Igor Sokolov

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EDUCATION

MOSCOW INSTITUTE OF PHYSICS AND TECHNOLOGY

- **Bachelor of sciences**
  Department of Control and Applied Mathematics
  Specialization: Applied Mathematics and Physics
  Thesis: Stochastic coordinate descent method with arbitrary sampling
  Supervisor: Peter Richtárik
  Sep 2014 – Aug 2019
  GPA: 4.69/5
- **Master of sciences**
  Department of Control and Applied Mathematics
  Specialization: Applied Mathematics and Physics
  GPA: 4.85/5
  Sep 2019 – Present

RESEARCH INTERESTS

Randomized and distributed optimization methods for machine learning

SKILLS

Programming languages: python, matlab, C/C++, T-SQL, LaTeX
Languages: Russian (Native), English (B2), German(A2)

WORK

MOSCOW INSTITUTE OF PHYSICS AND TECHNOLOGY

- **Research group of randomized algorithms for distributed optimization problems**
  Junior researcher
  Sep 2018 – Present

INTERNSHIPS

KING ABDULLAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

- **Visual Computing Center**
  Kingdom of Saudi Arabia
  Jan 2019 – Feb 2019

CONFERENCES & TALKS

- **Seminar "Modern Optimization Methods"**
  - Talk: A coordinate descent method without preprocessing
    17 December 2019
  - Talk: Accelerated coordinate descent with arbitrary sampling
    18 March 2019
- **Sixth International Conference on Continuous Optimization**
  Berlin, August 2019
- **Traditional Math School (Machine learning and Optimization)**
  Voronovo, June 2018
- **Computer science conference for pupils**
  Moscow, June 2012
- **Computer science conference for pupils**
  Moscow, June 2011

PAPERS

- **Stochastic coordinate descent with random stepsize and arbitrary sampling**
  Being prepared to submission to the "Optimization letters"
  February 2020

TRAINING

SAMSUNG RESEARCH RUSSIA

- **Machine learning in business analytics**
  July 2019

COURSERA

- **Introduction to Deep Learning**
  January 2020 - Present
- **Divide and Conquer, Sorting and Searching, and Randomized Algorithms**
  May 2019
- **Mathematics and Python for data analysis**
  June 2017 - July 2017

COMPUTER TRAINING CENTER

- **Setting and repair of PC**
  Sep 2011 – May 2012
- **Programming**
  C/C++, WinApi, OpenGL, HTML, CSS
  Sep 2010 – May 2013

COURSE PROJECTS

- **Background and foreground estimation via Robust PCA**
  GitHub project page, Source code
  January 2020
- **Benchmarking of quasi-Newton methods**
  GitHub project page, Source code, Poster
  June 2018
- **Realization of the splitting scheme for the heat equation**
  Implemented the numerical solution for the two-dimensional heat equation
  GitHub project page, Source code
  May 2017
- **Simple physical engine & demonstration program**
  The project consists of a simple 2D physics engine and a program that uses this engine and draws the scene
  GitHub project page, YouTube demonstration
  May 2016

HONORS & AWARDS

- **Winner of the «Phystech 2014» Olympiad on Physics**
  March 2014
- **Winner of the regional stage of All-Russian Olympiad on Physics**
  October 2013
- **2nd place at The Computer science conference for pupils**
  June 2013
- **2nd place at The Computer science conference for pupils**
  June 2012
- **Winner of The Programming Olympiad**
  June 2011