

# Arus Slavik Harutyunyan

✉ arus.harutyunyan@ysu.am

## Научно-исследовательский институт физики

ԲՎԱՆՏԱՅԻՆ ԵՐԼՈՒՅՆԵՐԻ ԻՆՏԱԳՐՈՄԱՆ և ՄՈՂԵԼԱՎՈՐՄԱՆ ԼԱԲՈՐԱՏՈՐԻԱ  
Научный сотрудник

## Образование

|                  |                          |
|------------------|--------------------------|
| Учреждение       | Yerevan State University |
| Факультет        | Faculty of physics       |
| Дата             | 2008 - 2014              |
| Степень / Звание | Магистр                  |

## Ученое звание/Ученая степень

|                      |   |
|----------------------|---|
| Учреждение           | Goethe University, Institute for Theoretical Physics                    |
| Дата                 | 2018  |
| Степень / Звание     | Аспирант  |
| Научный руководитель | Armen Sedrakyan   |
| Научная тема         | Relativistic hydrodynamics and transport in strongly correlated systems |

## Опыт работы

|                |                                    |
|----------------|------------------------------------|
| Учреждение     | Byurakan Astrophysical Observatory |
| Период времени | 2018 до настоящего времени         |
| Звание/степень | Senior researcher                  |

## Научные интересы

- Compact stars, transport phenomena, relativistic hydrodynamics

## Публикации

Статья

### Electrical conductivity of a warm neutron star crust in magnetic fields: Neutron-drip regime

Arus Harutyunyan, Armen Sedrakian, Narine T. Gevorgyan, Mekhak V. Hayrapetyan

Physical Review C 2024 055804

Статья

### Phenomenological Relativistic Second-Order Hydrodynamics for Multiflavor Fluids

Arus Harutyunyan, Armen Sedrakian

*Статья*

**Bulk viscosity from Urca processes: npe $\mu$  matter in the neutrino-transparent regime**

Mark Alford, Arus Harutyunyan, Armen Sedrakian

Physical Review D 2023 083019

---

*Статья*

**Relativistic second-order dissipative hydrodynamics from Zubarev's non-equilibrium statistical operator**

Arus Harutyunyan a, Armen Sedrakian, Dirk H. Rischke

Annals of Physics 2022 168755

---

*Статья*

**Delta-resonances and hyperons in proto-neutron stars and merger remnants**

Armen Sedrakian, Arus Harutyunyan

European Physical Journal A 2022 137

---

*Статья*

**Bulk Viscosity of Relativistic npe $\mu$  Matter in Neutron-Star Mergers**

Mark Alford, Arus Harutyunyan, Armen Sedrakian

Particles 2022 361-376

---

*Статья*

**Bulk viscosity from Urca processes: npe $\mu$  matter in the neutrino-trapped regime**

Mark Alford, Arus Harutyunyan, Armen Sedrakian

Physical Review D 2021 103027

---

*Статья*

**Equation of State and Composition of Proto-Neutron Stars and Merger Remnants with Hyperons**

Armen Sedrakian, Arus Harutyunyan

UNIVERSE 2021 382

---

*Статья*

**Bulk Viscous Damping of Density Oscillations in Neutron Star Mergers**

Mark Alford, Arus Harutyunyan, Armen Sedrakian

Particles 2020 500-517

---

*Статья*

**Bulk viscosity of baryonic matter with trapped neutrinos**

Mark Alford, Arus Harutyunyan, Armen Sedrakian

Physical Review D 2019 103021

---

*Статья*

**Bulk Viscosity of Hot Quark Plasma from Non-Equilibrium Statistical Operator**

Arus Harutyunyan, Armen Sedrakian

Particles 2018 212-229

---

*Статья*

**Relativistic Dissipative Fluid Dynamics from Non-Equilibrium Statistical Operator**

Arus Harutyunyan, Armen Sedrakian, Dirk H. Rischke

Particles 2018 155-165

---

*Статья*

**Electrical resistivity and Hall effect in binary neutron star mergers**

Arus Harutyunyan, Antonios Nathanail, Luciano Rezzolla, Armen Sedrakian

European Physical Journal A 2018 191

---

*Статья*

**On the importance of resistivity and Hall effect in MHD simulations of binary neutron star mergers**

A. S. Harutyunyan

Communications of the Byurakan Astrophysical Observatory 2018 338-345

---

*Статья*

**Transport coefficients of two-flavor quark matter from the Kubo formalism**

Arus Harutyunyan, Dirk H. Rischke, Armen Sedrakian

Physical Review D 2017 114021

---

*Статья*

**Bulk viscosity of two-flavor quark matter from the Kubo formalism**

Arus Harutyunyan, Armen Sedrakian

Physical Review D 2017 034006

---

*Статья*

**Electrical conductivity of a warm neutron star crust in magnetic fields**

Arus Harutyunyan, Armen Sedrakian

Physical Review C 2016 025805-1-18

---

*Статья*

**ABSORPTION OF MAGNETOSONIC WAVES IN THE CRUST OF NEUTRON STARS. RADIO EMISSION FROM PULSARS**

D. M. Sedrakian, A. S. Harutyunyan, M. V. Hayrapetyan

Астрофизика (Astrophysics) 2014 530-549

---

*Статья*

**MAGNETOHYDRODYNAMIC EQUATIONS FOR THE CRUST OF NEUTRON STARS**

D. M. Sedrakian, A. S. Harutyunyan, M. V. Hayrapetyan

Астрофизика (Astrophysics) 2013 76-87

---

*Статья*

**Magnetosonic waves in the crust of a neutron star**

D. M. Sedrakian, A. S. Harutyunyan, M. V. Hayrapetyan

Астрофизика (Astrophysics) 2013 229-245

---

*Конференция*

**Magnetosonic waves in the crust of a neutron star**

D. M. Sedrakian, A. S. Harutyunyan, M. V. Hayrapetyan

---

*Конференция*

**Electrical conductivity tensor of dense plasma in magnetic fields**

Arus Harutyunyan, Armen Sedrakian

---