

Andria Rogava

personal information

Contact Details

Email address:

Full name: Andria Rogava

andria.rogava@iliauni.edu.ge

Gender: Male

Country: საქართველო (Georgia)

Citizenship: საქართველო
(Georgia)

City: Tbilisi

Languages

Language	Writing	Reading	Speaking
Italian	B2	C1	B2
Russian	C2	C2	C2
English	C2	C2	C2
ქართული (Georgian)	C2	C2	C2

Education

Academic degree

Academic Degree: Doctoral/PhD, Ed.D or other equivalent

Year obtained: 13.09.1990

Education

Academic Degree	Name of the Institution	Country	Major discipline	Start year	End year
Doctoral/PhD, Ed.D or other equivalent	Ivane Javakhishvili Tbilisi State University	საქართველო (Georgia)	Theoretical Physics	1986	1990

Projects

Ongoing projects

Project title	Position	Project head	Start Date	Donor
Large-scale structures and waves in the solar wind	Project head	Andria Rogava	25.02.2019	Shota Rustaveli National Science Foundation of Georgia

Completed projects

Project title	Position	Project head	Start Date	End Date	Donor
The different observational manifestations of radio pulsars and their single emission nature.	key personnel	George Machabeli	25.02.2019	25.02.2022	Shota Rustaveli National Science Foundation of Georgia

Project title	Position	Project head	Start Date	End Date	Donor
Nonlinear optical phenomena in Astrophysical sources	key personnel	George Machabeli	05.05.2015	05.05.2018	Shota Rustaveli National Science Foundation of Georgia
Cosmic Ultra-High-Energies and their Realization Mechanisms	key personnel	Nino Chkheidze	15.04.2013	15.04.2016	Shota Rustaveli National Science Foundation of Georgia
Interactive dynamics of Sun and sun-like stars and collective phenomena	Scientific Leader of the Project	Andria Rogava	01.10.2008	01.10.2010	Georgian National Science Foundation
Electrodynamics of Relativistic Plasma Flows Emanating from Rotating Compact Astrophysical Objects: Pulsars to Active Galactic Nuclei	key personnel	George Machabeli	03.09.2007	03.09.2009	Georgian National Science Foundation

Scientific Fields (2018-2020)

Main Field

Field: 1. Natural sciences

Sub-Field: 1.3 Physical sciences

Subject area: 1.3.8 Astronomy (including astrophysics, space science)

Additional Field (1)

Field: 1. Natural sciences

Sub-Field: 1.3 Physical sciences

Subject area: 1.3.5 Fluids and plasma physics (including surface physics)

Scientific Fields (2021-2024)

Main Field

Field: 1. Physical Sciences and Engineering

Sub-Field: 1.9 Universe Sciences

Subject area: 1.9.10 Relativistic astrophysics and compact objects

Additional Field (1)

Field: 1. Physical Sciences and Engineering

Sub-Field: 1.9 Universe Sciences

Subject area: 1.9.1 Solar physics – the Sun and the heliosphere

Additional Field (2)

Field: 1. Physical Sciences and Engineering

Sub-Field: 1.2 Fundamental Constituents of Matter

Subject area: 1.2.8 Gas and plasma physics

Employment History

Current place(s) of employment

Workplace	Name of the work department	Position	Main responsibilities	Start Date
Ilia State University	Institute for Theoretical Physics	Director	Managing of the scientific and educational activity of the institute.	01.04.2017
Ilia State University	Faculty of Natural Sciences and Engineering	Associate Professor in Astrophysics	Teaching and scientific research	05.05.2010

Work experience

Company/Institution	Name of the department	Position	Main responsibilities	Start Date	End Date
Catholic University of Leuven	Center for Plasma Astrophysics	Senior Research Fellow	Scientific research	04.04.2006	04.04.2008
University of Turin	Department of General Physics	postdoctoral researcher	Scientific research	01.10.2002	02.07.2004
University of Turin	Department of General Physics	Postdoc	Scientific research	27.05.2000	27.03.2001
Catholic University of Leuven	Centre for Plasma Astrophysics	Junior research fellow	Scientific research	20.02.1998	20.02.2000
International Centre for Theoretical Physics (ICTP)	Plasma Physics Group	Researcher	Scientific research	01.10.1995	01.09.1996
Tbilisi State University	Department of Physics, Theoretical Physics Division	Invited Lecturer, Docent	Teaching	01.09.1990	01.07.1997
Abastumani Astrophysical Observatory	Department of Theoretical Astrophysics	Researcher	Scientific research	15.03.1990	01.09.2009

