

Goderdzi Didebulidze

Personal information

Contact Details

Full name: Goderdzi Didebulidze
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Languages

Language	Writing	Reading	Speaking
ქართული (Georgian)	C2	C2	C2
Russian	C1	C1	C1
German	B1	B2	B1
English	C1	C1	C1

Education

Academic degree

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

Year obtained: 15.12.1989

Education

Academic Degree	Name of the Institution	Country	Major discipline	Start year	End year
Doctoral/PhD, Ed.D or other equivalent	Ilia State University		Atmosphere-Ionosphere Physics	2007	
Master/MS, MA, MR, MBA, m.Ed or other equivalent	Ivane Javakhishvili Tbilisi State University		Physical Hydrodynamic	1974	1979

Projects

Completed projects

Project title	Position	Project head	Start Date	End Date	Donor
Theory of formation and localization of sporadic E(Es) layer caused by neutral wind in case of presence of electric field	Project coordinator	Giorgi Dalakishvili	01.04.2022	09.11.2023	SHOTA RUSTAVELI NATIONAL SCIENCE FOUNDATION OF GEORGIA
Spatial and temporal behavior of the ionosphere F2 region electron density under the influence of atmospheric waves: travelling ionospheric disturbances	Project Manager	Goderdzi Didebulidze	19.12.2018	21.05.2021	Shota Rustaveli National Science Foundation

Project title	Position	Project head	Start Date	End Date	Donor
Aerosols, Clouds, and Trace gases Research Infrastructure	Head of Georgian Research Team (associate member)	Gelsomina Pappalardo	29.10.2014	29.10.2018	European Union
Three-dimensional model of formation and behavior of ionospheric sporadic E under the influence of atmospheric waves evolving in the horizontal shear flow	Key Personnel	Giorgi Dalakishvili	29.03.2013	29.03.2016	Shota Rustaveli National Science Foundation of Georgia
Long-term, annual and interannual variations of cloudless days and nights in Abastumani (41.75oN, 42.82 oS) during various solar and geomagnetic activities as an indicator of the influence of cosmic factors on climate changes	Co-director	Michael Alania	20.03.2012	20.03.2015	Shota Rustaveli National Science Foundation of Georgia
Long-term trends of the mid-latitude upper atmosphere and geocorona nightglow intensity and their mutual coupling under different helio-geophysical conditions	Project manager	Goderdzi Didebulidze	01.01.2008	31.12.2010	Shota Rustaveli National Science Foundation of Georgia
Aerosols-Climate Interactions: Relationship Between Desertification, Aerosols and Climate in Caucasus	Project manager	Goderdzi Didebulidze	20.12.2004	20.12.2007	ISTC
Investigation of regional scale atmospheric motions and their influence on the mesosphere/thermosphere/ionosphere region	Head of Georgian Team	Marianna Shepherd	01.03.2004	01.03.2007	INTAS

Scientific Fields (2018-2020)

Main Field

Field: 1. Natural sciences

Sub-Field: 1.5 Earth and related environmental sciences

Subject area: 1.5.9 Meteorology and atmospheric sciences

Additional Field (1)

Field: 1. Natural sciences

Sub-Field: 1.3 Physical sciences

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

Employment History

Current place(s) of employment

Workplace	Name of the work department	Position	Main responsibilities	Start Date
Ilia State University	School of Natural Sciences and Engineering. Abastumani Astrophysical Observatory	Associate Professor	Lectures on Bachelor, MSD and PhD courses. Scientific research	11.12.2007

Work experience

Company/Institution	Name of the department	Position	Main responsibilities	Start Date	End Date
Abastumani Astrophysical Observatory	Laboratory of Investigation of the Upper Atmosphere	Research Consultant	To Carry out a research in the atmosphere and Space Physics	09.11.2007	31.12.2018

Company/Institution	Name of the department	Position	Main responsibilities	Start Date	End Date
Abastumani Astrophysical Observatory	Laboratory of the Investigation of the Upper atmosphere	Head of the Laboratory of Investigation of the Upper atmosphere	Leadership theoretical and observational investigations in the atmosphere and space physics	01.02.2001	09.11.2007
Abastumani Astrophysical Observatory	Laboratory of the Investigation of the Upper atmosphere	Senior Scientific Researcher	To carry out research in the field of atmosphere and space physics	01.06.1993	09.11.2007
Abastumani Astrophysical Observatory	Laboratory of the Investigation of the Upper atmosphere	Scientific researcher	To carry out scientific research in the field of atmosphere and space physics	01.02.1989	01.06.1993
Abastumani Astrophysical Observatory	Laboratory of the Investigation of the Upper atmosphere	Junior Scientific Researcher	To carry out scientific research in the atmosphere-ionosphere physics	10.01.1983	01.02.1989
Abastumani Astrophysical Observatory	Laboratory of the Investigation of the Upper atmosphere	Senior observer	To assisting observational and theoretical research	16.11.1979	10.01.1983

