

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

KING ABDULLAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

- **MASTER OF SCIENCES**
Specialization: Applied Mathematics and Computational Science
Supervisor: Peter Richtárik
September 2020 – Present

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

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

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

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