

## Summary

Applied mathematician (MIPT) with comprehensive experience in building complex economic and energy models. Theoretical knowledge in Finance. Advanced in programming. Work with a variety of programming tools and languages. Experienced in ML, DL.

- Main skills*
- Strong mathematical, programming, data mining and research skills
  - Theoretical knowledge in Finance
  - Work with a variety of programming tools
  - Machine Learning & Deep Learning
  - Able to build and maintain large complex optimization models: LP, NLP, MCP
  - High-quality visualization
  - Develop a wide range of economic and energy-economic models: CGE, RES, Partial equilibrium of gas market, Air Dispersion models, etc

*Programming skills* C++, (MPI, CUDA, QT), Python (PyTorch, Scikit-Learn), R, SQL, Docker, Linux, L<sup>A</sup>T<sub>E</sub>X, GAMS, GLPK, Pyomo, Julia/JuMP

*Languages* English: Advanced C1, Russian: Native

*Scientometrics* Scopus (h-index: 7), Web of Science (h-index: 6)

## Work Experience

2009–2022 **Senior research fellow**

*The Gaidar Institute & RANEPA*

For more than ten years, I have been engaged in the analysis of energy from different perspectives. The research results have been published in top-rated scientific journals. Creating complex models provided me with competitive advantages. Among my international collaborations there are projects with the World Bank and the UN.

To carry out this research, my colleague and I have been developing the opensource package energyRt of the RES (Representative Energy System) which has been successfully used in USA, China, India, Russia and other countries.

My most efforts are related to the developing and applying the following models:

- High detailed energy model RUTIMES
- CGE (Computable General Equilibrium Model)
- Estimate Input-Output table by CNN (ML) and Bayesian method
- Air dispersion model
- Partial equilibrium model of natural gas

2007–2019 **Teaching**

*Moscow Institute of Physics and Technology (MIPT)* Seminars on Micro- and Macro-Economics

## Education

2007–2009 **Moscow Institute of Physics and Technology (MIPT)**

Master of Science in Applied Mathematics and Physics

- 2003–2007 **Moscow Institute of Physics and Technology (MIPT)**  
Bachelor of Science in Applied Mathematics and Physics
- ongoing **MIT (edX): MicroMasters in Finance**  
[Courses](#)
- 2022 **Coursera: Financial Engineering and Risk Management Specialization**  
Consist from 5 courses Columbia University
- 2014 **Stochastic programming with applications in energy, finance and insurance**  
PhD Winter school 2014, Bad Hofgastein, Austria