KIRILL LYKOV

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www: http://kirilllykov.github.io/

EDUCATION

Università della Svizzera italiana, Switzerland — October 2011 - expected end 2016
Ph.D. Computational Science

Novosibirsk State University, Russia — September 2004 - June 2009
Diploma in Mathematics and Computer Science

EXPERIENCE

Università della Svizzera italiana, Switzerland — October 2011 - expected end 2016
Research Assistant

- Modeling of the blood flow in capillaries and microfluidic devices to study tumor cells migration
- Developed HPC software for blood flow modeling (Finalist of Gordon Bell'15 Award)

Data East, Russia — November 2008 - August 2011
Software Engineer

- Developed a service for full text and geo-spatial search (Java, Lucene, JavaScript)
- Designed and developed extensions for a geographic information system (C++, C#, WPF)

Ledas, Russia — July 2007- May 2008
Software Engineer

- Developed computational cores for modern CAD systems (C++)
- Done a research in polygonal mesh construction and medial axis computation

TECHNICAL SKILLS

Solid knowledge in Object-Oriented design and C++
Programming language agnostic: used Python, Java, Matlab, C#, JavaScript
Experience in high-performance computation (MPI, CUDA) and profiling (NVProf, CrayPAT, ...)
Multi-platform development experience (Linux, MacOS, Windows).

PUBLICATIONS

D. Rossinelli, Kirill Lykov, Y. Tang, et al. The In-Silico Lab-on-a-Chip: Petascale and High-Throughput Simulations of Microfluidics at Cell Resolution. In Proc. of the 2015 ACM/IEEE Intl. Conf. for High Perf. Computing, Networking, Storage and Analysis, SC'15, 2015. IEEE Computer Society. (This work is Gordon Bell prize finalist)

Kirill Lykov, X. Li, H. Lei, I. Pivkin, G. Karniadakis. Inflow/Outflow Boundary Conditions for Particle-Based Blood Flow Simulations: Application to Arterial Bifurcations and Trees. PLoS Comput Biol 11(8), 2015.

Emanuel K. Peter, Kirill Lykov, and Igor V. Pivkin. A polarizable coarse-grained protein model for dissipative particle dynamics. Phys. Chem. Chem. Phys., 2015

TEACHING

Universita della Svizzera italiana

- Teaching assistant, Algebra (undergraduate), 2012-2014
- Teaching assistant, Advanced Programming and Design (graduate), 2012-2014.

Novosibirsk State University

- Teaching assistant, Programming Fundamentals (undergraduate), 2010-2010
- Teaching assistant, Design Patterns (graduate), 2010-2011.

LANGUAGES

English - fluent
Russian - native