europass

Giorgi Veshapidze

Nationality: Georgian | **Gender:** Male | | |

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EDUCATION AND TRAINING

01/04/2000 – 31/07/2004 – Tokyo, Japan

DOCTOR OF SCIENCE – Tokyo Metropolitan University

Address 1-1 Minami-Osawa, Hachioji-sh, Tokyo, Japan |

Website https://www.tmu.ac.jp/english/index.html | **Field of study** Physics , Chemistry |

Final grade A |

Thesis Position-sensitive Time of Fflight Study of Collision Induced Dissociation of Multiply Charged Benzene

01/09/1997 – 09/07/1999 – Tbilisi, Georgia

MASTER OF SCIENCE – Tbilisi State University

Address 1 Chavchavadze Ave., Tbilisi, Georgia | **Website** https://www.tsu.ge/en |

Field of study Theoretical Physics. Quantum Field Theory. | **Final grade** A |

Thesis Field Quantization on the Null-Plane

01/09/1993 – 28/06/1997 – Tbilisi, Georgia

BACHELOR OF SCIENCE – Faculty of physics, Tbilisi State University

Address 1 Chavchavadze Ave., Tbilisi, Georgia | **Website** https://www.tsu.ge/en |

Field of study Natural sciences, mathematics and statistics | **Final grade** A

WORK EXPERIENCE

25/01/2021 – CURRENT – Tbilisi, Georgia

PROFESSOR OF EXPERIMENTAL PHYSICS – ILIA STATE UNIVERSITY

Development of Coherent optics lab. Supervision of undergraduate Electrical and Electronic Engineering program at the at ISU.
Teaching Optics, Quantum Optics, Circuit Analysis, Feedback Control Systems, Embedded Systems Programming ...

Business or Sector Education | **Department** Faculty of Business, Technology and Education

14/06/2012 – 25/01/2021 – Tbilisi, Georgia

ASSOCIATE PROFESSOR OF EXPERIMENTAL PHYSICS – ILIA STATE UNIVERSITY

11/04/2011 – 14/06/2012 – Tbilisi, Georgia

RESEARCHER – ABASTUMANI ASTROPHYSICAL OBSERVATORY, ILIA STATE UNIVERSITY

Atmospheric remote sensing with LIDAR and other optical methods. Wrote code for simulation of atmospheric chemistry and transport.

19/11/2008 – 21/03/2011 – Okazaki, Japan

VISITING SCIENTIST; JSPS POST-DOCTORAL FELLOW – INSTITUTE FOR MOLECULAR SCIENCE, INSTITUTES OF NATURAL SCIENCES

Laser cooling and trapping of Rubidium atoms in the Magneto-optical Trap (MOT). MOT temperature and density measurement. Trap loss spectroscopy in Rb MOT. Resonance enhanced multi-photon ionization of photo-associated ground-state Rb molecules. Shaped ultra-fast laser assisted Photo-Associative Ionization in Ultra-Cold Rb MOT. Ultra-fast pump-probe dynamics study of molecular wave-packet. Coherent control of Photo-association process by shaped ultra-fast laser pulses.

11/10/2005 – 23/07/2008 – Manhattan, United States

RESEARCH ASSOCIATE; POST-DOCTORAL FELLOW – J. R. MACDONALD LAB., DEPARTMENT OF PHYSICS, KANSAS STATE UNIVERSITY

Laser cooling and trapping of Rubidium atoms. CW Photo-Associative Ionization in ultra-cold Rubidium Magneto-Optical Trap (MOT). Shaped ultra-fast laser assisted Photo-Associative Ionization in ultra-cold Rb MOT. Time-resolved Excited state fraction measurement in a MOT by Cold Recoil Ion Momentum Spectroscopy. Measurement of the excited state population dynamics during STIRAP in MOT. Electro-Magnetically Induced Transparency (EIT).

01/09/2004 – 29/12/2005 – Tbilisi, Georgia

RESEARCHER – ATOMIC & MOLECULAR PHYSICS LAB, DEPARTMENT OF PHYSICS, TBILISI STATE UNIVERSITY

Energy Defect spectroscopy of alkali ions.

01/04/2003 – 31/07/2004 – Tokyo, Japan

RESEARCH FELLOW – DEPARTMENT OF CHEMISTRY, FACULTY OF SCIENCE, TOKYO METROPOLITAN UNIVERSITY

Coulomb Explosion Imaging of small molecules. Designed and built new type Recoil Ion Momentum Spectrometer. Developed data acquisition, conditioning and analysis software for the experiment. Wrote code for Monte – Carlo simulation.

LANGUAGE SKILLS

Mother tongue(s): **GEORGIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C2	C2	C2	C2	C2
JAPANESE	B1	A2	B1	B1	A1
RUSSIAN	C2	C2	B2	B2	B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

My Digital Skills

Magneto-Optical Traps

Vacuum chamber and detector design and assembly | Anti-Helmholtz Coil assembly | Optics line assembly | Saturation absorption spectroscopy | Alignment | Laser frequency stabilization | Electro-Magnetically Induced Transparency | MOT Temperature measurements

External Cavity Diode Laser (ECDL)

ECDL Design | ECDL Assembly | ECDL Tuning | PID control of diode current and temperature

Vacuum Techniques

Ultra High Vacuum handling, related practices and equipment

PROJECTS

2015 – 2017

University nanosatellite - Development of satellite technologies in Georgia

Development of 2-unit cube-sat for Attitude Control technology demonstration. The technology is based on the action of the Lorentz force by perpendicular magnetic field on the radial electric currents in the toroidal mercury channel, and the resultant counter-force (liquid reaction wheel).

2012 – 2013

Ground station and mission control center for communication with university nanosatellites

HONOURS AND AWARDS

2008

JSPS Postdoctoral Fellowship for Foreign Researcher – Japanese Society for the Promotion of Science (JSPS)