Institute of Physics Ministry of Science and Education of Azerbaijan Republic

Dzhelepov Laboratory of Nuclear Problems at Joint Institute for Nuclear Research

CIRRICULUM VITAE and PUBLICATION LIST

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PERSONAL INFORMATION

Name	**Nazim**
Surname	**Huseynov**
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PERSONAL STATEMENT

1996-2002	Baku State University
2002-2005	Ph.D student of IPP at BSU

2007 Ph.D in Physics and Mathematics

2005-2007 Scientist

2007-2014 Senior scientist

2014- Present: Chief scientist in the Laboratory of High Energy Physics, Physics Institute of ANAS, Baku

2007- Present: Senior scientist in the Laboratory of Nuclear Problems, Joint Institute for Nuclear Research, Dubna, Russia

2006- Present: User of ATLAS experiment

2008- Present: Author of ATLAS experiment

EDUCATION

01/2003 – 01/2005

Institute of Physical Problems at Baku State University

Ph.D: Physical electronics

Thesis Title: "Photovoltaic and electrophysical properties of silicon solar cells with ohmic contact based on Al-Ni amorphous alloy"

Degree: Ph.D on Physics, Senior Scientist

09/2000 – 07/2002

Baku State University, Faculty of Physics | Baku, AZ1143 Azerbaijan

MSc: Division of Physics Education, Master Program, Faculty Physics

09/1996 – 07/2000

Baku State University, Faculty of Physics | Baku, AZ1143 Azerbaijan

BSc: Division of Physics Education, Bachelor Program, Faculty Physics

EMPLOYMENT HISTORY

Baku,Azerbaijan

01.09.2000 – 01.09.2002

Engineer | Institute of Physical Problems at Baku State University

Baku,Azerbaijan

01.09.2005 – Present

Scientist | Institute of Physics at Azerbaijan National Academy of Science

Dubna, Russia

01/03/2006 – Present

Senior Scientist | Dzhelepov Laboratory of Nuclear Problems at the Joint Institute for Nuclear Research.

Scientific and Experimental Physical Department: Scientific and Experimental Department of Multiple Hadron Processes/Calorimetric and hardware and software systems for processing and analysis physical information

Head of Department: Davydov Yu.I.

OTHER SKILLS

- **IT: C++, Python, Neural Networks, ROOT, bash, Trexitter**
- **Languages:**

  Azerbaijan (Fluent)

  English (Fluent)

  Russian (Fluent)

The area of research interests

Top-quark physics. Investigation of the charge recovery of the top-quark by measuring the charges of its decay products at the ATLAS facility. We study the top-antitop pair birth and the subsequent decay mode into a single lepton and 4 hadronic jet ($tt \rightarrow WWbb \rightarrow (l\nu)(jj)(bb)$). The "half-lepton B-meson decay" method is used to recover the charge of the b-jet; the use of this method allows us to achieve a statistical significance of more than 5σ after analysis $1fb^{-1}$ data with tt fits.

Development of new precision methods of energy reconstruction in the calorimetric complex of the ATLAS experiment, in the electromagnetic and hadronic scales. Development and application of the E/P in-situ hadronic calibration method, as well as the study of hadronic jets formed by secondary hadrons in minimum-bias events.

