



**Teimuraz Nadareishvili**

**Assistant professor**

**Elementary particles and Quantum fields**

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**Education:**

- **Universty Diploma in Physics (Theoretical Physics), Ivane JavakhiShvili State University**
- **Ph.D,in Atom,Nuclear and Particles physics, Ivane JavakhiShvili State University**

**Teaching Courses**

- **Theoretical Mechanics (Lectures and practicum)**
- **Quantum Mechanics (Lectures and practicum)**
- **Relativistic Quantum Mechanics (Lectures and practicum)**
- **Field Theory(Practicum)**
- **Field Theory-Gravitation (Practicum)**
- **Mechanics (Practicum)**
- **Electromagnetism (Practicum)**
- **Mathematical Methods of Physics (Practicum)**
- **Molecular Physics(Practicum)**
- **Introduction in Physics (Practicum)**
- **Medical Physics (Practicum)**
- **Selected Topics of Quantum Mechanics (Practicum and Seminars)**

- **Quantum Field Theory (Seminars)**
- **Elementary Particle Physics (Seminars)**
- **Evolution of the Universe (Seminars)**

#### Research interests

- **Theoretical Physics**
- **Quantum Physics**
- **Quantum Field Theory**
- **Elementary Particle Physics**

#### Running projects

- **Investigation of luminescence blinking in nanostructures (SRGNF,STCU)**
- **Investigation of three-particle problem in a box and in the continuum (SRGNF)**

#### Selected Publications

1. T.Kereselidze, T.Chelidze, **T.Nadareishvili**, R.Kezerashvili. "Energy spectra of a particle confined in a finite ellipsoidal shaped potential well" *Physica E:Low-Dimensional Systems and Nanostructures*, 81, pp.196-204 (2016).
2. A.Khelashvili, **T.Nadareishvili**. "Singular Behavior of the Laplace Operator in Polar Spherical Coordinates and Some of Its Consequences for the Radial Wave Function at the Origin of Coordinate". *Physics of Particles and Nuclei Letters*.Springler Vol 12.No1. pp 11-25.(2015)
3. T.Kereselidze, T.Chelidze, **T.Nadareishvili**. "Perspectives of enhancement of p-type conductivity in ZnO nanowires". *Physica Status Solidi (C) Current Topics in Solid State Physics*, 12 (1-2), pp.111-116(2015).
4. A.Khelashvili, **T.Nadareishvili**. "On the Existence of Additional (Hydrino) states in the Dirac equation". *Bulletin of the Georgian National Academy of Sciences (Moambe) Vol 9,N3*.pp58-63(2015)
5. A.Khelashvili, **T.Nadareishvili**. "Effective Potentials in the Reduced Alt-Grassberger-Sandhas-Khelashvili (AGSK) equations and the Many Channel problem". *Bulletin of the Georgian National Academy of Sciences (Moambe) Vol 9,N1*.pp72-77.
6. A.Khelashvili, **T.Nadareishvili**. "On some consequences of the Laplacian's singularity at the origin in spherical coordinates". *European Journal of Physics Vol 35* ; p. 065026 (2014).

7. A.Khelashvili,**T.Nadareishvili**. "Scattering on the Dirac Delta potential and Reduction of the three particle problem". Bulletin of the Georgian National Academy of Sciences (Moambe) Vol 7,N3.pp31-35 (2013)
- 8.A.Khelashvili,**T.Nadareishvili**. "Delta-like Singularity in the Radial Laplace Operator and the Status of the Radial Schrodinger Equation" Bulletin of the Georgian National Academy of Sciences (Moambe) Vol 6,N1.pp68-73 (2012).
9. A.Khelashvili,**T.Nadareishvili** . "What is the boundary condition for radial wave function of the Schrödinger equation ?". American Journal of Physics. Vol. 79,No 6,pp 668-671
10. A.Khelashvili,**T.Nadareishvili**"On the Boundary Conditions for the Radial Schrodinger Equation". Bulletin of the Georgian National Academy of Sciences (Moambe) . Vol 5,N2.pp37-41 (2011).
11. A.Khelashvili,**T.Nadareishvili**. "Richardson and Cornell Potentials between Quarks and Antiquarks inspired by Infrared Asymptotics of the Gluon Propagator". Bulletin of the Georgian National Academy of Sciences (Moambe) . Vol 5,N2.pp37-41 (2010).
12. A.Khelashvili,**T.Nadareishvili**. "Potential between quarks and antiquarks according to infrared asymptotics of the gluon propagator". Georgian Electronic Scientific Journal (GESJ):Physics.No.1(3) [2010.06.30](2010)