

# Tigran Ara Petrosyan

## Research Institute of Physics

Laboratory of Theoretical Physics

Researcher

23-44  
(060) 71-03-44

tigran.petrosyan@ysu.am



## Education

<b>Institution</b>	Yerevan State University
<b>Faculty</b>	Department of Physics, Academician G. Sahakyan's Chair of Theoretical Physics
<b>Date</b>	2019 - 2022
<b>Degree name</b>	PhD student

## Scientific Rank/degree

<b>Institution</b>	Yerevan State University
<b>Date</b>	2022
<b>Degree name</b>	Candidate
<b>Specialty</b>	Physico-mathematical sciences
<b>Scientific Supervisor</b>	Aram Saharian
<b>Research Topic</b>	Some quantum effects in cosmological models

## Language skills

English Русский

## Work experience

<b>Institution</b>	Yerevan State University
<b>Period of time</b>	2023 till now
<b>Rank/degree</b>	Scientific Researcher

<b>Institution</b>	Yerevan State University
<b>Period of time</b>	2021 - 2023
<b>Rank/degree</b>	Junior Researcher

## Scientific interests

- Cosmology, quantum field theory in curved spacetime

*Article*

**Finite temperature fermionic charge and current densities in conical space with a circular edge**

A. A. Saharian, V.F. Manukyan, T.A. Petrosyan

Physical Review D 2025 065006

---

*Article*

**Topological Casimir effect for fermionic condensate in AdS spacetime with compact dimensions**

T.A. Petrosyan, A.A. Grigoryan, A.A. Saharian

Europhysics Letters 2025 64001

---

*Manual*

**Տեսական մեխանիկայի խնդիրների ժողովածու**

Ռոլանդ Ավագյան, Արամ Սահարյան, Տիգրան Պետրոսյան

2024 244

---

*Article*

**Plane symmetric gravitational fields in (D+1)-dimensional General Relativity**

R.M. Avagyan, T.A. Petrosyan, A.A. Saharian, G.H. Harutyunyan

Астрофизика (Astrophysics) 2024 405 - 419

---

*Article*

**Mean field squared and energy-momentum tensor for the hyperbolic vacuum in dS spacetime**

A. A. Saharian, T. A. Petrosyan, V. S. Torosyan

Annals of Physics 2022 168728

---

*Article*

**Cosmological Evolution With Negative Energy Densities**

A.A. SAHARIAN, R.M. AVAGYAN, E.R. BEZERRA DE MELLO, V.KH. KOTANJYAN, T.A. PETROSYAN,

H.G. BABUJYAN

Astrophysics 2022 427-440

---

*Article*

**Casimir Effect for Fermion Condensate in Conical Rings**

Aram Saharian, Tigran Petrosyan, Arshak Hovhannisyan

UNIVERSE 2021 73 (1-20)

---

*Article*

**Casimir densities induced by a sphere in the hyperbolic vacuum of de Sitter spacetime**

A. A. Saharian, T. A. Petrosyan

Physical Review D 2021 065017

---

*Article*

**Fermionic condensate in de Sitter spacetime**

A. A. Saharian, E. R. Bezerra de Mello, A. S. Kotanjyan, T. A. Petrosyan

Astrophysics 2021 529-543

---

*Article*

**Polarization of the Conformal Vacuum in the Milne Universe**

T.A. Petrosyan

Armenian Journal of Physics 2021 180-190

---

*Article*

**The Casimir densities for a sphere in the Milne universe**

Aram A. Saharian, Tigran A. Petrosyan

Symmetry 2020 619(1-30)

---

*Article*

**Scalar Field Modes in de Sitter Spacetime with Negative Curvature Spatial Foliation**

A.A. Saharian, T.A. Petrosyan, S.S. Chitchyan, A.Kh. Grigoryan

Armenian Journal of Physics 2020 316-329

---

*Article*

**Angular distribution of high power radiation from a charge rotating around a dielectric ball**

T.A. Petrosyan, L.Sh. Grigoryan, A.A. Saharian, H.F. Khachatryan, M.L. Grigoryan, A.V. Sargsyan

Journal of Instrumentation 2020 C04035

---

*Article*

**Angular Distribution of Intensive Radiation from a Charge Rotating Around a Conductive Ball**

L.Sh. Grigoryan, A.A. Saharian, A.H. Mkrtchyan, H.F. Khachatryan, M.L. Grigoryan, T.A. Petrosyan,

H.P. Harutyunyan

Armenian Journal of Physics 2020 105 -113

---

*Article*

**Vacuum fluxes from a brane in de Sitter spacetime with compact dimensions**

A.A. Saharian, D.H. Simonyan, T.A. Petrosyan

Armenian Journal of Physics 2019 51-61

---

*Article*

**BOUNDARY INDUCED QUANTUM EFFECTS IN LINEARLY EXPANDING COSMOLOGICAL MODELS**

Petrosyan Tigran

Collection of scientific articles of YSU SSS 2019 231-243

---

*Article*

**Scalar Casimir effect in a linearly expanding universe**

A. A. Saharian, T. A. Petrosyan, S. V. Abajyan, B. B. Nersisyan

International Journal of Geometric Methods in Modern Physics 2018 1850177(1-26)

---

*Conference*

**On the Features of Radiation from a Charge Rotating Around Dielectric and Conductive Ball**

L.Sh. Grigoryan, A.A. Saharian, H.F. Khachatryan, M.L. Grigoryan, A.V. Sargsyan, T.A. Petrosyan

---