Scientific Productivity

Article / Monograph / Manual

Type	Authors	Publication title	Source title	Year
Article	Andria Rogava, Stefaan Poedts, Ekaterine Dadiani	Self-similarity for astrophysical MHD transients revisited	Advances in Space Research	2022
Article	Giorgi Khomeriki, Andria Rogava	Centrifugally driven relativistic particles: general treatment and new solutions	General Relativity and Gravitation	2020
Article	George Machabeli, Andria Rogava, Beka Tevdorashvili	Self-trapping as the possible beaming mechanism for FRBs	Monthly Notices of the Royal Astronomical Society	2019
Article	G Machabeli, A Rogava, N Chkhidze, N Kevlishvili	The high energy emission of the Crab's twin pulsar PSR J0540-6919 in the Large Magellanic Cloud	Astrophysics and Space Science	2019
Article	Andria Rogava	Tennis Ball Towers	Physics World	2019
Article	Machabeli, G., Rogava, A., Chkhidze, N., Osmanov, Z., Shapakidze, D.	The Crab nebula energy origin and its high frequency radiation spectra	Journal of Plasma Physics	2016
Article	Machabeli, G., Rogava, A., Shapakidze, D.	On the Origin and Physics of Gamma Flares in Crab Nebula	Astrophysical Journal	2015
Article	Gudavdze, I., Osmanov, Z., Rogava, A.	On the role of rotation in the outflows of the Crab pulsar	International Journal of Modern Physics D	2015
Article	Osmanov, Z., Rogava, A., Poedts, S.	Electrostatic ion perturbations in kinematically complex shear flows	New Journal of Physics	2015
Article	Osmanov, Z.N., Rogava A.D., & Poedts, S.	Self-heating in kinematically complex magnetohydrodynamic flow	Physics of Plasmas	2012
Article	Dalakishvili G., Rogava A.D., Lapenta G., Poedts S.	Investigation of dynamics of self-similarly evolving magnetic clouds	Astronomy and Astrophysics	2011
Article	Shapakidze D., Debosscher A., Rogava A.D., & Poedts S.	Consistent Self-similar MHD Evolution of Coronal Transient	Astrophysical Journal	2010
Article	Rogava A.D., Osmanov, Z.N., & Poedts, S.	Self-heating and its possible relationship to chromospheric heating in slowly rotating stars	Monthly Notices of Royal Astronomical Society	2010
Article	Osmanov, Z.; Rogava, A. D. ; Bodo, G.	On the efficiency of particle acceleration by rotating magnetospheres in AGN	Astronomy and Astrophysics	2007

