# SERGEI VOLODIN

Birth date: 3 October 1994

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## EDUCATION

**Moscow Institute of Physics and Technology** *Sept 2012 – June 2017*
Department of Control and Applied Mathematics, chair of Intellectual systems and Data Analysis
GPA for 7 semesters: 8.98/10

## RESEARCH INTERESTS

Artificial intelligence

Machine learning

Optimization

## RESEARCH EXPERIENCE

**Skoltech** Sep 2016 –
*Research Intern* *Russia, Moscow*

· Working on Power flow feasibility problem with Anatoly Dymarsky and Elena Gryazina
· Design and implementation of the algorithm for cutting convex parts of the image in general case (when the set of nonconvexities is infinite)
· Doing numerical optimization with Matlab
· Results: *article expected*

**MIPT** Feb 2016 – July 2016
*Student* *Russia, Moscow*

· Working on a bioinformatics/machine learning/multitask/multilabel problem (ligand-receptor interaction)
· Implementing Probabilistic Classifier Chains algorithm
· Using scikit-learn, numpy
· Results: an article in ITAS proceedings

**MIPT, chair of theoretical mechanics** Oct 2012 – Feb 2013
*Technician* *Russia, Moscow*

· Working on an article "Janibekov's effect and the laws of mechanics" (an example of Tennis Racket Theorem) with A.G. Petrov
· Numerical simulations for Euler's equations
· Checking correctness of the approximation using numerical simulation
· Results: an article in Doklady Akademii Nauk

## PUBLICATIONS

On the feasibility for the system of quadratic equations, Anatoly Dymarsky, Elena Gryazina, Boris Polyak, **Sergei Volodin** *(expected)*

Probabilistic prediction of nuclear receptors biological activity, **Sergey Volodin**, Maria Popova, Vadim Strijov, ITAS 2016

Janibekovs effect and the laws of mechanics, A.G. Petrov, **S.E. Volodin**, 2013, published in Doklady Akademii Nauk, 2013, Vol. 451, No. 4, pp. 399403.

## CONFERENCES

Information Technologies and Systems (Saint-Petersburg, Repino, September 2016)
*Speaker*

Eights Traditional school Control, Information, Optimization (Saint-Petersburg, Repino, June 2016)
*Poster presenter*

## SKILLS

Programming: C/C++, Python, Matlab, scikit-learn, numpy, AVR C/C++, x86 assembly, Microsoft SQL

Languages: Russian (native), English (B2)

## OLYMPIADS AND HACKATHONS

DeepHack.RL Deep Reinforcement learning hackathon and science school (Moscow Institute of Physics and Technology, January 2016, *expected*)

Sixteen interuniversity programming olympiad, Vologda, 2013, Successful performance
*http://olympiads.vologda-uni.ru/interuni/*

DevCup, Russia, Moscow 2013, 2nd place (with BBC&N team)
*https://vk.com/devcup*

## PROFESSIONAL EXPERIENCE

**ITBrat**                                                     July 2015 – Feb 2016
*Developer*                                                  *Russia, Moscow*

· High Frequency Trading application development, from initial architecture and strategy sketch to deployment and supporting
· Low-level networking in Linux (Solarflare OpenOnload)
· Designing and supporting the environment for the trading algorithm (network dump analysis, developing and testing new methods of decreasing latency)

**Claustrophobia**                                            July 2014 – Feb 2015
*Developer*                                                  *Russia, Moscow*

· C++ programming (Atmel AVR, Linux)
· System architecture
· Results description: `https://habrahabr.ru/company/technoworks/blog/258585/` (in Russian)

## HOBBY

**Quadcopter stabilization**                                         2012 – 2014
*Lead developer*                                             *Russia, Moscow*

· C++ programming (Atmel AVR, Linux)
· System architecture
· Working with TechnoWorks team (Arshavir Ter-Gabrielyan and others)
· Results description: `https://habrahabr.ru/company/technoworks/blog/216437/` (in Russian)