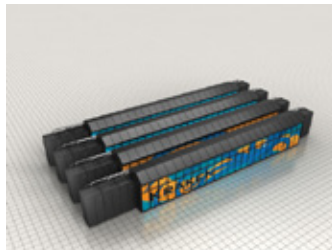# ICL NEWSLETTER
APRIL 2009

Kraken Comes to Life

Kraken, the new Cray XT5 at ORNL and managed by UT and ORNL's National Institute for Computational Science (NICS), is officially operational and open for business. As the world's fastest academically managed supercomputer, Kraken has a theoretical peak performance of 607 Teraflops. Combined with Jaguar, the fastest open science supercomputer at 1.6 Petaflops, ORNL has now become the fastest supercomputing complex in the world. See the **press release on Kraken** by NICS.

MPI 2.1 Standard Now Available in Hardcopy

The new MPI standard has been printed and is being sold at cost by the High Performance Computing Center, Stuttgart (HLRS). At only $25, the 608-page hardcover book includes a 16 page index to quickly locate relevant information and is a must have reference manual for an MPI programmer's library. More information about the book, including links for ordering online, can be found **here**.

First Annual IESP Workshop

On April 7-8, the first annual workshop for the International Exascale Software Project (IESP) will be held in Santa Fe, New Mexico. With a goal of uniting experts from academia, government, and industry, this invitation only workshop represents the first step in collaborative strategic software planning for the emergence of peta/exascale systems. Visit the **IESP website** for more information about the project including the workshop.

RECENT CONFERENCES

MAR 2-6 Miami, FL
SIAM Conference on Computational Science and Engineering (CSE09)
Dan, Emmanuel, Jakub, Keith, Stan

MAR 9-12 Boulder, CO
The 10th LCI International Conference on High-Performance Clustered Computing
Shirley

MAR 19-20 Albuquerque, NM
2009 Fault Tolerance Workshop
George, Peng

MAR 23 Blacksburg, VA
Virginia Tech Network Dynamics and Simulation Sciences Laboratory Seminar
Shirley

MAR 23-26 Pittsburgh, PA
PSC/Intel Multi-core Programming and Performance Tuning Workshop
Peng

MAR 25-27 Marina del Rey (Los Angeles), CA
PERI All Hands Meeting, Spring 2009
Dan, Keith, Shirley

UPCOMING CONFERENCES

APR 4-6 Santa Fe, NM
International Exascale Software Project
Terry, Tracy

APR 4-6 Chicago, IL
MPI Forum and STCI Meeting
George, Thomas

INTERVIEW

Dorian Arnold
ICL 1990-1996

You joined ICL as a research associate in 1999. Tell us a little about your education background.

Well, I spent my formative years in Belize; I often forget and say I was born and raised in Belize – I was actually born in Canada, but I digress. I went to primary, secondary in Belize. The "grades" for secondary school or "college" as we call it are called "forms": the American grades 9-12 are our forms 1-4. Oddly, the 1st year of tertiary education is not called 5th form; it's called 6th form, first year. We skip 5th form and do two years of 6th form. Perhaps this is the former colonists systematic way of making sure everyone gets held back at least once so we don't get too high on our horses. Anyway, after 6th form I went to a small, liberal arts school in Denver called Regis University. After Regis, I did a M.S. at UTK, and then joined ICL. I left ICL in 2001 to pursue a PhD at the University of Wisconsin. I'm now an assistant professor at the University of New Mexico.

What prompted you to join ICL back then?

I always knew I would pursue a Ph.D., and thought it was a good idea to beef up my CV before pursuing that dream. I thought working with Jack would give me an excellent opportunity do some solid research and establish a strong publication record. I was right.

What are some of your favorite memories from your days in the group?

Does anyone say anything other than the "Friday Lunch" for this question? The Chinese food was my favorite, but as I re-learned when I returned to graduate school, free food is always good food – I must admit that for me the falafels did challenge this theory. I also enjoyed coming in to the office on "game day" when we were on the hill. Timed just right, folks were always giving away free tailgate food just before game time. I guess my fondest memories all involve food. The folks at ICL were great though – there were people with great expertise in any area of CS that I was interested in, from systems and computer architecture to algorithms and applications. Whether you had a theoretical or practical question, there was definitely someone in the building with an answer. And there was a high likelihood that the answer was correct. And the staff was second to none – "Hi, Tracy and Tracy."

