

# Anahit Rafiki Balabekyan

## Research Institute of Physics

International Center for Advanced Studies

Head of the center

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## Education

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<b>Institution</b>	Yerevan State University
<b>Faculty</b>	Physics/Nuclear Physics
<b>Date</b>	1973 - 1978
<b>Degree name</b>	Qualified specialist

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## Scientific Rank/degree

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<b>Institution</b>	Yerevan State University
<b>Date</b>	2019
<b>Degree name</b>	Professor
<b>Specialty</b>	Physico-mathematical sciences

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<b>Institution</b>	Joint Institute of Nuclear Research /Dubna, RF/, Laboratory of Nuclear Problems
<b>Date</b>	2010
<b>Degree name</b>	Doctor
<b>Specialty</b>	Physico-mathematical sciences
<b>Research Topic</b>	Nuclear reactions on medium-weight separated isotopes and on heavy radioactive nuclei

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<b>Institution</b>	Joint Institute of Nuclear Research /Dubna, RF/, Laboratory of Nuclear Problems
<b>Date</b>	1993
<b>Degree name</b>	Candidate
<b>Specialty</b>	Physico-mathematical sciences
<b>Scientific Supervisor</b>	A.H.Khudaverdyan, A.S.Danagulyan
<b>Research Topic</b>	"Photospallation of tin isotopes and investigation of the simple reactions by bremsstrahlung photons with maximum energy $E_{max} = 4.5\text{GeV}$

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## Language skills

Հայերեն Русский English

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## Work experience

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<b>Institution</b>	Yerevan State University, International Center of Advanced Studies
<b>Period of time</b>	2025 - 2029
<b>Rank/degree</b>	Head

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<b>Institution</b>	Yerevan State University, Chair of Nuclear Physics
<b>Period of time</b>	2013 - 2024
<b>Rank/degree</b>	Head of Chair

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<b>Institution</b>	Yerevan State University, Chair of Nuclear Physics
<b>Period of time</b>	2003 - 2013
<b>Rank/degree</b>	associate professor

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<b>Institution</b>	Joint Institute of Nuclear Research, Laboratory of Nuclear Problem
<b>Period of time</b>	1995 - 2005
<b>Rank/degree</b>	Senior Researcher

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<b>Institution</b>	Yerevan State University, Laboratory of High Energy
<b>Period of time</b>	1988 - 1995
<b>Rank/degree</b>	Researcher

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<b>Institution</b>	Yerevan State University, Chair of Nuclear Physics
<b>Period of time</b>	1978 - 1988
<b>Rank/degree</b>	senior Assistant

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## Scientific interests

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- Nuclear Reactions
  - Fission reactions
  - Problems of Radioactive Waste
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## Membership

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<b>Institution</b>	National Laboratory after A.Alikhanyan, Dissertation Council N024
<b>Period of time</b>	2018 - 2023

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<b>Institution</b>	Yerevan State University, Department of Physics
<b>Period of time</b>	2013 - 2023

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## Publications

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*Article*

**Low-pressure multi-wire proportional chamber-based fission-fragment sensitive detection**

**system: application in nuclear forensic analysis**

A.R. Balabekyan, G.H. Hovhannisyanyan, S.V. Gaginyan, G.M. Ayvazyan, H.G. Zohrabyan, V.H. Kakoyan,

A.T. Margaryan

European Physical Journal: Special Topics 2025 123504

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*Article*

**Investigation of photonuclear reactions on isotopes  $^{51}\text{V}$ ,  $^{nat}\text{Cu}$ ,  $^{nat}\text{Mo}$ ,  $^{115}\text{In}$  and  $^{207}\text{Pb}$  at photon energy  $E_{\text{max}} = 20\text{--}70\text{ MeV}$**

A.R. Balabekyan, S. Gaginyan, A. Aleksanyan, S. Amirkhanyan, L. Poghosyan, N.A. Demekhina, G. Avdalyan

Radiation Physics and Chemistry 2023 110651

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*Article*

**Proton induced reactions on  $^{114}\text{Sn}$  and  $^{120}\text{Sn}$  targets at energies up to 18 MeV**

G. H. Hovhannisyanyan, A. R. Balabekyan, G. V. Martirosyan, T. M. Bakhshiyanyan, R. K. Dallakyan

European Physical Journal A 2023 161

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*Article*

**ЭКСПЕРИМЕНТАЛЬНАЯ УСТАНОВКА НА ОСНОВЕ LPMWPC И SSD ДЕТЕКТОРОВ ДЛЯ РЕГИСТРАЦИИ И ИДЕНТИФИКАЦИИ АЛЬФА-ЧАСТИЦ И ОСКОЛКОВ ДЕЛЕНИЯ**

