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
  September 2014 – August 2019
  GPA: 7.55/10
- **Master of sciences**
  Department of Control and Applied Mathematics
  Institute for Information Transmission Problems
  Specialization: Applied Mathematics and Physics
  Supervisor: Alexander Gasnikov, Peter Richtárik
  September 2019 – Present
  GPA: 8.44/10

RESEARCH INTERESTS

Optimization, Randomized Algorithms, Machine Learning

SKILLS

Programming languages: C, python(numpy, pandas, scipy, mpi4py), matlab
Languages: Russian (Native), English (B2), German(A2)

WORK EXPERIENCE

MOSCOW INSTITUTE OF PHYSICS AND TECHNOLOGY

- **Peter Richtárik's research group of randomized algorithms for distributed optimization problems**
  Junior researcher
  September 2018 – October 2019

INTERNSHIPS

KING ABDULLAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

- **Visual Computing Center**
  Research intern
  Kingdom of Saudi Arabia
  January 2019 – February 2019

CONFERENCES & TALKS

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

PAPERS

- **«Stochastic coordinate descent with random stepsize and arbitrary sampling»**
  Being prepared to submission to the arXiv

TRAINING

SAMSUNG RESEARCH RUSSIA

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

COURSERA

- **«Introduction to Deep Learning»**
  HSE, January 2020
- **«Divide and Conquer, Sorting and Searching, and Randomized Algorithms»**
  Stanford, May 2019
- **«Mathematics and Python for data analysis»**
  MIPT, Yandex, June 2017 - July 2017

COMPUTER TRAINING CENTER

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

ADDITIONAL SCHOOLS

- **Moscow State University mathematics school**
  Moscow,
  September 2012 – May 2013
- **School of physics and mathematics of MIPT**
  Moscow,
  September 2013 – May 2014

COURSE PROJECTS

- **Background and foreground estimation via Robust PCA**
  GitHub project page, Source code
  Jan 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

HOBBIES

- **Jogging**
- **Badminton**
- **Snowboarding**
- **Travelling**