

ICL NEWSLETTER

May 2007

New Design

Thanks to David Rodgers, we have a new design for the ICL Newsletter. I hope you like it!



GridSolve by Asim Yarkhan



The [GridSolve](#) project originated in approximately 1996, starting with an early version of NetSolve implemented by ICL alumnus Henri Casanova. Since then, many people visiting or working at ICL have participated in this project.

NetSolve is a RPC-based, agent-mediated, client-server environment that allows a user to access remote hardware and software resources transparently. The environment provides service discovery, dynamic binding, resource scheduling, load balancing, and fault tolerance.

Ease of use has always been a major goal of this project. To that end, client bindings in high level languages (e.g., Matlab) allow a domain scientist to easily and transparently access and use remote Grid resources. Service bindings for several mathematical libraries (e.g., LAPACK) were distributed with the source code.

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Friday Lunch Presentations

04/20/07 Jelena Pjesivac-Grbovic

Open MPI Collective Operations at Large-Scale [[PDF](#)]

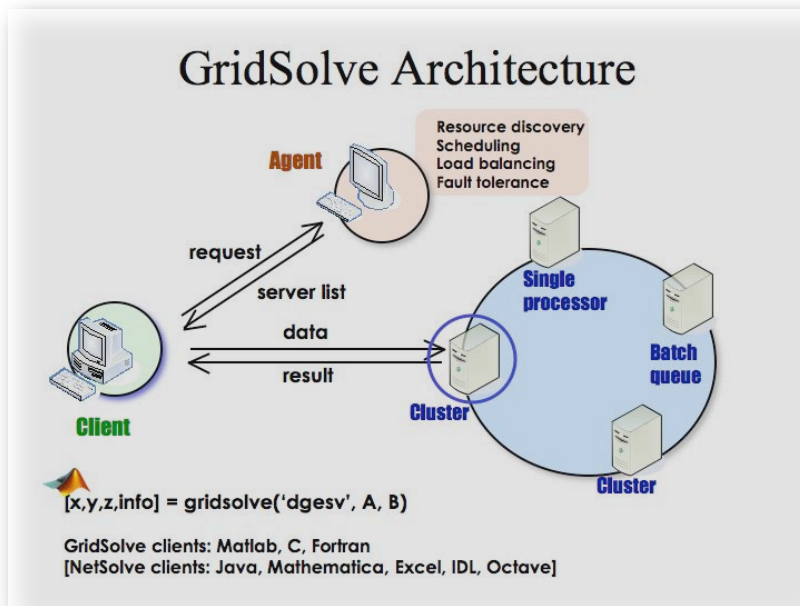
04/20/07 Craig Rasmussen

SciDAC Application Language Tool Support [[PDF](#)]

04/13/07 Piotr Luszczek

Sony PlayStation 3: Supercomputer in the Living Room [[PDF](#)]

Some time ago, we realized that the NetSolve code base would require a major overhaul to correctly support NAT environments. In order to enable this and to incorporate other improvements, we are working on a complete reimplementation of the NetSolve code base. This project is named GridSolve to indicate that the core client API is now the Open Grid Forum's proposed GridRPC standard. GridSolve is a more highly evolved version of NetSolve, implementing most of the functionality of NetSolve, with enhancements in performance, resource selection, scheduling, data-transfer, deployment, and service creation among other things.



GridSolve (version 0.15) provides client bindings for Matlab, Octave, Interactive Data Language (IDL), C and Fortran, and wrappers for some basic mathematical libraries are distributed. Additional client bindings and library wrappers are being developed, and research is being done on scheduling, workflow execution, and distributed computation.

