

# INSTITUTE OF GEOLOGY AND GEOPHYSICS, MINISTRY OF SCIENCE AND EDUCATION REPUBLIC OF AZERBAIJAN FRANK LABORATORY OF NEUTRON PHYSICS AT THE JOINT INSTITUTE FOR NUCLEAR RESEARCH CIRRICULUM VITAE and PUBLICATION LIST

# Fuad A. Aliyev

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Date of birth	23.11.1985

PERSONAL INFORMATION

# PERSONAL STATEMENT

My specific responsibilities include the research of geological objects by physical methods as well as the development of new experimental installations for the investigation of rocks and minerals. It has been interesting the origin of geological objects from the microscopic crystal to the giant mainland because they have been the keys to the source of energy. That's why I've began to research the geological samples by the nuclear methods. The object of research is mud volcanoes and sedimentary rocks from the geological outcrops. The research is carried out by gamma spectrometric, neutron activation and microfaunal methods. The purpose of this study is a stratigraphic separation of sediments of different ages if samples do not contain faunal and floristic remains.

#### **EDUCATION**

### 05/2018 - Present

Institute of Geology and Geophysics, Azerbaijan National Academy of Sciences Baku, AZ1143 Azerbaijan

**Ph.D:** Geophysics, geophysical methods for mineral exploration

Thesis Title: Application of gamma spectrometric, neutron activation and microfaunal methods to correlate the stratigraphic age of solid emissions from mud volcanoes

09/2013 - 07/2015

Azerbaijan State Oil and Industry University | Baku, AZ1010 Azerbaijan

MSc: Division of Geophysics, Master Program, Faculty of Geological Exploration

09/2009 - 07/2013

Azerbaijan State Oil and Industry University | Baku, AZ1010 Azerbaijan

BSc: Division of Geophysics, Master Program, Faculty of Geological Exploration

#### **EMPLOYMENT HISTORY**

# 01/09/2015 - Present

**Engineer** Frank Laboratory for neutron Physics at the Joint Institute for Nuclear Research.

Department of Nuclear Physics: Installation of IREN, Neutron Activation Analysis Group

Dubna, Russia

## 01/08/2013 - present

Research Fellow | Institute of Geology and Geophysics, Azerbaijan National Academy of Sciences | Baku, AZ1143 Azerbaijan

Title of department: Department of radioactive fields of the Earth.

**Position: Engineer** 

I studied the topics as shown below during this period:

- investigations of integral radioactivity and radionuclide composition of rocks, soils, waters, air, bottom sediments and etc.:
- evaluation of radionuclide contamination of different territories and study of their nature;
- determination of the background radioactivity and amount of radioactive elements in different lithologo-stratigraphic complexes and development of radiostratigraphy method;
- study of radioactive fields of mud volcanoes and creation of monitoring systems of their activity in near real time-scale.

#### ADDITIONAL SKILLS / RESEARCH INTEREST

Ability to install and configure appropriate equipment to conduct experiments, analyse and interpret the data obtained by physical methods. Extensive experience to conduct analysis by devices as follows:

- CANBERRA High-Purity Germanium (HPGe)
- Bruker S6 JAGUAR spectrometer (benchtop X-Ray Fluorescence)

Jeol jsm-6610lv scanning electron microscope

### **COMPUTER SKILLS**

- Origin Lab (Graphing for Science and Engineering)
- Surfer (For landscape visualization, surface analysis and 3D surface mapping)
- ArcGis (Manage and analyze geographic data and patterns)
- AutoCAD
- Root (Data Analysis Framework)
- C++