Scientific Productivity

Article / Monograph / Manual

Type	Authors	Publication title	Source title	Year
Article	Goderdzi G. Didebulidze, Giorgi Dalakishvili, Maya Todua, Lekso Toriashvili	The Role of Neutral Wind Velocity and Its Vertical Component on Predictability of Formation and Localization of Sporadic E (Es)	Atmosphere, 14, 1008	2023
Article	Š. Mackovjak, M. Varga, S. Hrivňak, O. Palkoci, and G. G. Didebulidze	Data-Driven Modeling of Atomic Oxygen Airglow over a Period of Three Solar Cycles	Journal of Geophysical Research: Space Physics	2021
Article	G.G. Didebulidze, G. Dalakishvili, M. Todua	Formation of multilayered sporadic E under an influence of atmospheric gravity waves (AGWs)	Atmosphere	2020
Article	G. Dalakishvili, G.G. Didebulidze, M. Todua	Formation of sporadic E (Es) layer by homogeneous and inhomogeneous horizontal winds	Journal of Atmospheric and Solar-Terrestrial Physics	2020
Article	René Sedlak , Alexandra Zuhr , Carsten Schmidt , Sabine Wüst , Michael Bittner, Goderdzi G. Didebulidze , and Colin Price	Intra-annual variations of spectrally resolved gravity wave activity in the upper mesosphere/lower thermosphere (UMLT) region	Atmospheric Measurement Techniques	2020
Chapter in book	G.G. Didebulidze, G. Dalakishvili, M. Todua	Formation of multilayered sporadic E under an influence of atmospheric gravity waves (AGWs)	Earth and Its Atmosphere	2020
Article	Goderdzi Didebulidze, Maya Todua	The inter-annual distribution of cloudless days and nights in Abastumani: Coupling with cosmic factors and climate change	Journal of Atmospheric and Solar-Terrestrial Physics	2016
Article	Goderdzi Didebulidze, Giorgi Dalakishvili, Levan Lomidze, Giorgi Matiashvili	Formation of sporadic-E(Es) layers under the influence of AGWs evolving in a horizontal shear flow	Journal of Atmospheric and Solar-Terrestrial Physics	2015
Article	Goderdzi Didebulidze, Maya Todua	Investigation of presence of cosmic factors in the inter-annual distributions of cloudless days and nights in Abastumani	Sun and Geosphere	2015
Article	Maya Todua, Goderdzi Didebulidze	Cosmic Factors Influence on the Inter-Annual Variations of the Green 557.7 Nm Line and Red 630.0 Nm Line Nightglow Intensities and their Possible Coupling with Cloud Covering at Abastumani (41.75°N, 42.82°E)	Acta Geophysica	2013
Article	P. Kokkalis, R. E. Mamouri, M. Todua, G. G. Didebulidze, A. Papayannis, V. Amiridis, S. Basart, C. Pérez, J. M. Baldasano	Ground-, satellite- and simulation based analysis of a strong dust event over Abastumani, Georgia, during May 2009	International Journal of Remote Sensing	2012

Type	Authors	Publication title	Source title	Year
Article	G. G. Didebulidze, L. N. Lomidze, N. B. Gudadze, A. D. Pataraya, M. Todua	Long-term changes in the nightly behaviour of the oxygen red 630.0 nm line nightglow intensity and trends in the thermospheric meridional wind velocity	International Journal of Remote Sensing	2011
Article	Goderdzi Didebulidze, Levan Lomidze	Double atmospheric gravity wave frequency oscillations of sporadic E formed in a horizontal shear flow	Physics Letters A	2010
Article	G.G. Didebulidze, L.N. Lomidze, N.B. Gudadze	Ionosphere F2 layer stratification caused by shear excited atmospheric vortical perturbation	Advances in Space Research	2009
Article	G. G. Didebulidze, L. N. Lomidze, N. B. Gudadze, M. Todua	Multilayered structures in the ionosphere F2 region and impulse-like increase of the nightglow red 630 nm line intensity as a result of influence of shear excited atmospheric vortical perturbations	Journal of Geophysical Research	2009
Article	N. B. Gudadze, G. G. Didebulidze, L. N. Lomidze, G. Sh. Javakhishvili, M. A. Marsagishvili, M. Todua	Different long-term trends of the oxygen red 630.0nm line nightglow intensity as the result of lowering the ionosphere F2 layer	Annales Geophysicae	2008
Article	Goderdzi Didebulidze, Levan Lomidze	The formation of sporadic E layers by a vortical perturbation excited in a horizontal wind shear flow	Annales Geophysicae	2008