Conferences

Baseline Configuration Team (BCT) face-to-face meeting

David C. - San Francisco - May 9th -10th

Linux Cluster Institute Conference

George , Shirley - Lake Tahoe - May 14th - 17th

CCGrid'07 (Seventh IEEE International Symposium on Cluster Computing and the Grid)

Thara - Rio de Janeiro, Brazil - May 14th - 17th

Eclipse PTP Workshop

George - Oak Ridge, TN - May 23th - 24th

ICCS 2007 (International Conference on Computational Science)

Karl - Beijing, China - May 27h - May 30th

Friday Lunch

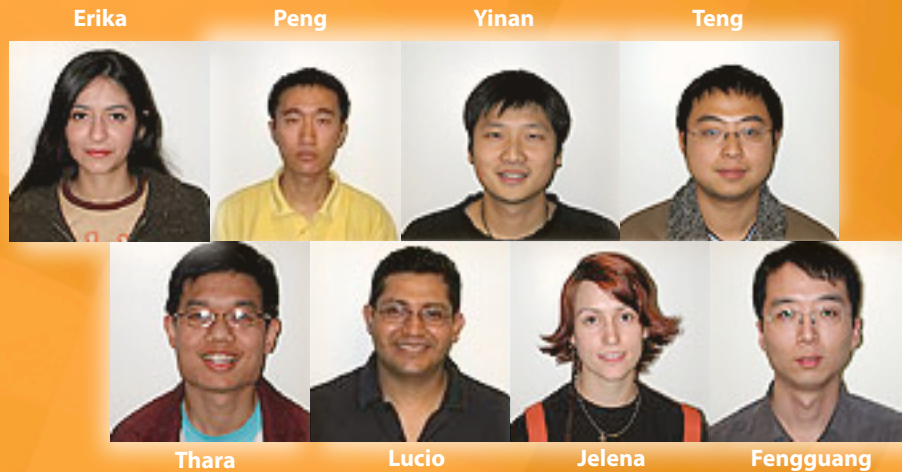
[May 4th] Ricardo Ortiz from the University of Iowa, Title TBA

[May 11th] Stanimire, TBA

[May 18th] Julien, "Tall Skinny QR"

[May 25th] TBA

What are the ICL students doing this summer?



Erika Fuentes

When did you start working for ICL?

I started working *again* for ICL back in 2002. I originally worked for 2 semesters back in 2000 but worked for a year or so with another professor in the CS department. When I rejoined ICL in FALL 2002 it was for my PhD.

When do you expect to graduate?

I expect to graduate from PhD program in Fall 07.

What do you work on at ICL?

I've been working on SALSA for the past few years as part of my dissertation. The goal is to finish the project within the next few months.

What about this summer?

I'll be staying in ICL finishing up my dissertation and wrapping up the related research.

And next year?

I'm currently looking for a job, I'm looking for PostDoc positions or faculty/research staff (I'm aiming for the DC area mainly)

I am working on runtime environments of FT-MPI/ Open MPI.

The goal is to improve their scalability, fault-tolerance and usability.

What about this summer?

I am going to enjoy the sun in Thailand for a month and stay at ICL for the rest of the summer.

And next year?

I may ask for a post-doc position at ICL.

Fengguang Song

When did you start working for ICL?

I joined ICL in May 2003.

When do you expect to graduate?

I expect to graduate as a PhD this winter.

What do you work on at ICL?

I have been working on several ICL projects: Kojak, VGrADS, GridSolve, and Copper. Currently I'm working on the Copper project with Shirley, Felix, and Karl.

What about this summer?

This summer the Copper team is going to collaborate more with the University of Houston and finish up the project.

And next year?

I plan to find a research position in industry or in university. For now I am not sure if I want to go to industry or academia, so I'll just keep both options open.

Thara Angskun

When did you start working for ICL?

I joined ICL's Distributed Computing group on Jan 09, 2003 at 10 am. [Couldn't be more precise!]

When do you expect to graduate?

I hope to get my PhD on December 2007.

What do you work on at ICL?

Jelena Pjesivac-Grbovic

When did you start working for ICL?

I joined ICL's Distributed Computing group in Fall 2003.

When do you expect to graduate?

Official graduation date - December 2007.

