Grigor Bakhshi Alaverdyan

Institute of Physics
Chair of Theoretical and Mathematical Physics
Associate professor

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Research Institute of Physics
Տեսական և մաթեմատիկական ֆիզիկայի կենտրոն
Գերխիտ աստղերի ֆիզիկայի լաբորատորիա
Senior Researcher

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Education

Institution	Yerevan State University
Faculty	Faculty of Physics, Chair of Theoretical Physics
Date	1974 - 1977
Degree name	PhD student

Institution	Yerevan State University
Faculty	Faculty of Physics, Chair of Theoretical Physics
Date	1966 - 1971
Degree name	Qualified specialist

Scientific Rank/degree

Institution	Yerevan State University
Date	1982
Degree name	Associate professor

Institution	Yerevan State University
Date	1980
Degree name	Candidate
Scientific Supervisor	Tarasov Alexander Vasilevich, Joint Institute for Nuclear Research (JINR), Dubna
Research Topic	Multiple collision effects of leading particles in the hadron-nucleus interactions

Language skills

Հայերեն Русский English

Work experience

Institution	Yerevan State University, Department of Science
Period of time	2025 till now
Rank/degree	Inspector

Institution	Yerevan State University, Chair of theoretical and mathematical physics
Period of time	2018 - 2025
Rank/degree	Associate Professor

Institution	Yerevan State University, Chair of applied Electrodynamics and Modeling
Period of time	2012 - 2018
Rank/degree	Associate Professor

Institution	Yerevan State University, Chair of Wave Processes theory and Physics
Period of time	1982 - 2012
Rank/degree	Head of Chair

Institution	Yerevan State University, Chair of Wave Processes theory and Physics
Period of time	1980 - 1982
Rank/degree	Associate Professor

Institution	Yerevan State University, Department of implementation of scientific and technical works
Period of time	1977 - 1980
Rank/degree	Group Leader

Institution	Yerevan State University, Department of Scientific Research
Period of time	1977 - 1977
Rank/degree	Senior Engineer

Institution	Yerevan State University, Chair of Theoretical Physics
Period of time	1973 - 1976
Rank/degree	PHD Student

Institution	Yerevan State University, Chair of Theoretical Physics
Period of time	1971 - 1973
Rank/degree	Assistant Professor

Publications

Article

Quark Deconfinement Phase Transition in Hot Neutron-Star Matter: Effects of Neutrino

Trapping
Grigor Alaverdyan, Ani Alaverdyan

Particles 2026 64

https://doi.org/10.3390/particles9020064

Article

Numerical Modeling of Thermodynamic Parameters for Hot Neutron Star Matter in Neutrino-Trapped Regime
G.B. Alaverdyan, G.S. Hajyan, A.G. Alaverdyan

Physics of Particles and Nuclei 2025 1318-1322

Article

Changes in the Parameters of a Compact Star Due to the Quark Deconfinement Phase Transition: Comparative Analysis of Maxwell and Gibbs Scenarios.
G.B.Alaverdyan

Current Perspective to Physical Science Research 2024 71-82

Article

Isospin-Asymmetric Cold Nuclear Matter in the Relativistic Mean-Field Theory with a Scalar-Isovector Interaction Channel
Alaverdyan G.B, Alaverdyan A.G.

Astrophysics 2024 215–230

Conference

Thermodynamic Properties of Hot Q Equilibrium Hadronic and Quark Matter in the Neutrino-Trapped Regime
Grigor Alaverdyan

2024 31 - 31

https://www.spectrumconferences.com/2024/isgac

Conference

Numerical Modeling of Thermodynamic Parameters for Hot Neutron Star Matter in Neutrino-Trapped Regime
Grigor Alaverdyan, Gevorg Hajyan, Ani Alaverdyan

2024 51 - 52

https://indico.jinr.ru/event/4467/

Article

EFFECT OF NEUTRINO OSCILLATIONS ON THE THERMODYNAMIC PROPERTIES OF HOT QUARK MATTER
G. B. Alaverdyan, G. S. Hajyan, A.G. Alaverdyan

