

SERGEI VOLODIN

Birth date: 3 October 1994

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Russia, Moscow

EDUCATION

Moscow Institute of Physics and Technology, undergraduate student *Sep 2012 – June 2017*
Department of Control and Applied Mathematics,
sub-department of Intellectual Systems and Data Analysis
GPA for 7 semesters: 8.98/10

RESEARCH INTERESTS

1. Artificial Intelligence
2. Machine Learning
3. Optimization

RESEARCH EXPERIENCE

Skoltech, Center for Energy Systems Sep 2016 – Present
Research Intern *Russia, Moscow*

- Worked on the Power Flow Feasibility problem with Anatoly Dymarsky and Elena Gryazina
- Designed (partially) and implemented the algorithm for cutting convex parts of the image in Matlab
- Examined the structure of the set of nonconvexities
- Results: *article expected in 2017*

MIPT, chair of Data Analysis Feb 2016 – July 2016
Student *Russia, Moscow*

- Worked on the ligand-receptor interaction problem using Machine Learning approach
- Implemented Probabilistic Classifier Chains algorithm using scikit-learn library
- Assessed this method as infeasible for the task
- Results: an article in ITAS proceedings

MIPT, chair of Theoretical Mechanics Oct 2012 – Feb 2013
Technician *Russia, Moscow*

- Worked on the article “Janibekov’s effect and the laws of mechanics” with A.G. Petrov
- Designed and implemented numerical simulations for Euler’s rotation equations
- Checked correctness of the approximation presented in the article using numerical simulation and symbolic computations in Wolfram Mathematica
- Results: an article in Doklady Akademii Nauk

PUBLICATIONS

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

SCHOLARSHIPS

“Abramov fund scholarship” for excellent grades (2014)

SKILLS

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

Languages: Russian (native), English (B2)

OLYMPIADS AND HACKATHONS

DeepHack.RL hackathon (Deep Reinforcement Learning for Atari games), MIPT, 2017, *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

- Developed High Frequency Trading (cross-border arbitrage) application in C++, from initial discussion with the team to deployment and supporting
- Added low-level networking to the project using Solarflare OpenOnload library and hardware
- Designed and supported the environment for the algorithm: build stage, version control, performance analysis using network dumps

Claustrophobia

July 2014 – Feb 2015

Developer

Russia, Moscow

- Created system architecture for the real-world escape room game
- Implemented the solution using C++ (Atmel AVR, Linux)
- Results description: <https://habrahabr.ru/company/technoworks/blog/258585/> (in Russian)

HOBBY

Quadcopter stabilization

2012 – 2014

- Worked with TechnoWorks team (Arshavir Ter-Gabrielyan and others)
- Developed the algorithm for stabilization a quadcopter drone using C++ (Atmel AVR, Linux)
- Conducted the analysis of launches to improve flying quality
- Results description: <https://habrahabr.ru/company/technoworks/blog/216437/> (in Russian)