

Curriculum Vitae



Contact details

Name: Eugeny Gusarevich

Date of Birth: November 25, 1978.

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Education

All education is got in Russia (Arkhangelsk).

- **2001–2004:** Postgraduate education at Pomor State University named after M.V. Lomonosov.
- **1996–2001:** Higher education at Physical Department of Pomor State University named after M.V. Lomonosov.
- **1986–1996:** High School.

Qualification

- **2004** — PhD in Physical Electronics.
- **2001** — Diploma (Honours) in Physics.

Work experience

Science

- **2006–now:** Senior researcher at the Center for Theoretical Physics of Northern (Arctic) Federal University.
- **2005–2013:** Academic secretary of the Dissertational Council on Physical Electronics at Northern (Arctic) Federal University.

Teaching

- **2011–now:** Assistant professor at Theoretical Physics Department (Institute of Natural Science and Technology) of Northern (Arctic) Federal University
Differential Equations, Group Theory, Theoretical Mechanics, Continuum Mechanics, Mathematical Physics, General Relativity, Quantum Mechanics, Quantum Electrodynamics, Nanochemistry, Statistical Physics and Thermodynamics, Nuclear and Particle Physics, Physics of Fundamental Interactions, Plasma Physics, Modern Problems of Physics (Deterministic Chaos Theory), Physics of Nonlinear Processes
- **2005–2011:** Assistant professor at Physical Department of Pomor State University
Vector and Tensor Analysis, Theoretical Mechanics, Quantum Mechanics, Quantum Electrodynamics, Statistical Physics and Thermodynamics, Plasma Physics, Modern Problems of Physics (Deterministic Chaos Theory)
- **2004–2005:** Senior lecturer at the Physical Department of Pomor State University
Vector and Tensor Analysis, Theoretical Mechanics, Quantum Mechanics, Quantum Chemistry, Quantum Electrodynamics, Statistical Physics and Thermodynamics
- **2001–2004:** Assistant at the Physical Department of Pomor State University
General Physics, Quantum Mechanics, Statistical Physics and Thermodynamics

Awards

- **2008** — fellowship of the President of Russia.
- **2005** — fellowship of the President of Russia.
- **2004** — Premium named after M.V. Lomonosov by Arkhangelsk region administration.
- **2003** — fellowship of the President of Russia for postgraduates.

Languages

Russian (native), English.

Computing skills

Windows, Linux, MS Office

C/C++, Wolfram Mathematica, LATEX

HPC: CUDA, Hybrid OpenMP/MPI, PBS, Intel Xeon, Intel Xeon Phi

Publications

1. *Matveev V. I., Makarov D. N., Gusarevich E. S.* Eikonal Approximation in the Theory of Energy Loss by Fast Charged Particles // *Journal of Experimental and Theoretical Physics*, 2011, v. 112, No. 5, pp. 756–769.
2. *Matveev V. I., Makarov D. N., Gusarevich E. S.* On the Energy Losses of Fast Charged Particles // *Journal of Experimental and Theoretical Physics Letters*, 2010, v. 92, No. 5, pp. 281–287.
3. *Matveev V. I., Gusarevich E. S., Makarov D. N.* Energy losses from Fast Structured Heavy Ions in Multiple Collisions with Molecules and Nanoparticles // *Journal of Experimental and Theoretical Physics*, 2009, v. 109, No. 5, pp. 726–733.
4. *Gusarevich E. S., Matveev V. I.* Excitation and ionization cross sections of hydrogen-like atoms in collisions with relativistic highly charged ions // *Journal of Experimental and Theoretical Physics*, 2008, v. 107, No. 6, pp. 933–941.
5. *Matveev V. I., Gusarevich E. S., Ryabchenko S. V., Makarov D. N.* Energy losses of fast heavy structure ions in multiple collisions with diatomic molecules // *Journal of Experimental and Theoretical Physics Letters*, 2008, v. 88, No. 4, pp. 232–239.
6. *Matveev V. I., Gusarevich E. S., Matrasulov D. U., Rakhimov Kh. Yu., Stöhlker Th., Baur G.* Projectile electron losses in the collisions with neutral targets: sudden-perturbation approximation // *Journal of Physics B: Atomic, Molecular and Optical Physics*, 2006, v. 39, No. 6, pp. 1447–1460.
7. *Matveev V. I., Gusarevich E. S., Pashev I. N.* Inelastic Processes in the Interaction of an Atom with an Ultrashort Electromagnetic Pulse // *Journal of Experimental and Theoretical Physics*, 2005, v. 100, No. 6, pp. 1043–1049.
8. *Matveev V. I., Gusarevich E. S.* K-Shell Ionization of a Quasirelativistic Hydrogenlike Atom upon Collision with a Relativistic Structural Multiply Charged Ion // *Technical Physics Letters*, 2003, v. 29, No. 9, pp. 760–763.
9. *Matveev V. I., Gusarevich E. S.* Cross Sections of Inelastic Processes in Collisions between Relativistic Structured Heavy Ions and Atoms // *Journal of Experimental and Theoretical Physics*, 2003, v. 96, No. 1, pp. 34–39.
10. *Matveev V. I., Gusarevich E. S.* Single and Double Ionization Cross Sections of Atoms Colliding with Relativistic Structural Heavy Ions // *Technical Physics Letters*, 2002, v. 28, No. 6, pp. 497–500.
11. *Matveev V. I., Gusarevich E. S.* Ionization of Hydrogen and Helium Atoms in Collisions with Relativistic Structural Heavy Ions // *Russian Physics Journal*, 2002, v. 45, No. 11, pp. 1081–1085.
12. *Matveev V. I., Gusarevich E. S.* Energy Losses in Collisions of Relativistic Structural Heavy Ions with Atoms // *Russian Physics Journal*, 2001, v. 44, No. 8, pp. 852–857.

