ADAM DECONINCK

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Summary

Engineer and scientist with expertise in high-performance computing and cloud computing. Background in academic and commercial research with a heavy focus on computational analysis. Interested in "Big Data" technologies and the application of cloud computing to HPC for non-traditional users.

Professional Experience

Systems Administrator/Applications Specialist @ R Systems NA, Inc.　　　November 2010–present
- Design, deploy, and support virtual dynamic HPC clusters in a wide variety of configurations.
- Tune configuration of customer applications for best performance and usability.
- Project lead on 10+ HPC deployments, including a long-term 1000-core Windows cluster.
- Develop software and pre-built images for deployment of "cloud" HPC clusters.
- Track technology development and evaluate new hardware and software.
- Contribute to open-source projects and do outreach activites to relevant research communities.

Graduate Research Assistant @ University of Illinois　　　August 2007–November 2010
- Scientific research on microfluidics, colloidal physics, 3D particle tracking and DNA genotyping.
- Computational analysis of microscopy images to extract physical and chemical data.
- Trained and supervised undergraduate researchers and administered group compute servers.
- Awarded the National Defense Science and Engineering Graduate Fellowship (2008–2010).

Contractor @ Dow Corning Corporation　　　May 2006–August 2006
- Assembled hardware and developed software for an automated test station for testbed OLED devices.
- OLED test station and software were still in active use as of project completion in 2009.

Undergraduate Research Assistant @ Michigan State University　　　June 2005–August 2005

Undergraduate Research Assistant @ Michigan Technological University　　　June 2004–May 2005

Other Experience

- **Warewulf 3.0**: Developer and tester for the HPC cluster manager from Lawrence Berkeley National Lab.
- **Presentations and Publications**: Academic publications and presentations to the research and engineering communities on topics in science and HPC. Full list at http://www.ajdecon.org/projects/pubs.
- **ImageJ plugins**: Developed mathematical morphology processing routines for the popular image-processing tool, available at http://www.github.com/ajdecon/imagej_morphology.
- **Fencing**: Épée fencer and occasional volunteer instructor at The Point in Champaign, IL. Previously served as President of the Fencing Club at Michigan Technological University.

Education

M.S. in Materials Science and Engineering–University of Illinois　　　December 2010
B.S. in Physics–Michigan Technological University　　　May 2007

Skills and Knowledge

- Configure and support HPC clusters running Linux (RHEL, Fedora, Ubuntu) and Windows 2008 HPC R2
- Programming languages: Python, Perl, bash, Matlab, and Java for sysadmin and scientific programming
- Classroom or personal experience with Fortran, C, and R
- Set up and configure Ethernet and Infiniband networks
- Automated provisioning and configuration with Perceus/Warewulf, Cobbler, MS HPC Pack, Puppet
- Configure and track HPC Schedulers including Torque/PBS, Grid Engine, Hadoop, and MS HPC Pack
- Configure and maintain parallel file systems including Lustre, PVFS2, and HDFS
- Support academic and commercial users at a variety of experience levels