Department of Computer Science
University of Houston
Seminar Fall 2010

WHEN: MONDAY, NOVEMBER 22, 2010
WHERE: PGH 232
TIME: 11:00 AM

SPEAKER: Dr. Matthias S. Mueller and Michael Kluge, Technische Universität Dresden

Host: Dr. Edgar Gabriel

Title: Performance Analysis in the Light of Deep Software Stacks and Complex System Architectures

ABSTRACT:
Today's software codes used to solve scientific or engineering problems are huge.
Especially large, parallel codes running on High Performance Computers comprise many software components consisting of numerical libraries, runtime systems, message passing layers and the operating system.
Identifying performance bottlenecks under such circumstances is a difficult task. In our presentation we use file input and output as an example how to collect performance relevant data at different abstraction levels and how to analyze and optimize performance of parallel applications using an HPC file system like Lustre.

BIO:
Matthias S. Mueller is deputy director and CTO of ZIH at TU Dresden. Among other tasks he is head of the VampirTrace development group. He received his PhD in Computational Physics from Stuttgart University in 2001. From 1999-2005 he worked at the High Performance Computing Center in Stuttgart, Germany, which he left as a deputy director.
His research interests include programming methodologies and tools, computational science on high performance computers and Grid computing. He is a member of the German Physical Society (DPG), the expert group of the European Exascale Software Initiative (EESI) and Vice Chair of SPEC's High Performance Group.

BIO:
Michael Kluge is a researcher and software engineer at the Center for High Performance Computing (ZIH) at Technische Universität Dresden. His research focuses on the analysis of parallel file systems and the development of tools to support I/O centric analysis approaches. Michael received a Masters degree in Information Systems Technology in 2004 and is currently a PhD student at ZIH. He was part of the team winning the Bandwidth Challenge at SC'07.