



Experts Address Major HPC issues in ISC '08 Keynote Talks

DRESDEN, Germany — Some of the best known names in high performance computing, with experience in industry and research settings, will present keynote addresses over three days at the 2008 International Supercomputing Conference (ISC'08).

The conference, Europe's premier HPC event, will be held June 17 - 20 at the International Congress Center in Dresden, one of Germany's "Cities of Science." The conference, which is conducted in English, includes three days of technical sessions, pre-conference sessions aimed at the automotive industry and scientific researchers, poster and birds-of-a-feather sessions, and after-hours networking opportunities.

Advance registration for ISC'08 is now open and those who register by May 19 will receive a discount. To register, go to www.isco8.org/registration

"Our keynote addresses will be the anchor of a technical program that will address the most important issues in high performance computing today," said Conference Chair Prof. Hans Werner Meuer of the University of Mannheim. "These speakers are people who are changing the landscape in computing and who can provide insight on everything from the evolution of grid infrastructure to the transformation of computing through multicore platforms to scientific discoveries enabled by new infrastructure and algorithms."

Here is an overview of the conference's keynote speakers:

- Prof. Dr. Satoshi Matsuoka of the Tokyo Institute of Technology Global Scientific Information and Computing Center has pioneered grid computing research for more than a decade. He is one of the leaders of the Japanese National Research Grid Initiative, a project that aims to create middleware for next-generation science cyberinfrastructure, and was the technical lead in the construction of TSUBAME, the fastest supercomputer in Asia with a peak performance of 85 teraflops. Matsuoka will open the conference technical program on Wednesday, June 18, with a talk that will highlight the changing face of grid computing.



In the era of ubiquitous parallel processors and a proliferation of Web 2.0 technologies, grid infrastructure could become more centralized and supercomputers could become much more like Internet-based resources rather than elite resources available only to a select audience, according to Matsuoka. His talk will discuss future multi-petascale grids, which could become massive resource nodes supporting service-oriented architectures rather than vast distributions of smaller resources. This evolution of supercomputing grid could finally make supercomputing available to the masses.

- Justin Rattner, Intel Corporation's chief technology officer, vice president and Senior Fellow, will present another view of supercomputing for the masses with his keynote on multicore/many core platforms on Thursday, June 19. Rattner joined Intel in 1973 and has a long history of accomplishments, including R&D magazine's scientist of the year in 1989 and acknowledgement as one of the 200 individuals with the greatest impact on the U.S. computing industry in 1997. Rattner will address the transformation of the computing world made possible by the spread of multicore processors and how multicore revolution could usher in a new Internet age characterized by realistic graphics and personalized information spaces. He will address Intel's terascale research program and the challenge of scaling multicore architectures to integrate programmable cores and fixed-function accelerators, flexible cache and memory hierarchy, and high-bandwidth on-die networks to ensure high throughput.
- Prof. John Salmon of D. E. Shaw Research, New York, USA, will present the keynote on Friday, June 20, which will focus on the effects of high performance computing on molecular dynamics (MD) simulations. Salmon holds a Ph.D. in physics from the California Institute of Technology and is involved with algorithm design, software development, and computer architecture design at Shaw. He will discuss Anton, a specialized, massively parallel computing system being built at Shaw which, when completed later this year, should be capable of executing millisecond-scale classical molecular dynamics simulations of one or more proteins at the atomic level of detail. MD simulations at this timescale are about three orders of magnitude beyond the duration of the longest current MD simulations. The ability to simulate this level of molecular activity could lead to important scientific advances and provide a powerful new tool for drug discovery.

ISC, which marks its 23rd anniversary in 2008, has a well-established reputation for presenting well-founded, precise and up-to-date information in an environment that encourages informal conversations and sharing of

INTERNATIONAL SUPERCOMPUTING CONFERENCE

Europe's Premier HPC Event



ideas. ISC is also the largest high performance computing exhibition in Europe, and 90 of the leading hardware, software and services vendors are expected to fill the exhibition hall in Dresden during ISC'o8. To learn more about the conference program, please visit the ISC 'o8 website at <http://www.isco8.org/>.
