

# SERGEI VOLODIN

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1026 Échandens, Canton of Vaud, Switzerland

## EDUCATION

### École Polytechnique Fédérale de Lausanne

Sep 2017 –

*MSc in Computer Science* *Lausanne, Switzerland*

- Relevant courses: Machine Learning, Software Engineering, Unsupervised and Reinforcement Learning in Neural Networks, Biological modeling of neural networks, Random graph theory, Functional Programming, Set Theory
- GPA: **5.61**/6.00

### Moscow Institute of Physics and Technology

Sep 2012 – Jun 2017

*BSc in Computer Science* *Moscow, Russia*

- Relevant courses: Machine Learning (intro), Algorithms and Data Structures, Convex Optimization, Random Processes, Functional Analysis
- GPA: **4.84**/5.00

## RESEARCH INTERESTS


1. Artificial Intelligence; Machine Learning
2. Mathematical Optimization
3. Robotics

## RESEARCH EXPERIENCE

### EPFL, CHILI lab

Sep 2017 – present


*Research Assistant* *Lausanne, Switzerland*

- Created  a library for seamless augmented reality using OpenCV and Qt
- Designed a learning activity involving augmented reality and robots for teaching math, conducted experiments, analyzed data

### Skoltech, Energy Systems

Sep 2016 – Jul 2017

*Research Intern* *Moscow, Russia*

- Examined in MATLAB and theoretically the structure of the set of boundary non-convexities of an image of a quadratic map
- Designed and implemented  the CAQM library which gives approximate solutions to a number of problems involving quadratic maps


### MIPT, Theoretical Mech. dpt.


Oct 2012 – Feb 2013

*Technician* *Moscow, Russia*



- Designed and implemented numerical simulations for Euler's rotation equations
- Checked soundness of the approximation using symbolic computations in Wolfram Mathematica


## PUBLICATIONS


**Volodin S.**, Popova M., Strijov V.  Probabilistic prediction of nuclear receptors biological activity. Proceedings of ITaS, 2016, *in Russian*

Petrov A., **Volodin S.**  Janibekov's effect and the laws of mechanics. Doklady Akademii Nauk, 2013.

## CONFERENCES

 P.A.I.S.S. (AI Summer School) (INRIA Grenoble, 2018), *participant*,  *selected to receive financial help*

 DeepBayes school on Bayesian methods in Deep Learning (Moscow, 2017), *participant*

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

## SKILLS

**Scientific programming:** Keras, TensorFlow, Theano, scikit-learn, MATLAB, Mathematica, R


**Languages:** English (TOEFL iBT 112/120), French (beginner), Russian (native)



**Programming:** C/C++, Python, AVR C++, Scala, Java, nasm, C#


**Frameworks:** Qt/QML, Django, Android Studio, OpenGL/GLSL, Unity 3D

**Environment:** Git, L<sup>A</sup>T<sub>E</sub>X, Bash, Debian/Ubuntu Linux



## SCHOLARSHIPS

 Research Scholars at EPFL  DCL Lab (2018)

 Research Scholars at EPFL  CHILI Lab (2017 – 2018)

 Abramov Fund's, for excellent grades (2014)

## OLYMPIADS AND HACKATHONS




 DeepHack.RL hackathon (Deep RL for Atari games), MIPT, Moscow, Russia, 2017.  4th place.

## PROJECTS

### TechnoWorks

2012 – 2015

*Quadcopter stabilization project*

- Developed  an algorithm in C++ for stabilization of a quadcopter drone
- Conducted the analysis of launches to improve flying quality
- Results were  published in the Habrahabr CS blog
- Managed the  community page at a social network



## WORK EXPERIENCE

### EscapeControl

Jul 2015 – Feb 2016

*C++, AVR, Linux*

*Moscow, Russia*

- Created a startup selling software&hardware  framework for real-world escape games
- Created  system architecture for the real-world escape room games (*in Russian*)
- Managed a team of two web developers
- More than twenty solutions sold, currently running in different countries

## HOBBY

Running, Snowboarding, Swimming

## VOLUNTEERING

### Anti-corruption foundation

2015 – 2017

*Moscow, Russia*

- Door-to-door campaign
- Street volunteer
- Rally participant