Participation in scientific events

Scientific event name	Title of the presentation	Event venue	Year
IES2023 Ionospheric Effects Symposium	The importance of electric field in ions convergence and formation of sporadic E (Es) at the equatorial region	Alexandria, USA	2023
ICTP-SCOSTEP-ISWI School and Workshop on the Predictability of the Solar-Terrestrial Coupling - PRESTO	The importance of electric field in ions convergence and formation of sporadic E (Es) at the mid-latitude and equatorial regions	Trieste, Italy	2023
COSPAR 2022, 44th Scientific Assembly	Influence of ions horizontal transport caused by AGWs on formation and characteristics of sporadic E	Athens	2022
43rd COSPAR Scientific Assembly	Formation of multilayered sporadic E under an influence of atmospheric gravity waves (AGWs)	Sydney, Australia	2021
43rd COSPAR Scientific Assembly	The behavior of the oxygen red 630.0 nm line nightglow intensity under an influence of thermosphere wind and atmospheric gravity waves	Sydney, Australia	2021
ICPAP 2020 : XIV. International Conference on Planetary and Atmospheric Physics	The Characteristics of Multilayered Sporadic E Formed under the Influence of Atmospheric Gravity Waves	Rome, Italy	2020
International Research Conference ICASASA 2020	Analytical and Numerical Study of Formation of Sporadic E Layer with Taking into Account Horizontal and Vertical in-Homogeneity of the Horizontal Wind	Jerusalem, Israel	2020
AGU Fall Meeting 2020	TIDs characteristic behavior of the oxygen red 630.0 nm line nightglow intensity caused by thermosphere wind and AGWs	San-Francisco, USA	2020
EGU General Assembly 2019	Influence of AGWs on layered structure of the ionosphere F2 region	Vienna, Austria	2019
EGU General Assembly 2019	Horizontal wind velocity direction, value and lower thermosphere structural factors in formation of multilayered sporadic E under an influence of AGWs	Vienna, Austria	2019
International Space Weather Initiative Workshop	Sensitivity of the ionosphere parameters long-term variations and its irregular structures in the Caucasus on geomagnetic activity	Trieste Italy	2019
14th International Workshop on Layered Phenomena in the Mesopause Region (LPMR)	Formation of Es layers by background homogeneous wind and tidal wind	Williamsburg, Virginia, USA	2019
AGU 2019 Fall Meeting	Formation of Sporadic E (Es) Layer by Horizontal Wind Without Vertical Shear	San Francisco, CA, USA	2019
VAO Symposium 2018	Some peculiarities of inter-annual and long-term variations of total ozone content observed at Abastumani	Gières, France	2018
The Fourteenth Edition of the Solar-Terrestrial Physics Symposium (STP14)	Lower thermosphere factor in formation of sporadic E under influence of horizontal wind and AGWs	York University, Toronto, Canada	2018
The Fourteenth Edition of the Solar-Terrestrial Physics Symposium (STP14)	Coupling geomagnetic disturbances and GCRs flux with cloud covering and TOC at Abastumani.	York University, Toronto, Canada	2018

Scientific event name	Title of the presentation	Event venue	Year
42nd COSPAR Scientific Assembly	About cosmic factor coupling with cloudless days and ozone content variations by observations from Abastumani	Pasadena, California, USA	2018
42nd COSPAR Scientific Assembly	Horizontal wind's factor in formation of sporadic E under influence of atmospheric waves	Pasadena, California, USA	2018
United Nations/United States of America Workshop on the International Space Weather Initiative: The Decade after the International Heliophysical Year 2007	On the Development of Thermosphere-Ionosphere Coupling Study in Georgia under Various Helio-Geophysical Condition by TEC Data Obtained with GNSS Receivers	Boston College, Boston, USA	2017
American Geophysical Union, Fall Meeting 2017	Regional peculiarities in the inter-annual distribution of the red 630.0 nm line nightglow intensities over Abastumani	New Orleans, USA	2017
7th NDMC Symposium	Vortical perturbations and their possible transformation into shortperiod AGWs by nightglow observations	Grainau, Germany	2017
VAO board meeting 2016	E Kharadze Abastumani Astrophysical Observatory: current status of atmospheric research, interest and role within VAO	Munich, Germany	2016
41st COSPAR Scientific Assembly	Formation of ionospheric sporadic E by atmospheric gravity waves	Istanbul Congress Center (ICC), Turkey	2016
41st COSPAR Scientific Assembly	The inter-annual variability of mesosphere-thermosphere nightglow intensities and their possible coupling with cosmic factors and lower atmosphere climatology	Istanbul Congress Center (ICC), Turkey	2016
CEDAR-GEM Joint Workshop	Some properties of the TIDs and TADs by observation the oxygen red 630.0 nm line intensities from Abastumani	Santa Fe, New Mexico, USA	2016
CEDAR-GEM Joint Workshop	Formation and behavior sporadic E under the influence of atmospheric gravity waves	Santa Fe, New Mexico, USA	2016
EGU General Assembly 2016	The oxygen red OI 630.0 nm line nightglow intensity as an indicator of atmospheric waves propagation in the mid-latitude ionosphere F2 region	Vienna Austria	2016
EGU General Assembly 2016	Tidal wind as a possible link of coupling between atmospheric waves activity and sporadic E formation	Vienna Austria	2016
EGU General Assembly 2016	Mesosphere-thermosphere regions coupling with the lower atmosphere through the inter-annual variations of the hydroxyl OH(8-3) bands, the oxygen 557.7 nm and 630.0 nm lines nightglow intensities	Vienna Austria	2016
EGU General Assembly 2016	Formation of sporadic E under the influence of AGWs and horizontal background wind	Vienna Austria	2016

Productivity index

#	Citation index	h-index
Google scholar	212.00	10.00
Scopus	146.00	8.00