Ա.Ր. ԲԱԼԱԲԵԿՅԱՆ, Գ.Օ. ՕԳԱՆԵՏՅԱՆ, Շ.Վ. ԳԱԳԻՆՅԱՆ, Գ. Մ. ԱՅՎԱԶՅԱՆ, Գ.Գ. ՅՕԳՐԱԲՅԱՆ, Վ.Օ. ԽԱՇԱՏՐՅԱՆ,

Գ.Շ. ՎԱՐՏԱՆՅԱՆ, Ա. Թ. ՄԱՐԳԱՐՅԱՆ

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2023

503-508

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*Article*

**Experimental Installation Based on LPMWPC and SSD Detectors for Registration and Identification of Alpha Particles and Fission Fragments**

A.R. Balabekyan, G. H. Hovhannisyanyan, S.V. Gaginyan, G. M. Ayvazyan, H. G. Zohrabyan, H. S. Vardanyan,

V. H. Khachatryan, A. T. Margaryan

Journal of Contemporary Physics (Armenian Academy of Sciences) 2023 321–325

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*Article*

**Production of  $^{47}\text{Sc}$  in photonuclear reactions on  $^{nat}\text{Ti}$  targets at the bremsstrahlung endpoint energy of 30 and 40 MeV**

G.H. Hovhannisyanyan, T.M. Bakhshiyanyan, A.R. Balabekyan, I.A. Kerobyan

Applied Radiation and Isotopes 2022 110138

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*Article*

**Investigations at the LUE-75 Linear Accelerator Facility of A.I. Alikhanyan National Science Laboratory**

A.S. Hakobyan, H.H. Marukyan, I. A. Kerobyan, H. R. Gulkanyan, L. A. Poghosyan, V. S. Pogosov,

H. T. Torosyan, A. Z. Babayan, L. R. Vahradyan, A. R. Balabekyan, G. H. Hovhannisyanyan, R. K. Dallakyan,

K. Katovsky

Journal of Contemporary Physics (Armenian Academy of Sciences) 2022 209-217

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*Article*

**Ճանր միջուկների բաժանման հազվագյուտ պրոցեսներ**

Գոհար Հովհաննիսյան, Անահիտ Բալաբեկյան, Ամուր Մարգարյան

Գիտության աշխարհում 2022 36-43

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Article

**A Study of Alpha Particle Production in Photonuclear Reactions at Photon Energies of 21 and 40 MeV**

A. R. Balabekyan, N. A. Demekhina, E. Melyan, S. Faltajanyan, A. Aleksanyan, S. Amirkhanyan, H. Gulkanyan, T. Kotanjyan, A. S. Hakobyan

Journal of Contemporary Physics (Armenian Academy of Sciences) 2020 1-7

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Article

**Isovector pair correlations in analytically solvable models**

A. Balabekyan, G. Nikoghosyan, E. A. Kolganova, R. V. Jolos, D. A. Sazonov

International journal of Modern physics E 2020 2050091

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Article

**The Study of Photoproduction of Cobalt Radioisotopes from Copper Nuclei**

A. Y. Aleksanyan, S. M. Amirkhanyan, A. Balabekyan, N. A. Demekhina, H. R. Gulkanyan, T. V. Kotanjyan, V. Mangasaryan, V. S. Pogosov, L. A. Poghosyan, S. Faltajanyan

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2020 275-283

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Article

**Spallation reactions induced by 4.4 GeV deuterons on lead isotopes**

S V Gaginyan, A R Balabekyan, G S Karapetyan, N A Demekhina, J R Drnoyan, V I Zhemenik, J Adam, L Zavorka, A A Solnyshkin, V M Tsoupko-Sitnikov, J Khushvaktov, V Pronskikh, V M Zhamkochyan, V Guimarães, A Deppman

Journal of Physics G: Nuclear and Particle Physics 2019 095103(1-23)

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Article

**Fragment production in proton-induced reaction on  $^{209}\text{Bi}$  target at intermediate energy range**

A. R. Balabekyan, G. S. Karapetyan, E. Andrade-II, A. Deppman, S. V. Gaginyan, E. Melyan, J. R. Drnoyan, V. I. Zhemenik, J. Adam, L. Zavorka, A. A. Solnyshkin, V. M. Tsoupko-Sitnikov, J. Khushvaktov,

E. B. Hernández

Physical Review C 2019 024616(1-9)

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Book

**Միջուկային փոխազդեցություններ**

Անահիտ Բալաբեկյան

2019 142

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Article

**Reactions  $^{11}\text{B} + ^{209}\text{Bi}$  at energies above Coulomb barrier**

A.R. Balabekyan, N.A. Demekhina, Yu. E. Penionzhevich, N. K. Skobelev, S.M. Lukyanov, V. Burjan

