# Vladimir Kostyukov

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I am quite interested in: programming languages design and implementation; Java platform performance analysis and optimizations (VM, GC, JIT, Java Class Library); OOAD/OOP; API design.

Interested to have me onboard? Check out my personal web-site <a href="http://vkostyukov.ru">http://github.com/vkostyukov for more details.</a>

# Experience

# Intel Corporation (Novosibirsk), Performance Engineer, 2011 - [current]

- Department: Software Optimization
- Responsibilities: Java platform performance analysis and enabling
- Key Results:

Developed (from scratch) a proof of concept PKCS#11 Java Crypto Provider (5k LOC) based on Intel IPP libraries. The prototype shows 6X speedup relative to the default Java implementation.

## Intel Corporation (Novosibirsk), Intern, 2010 – 2011

- Department: Compilers and Languages
- Responsibilities: Performance tracking and analysis of Intel Compiler for Larrabee platform
- Key Results:

Won an Intel SSG Award for being a pioneer of Intel MIC compiler performance tracking (developed a Perl-based harness and ported 4 workloads from NVidia CUDA SDK).

# Altai State Technical University n/a I. I. Polzunov, (Barnaul), Technician, 2007 - 2010

- Department: IT
- Responsibilities: Maintaining network environment/OS Administration
- Key Results:

Established an approach (based on open source solution) of multicast workstations cloning, which become an important part of technical maintaining of ACM ICPC NEERC semi-finals.

# **Projects**

#### La4j (Linear Algebra for Java)

Open source and pure Java library that provides Linear Algebra primitives and algorithms. La4j is included into JMatBench project – popular benchmarking packages for java matrix libraries.

- Official web-site: <a href="http://la4j.org">http://la4j.org</a>
- La4j success story [RU]: <a href="http://habrahabr.ru/post/132642/">http://habrahabr.ru/post/132642/</a>
- La4j overview: <a href="http://www.codeproject.com/Articles/283113/la4j-Linear-Algebra-for-Java">http://www.codeproject.com/Articles/283113/la4j-Linear-Algebra-for-Java</a>
- Development Blog: <a href="http://la4j.blogspot.com/">http://la4j.blogspot.com/</a>

# Quipu

Esoteric programming language inspired by "talking knots" – recording devices historically used by Incas.

- GitHub page: <a href="https://github.com/vkostyukov/quipu">https://github.com/vkostyukov/quipu</a>
- Esolang page: <a href="http://esolangs.org/wiki/Quipu">http://esolangs.org/wiki/Quipu</a>
- Quipu overview [RU]: <a href="http://habrahabr.ru/post/165661/">http://habrahabr.ru/post/165661/</a>

#### **Brainfuck MediaWiki Extension**

Simple MediaWiki Extension, which allows to interpret Brainfuck code on wiki pages.

- MediaWiki page: http://www.mediawiki.org/wiki/Extension:Brainfuck
- GitHub page: <a href="https://github.com/vkostyukov/brainfuck-wiki-extension">https://github.com/vkostyukov/brainfuck-wiki-extension</a>

#### **Kotlin Sublime Package**

Sublime Text 2 Package for Kotlin Programming Language.

- GitHub page: <a href="https://github.com/vkostyukov/kotlin-sublime-package">https://github.com/vkostyukov/kotlin-sublime-package</a>
- Plugin announcement: <a href="http://www.sublimetext.com/forum/viewtopic.php?f=5&t=10231">http://www.sublimetext.com/forum/viewtopic.php?f=5&t=10231</a>

#### **Texts**

#### **Publications**

- Distributed Monitoring System (article in scientific magazine) [RU]:
  http://elib.altstu.ru/elib/books/Files/pa2011 3/pdf/138kostyukov.pdf
- Optimization default serialization mechanism for Java (Intel Summer School final report) [RU]:
  <a href="http://software.intel.com/ru-ru/articles/Optimizaciya-dostupa-k-zagruzchikam-klassov-JVM-1/">http://software.intel.com/ru-ru/articles/Optimizaciya-dostupa-k-zagruzchikam-klassov-JVM-1/</a>

#### **Blogs**

- Loads of articles about Java and Design Patterns [RU]: <a href="http://habrahabr.ru/users/spiff/topics/">http://habrahabr.ru/users/spiff/topics/</a>
- La4j-related topics at development blog [EN]: <a href="http://la4j.blogspot.com/">http://la4j.blogspot.com/</a>
- Personal thoughts about programming [RU]: http://vkostyukov.tumblr.com/

# **Open Source Activities**

## JGraphT, <a href="http://jgrapht.org/">http://jgrapht.org/</a>

equals() and hashCode() methods for graphs: <a href="https://github.com/igrapht/jgrapht/pull/6">https://github.com/igrapht/jgrapht/pull/6</a>

## Semantic Forms, <a href="http://www.mediawiki.org/wiki/Extension:Semantic Forms">http://www.mediawiki.org/wiki/Extension:Semantic Forms</a>

checked tag for "Watch this page" checkbox: <a href="https://gerrit.wikimedia.org/r/#/c/12214/1">https://gerrit.wikimedia.org/r/#/c/12214/1</a>

# pChart4mw, <a href="http://www.mediawiki.org/wiki/Extension:Pchart4mw">http://www.mediawiki.org/wiki/Extension:Pchart4mw</a>

Threshold line parameter for charts: <a href="http://code.google.com/p/pchart4mw/source/detail?r=885">http://code.google.com/p/pchart4mw/source/detail?r=885</a>

# Education

## Altai State Technical University n/a I. I. Polzunov (Barnaul), 2006-2011

- Faculty: IT
- Major: Software Engineering
- Education level: MSc Degree
- Diploma: "Distributed monitoring and dispatching system of processes in heterogeneous computing environments"
- Supervisor: Kruchkova E. N., Assoc. of Applied Mathematics department