I hope to defend and turn in my PhD dissertation before October 2007.

What do you work on at ICL?

I work on optimization of MPI collective operation performance. I started with [FT-MPI](#) and I am currently involved in the [Open MPI](#) project. A big part of my work consists of implementing and testing different collective algorithms, performance analysis and modeling, as well as automatic tuning and algorithm selection function generation.

What about this summer?

My big goal is to finish and defend my dissertation by the end of the summer, while baby-sitting in the afternoons.

And next year?

The plan is to leave Knoxville and move to sunny and expensive California to work in the Systems group at Google (most likely on [GFS](#), [Google File System](#)).

Peng Du

When did you start working for ICL?

I joined ICL in August 2005.

When do you expect to graduate?

I do not know yet.

What do you work on at ICL?

I've been working for the project of LAPACK and ScaLAPACK. I'm currently interested into performance optimization for multicore system, mostly for cluster system with multicore.

What about this summer?

I will work at ICL.

And next year?

still at ICL...

Ma Teng

When did you start working for ICL?

I started working for ICL on August ,2006

When do you expect to graduate?

My expected PhD Graduation is August, 2010.

What do you work on at ICL?

I worked for MPI group and focused on fault tolerance and network. What I did is sctp-btl and elan-btl for open-mpi. My goal is to do some research on fault tolerance for open-mpi.

What about this summer?

This summer, I planed to work in ICL.

And next year?

Next year, I will be still at ICL.

Yinan Li

When did you start working for ICL?

I started working for ICL on August 14th ,2006

When do you expect to graduate?

This is my first year here to study for my PhD degree. I do not know yet my graduation date.

What do you work on at ICL?

My current focus is the coursework, especially the core courses, since I'll take the PhD Comprehensive Exam in Fall 2007.

What about this summer?

This summer I will stay in ICL until the end of June. After that I will go back to China for vacation and come back early August.

And next year?

Next year I will start to think about my dissertation topic and continue to work for the NetSolve/GridSolve project.

Daniel Lucio

Too busy to answer the interview.

Visitors



Julie Langou and Julien Langou should be at ICL Monday 14th (There is no more snow in Colorado and "also they can be reminded what grass looks like!"). Julien will work for ICL for his summer semester (until mid-august.). Julie will come to get some news for the Newsletter and she should also work on some Microsoft deployments.



Marc Baboulin from the [Parallel Algorithms Team of CERFACS](#) will visit ICL for the summer starting May 30th. Marc already visit ICL last summer.

Interviews for the Linear Algebra Position



[Ricardo Ortiz](#) from the University of Iowa will be visiting on May 4th.



[Ayaz Ali](#) from the University of Houston will be visiting on May 16th.



Anna Matsekh from Los Alamos National Lab will be visiting on May 21st.

Travel

Julie (on the right) visited [Dr John Gilbert](#) (second from the left) at [University of California Santa-Barbara \(UCSB\)](#) from April 9th to April 18th. John Gilbert is a full time professor at the UCSB Computer Science Department and head of the [CSC Lab](#) (focus on Combinatorial Scientific Computing, software for Computer Science and Engineering, and Numerical Linear Algebra).

"I gave a 1h15m talk on LAPACK/ScaLAPACK and the current research at ICL, especially multi-core. Moreover I had the opportunity to play with their new machine, a 16 core (8*2) AMD machine. I would like to thank John and his students for the warm welcome they gave me.



People

Jiayi Wu has accepted a job with amazon.com. Congratulations!



Daniel Andrzejewski is going to work with the CS Labstaff starting May 1st.

Remi Delmas, ICL alumni, is leaving [ClearSpeed](#) at the end of May for [Thales Aerospace](#). He will be part of the Avionics department. Nothing related to high performance computing.



Reminders

- Classes have ended and finals are taking place this week.
- **Piotr's** last day is Friday, May 4th.
- Monday, May 28, 2007 - **Memorial Day** - UT is closed.