Proceedings

1. *Kabanov K.S., Gusarevich E. S.* Energy and momentum spectra of electrons produced by ionization of relativistic ions in collisions with diatomic molecules // *XIX All-Russian Scientific Conference of the physicists-students and young scientists (VNKSF-19)*, Arkhangelsk, 28 March – 4 April 2013. The books of abstract. 2013, pp. 61–62. (in Russian)
2. *Gusarevich E.S., Matveev V.I.* Energy losses of fast structural multicharged ions at collisions with polyatomic molecules and nanotubes. // *41th EGAS Europhysics Conference*, Gdansk, Poland, 8 – 11 July 2009, book of abstracts. 2009, p. 93.
3. *Gusarevich E.S., Matveev V.I.* Energy losses of fast structural multiply charged ions in collisions with polyatomic molecules and nanotubes. // *XIX Conference on Fundamental*

- Atomic Spectroscopy* (FAS XIX), Arkhangelsk – Solovki, 22 – 29 June 2009. The books of abstract. 2009, pp. 23-24. (in Russian)
4. *Gusarevich E.S., Matveev V.I.* Energy losses of fast structural multicharged ions at collisions with polyatomic molecules and nanotubes. // *PEARL 2009, Workshop on Physics at EBITs and Advanced Research Light Sources*, Dublin City University, Glasnevin, Dublin, Ireland, 6 – 9 May 2009, book of abstracts. 2009, p. 44.
 5. *Gusarevich E. S.* The influence of multiple collisions and molecular structure on stopping of heavy ions on molecular targets // *XV International scientific conference of the students, post-graduate students and young scientists “Lomonosov 2008”*, Moscow, 8 – 12 April 2008. The books of abstract, section "Physics", subsection "Theoretical Physics". 2008, p. 12. (in Russian)
 6. *Matveev V. I., Gusarevich E. S., Matrasulov D. U., Rakhimov Kh. Yu., Stöhlker Th., Baur G.* Projectile electron losses in the collisions with neutral targets // *38th EGAS Europhysics Conference*, Ischia (Naples), Italy, 7 – 10 June 2006, books of abstracts. 2006, p. 200.
 7. *Gusarevich E. S., Matveev V. I.* Cross sections of inelastic processes at collisions of relativistic structural high-charge ions with atoms // *XXIV International Conference on Photonic, Electronic and Atomic Collisions “ICPEAC 2005”*, Rosario, Argentina, 20 – 26 July 2005, books of abstracts. 2005, Tu086.
 8. *Matveev V. I., Gusarevich E. S.* Cross Sections of inelastic processes at collisions of relativistic structural multicharged ions with atoms // *XII International Conference on the Physics of Highly Charged Ions “HCI-2004”*, Vilnius, Lithuania, 6 – 11 September 2004, books of abstracts. 2004, B1-33.
 9. *Matveev V. I., Gusarevich E. S.* Inelastic processes and energy losses at collisions of relativistic structural heavy ions with atoms // *XI International Conference HCI-2002*, Vienna, 1 – 6 September 2002, CAEN – FRANCE, books of abstracts. 2002, B2-2-9, p. 97.

Grants

1. Grant of the President of Russian Federation in competition of the young Russian candidates of sciences «*Theory and calculations of energy losses of fast heavy structural ions in collisions with molecules and nanoparticles*». Team leader – Gusarevich E.S., project MK-6201.2008.2 (2008).
2. Grant of the President of Russian Federation in competition of the young Russian candidates of sciences «*Electron losses by the structural heavy ions at relativistic collisions with neutral atoms*». Team leader – Gusarevich E.S., project MK-2013.2005.2 (2005).
3. Grant of the Ministry of Education of Russian Federation for support of post-graduate students research «*Asymptotical formulas for cross sections of inelastic processes and energy losses at collisions of relativistic multiply charged ions with atoms*». Team leader – Matveev V.I., project № A03-2.9-599 (2003).
4. Grant of the Russian Foundation of Basic Research № 03-02-06051 (competition MAS-2003 to the project № 01-02-17047 «*Inelastic processes at collisions of relativistic and ultrarelativistic heavy ions with atoms and molecules*»). Team leader – Matveev V.I. (2003).

Main research interests

The inelastic processes (the energy loss and the stripping) in collisions of fast and relativistic structural heavy ions with atoms, molecules, clusters and nanoparticles. The interaction of superstrong electromagnetic field with matter.

Organization of scientific meetings

1. *XIX All-Russian Scientific Conference of the physicists-students and young scientists* (VNKSF-19), Arkhangelsk, 28 March – 4 April 2013.
2. *XIX Conference on Fundamental Atomic Spectroscopy* (FAS XIX), Arkhangelsk – Solovki, 22 – 29 June 2009
3. *III Interregional Summer School for Physicists*, Arkhangelsk – Petrozavodsk – Saint Petersburg, 23 July – 7 August 2007.

Interests

Computers, volleyball.