EURASIAN JOURNAL OF PHYSICS AND FUNCTIONAL MATERIALS 2018 6-16

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Article

**Systematic study of fission modes in the proton-induced fission of actinide and pre-actinide**

A R Balabekyan, E Andrade, G S Karapetyan, A Deppman, J L Bernal-Castillo, Valdir Guimaraes, J Adam, F Garcia, F Guzman

Journal of Physics G: Nuclear and Particle Physics 2018 015105(1-24)

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Article

**Isotopic Dependence of Fragment Production Cross Sections in the Reactions of Deuterons on Enriched Lead and Tin Isotopes**

A. R. Balabekyan, G. Karapetyan, N. A. Demekhina, S. V. Gaginyan, D.R.Drnoyan, V. I. Zhemelik, J.Adam, L.Zavorka, A. A. Solnyshkin, V. M. Tsoupko-Sitnikov, J. Khushvaktov  
Physics of Atomic Nuclei 2018 804-809

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Article

**Isomer production in intermediate-energy deuteron-induced reactions on a gold target**

A.R. Balabekyan, G.S.Karapetyan, N. A. Demekhina, D. R. Drnoyan, V. I. Zhemelik, J. Adam, L. Zavorka, A. A. Solnyshkin, V. M. Tsoupko-Sitnikov, V. Guimaraes, A. Deppman  
Physical Review C 2016 054614-1-054614-  
<https://journals.aps.org/prc/>

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Article

**МЕТОД НАВЕДЕННОЙ АКТИВНОСТИ ДЛЯ ИССЛЕДОВАНИЯ ЯДЕРНЫХ РЕАКЦИЙ НА ИЗОТОПАХ Pb И Sn**

А.Р. БАЛАБЕКЯН, С.В. ГАГИНЯН, ДЖ.Р. ДРНОЯН  
Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2016 291-299  
<http://www.flib.sci.am/eng/Fizika/Frame.html>

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Article

**Աստղերի էներգիայի աղբյուրը**

Ա.Ռ.Բալաբեկյան, Է.Լ. Կարապետյան  
Բնագետ 2016 66-72  
<http://www.ysu.am/bnaget>

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Article

**Interaction of  $^{11}\text{B}$  with  $^{209}\text{Bi}$  and  $^{181}\text{Ta}$  targets at intermediate energies.**

A.R.Balabekyan, G.S.Karapetyan, A.Deppman, V.Guimaraes, N.A.Demekhina  
Physical Review C 2016 024618-1-8  
<https://journals.aps.org/prc/>

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Manual

**Միջուկային ռեակցիաներ**

Ա.Ռ.Բալաբեկյան  
2013 75

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Conference

**NUCLEAR REACTIONS OF DEUTERONS WITH SEPARATED LEAD ISOTOPES AT 2.2 GEV/NUCLEON ENERGIES**

A.R. Balabekyan, S.V.Gaginyan, N.A.Demekhina, G.S.Karapetyan

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Conference

**PHOTOPRODUCTION OF ALFA-PARTICLES FOR MEDIUM WEIGHT AND HEAVY NUCLEI IN ENERGY RANGE 20-40 MEV**

A.R.Balabekyan, E. Melyan, S. Faltajanyan, N.A. Demekhina, A. Aleksanyan, S. Amirkhanyan, H. Gulkanyan, T. Kotanjyan

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Conference

**THE STUDY OF PHOTOPRODUCTION OF COBALT RADIOISOTOPES FROM COPPER NUCLEI**

A. Balabekyan, A. Aleksanyan, S. Amirkhanyan, N. Demekhina, S. Faltajanyan, H. Gulkanyan,  
T. Kotanjyan, V. Mangasaryan, L. Poghosyan, V. Pogosov

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Conference

**ՃԱՆՐ ՄԻՋՈՒԿՆԵՐԻ ԻՆՔՆԱԿԱՄ ԵՎ ՀԱՐԿԱԴՐԱԿԱՆ ԲԱԺԱՆՄԱՆ ՀԱՉՎԱԳՅՈՒՏ ԴՐՈՑԵՍՆԵՐ**

Բալաբեկյան Ա.Ռ., Հովհաննիսյան Գ.Հ., Գազիկյան Ս.Վ., Չոիրաբյան Հ.Գ., Խաչատրյան Պ.Ա

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Conference

**Determination of photoneutron production from different targets irradiated by electron beam**

Melyan E., Katovsky K., Kral D., Zeman M., Svoboda J., Balabekyan A., Gaginyan S., Poghosyan L.,  
Marukyan H., Manukyan A.

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Conference

**Reaction rates determination for activation detectors in neutron spectrum generated by 70 MeV electrons**

Zeman, M., Holomb, R., Katovsky, K., Kral, D., Melyan, E., Stastny, O., Svoboda, J., Balabekyan, A.,  
Gaginyan, S., Haysak, I.

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