



Innovation and Digital
Development Agency

**NUCLEAR RESEARCH DEPARTMENT OF INNOVATION AND DIGITAL
DEVELOPMENT AGENCY**

**FRANK LABORATORY OF NEUTRON PHYSICS AT THE JOINT INSTITUTE
FOR NUCLEAR RESEARCH**

CIRRICULUM VITAE

Gadir S. Ahmadov



PERSONAL INFORMATION

Name	Gadir
Surname	Ahmadov
Address	Ap. 110, h. 5, Dalidag 1st massiv, Badamdar set., AZ1143 Baku, Azerbaijan
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PERSONAL STATEMENT

I am a researcher with over 10 years of experience in low energy nuclear physics and silicon-based pixel detector/diode. Since 2010, I have been seconded to the Joint Institute for Nuclear Research (JINR) from the Institute of Radiation Problems of Azerbaijan National Academy of Sciences. At Frank laboratory of Neutron Physics, I am working on studying neutron induced or spontaneous rare fission mode processes with hybrid pixel (Timepix) and other detectors. At Laboratory of High Energy Physics, my research focuses on the development and application of silicon photomultipliers/diodes. I am a participant in

a lot of local and international projects (Horizon-2020). In conclusion, my research interests encompass a wide range of topics, including nuclear fission processes, nuclear reactions, radiation physics, and detector physics.

EDUCATION

2001 – 2005: Baku State University, bachelor

2005 – 2007: Baku State University, Master degree

2010 – 2015: Joint Institute for Nuclear Research, PhD (Radiation material science)

2018- present: Joint Institute for Nuclear Research, Doctor in Science

Thesis Title: Rare fission mode processes in the fission of instable nuclei

Degree: Doctor in Science (Atomic and nuclear physics)

EMPLOYMENT HISTORY

26/10/2009 – Present

Position: Senior Researcher

Department: Innovation and instrumentation

Affiliation: Institute of Radiation Problems, Ministry of Science and Education, AZ1143 Baku, Azerbaijan

26/10/2010 – Present

Position: Senior Researcher

Department: Frank Laboratory of Neutron Physics, Department of Nuclear Physics, Neutron-nuclear interactions research sector

Affiliation: Joint Institute for Nuclear Research, 141980 Dubna, Russia

26/10/2012 – Present

Position: Junior Researcher

Department: Veksler and Baldin Laboratory of High Energies

Affiliation: Joint Institute for Nuclear Research, 141980 Dubna, Russia

23/12/2014 – 23/12/2019

Position: Senior Researcher

Department: The department of innovation and instrumentation

Affiliation: National Nuclear Research Centre of Ministry of Communications and High Technologies, Baku, Azerbaijan

23/12/2019 – 23/11/2022

Position: Head of the department

Department: Nuclear physics

Affiliation: National Nuclear Research Centre of Ministry of Communications and High Technologies, Baku, Azerbaijan

23/11/2022 –

Position: Head of the division

Department: Division of nuclear and radiation research

Affiliation: Nuclear Research Department of Ministry of Communications and High Technologies, Baku, Azerbaijan

23/11/2022 –

Position: Head of the division

Department: Division of nuclear and radiation research

Affiliation: Nuclear Research Department, Innovation and Digital Development Agency, AZ1073 Baku, Azerbaijan

10/10/2023 –

Position: Head of the Nuclear fission group

Department: Frank Laboratory of Neutron Physics, Department of Nuclear Physics, Neutron-nuclear interactions research sector

Affiliation: Joint Institute for Nuclear Research, 141980 Dubna, Russia

ADDITIONAL SKILLS / RESEARCH INTEREST

My research interests:

- Nuclear fission processes;
- Nuclear reactions;
- Radiation physics;
- Detector physics;

COMPUTER SKILLS

Operational systems	: Windows, Linux or related systems
Data analysis	: C&C++ programming languages, ROOT, Origin pro
Simulation	: Talys, SRIM, TRIM, Casino, GEANT4 (very little)
Electronics	: Proteus, Tina TI, WinAVR (very little)
Design	: AutoCAD, SolidWorks

PROJECTS

I have actively participated in various training programs and collaborative projects with esteemed companies and institutions. These experiences have enriched my expertise significantly.

