

# Dmitry Duplyakin

## Curriculum vitae

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dmitry.duplyakin.org

- Now **Postdoctoral Researcher**  
*Flux Research Group*  
*School of Computing, University of Utah*
- 2017 **Ph.D. in Computer Science**  
*University of Colorado - Boulder*
- 2012 **M.S. in Computer Science**  
*University of Colorado - Boulder*
- 2008 **B.S. in Applied Math and Computer Science (Cum Laude)**  
*Samara University, Russia*

## RESEARCH INTERESTS

*Cloud*: from virtualization to high-level orchestration tools and containers; resource allocation and elasticity management.

*High Performance Computing*: parallel performance modeling and prediction; design of experiments for supercomputers.

*Machine Learning*: Active Learning and other Machine Learning techniques applied to practical system & application performance analysis.

## RESEARCH EXPERIENCE

MAY 2015 – MAY 2017

University of Utah, Flux Research Group

### Research Assistant

Contribute to CloudLab, a large-scale NSF-funded testbed for cloud and distributed systems research, and develop workflows and tools for efficient configuration and experiment management.

AUGUST 2015 – MAY 2017

University of Colorado - Boulder

### Research Assistant

Develop and evaluate techniques for predictive modeling in analysis of performance and energy consumption of parallel applications, including codes for Adaptive Mesh Refinement.

MAY 2014 – AUGUST 2014

University of Chicago, Computation Institute

### Summer Intern

Work with the Globus Genomics team and develop enhancements to the cloud-based Galaxy science gateway infrastructure.

MAY 2011 – SEPTEMBER 2012

National Center for Atmospheric Research

### System Administrator

Cluster administration, performance analysis.

## RECENT PUBLICATIONS

- 2018 Evaluating Active Learning with Cost and Memory Awareness @ **IEEE IPDPS'18**
- 2017 Machine and Application Aware Partitioning for Adaptive Mesh Refinement Applications @ **ACM HPDC'17**
- 2017 The Part-Time Cloud: Enabling Balanced Elasticity Between Diverse Computing Environments @ **ScienceCloud'17**
- 2016 Active Learning in Performance Analysis @ **IEEE Cluster'16**

Published and presented papers at **CNERT '16, ScienceCloud'15, CCGrid'15, and ScienceCloud'13.**

## PROFESSIONAL SERVICE

- Chaired ScienceCloud'18 and SC'17 BoF.
- PC member for IPDPS'18, DAPPER'18, and IWAC'18.
- Faculty search committee, Dept. of Computer Science, University of Colorado, Spring'17.
- Student volunteer at Supercomputing'16 and IEEE Cluster'13 conferences.
- Mentor for undergraduate and graduate CS students at University of Colorado.

## TEACHING EXPERIENCE

- 2016 Prepared and presented hands-on cloud-focused tutorials at NSFCloud For Everyone and GENI Regional Workshop.
- 2012 Taught a class "CS1: Intro to Programming" (260 students) at University of Colorado-Boulder.
- 2011-2015 TAed for Intro to Programming, Principles of Programming Languages, and High Performance Scientific Computing classes at University of Colorado-Boulder.

## SOFTWARE SKILLS

- COMPUTING MPI, OpenMP, OpenACC, multithreaded, Hadoop, Spark
- SYSTEMS Linux, bash scripting, DevOps with Chef, HPC cluster administration, OpenStack and container management
- PROGRAMMING Python, C, C++, R, MATLAB

## REFERENCES

- Robert Ricci (advisor in the Flux Research Group)  
Jed Brown (advisor at University of Colorado)