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Piotr Wendykier

EMPLOYMENT

- 5/2008 - 8/2008** **Google Inc. - Google Summer of Code program**
Position: Developer
Project: Multithreaded implementation of image processing algorithms for automatic classification and cropping of very large size collections of scanned paper documents.
- 5/2004 - 8/2005** **Distributed Computing Laboratory, Emory University, Atlanta, GA, USA**
Position: Research Scholar
Duties: I was involved in a Java middleware project (H2O). I designed and implemented a fault tolerant, distributed naming service (HDNS), a JNDI service provider for HDNS and a unit tests framework for H2O.
- 7/2003 - 4/2004** **PPHU GEPOL Sp. z o.o. Poznan, Poland**
Position: Software Engineer
Duties: I designed and implemented GIS Communicator - VisualBasic application for viewing, editing and analyzing numerical maps created in MapInfo.

EDUCATION

- 2005 - present** **Dept. of Math and Computer Science, Emory University, Atlanta, GA, USA**
Major: Computational Mathematics
Degree: Doctor of Philosophy
Expected graduation date: Spring 2010.
- 1998 - 2003** **Adam Mickiewicz University, Poznan, Poland**
Major: Computer Science
Degree: Master of Science
Thesis: E-banks - offered systems and security.

ADDITIONAL TRAINING

- Many-Core Processors for Science and Engineering - summer school 2009 at the University of Illinois' National Center for Supercomputing Applications (NCSA).

PROFESSIONAL SKILLS

- Strong mathematical background: analysis, numerical analysis.
- Strong computer science background: algorithms, data structures and networking.
- Expertise in developing multithreaded mathematical software in Java.
- Operating systems: Windows, Linux, Solaris, OSX.
- Programming languages: Java, C, C++, Fortran, MATLAB, IDL, VisualBasic, MapBasic.
- Databases: SQL, MySQL.
- Parallel programming: Java threads, POSIX threads, CUDA, MPI.
- Numerical libraries: BLAS, LAPACK, PLASMA, FFTPACK, FFTW, PETSc.
- Developer Tools: Eclipse, IntelliJ Idea, JBuilder, SunStudio, MS Visual Studio, SVN, CVS, Ant, make.
- Web development: HTML, CSS, JSP.

SOFTWARE

- **JTransforms** - multithreaded Fast Fourier Transform library in Java.
- **JPlasma** - Java port of PLASMA (Parallel Linear Algebra for Scalable Multi-core Architectures).
- **CSparseJ** - Java port of CSparse (Concise Sparse matrix package).
- **Parallel Colt** - multithreaded version (with many extensions) of CERN's high performance computing library in Java.
- **Parallel Spectral and Iterative Deconvolution** - multithreaded ImageJ plugins for image deblurring.
- **Parallel HRRT Deconvolution** - multithreaded ImageJ plugin for motion correction of PET brain images.
- **Parallel Super-Resolution** - multithreaded ImageJ plugin for super-resolution.
- **Parallel FFTJ** - multithreaded Fast Fourier Transform plugin for ImageJ.
- **Lincoln Papers** - multithreaded cropping of scanned papers with color scale bars.
- **HDNS** - a fault-tolerant, distributed naming service; JNDI Service Provider for HDNS.
- Unit tests framework for **H2O** (Java middleware).
- **GIS Communicator** - VisualBasic application for viewing, editing and analyzing numerical maps created in MapInfo.

PUBLICATIONS

- Piotr Wendykier and James G. Nagy
Image Processing on Modern CPUs and GPUs. Submitted for publication in 2009.
- Piotr Wendykier and James G. Nagy
Large-Scale Image Deblurring in Java. In Proceedings of the 8th International Conference on Computational Science, Krakow, Poland, June 2008.
- Dirk Gorissen, Piotr Wendykier, Dawid Kurzyniec, and Vaidy Sunderam
Integrating heterogeneous information services using JNDI. In Proceedings of the 15th Heterogeneous Computing Workshop, Rhodes Island, Greece, April 2006.

CONFERENCES

- 2/2009** 3rd ACES Workshop (talk: *Image Processing on Modern CPUs and GPUs*).
- 6/2008** 8th International Conference on Computational Science (talk: *Large-Scale Image Deblurring in Java*).
- 4/2008** 10th Copper Mountain Conference on Iterative Methods (talk: *Large-Scale Iterative Image Deblurring in Java*).
- 1/2008** 2nd ACES Workshop (talk: *Large-Scale Image Deblurring in Java*).
- 5/2005** 5th International Conference on Computational Science (co-organizer).
- 8/2003** 11th International Conference on Random Structures and Algorithms (participant).
- 5/2003** Workshop: Cryptology - fundamentals and frontiers (participant).

DISTINCTIONS

- 2003** One of the best computer science students at the Adam Mickiewicz University.
- 1999 - 2003** Academic studentship for outstanding grades.

PROFESSIONAL AFFILIATIONS

- Society for Industrial and Applied Mathematics (SIAM), Member.
- American Mathematical Society (AMS), Member.

REFERENCES

- James Nagy - PhD advisor, phone: +1 404-727-5601
- Vaidy Sunderam - supervisor, phone: +1 404-727-5926
- Peter Bajcsy - GSoC mentor, phone: +1 217-265-5387