Astrophysics 2023 127-139

Conference

Hot β-equilibrium hadronic matter in the neutrino-trapped regime within the framework of relativistic mean-field theory
Grigor Alaverdyan

2023 1 - 1

https://indico.cern.ch/event/1234609/

Conference

Neutrino oscillations effects on the thermodynamic properties of hot electrically neutral quark matter in beta-equilibrium

Grigor Alaverdyan, Gevorg Hajyan

2023 3 - 4

https://indico.cern.ch/event/1234609/

Article

Properties of Hot Quark Matter with Neutrino Confinement in the NJL Model

G.B. Alaverdyan, G.S. Hajyan

Astrophysics 2022 126-136

Article

QUARK MATTER IN THE NJL MODEL WITH A VECTOR INTERACTION AND THE STRUCTURE OF HYBRID STARS

G.B. Alaverdyan

Astrophysics 2022 378-395

Conference

Quark Matter in The NJL Model with Vector Interaction and The Structure of Compact Stars

G.B. Alaverdyan

2022 31

https://crgconferences.com/physics/2022/

Study manual

Մեխանիկա 1. Կինեմատիկա

Գրիգոր Ալավերդյան

2022 104

Article

Hadron–Quark Phase Transition in the SU (3) Local Nambu–Jona-Lasinio (NJL) Model with Vector Interaction

Grigor Alaverdyan

Symmetry 2021 124(1-16)

Article

Hot Quark Matter with Neutrino Confinement in Terms of the Local Nambu - Jona-Lasinio SU(3) Model

G.B.Alaverdyan, G.S.Hajyan

Astrophysics 2021 370–387

Conference

Hot Quark Matter at Neutrino Confinement in the Framework of the local SU(3) Nambu - Jona-Lasinio Model

Grigor Alaverdyan, Gevorg Hajyan

2021 1

https://indico.cern.ch/event/1046655/

Conference

Hybrid Star Properties within the Nambu - Jona-Lasinio (NJL) Model forQuark Matter and

Relativistic Mean Field (RMF) Model for Hadronic Matter

Grigor Alaverdyan

2019 1

https://indico.cern.ch/event/769736/

Article

Гибридные звезды в рамках локальной модели Намбу-Иона-Лазинио для кварковой материи

Г.Б.Алавердян, Ю.Л.Вартанян

Astrophysics 2018 557-572

Conference

Structure of hybrid stars within the local NJL model for quark matter and RMF model for hadronic matter

G.B. Alaverdyan, Yu.L. Vartanyan

2018 22

https://www.bao.am/meetings/meetings/VA110/

Article

Максимальная масса гибридных звезд в модели кваркового мешка

Алавердян Г.Б., Вартанян Ю.Л.

Astrophysics 2017 617-626

Conference

Impact of the MIT bag model parameters values on the maximum mass of neutron star with a quark core

Grigor Alaverdyan, Yuri Vartanyan

2017 1

https://indico.cern.ch/event/597202/

Article

Աղբյուրի գերձայնային շարժման ժամանակ ձայնային ազդանշանի ժամանակային շրջման երևույթի մասին

Գ.Բ. Ալավերդյան

Բնագետ 2015 17-24

http://www.ysu.am/bnaget

Conference

Strange quark matter in compact stars

Yu.L.Vartanyan, G.S.Hajyan, G.B.Alaverdyan, A.K.Grigoryan, A.R.Harutyunyan, A.G.Alaverdyan,

H.A.Shahinyan

2015 1-15

http://pos.sissa.it/cgi-bin/reader/conf.cgi?confid=262

Conference

Scalar-isovector channel of the nucleon-nucleon interaction in the RMF theory and massive compact stars

ALAVERDYAN, Grigor

2015 1

https://indico.cern.ch/event/360350/

Conference

Compact stars with quark core

ALAVERDYAN Grigor, VARTANYAN Yury, HARUTYUNYAN Anahit

2015 7

https://indico.cern.ch/event/360350/