# **Publications last 3 years**

- 1. Fedorov N.A., Dashkov I.D., Grozdanov D.N., Kopatch Yu N., Ruskov I.N., Skoy V.R., Tretyakova T.Yu, Aliev F.A., Dabylova S., Gundorin N.A., Hramco C. Investigation of 14.1 MeV neutrons interaction with C, Mg, Cr. Indian Journal of Pure and Applied Physics. Издательство scientific Publishers (India), год: 2020, том 58, № 5, с. 358-362. <a href="http://nopr.niscair.res.in/handle/123456789/54753">http://nopr.niscair.res.in/handle/123456789/54753</a>
- 2. Grozdanov D.N., Fedorov N.A., Yu.N. Kopatch, Ruskov I.N., Dabylova S.B., Aliyev F.A., Skoy V.R., Hramco C., T.Yu. Tretyakova, Kumar A., Gandhi A., Sharma A., Wang D., Sakhiyev S.K. Indian Journal of Pure and Applied Physics. Издательство scientific Publishers (India), год: 2020, том 58, № 5, с. 427-430. <a href="http://nopr.niscair.res.in/handle/123456789/54739">http://nopr.niscair.res.in/handle/123456789/54739</a>
- 3. Grozdanov D.N., Fedorov N.A., Kopatch Yu N., Bystritsky V.M., Tretyakova T.Yu, Ruskov I.N., Skoy V.R., Dabylova S., Aliev F.A., Hramco K., Gundorin N.A., Dashkov I.D., Bogolyubov E.P., Yurkov D.I., Zverev V.I., Gandhi A., Kumar and A. Measurement of the Yield and Angular Distributions of Gamma Rays Originating from the Interaction of 14.1 MeV Neutrons with Chromium Nuclei. Physics of Atomic Nuclei. издательство Pleiades Publishing, Ltd (Road Town, United Kingdom), год: 2020, том 83, № 3, с. 384-390. DOI: 10.31857/S0044002720030095
  - https://www.pleiades.online/contents/nuclphys/nuclphys3\_20v83cont.pdf
- 4. Fedorov N.A., Grozdanov D.N., Kopatch Yu N., Bystritsky V.M., Tretyakova T.Yu, Ruskov I.N., Skoy V.R., Dabylova S., Aliev F.A., Hramco K., Gundorin N.A., Dashkov I.D., Bogolyubov E.P., Yurkov D.I., Gandhi A., Kumar A. Measuring the Yields and Angular Distributions of γ-Quanta from the Interaction between 14.1 MeV Neutrons and Magnesium Nuclei. Bulletin of the Russian Academy of Sciences: Physics. издательство Allerton Press Inc. (United States), год: 2020,том 84, № 4, с. 367-372. DOI: <a href="http://dx.doi.org/10.3103/S1062873820040085">http://dx.doi.org/10.3103/S1062873820040085</a>
- 5. Fedorov N.A., Grozdanov D.N., Kopatch Yu N., Tretyakova T.Yu, Ruskov I.N., Skoy V.R., Dashkov I.D., Aliyev F.A., Dabylova S., Hramco C., Kumar A., Gandhi A., Wang D., Bogolyubov E.P., Yurkov D.I., collaboration TANGRA, Inelastic scattering of 14.1 MeV neutrons on iron, European Physical Journal A, издательство Springer Verlag (Germany), том 57, 2021 DOI: <a href="http://dx.doi.org/10.1140/epja/s10050-021-00503-x">http://dx.doi.org/10.1140/epja/s10050-021-00503-x</a>
- 6. Dashkov I.D., Fedorov N.A., Grozdanov D.N., Kopach Yu N., Tretyakova T.Yu, Ruskov I.N., Skoy V.R., Dabylova S., Aliev F.A., Hramco C., Gundorin N.A., Marzhokhov R.B., Barmakov Yu N., Bogolyubov E.P., Zverev V.I., Modeling 14 MeV Neutron Scattering on Titanium, Chromium, and Iron Nuclei Using the TALYS Program, Bulletin of the Russian Academy of Sciences: Physics, издательство Allerton Press Inc. (United States), том 85, № 10, с. 1113-1121, 2021. https://www.elibrary.ru/item.asp?doi=10.31857/S0367676521100136
- 7. Aliyev F.A., Aliyev Ch.S., Determination of the concentration of major and trace elements in sedimentary rocks using neutron activation analysis, Geophysics news in Azerbaijan, № 1-2/2022 <a href="https://amgk.az/pdf/aze\_GGI\_1-2.2022.pdf">https://amgk.az/pdf/aze\_GGI\_1-2.2022.pdf</a>
- 8. Matlab N Mirzayev, Anca C Parau, Lyubomir Slavov, Mihaela Dinu, Dimitar Neov, Zdravka Slavkova, Evgeni P Popov, Maria Belova, Kanan Hasanov, Fuad A Aliyev, Alina Vladescu,

TiSiCN as Coatings Resistant to Corrosion and Neutron Activation, Materials 16(5) (2023) 1835. DOI: 10.3390/ma16051835