Type	Authors	Publication title	Source title	Year
Article	Gogoberidze, G.; Rogava, A. D.; Poedts, S.	Quantifying Shear-induced Wave Transformations in the Solar Wind	Astrophysical Journal	2007
Article	Dalakishvili, G. T.; Rogava, A. D.; Berezhiani	Role of radiation reaction forces in the dynamics of centrifugally accelerated particles	Physical Review D	2007
Article	Rogava, A. D.; Gogoberidze, G.; Poedts, S.	Overreflection and Generation of Gravitational-Alfvén Waves in Solar-Type Stars	Astrophysical Journal	2007
Article	Rogava, A. D.; Gogoberidze, G.	Linear coupling of acoustic and cyclotron waves in plasma flows	Physics of Plasmas	2005
Article	Rogava, A. D.	Are Astrophysical Shear Flows Able to Heat Themselves?	Astrophysics and Space Science	2004
Article	Rogava, A. D.; Poedts, S.; Osmanov, Z.	Transient shear instability of differentially rotating and self-gravitating dusty plasma	Physics of Plasmas	2004
Article	Rogava, A. D.; Dalakishvili, G.; Osmanov, Z.	Centrifugally Driven Relativistic Dynamics on Curved Trajectories	General Relativity and Gravitation	2003
Article	Rogava, A. D.; Mahajan, S. M.; Bodo, G.; Massaglia, S.	Swirling astrophysical flows - efficient amplifiers of Alfvén waves!?	Astronomy and Astrophysics	2003
Article	Rogava, A. D.; Bodo, G.; Massaglia, S.; Osmanov, Z.	Amplification of MHD waves in swirling astrophysical flows	Astronomy and Astrophysics	2003
Article	Osmanov, Z. N.; Machabeli, G. Z.; Rogava, A. D.	Electromagnetic waves in a rigidly rotating frame	Physical Review A	2002
Article	Poedts, S.; Rogava, A. D.	Does spiral galaxy IC 342 exhibit shear induced wave transformations?!	Astronomy and Astrophysics	2002
Article	Bodo, G., Poedts, S., Rogava, A., Rossi, P.	Spatial aspect of wave transformations in astrophysical flows	Astronomy and Astrophysics	2001
Article	Khujadze, G., Poedts, S., Rogava, A.	Shear Induced Phenomena in Dusty Plasma Flows	Astrophysics and Space Science	2001
Article	Rogava, A., Poedts, S., Mahajan, S.	Shear-driven wave oscillations in astrophysical flux tubes	Astronomy and Astrophysics	2000
Article	Poedts, S., Khujadze, G., Rogava, A.	Acoustic phenomena in electrostatic dusty plasma shear flows	Physics of Plasmas	2000
Article	Rogava, A., Poedts, S., Heirman, S.	Are galactic magnetohydrodynamic waves coupled?	Monthly Notices of Royal Astronomical Society	1999
Article	Mahajan, S., Rogava, A.	What Can the Kinematic Complexity of Astrophysical Shear Flows Lead To?	Astrophysical Journal	1999
Article	Poedts, S., Rogava, A., Mahajan, S.	Velocity Shear Induced Phenomena in Solar Atmosphere	Space Science Reviews	1999
Article	Rogava, A., Berezhiani, V., Mahajan, S.	Acoustic Phenomena in Relativistic Shear Flows	Physica Scripta	1998
Article	Poedts, S., Rogava, A., Mahajan, S.	Shear-flow-induced Wave Couplings In The Solar Wind	Astrophysical Journal	1998
Article	Rogava, A., Chagelishvili, G., Mahajan, S.	Shear Langmuir vortex: An elementary mode of plasma collective behavior	Physical Review E	1998
Article	Rogava, A., Chagelishvili, G., Berezhiani, V.	Velocity shear-induced effects on electrostatic ion perturbations	Physics of Plasmas	1997
Article	Chagelishvili, G., Khujadze, G., Lominadze, J., Rogava, A.	Acoustic waves in unbounded shear flows	Physics of Fluids	1997
Article	Chagelishvili, G., Rogava, A., Tsiklauri, D.	Compressible hydromagnetic shear flows with anisotropic thermal pressure: Nonmodal study of waves and instabilities	Physics of Plasmas	1997
Article	Mahajan, S., Machabeli, G., Rogava, A.	Escaping Radio Emission from Pulsars: Possible Role of Velocity Shear	Astrophysical Journal Letters	1997
Article	Rogava, A., Mahajan, S.	Coupling of sound and internal waves in shear flows	Physical Review E	1997
Article	Rogava, A., Khujadze, G.	General-Relativistic Model of Magnetically Driven Jet	General Relativity and Gravitation	1997
Article	Rogava, A., Mahajan, S., Berezhiani, V.	Velocity shear generated Alfvén waves in electron-positron plasmas	Physics of Plasmas	1996
Article	Chagelishvili, G., Rogava, A., Tsiklauri, D.	Effect of coupling and linear transformation of waves in shear flows	Physical Review E	1996
Article	Tsikarishvili, E., Rogava, A., Tsiklauri, D.	Relativistic, Hot Stellar Winds with Anisotropic Pressure	Astrophysical Journal	1995
Article	Chagelishvili, G., Rogava, A., Segal, I.	Hydrodynamic stability of compressible plane Couette flow	Physical Review E	1994
Article	Tsikarishvili, E., Rogava, A.	Linear hydromagnetic waves in an ultrarelativistic, collisionless plasma with a pressure anisotropy	Physical Review E	1994

Type	Authors	Publication title	Source title	Year
Article	Machabeli, G., Rogava, A.	Centrifugal force: A gedanken experiment	Physical Review A	1994
Article	Rogava, A.	Viscous shear in general-relativistic astrophysical flows	General Relativity and Gravitation	1993
Article	Rogava, A., Tsiklauri, D.	The structure of the accretion disc boundary layer around a rotating, non-magnetized star	Astrophysics and Space Science	1993
Article	Tsikarishvili, E., Lominadze, J., Rogava, A., Dzhavakhishvili, D.	General-relativistic hydrodynamics of a collisionless plasma in a strong magnetic field	Physical Review A	1992
Article	Rogava, A.	General co-moving frames in stationary and axisymmetric metrics	General Relativity and Gravitation	1992
Article	Chagelishvili, G., Lominadze, J., Rogava, A.	Fast Variation of Cygnus X-1 and Related Sources	Astrophysical Journal	1989
Article	Chagelishvili, G., Lominadze, J., Rogava, A.	Millisecond variability of black hole candidates	Advances in Space Research	1988

Scholarships and awards

Scholarships/awards name	Issuer	Year of Issue
Georgian State Award Winner	State Committee for State Awards in the Field of Science and Technology	2002

Productivity index

#	Citation index	h-index
Google scholar	1076.00	18.00