586, №2, pp.15-24 (2002).**
32. R. Kh. Muradov, **A. I. Akhmedov**, R. M. Burjaliev. Polarization effects in proton-proton Collisions.  
**Physics of Atomic Nuclei, Vol. 65, №7, pp.1352-1358 (2002),**
-

33. **A. I. Akhmedov**, R. Kh. Muradov. Single-transverse spin asymmetry in direct photon Production. **I Eurasia Conference on Nuclear Science and its Application. 23 - 27 October 2000, Izmir Turkey, pp.450-451.**
34. R. Kh. Muradov, **A. I. Akhmedov**. R. M. Burjaliev. Polarization effects at the proton-proton collisions, **I Eurasia Conference on Nuclear Science and its Application. 23-27 October 2000, Izmir Turkey, pp.202-203.**
35. R. Kh. Muradov, **A. I. Akhmedov**. R. M. Burjaliev, Spin effects at the proton-proton Collisions.  
**Russian Physics Journal, Vol.43, №8, pp.95-103 (2000).**
36. R. Kh. Muradov, **A. I. Akhmedov**, R. M. Burjaliev. The contribution of the sea quark and gluon in the spin of proton.  
**Russian Physics Journal, Vol.43, №8, pp.88-94 (2000).**
37. R. Kh. Muradov, **A. I. Akhmedov**, R. M. Burjaliev, The process of inclusive electroproduction pseudoscalar meson on the proton: extracting contribution strange quark in the spin of proton.**Russian Physics Journal, Vol.43, №1, pp.21-25 (2000).**
38. R. Kh. Muradov, **A. I. Ahmadov**, R. M. Burjaliev. Violation of the scaling in the deep inelastic electron-proton scattering.  
**News of Baku University, №3, pp.75-81 (2000).**
39. F. S. Sadykhov, **A. I. Akhmedov**. QCD investigation of polarization effects in the inclusive photoproduction of SUSY Particles.  
**Physics of Atomic Nuclei Vol.38, №10, pp.1788-1790 (1995).**  
**Translated from Yadernaya Fizika, Vol.58, №10, pp.1890 - 1893 (1995).**
40. F. S. Sadykhov, **A. I. Akhmedov**. Production of supersymmetric quarks in photon-gluon Collisions.  
**Russian Physics Journal, Vol.38, №8, pp. 808-810 (1995).**
41. F. S. Sadykhov, **A. I. Akhmedov**. Photoformation Supersymmetric particles in deep inelastic scattering of photons by protons.  
**Russian Physics Journal, Vol. 38, №7, pp.713-716 (1995).**
42. F. S. Sadykhov, **A. I. Akhmedov**. Quantum chromodynamic investigation of polarization effects in inclusive photoproduction of supersymmetric particles.  
**Russian Physics Journal, Vol. 38, №6, pp.646-649 (1995).**
43. F. S. Sadykhov, **A. I. Akhmedov**. Contribution of high-order twists to the inclusive photocreation process of mesons with large  $p_T$ .  
**Russian Physics Journal, Vol. 38, №5, pp. 513-518 (1995).**
44. **A. I. Akhmedov**. Inclusive photoproduction of the large  $-p_T$  mesons and contributions High twist, **Regional Conference on Mathematics and Theoretical Physics. Tabriz, Iran. 22-25**
-

**DÖVLƏT VƏ BEYNƏLXALQ PROQRAM VƏ QRAN TLARI**

1. 2002- DAAD Qrantı, Almanıyanın Wuppertal Universiteti
2. 2003-2006- Reintegrasiya Qrantı, NATO-nun baş ofisi, Brüssel, Belçika
3. 01.02.2006-30.07.2006, TUBİTAK Qrantı, Erciyez Universiteti, Turkiyə
4. 2006- DAAD Qrantı, Almanıyanın Bonn Universiteti
5. 2008- Pakistan İslam Respublikasının Dövlət Qrantı, Lahor Universiteti
6. 2009- DAAD Qrantı, Almanıyanın Axen Universiteti
7. 2009- İyul-Avqust , Nəzəri Fizika Şöbəsi, Avropa Nüvə Tədqiqatları Mərkəzi, CERN, Cenevrə, Visitor
8. 2010 - 05July - 05 September, Beynəlxalq Nəzəri Fizika Mərkəsi, ICTP, Triest, İtaliya, Visitor
9. 2010-Sentyabr-Oktyabr, Nəzəri Fizika Şöbəsi , CERN, Cenevrə, Visitor
10. 01.02.2006-30.07.2006, TUBİTAK Qrantı, Erciyez Universiteti, Turkiyə
11. 01.07.2011-30.10.2011, TUBİTAK Qrantı, Trabzon Texniki Universiteti, Turkiyə
12. 01.07.2012-30.12.2012, TUBİTAK Qrantı, Trabzon Texniki Universiteti, Turkiyə
13. 2013 – Sentyabr - Oktyabr, Nəzəri Fizika Şöbəsi, Avropa Nüvə Tədqiqatları Mərkəzi (CERN), Cenevrə, Visitor
14. 2013 Sentyabr-2014 Oktyabr, Nəzəri Fizika Şöbəsi, Avropa Nüvə Tədqiqatları Mərkəzi(CERN) assosiativ üzv
15. 24 İyun - 3İyul 2014, Dəvətli Professor, ETTORE MAJORANA FOUNDATION AND CENTRE FOR SCIENTIFIC CULTURE, International School of Subnuclear Physics, ERICE, Italy.
16. 2014, Oktyabr - 2015 yanvar, Wuppertal University, Wuppertal, Germany, DAAD Qrantı
17. 2015 Sentyabr - October, Nəzəri Fizika Şöbəsi, Avropa Nüvə Tədqiqatları Mərkəzi(CERN), Cenevrə, Visitor
18. 18-30 İyul 2016, Dəvətli Lektor, 41st İnterntional Nathiagali Summer College on Physics and Contemporary Needs, İslamabad, Pakistan.
19. 2017 October- Noyabr, Nəzəri Fizika Şöbəsi, Avropa Nüvə Tədqiqatları Mərkəzi (CERN), Cenevrə, Visitor
20. Azərbaycan Respublikasının Prezidenti yanında Elmin İnkişafı Fondunun Elm– Təhsil İnteqrasiya Qrantı  
**Qrant № EİF/MQM/Elm-Təhsil-1-2016-1(26)-71/11/1(Bir illik:2018-2019)**