- Joint Institute for Nuclear Research - Russia
- Zekotek Photonics - Canada
- Mikron company - Russia
- Malaysian Institute of Microelectronic Systems - Malaysia
- Institute of Experimental and Applied Physics - Czech Republic
- University of West Bohemia, Faculty of Electrical Engineering - Czech Republic
- Technische Universität München (FRM 2 reactor) - Germany
- Institute of High Energy Physics of Chinese Academy of Sciences - China

PUBLICATIONS FOR LAST 3 YEARS

1. G. Ahmadov, F. Ahmadov, M. Holik, D. Berikov et al., Gamma-ray spectroscopy with MAPD array in the readout of LaBr₃:Ce scintillator, 2021 JINST 16 P07020.
2. D. Berikov, G. Ahmadov, Yu. Kopatch, A. Gagarski et al., Effect of rotation in the γ -ray emission from 60 meV polarized neutron-induced fission of the ²³⁵U isotope, Phys. Rev. C 104, 024607, 2021.
3. E. Sansarbayar, Yu. M. Gledenov, I. Chuprakov, G. Khuukhenkhuu, G. S. Ahmadov et al., Cross sections for the ³⁵Cl(n, α)³²P reaction in the 3.3–5.3 MeV neutron energy region, Phys. Rev. C 104, 044620, 2021.
4. F. Ahmadov, G. Ahmadov, R. Akbarov, A. Akgag et al., Investigation of parameters of new MAPD-3NM silicon photomultipliers, 2022 JINST 17 C01001.
5. AZ Sadigov, FI Ahmadov, ZY Sadygov, GS Ahmadov et al., Improvement of parameters of micro-pixel avalanche photodiodes, 2022 JINST 17 P07021.
6. D Berikov, G Ahmadov, Y Kopatch, V Novitsky, Magnetic system for controlling the spin of polarized neutrons, 2022 JINST 17 P08030.
7. M Holik, F Ahmadov, A Sadigov, G Ahmadov et al., Gamma ray detection performance of newly developed MAPD-3NM-II photosensor with LaBr₃(Ce) crystal, Scientific Reports, 12, 15855 (2022).
8. GS Ahmadov, Ternary particles of Z= 1 to 4 emitted in spontaneous fission of ²⁵²Cf, Eurasian Journal of Physics and Functional Materials 2022, 6(3), p. 174-179.
9. Əhmədov Q.S., Timepix pixelli detektor əsasında yüklü zərrəciklərin identifikasiyası üçün $\Delta E/\Delta x$ -E çox funksiyalı spektrometr // Milli Aviasiya Akademiyasının Elmi Məcmuələr, Cild 24(1) , 2022, s. 24-30.
10. Əhmədov Q.S., 0.27 eV enerjili polyarlaşmış neytronların təsiri ilə ²³⁵U nüvəsinin bölünməsi zamanı ani qamma kvantların və neytronların bucaq korrelyasiyasının ölçülməsi // AJP FİZİKA, 2022, Cild XXVIII, № 01, s. 31-34.
11. Əhmədov Q.S., 60 meV enerjili polyarlaşmış neytronların təsiri ilə ²³⁵U nüvəsinin bölünməsi zamanı bölünmə oxunun fırlanma bucağının təyini // AJP FİZİKA, 2022, Cild XXVIII, № 02, s. 17-20.
12. Əhmədov Q.S., Nadir bölünmə proseslərinin nəticələrinin işlənməsi üçün çox alqoritmlı analiz proqramı // AJP FİZİKA, 2022, Cild XXVIII, № 03, s. 7-10.
13. Q.S. Əhmədov, Z.Y. Sadıqov, A.A. Qəribov, İsti neytronların təsiri ilə ²³⁵U izotopunun bölünməsi zamanı ani γ -kvantların və neytronların bucaq korrelyasiyasının ölçülməsi // AJP FİZİKA, 2022, Cild XXVIII, № 03, s. 64-68.
14. G Ahmadov, D Berikov, YU Kopatch, Angular distribution of prompt fission γ -rays, Romanian Reports in Physics 75, 202 (2023).
15. 10.M Holik, F Ahmadov, A Sadygov, G Ahmadov et al., Investigation of the possibility of a new detector based on SiPM in nuclear forensics, 2023 JINST 18 C01015.