Arus Slavik Harutyunyan

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Research Institute of Physics
Տեսական և մաթեմատիկական ֆիզիկայի կենտրոն
Scientific Worker

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Scientific Worker

Institute of Physics
Chair of Theoretical and Mathematical Physics
Lecturer on an hourly basis

Education

Institution	Yerevan State University
Faculty	Faculty of physics
Date	2008 - 2014
Degree name	Masters

Scientific Rank/degree

Date	2018
Degree name	PhD
Scientific Supervisor	Armen Sedrakian
Research Topic	Relativistic hydrodynamics and transport in strongly correlated systems

Work experience

Institution	Byuarakan Astrophysical Observatory
Period of time	2018 till now
Rank/degree	Senior researcher

Publications

Article

Generalized relativistic second-order dissipative hydrodynamics: coupling different rank tensors
Arus Harutyunyan, Armen Sedrakian

Annals of Physics 2025 170159

Article

Bulk Viscosity of Two-Flavor Color Superconducting Quark Matter in Neutron Star Mergers
Mark Alford, Arus Harutyunyan, Armen Sedrakian, Stefanos Tsiopelas

Frontiers in Astronomy and Space Sciences 2025 1648066

Article

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

Article

Bulk viscosity of two-color superconducting quark matter in neutron star mergers
Mark Alford, Arus Harutyunyan, Armen Sedrakian, Stefanos Tsiopelas

Physical Review D 2024 L061303

Article

Thermal Conductivity and Thermal Hall Effect in Dense Electron-Ion Plasma
Arus Harutyunyan, Armen Sedrakian

Particles 2024 967-983

Article

Phenomenological Relativistic Second-Order Hydrodynamics for Multiflavor Fluids
Arus Harutyunyan, Armen Sedrakian

Symmetry 2023 494

Article

Bulk viscosity from Urca processes: npeμ matter in the neutrino-transparent regime
Mark Alford, Arus Harutyunyan, Armen Sedrakian

Physical Review D 2023 083019

Article

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

Article

Delta-resonances and hyperons in proto-neutron stars and merger remnants
Armen Sedrakian, Arus Harutyunyan

The European Physical Journal A 2022 137

Article

Bulk Viscosity of Relativistic npeμ Matter in Neutron-Star Mergers
Mark Alford, Arus Harutyunyan, Armen Sedrakian

Particles 2022 361-376

Article

Equation of State and Composition of Proto-Neutron Stars and Merger Remnants with Hyperons
Armen Sedrakian, Arus Harutyunyan

UNIVERSE 2021 382

Article

Bulk viscosity from Urca processes: npeμ matter in the neutrino-trapped regime
Mark Alford, Arus Harutyunyan, Armen Sedrakian

Physical Review D 2021 103027

Article

Bulk Viscous Damping of Density Oscillations in Neutron Star Mergers
Mark Alford, Arus Harutyunyan, Armen Sedrakian

Particles 2020 500-517

Article

Bulk viscosity of baryonic matter with trapped neutrinos
Mark Alford, Arus Harutyunyan, Armen Sedrakian

Physical Review D 2019 103021

Article

Relativistic Dissipative Fluid Dynamics from Non-Equilibrium Statistical Operator
Arus Harutyunyan, Armen Sedrakian, Dirk H. Rischke

Particles 2018 155-165

Article

Bulk Viscosity of Hot Quark Plasma from Non-Equilibrium Statistical Operator
Arus Harutyunyan, Armen Sedrakian

Particles 2018 212-229

Article

Electrical resistivity and Hall effect in binary neutron star mergers
Arus Harutyunyan, Antonios Nathanail, Luciano Rezzolla, Armen Sedrakian

The European Physical Journal A 2018 191

Article

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

Article

Transport coefficients of two-flavor quark matter from the Kubo formalism
Arus Harutyunyan, Dirk H. Rischke, Armen Sedrakian

Physical Review D 2017 114021

Article

Bulk viscosity of two-flavor quark matter from the Kubo formalism
Arus Harutyunyan, Armen Sedrakian

Physical Review D 2017 034006

Article

Electrical conductivity of a warm neutron star crust in magnetic fields
Arus Harutyunyan, Armen Sedrakian

Physical review. C 2016 025805-1-18

Conference

Electrical conductivity tensor of dense plasma in magnetic fields
Arus Harutyunyan, Armen Sedrakian

2015 138096

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

Article

ABSORPTION OF MAGNETOSONIC WAVES IN THE CRUST OF NEUTRON STARS. RADIO EMISSION FROM PULSARS
D. M. Sedrakian, A. S. Harutyunyan, M. V. Hayrapetyan

Astrophysics 2014 530-549

Article

MAGNETOHYDRODYNAMIC EQUATIONS FOR THE CRUST OF NEUTRON STARS
D. M. Sedrakian, A. S. Harutyunyan, M. V. Hayrapetyan

Astrophysics 2013 76-87

Article

Magnetosonic waves in the crust of a neutron star
D. M. Sedrakian, A. S. Harutyunyan, M. V. Hayrapetyan

Astrophysics 2013 229-245

Conference

Magnetosonic waves in the crust of a neutron star
D. M. Sedrakian, A. S. Harutyunyan, M. V. Hayrapetyan

2013 012017

https://indico.cern.ch/event/215145/