What all are you working on at the University of New Mexico?

At this point, I am still learning what it means to be a professor – I'm in my third month here. I no longer think "Who me?" when someone addresses me as "Doctor" or "Professor", but the orientation is still on. However, my research here is focused on scalability and fault-tolerance in extremely large distributed systems – think tens and hundreds of thousands or even millions of components.

What's the transition been like going from being a student to teaching them?

Well, now I'll begin to sound like an old curmudgeon, but, man, some of these students can whine. But teaching is great. I love it. And I feel that not being that far removed from the student life myself, I can relate to the students and try to understand where they are coming from. I have been actively thinking about the things that I thought my professors and advisors could have done to add even more value to my educational experiences and try to implement them. Hopefully, I can maintain this mindset when I've been in the game for several years.

In what ways did working at ICL prepare you for the teaching and research you're doing now?

First and foremost, I think ICL provided that toehold I needed to get to the next level of academia – regardless of the academic preparation they provide, names like "St. John's College" and "Regis University" just don't have the same ring to them like some of the more elite universities in the country. And we all know that when it comes to jobs in academia, pedigree matters. ICL's excellent reputation gave me that pedigree, so that places like the University of Wisconsin and the many other top 10 and top 25 CS departments that accepted me for graduate school would give me a shot. Without that shot, I'd probably not be fortunate enough to receive an academic position. Also, even at this early point in my academic career, I may have a larger than average network of colleagues and collaborators. Many of these people are folks I first worked with or met during my ICL days.

ICL ADMINISTRATIVE REMINDERS

UT Holidays and Administrative Closings

The University is officially closed several days out of the year for holidays and administrative closings. Visit the **UT Calendar and Events page** to see these dates. See Teresa for an explanation of the difference, if you care.

After Hours Access

All of your office keys should fit the main door entrance outside the department (suite 203), as well as 413 and 233 (conference room). The conference room's magnetic locks are engaged between 7pm and 7am. Your ID and key are required to access this room during these hours. To have your ID coded properly, please see Leighanne.

Please use caution and make sure that whatever door you enter is locked and secured before you leave the area. CS has had one laptop stolen and College of Education has had one computer stolen to date. If you leave your area at all (even to go to the restroom) - SECURE YOUR DOOR.

Long Distance Phone Calls

If you make a long distance phone call that is personal, you MUST use a calling card or cell phone. The problem with making personal calls and us paying for them is 1) We have to take long distance out of our grant budgets, and 2) UT is tax exempt, and it is against the law for you to receive such tax exempt services. If you have any questions regarding this message, please **let Tracy know**. Of course, if your calls are business related, then it is fine to dial directly and let us pay from our grants.

Time Off

Please remember that if you are going to be off work other than when the university is closed, you should send mail to **icl-out@eecs.utk.edu**. This enables us to know when you'll be out (and return) so we can tell those who ask. This applies to anytime you're out.

Other key group mail addresses to remember:

icl-help@eecs.utk.edu – contact ICL Help staff
icl-webmaster@eecs.utk.edu – contact ICL web staff
dongarra-local@eecs.utk.edu – send messages to the entire ICL group (Use with caution)

RECENT LUNCH TALKS

MAR 6 Michael Resch from HLRS in Germany
Working the Borderline - HPC between Research and Industry PDF

MAR 13
Akila Gothandaraman, PhD Candidate in EECS
Accelerating Computational Chemistry Applications using Emerging Architectures PDF

MAR 20 Shirley
A Proposal for Population Dynamics Simulation Research for AIDS Impact Mitigation

MAR 27 Asim
TBLAS: Task BLAS for Multicore and Distributed Memory Machines PDF

UPCOMING LUNCH TALKS

APR 3 Dr. Itamar Arel from EECS
A Novel Approach to Solving Large-Scale Linear Systems

APR 10 No Lunch Talk - Holiday

APR 17 Anthony Danalis

APR 24 Haihang