Vladislav Toigildin

Software Developer





Experience

o6.2015 - **Software engineer**, *IBM*, Moscow.

03.2016 Development of Linux driver (zfcp) for IBM z System (s390x) storage hardware.

- Code development of device Linux driver.
- Development of internal perf tool (C++ and Perl).
- Work in international team. Regular code review.
- Design, creation and management of test environment.

09.2014 - **Researcher**, *Research Computing Center MSU*, Moscow.

o8.2016 Design and development of parallel version of algorithm search of repeats in biological sequence.

- Разработка параллельного спектрально-аналитического метода для гетерогенных многопроцессорных систем с распределенной памятью.
- Проектирование объектно-ориентированной архитектуры, позволяющей выделить в отдельные модули операции межпроцессорного взаимодействия и работу с графическими процессорами.
- Реализация параллельной программы, использующей технологию обмена сообщениями с возможностью задействования графических процессоров в качестве ускорителей (C++/MPI/cuda).
- Анализ эффективности и масштабируемости параллельного алгоритма.

11.2013 – **Technician**, Nuclear Safety Institute of the Russian Academy 10.2014 of Sciences, Moscow.

Development of model of hydrodynamic process in liquids using CABARET scheme.

- Design and implementation of GUI (Qt).
- Configure development environment.
- Implementation of new features in main project code (Fortran).
- Training team basic of *nix and features of HPC software development.

Education

2010 - 2015

MSc (equivalent) in Applied Mathematics and Computer Science, Lomonosov Moscow State University, Moscow, Faculty of Computational Mathematics and Cybernetics.

- Qualification: specialist in mathematics and system programming
- Department of Supercomputers and Quantum Informatics
- Specialization: high performance computing
- Master dissertation "Research and development of parallel algorithm for genome blurred repeats search"

Technical skills

Languages C, C++, Bash, Assembler, Perl(basic), Fortran(basic)

VCS Git

OS GNU/Linux, FreeBSD

HPC MPI, Cuda, OpenMP

Builder Make, Autotools

Others Qt(basic), LTFX, Gnu plot

Publications

A.N. Pankratov, R.K. Tetuev, M.I. Pyatkov, V.P. Toigildin, N.N. Popova Spectral analytical method of recognition of inexact repeats in character sequences. – Proceedings of the Institute for System Programming Volume 27 (Issue 6). 2015 y. pp. 335-344. Abstract

V.P. Toigildin Research and development of parallel algorithm for genome blurred repeats search. – CUDA Almanac, 2015 February. – p.12

Awards

2014

Fellowship of CUDA Center of Excellence MSU, Moscow.

Won a fellowship for a significant acceleration of computing for my research using GPU.

Open Source Project

mpiSBARS

Parallel program for recognition of extended inexact repeats in genome. MPI+CUDA model is used for scalability on heterogeneous computer system.