

Igor Molybog

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EDUCATION

University of California, Berkeley

2017 - 2021

Ph.D.. Industrial Engineering and Operations Research Department.

Major: Operations Research.

Moscow Institute of Physics and Technology (State University)

2013 - 2017

B.Sc. Department of Control and Applied Mathematics.

Major: Applied Mathematics and Physics. GPA: 4.97 out of 5.

WORK EXPERIENCE

Los Alamos National Laboratory

July 2017 - August 2017

Visiting researcher. Department: Applied Mathematics and Plasma Physics.

- Complex Energy Function optimization for electrical grid control

Skolkovo Institute of Science and Tech

October 2016 - June 2017

Research Intern. Department: Modeling, Analysis and Design of Energy Systems.

- Development of novel numerical optimization techniques for the Power flow problems

Institut Pasteur

July 2016 - September 2016

Amgen scholar. Center for Innovation & Technological Research.

- Designed a Micro-Manager-based 3D photolithographic plugin for automated microscope

ACHIEVEMENTS

"Advances in Systems Science and Applications"

2017

Publication: Molybog I., Chechovich Yu. "Data analysis for transport flows heterogeneity evaluation" (In press)

"Informatics and application"

2017

Publication: Molybog I., et. al. "Improving classification quality for intrinsic plagiarism problem" (In press)

SCHOOL "CONTROL, INFORMATION AND OPTIMIZATION"

2016

St. Petersburg. Poster session participant with report.

AMGEN EUROPEAN SYMPOSIUM

2016

University of Cambridge. Poster session and workshops participant.

INFORMATION TECHNOLOGY AND SYSTEMS CONFERENCE

2016

Publication: Molybog I., Motrenko A. "t-SNE modification for classification problem", ITAS2016 proceeding, p. 265-268

PROJECTS

T-SNE modification for classification problem. *Expanding applicability of an advanced dimension reduction algorithm. Supervisor: Vadim Strijov (RAS Computing Center). 2016-2017.*

Traffic flows splitting problem. *Data analysis project, based on Yandex.traffic's GPS data set. Supervisor: Yury Chechovich (RAS Computing Center). 2015-2017.*

X86-like microprocessor virtualization (junior developer). *(IntelLab, MIPT). Fall 2013 - summer 2014.*

Using optical methods for studying capillary waves on the surface of a water jet. *Minor Academy of Sciences of Ukraine Competition project, second prize. Winter-spring 2013.*

ADDITIONAL INFORMATION

Languages: Ukrainian, Russian.

Skills: OOP (C/C++, Java, Python), Parallel coding (MPI, POSIX Threads), Database design (Transact SQL), Scientific writing (LaTeX, Inkscape, Microsoft Office), Math modeling (Python, Matlab, Maple, Mathematica, AMPL), Circuit design (Arduino platform, Proteus, Assembly x86), Data analysis (R, pandas, SciPy, sklearn, skimage).

Hobbies: Traveling, basketball, skydiving, hiking / kayaking.