SERGEI VOLODIN

Birth date: 3 October 1994
sergei.volodin@phystech.edu, +7 916 600-90-58
Russia, Moscow

EDUCATION

Moscow Institute of Physics and Technology, undergraduate student *Sep 2012 – June 2017*
Department of Control and Applied Mathematics,
chair of Intellectual systems and Data Analysis
GPA for 7 semesters: 8.98/10, in top-5% of the department (2/77)

RESEARCH INTERESTS

1. Artificial intelligence
2. Machine learning
3. Optimization

RESEARCH EXPERIENCE

Skoltech, Center for Energy Systems Sep 2016 –
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

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

SCHOLARSHIPS

"Abramov" 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, 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 of stabilization for 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)