YURIY KASHNIKOV

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EDUCATION

2009 MS in Applied Math and Computer Science from the Novosibirsk State University.

2004 High College Informatics of Novosibirsk State University(Novosibirsk).

HONORS and DISTINCTIONS

- **Awards and Scholarships**

  2007 Intel Scholarship Award.

  2004 High College Informatics Honors in Computer Science.

SKILLS

- Compilers, dynamic optimizations, binary translation, runtime systems and memory management systems, pattern recognition and machine learning;
- Good debugging and performance profiling abilities;
- Strong mathematical background;

HARDWARE and OPERATING SYSTEMS

- GNU/Linux (Debian, Ubuntu) — x86, ARM

- Microsoft Windows (XP) — x86

- Mac OS X — x86;

PROGRAMMING LANGUAGES

- C, C++, C#, Python, BASH, x86 assembly language.

EMPLOYMENT HISTORY

- **Research Assitant** at Exascale Computing Research Laboratory, Paris, France (January 2009 – March 2009).

- **Research Assistant** at LRC IT@CA, PRISM, UVSQ, Versailles, France (October 2009 – March 2009).

- **Visiting Researcher** at INRIA Saclay, Orsay, France (October 2009 – January 2009).

- **Software Engineer** at SymLevel LLC, Novosibirsk, Russia (April 2009 – October 2009).

- **Software Engineer** at GrapeCity (after DataDynamics acquisition), Novosibirsk, Russia (December 2008 – April 2009).

- **Software Engineer** at DataDynamics, Ltd., Novosibirsk, Russia (August 2008 - December 2008).

- **Undergraduate Intern (Software Engineering)** at Intel, Novosibirsk, Russia (September 2007 – August 2008).

- **Intern** at High Performance Computing Research Laboratory Intel-NSU, (July 2005 – May 2009).

PARTICIPATED PROJECTS

- **MILEPOST** (2009 – 2010).

- **cTuning** (2009 – 2010).

- **Apache Harmony** (2006 – 2009).

- **Experimental Pattern Recognition System** for Sobolev Institute of Mathematics of Siberian Branch of the Russian Academy of Sciences, (2007 – 2009).

- **eXuberant CTAGS** (2005).

BACKGROUND:

- Languages: Russian, English.

TEACHING EXPERIENCE

- **Assistant**, Novosibirsk Gymnasium 3 of Institute of Thermophysics of Siberian Branch of the Russian Academy of Sciences (2006-2007)
  - I have taught a course "Operating Systems and Networks" based on GNU/Linux operating system, POSIX and open source software.
  - I have taught a course "Programming in C for UNIX", based GNU/Linux operating system and GNU C Compiler.
- **Students group mentor** at Summer School for Young Programmers of A.P. Ershov Institute of Informatics Systems 2006 (Book reader for mobile devices, C/C++ and ARM assembler.).
  Goals:

  - Team developed fictionbook format parser and visualizer. We used: C++.
  - As additional task we have ported GNU/Linux on handheld device (HP iPAQ hx2470).
- **Students group mentor** at Summer School for Young Programmers of A.P. Ershov Institute of Informatics Systems 2005 (Network applications in POSIX systems, C and bash).
  Goals:

  - Team developed GNU talk clone with client and server as daemon for GNU/Linux fully based on POSIX API.
- **Students group mentor** at Summer School for Young Programmers of A.P. Ershov Institute of Informatics Systems 2004 (Cryptograhpy, C).
  Goals:

  - Team developed implementation for block cipher algorithms: DES and GOST.
  - Explored methods of cryptanalysis and encryption cracking.

PUBLICATIONS

- Grigori Fursin, Yuriy Kashnikov, Abdul Wahid Memon, Zbigniew Chamski, Olivier Temam, Mircea Namolaru, Elad Yom-Tov, Bilha Mendelson, Ayal Zaks, Eric Courtois, Francois Bodin, Phil Barnard, Elton Ashton, Edwin Bonilla, John Thomson, Chris Williams, Michael O'Boyle. *MILEPOST GCC: machine learning enabled self-tuning compiler.* **International Journal of Parallel Programming (IJPP).**

- Yuanjie Huang, Liang Peng, Chengyong Wu, Yuriy Kashnikov, Jrn Renneke, and Grigori Fursin. *Transforming GCC into a research-friendly environment: plugins for optimization tuning and reordering, function cloning and program instrumentation.* **2nd International Workshop on GCC Research Opportunities (GROW10) co-located with HiPEAC'10, Pisa, Italy, January 2010**

- Yuriy Kashnikov, Mihail Fursov, Igor Skopin. *Advanced garbage collection algorithms and cache-conscious data placement,* **International Scientific Students Conference MNSK, Novosibirsk, Russia, 2008**

- Yuriy Kashnikov, Mihail Fursov, Igor Skopin. *Value profiling and virtual calls devirtualization in Just-In-Time compilers,* **Microsoft technologies in theory and practice of programming, Novosibirsk, Russia, 2007**