PUBLICATIONS

- Search for the associated production of the Higgs boson with a top quark pair in multi-lepton final states with the ATLAS detector
  The ATLAS Collaboration, ATLAS-CONF-2015-006 [contribution of 1 out of 5 analysis channels]
- Search for the associated production of the Higgs boson with a top quark pair in multi-lepton final states with the ATLAS detector
  The ATLAS Collaboration, Physics Letters B 749 (2015) 519-541 [contribution of 1 out of 5 analysis channels]
- Measurements of the Higgs boson production and decay rates and coupling strengths using pp collision data at sqrts=7 and 8 TeV in the ATLAS experiment
  The ATLAS Collaboration, Eur. Phys. J. C76 (2016) 6 [ttH contribution]
- Measurements of the Higgs boson production and decay rates and constraints on its couplings from a combined ATLAS and CMS analysis of the LHC p p collision data at sqrts = 7 and 8 TeV
  The ATLAS and CMS Collaborations, JHEP 08 (2016) 045 [ttH contribution]
- Search for the associated production of the Higgs boson with a top quark pair in multi-lepton final states with the ATLAS detector at sqrts = 13 TeV
  The ATLAS Collaboration, ATLAS-CONF-2016-066 [contribution of 1 out of 3 analysis channels]
- Evidence for the associated production of the Higgs boson and a top quark pair with the ATLAS detector The ATLAS Collaboration, ATLAS-CONF-2017-077 [contribution of 1 out of 7 analysis channels]
- Top associated Higgs production in the ttH into multileptons channel with one tau lepton in ATLAS

Frank Seifert, ATL-PHYS-PROC-2015-083, EPS 2015, PoS EPS-HEP2015 (2015) 164

- Top associated Higgs boson production channel ttH→2l+1τhad at s√=13 TeV with the ATLAS experiment Babar Ali, ATL-PHYS-PROC-2016-215. ICHEP 2016, PoS(ICHEP2016)1137
- Searches for ttH (Multilepton+Diphoton) Production in ATLAS André Sopczak, ATL-PHY-PROC-2016-008. Annual Workshop: Higgs Couplings 2016, arXiv:1612.05828
- Search for the Associated Production of the Higgs Boson and a Top Quark Pair in Multilepton Final States with the ATLAS Detector, Physics&Computing Russian Institutes Meeting, September 2017 Internal notes detailing the analyses
- B.Ali, N.Huseynov, F.Seifert, A.Sopczak et al., ATL-COM-PHYS-2014-1389 (supporting note) [contribution of 1 out of 5 analysis channels]
- Search for ttH in the multilepton final state at sqrts = 13 TeV B.Ali, N.Huseynov, A.Sopczak et al., ATL-COM-PHYS-2015-1350 (supporting note) [contribution of 1 out of 3 analysis channels]
- Search for the Associated Production of a Higgs Boson and a Top Quark Pair in pp Collisions at s√ = 13 TeV with the ATLAS Detector B.Ali, N.Huseynov, A.Sopczak et al., ATL-COM-PHYS-2016-907
- Search for the Associated Production of a Higgs Boson and a Top Quark Pair in multilepton final states in pppp Collisions at √s = 13 TeV with the ATLAS Detector
  B.Ali, N.Huseynov, A.Sopczak et al., ATL-COM-PHYS-2017-101

International Conferences & Conference Papers

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1. Huseynov N.A. Higgs boson production in association with a single top quark at the LHC, The XXIII International Scientific Conference of Young Scientists and Specialists (AYSS-2020)
2. Huseynov N.A. HIGGS BOSON PRODUCTION IN ASSOCIATION WITH A SINGLE TOP QUARK AT THE LHC,Modern Trends In Physics, Baku, 01-03 May, 2019, p.232-236, ISSN 2522-4352
3. Huseynov N.A. "Моделирование процесса ассоциативного рождения бозона Хиггса с одиночным топ-кварком на Большом Адронном Коллайдере, Конференция по теоретической и экспериментальной физике МКТЭФ-2019
4. Huseynov N.A. Search for the Standard Model Higgs boson production in association with the top quark pair in multilepton final state at √s = 13TeV with the ATLAS detector, International Conference “Modern Trends in Physics”, Baku State University, Baku, Azerbaijan 2015
5. Huseynov N.A. Measurement of Top Quark Charge at the ATLAS Detector, International conference on high energy physics "PHYSICS IN ATLAS", Institute of Physics of Azerbaijan National Academy of Sciences, Baku, Azerbaijan 2013
6.
7.

REVIEWER & EDITOR OF JOURNAL

Journal referee:

Journal Surface Engineering and Applied Electrochemistry

Vacuum

Modern Physics Letters B

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