

Message from the International Advisory Committee Chair

Developments in High Performance Computers (sometimes called supercomputers) continue to be driven by engineering and scientific applications, although business and corporate needs provide most of the revenue for computer companies. Today's HPCs include those that fill a large building with special water and power requirements, as well as small but powerful desktop systems. Frequently, widely separated systems are connected by fast networks and there is a growing trend toward considering this entity as a single tool to be utilized as an ensemble, a concept called grid computing.

Research in HPC includes the development of new processor architectures, memory, storage, databases, visualization, and other peripheral components. It also includes software including user interface and system tools such as compilers, debuggers, schedulers, as well, of course, as the actual end user applications in science, engineering, and others.

Thus HPC is not only of academic interest; a vigorous industry of computer hardware, software, and service vendors generates over US\$5 billion in sales each year.

The goal of HPC-Asia is to provide a venue for the discussion of relevant research topics, as well as to offer vendors the opportunity to describe and exhibit their most exciting new products and projects.

In 1994, ATIP proposed the idea of an HPC conference that would move from country to country within the Asia Pacific region. The idea appeared to have significant advantages: countries in Asia share common problems that lend themselves to HPC solutions; a regional conference fosters the growth of human collaborative networks among Asians; a conference with a changing country venue encourages collaboration; a regional conference benefits from increased critical mass (important both to vendors and to participants who are exposed to a larger and better set of ideas); a regional conference with local control gives autonomy to each country's organizers to orient the conference to their specific needs.

A set of experts in over a dozen countries formed into an International Advisory Committee (IAC) and set out to foster and guide the development of HPC-Asia as a regional forum. Thus far, HPC-Asia conferences have been held in Taiwan, Korea, Singapore, China, Australia, Bangalore, and this year HPC-Asia 2004 is in Tokyo Japan. For each conference a local country team does the real work of organizing the conference with some advice of the IAC that I have the privilege to chair. IAC is composed of experts from most countries in the region who volunteer their time and insight to make suggestions to the local organizers, and encourage participation from their country in HPC-Asia. It is great working with such capable and dedicated people, and HPC-Asia has given us the opportunity to develop many friendships and encourage joint scientific projects.

High performance computing (HPC) has become an essential component of today's scientific method. HPC-Asia allows Asians to express their achievements in their own regional forum. Working together in a friendly and collaborative manner generates momentum that propels us forward. The field is growing and the future is very bright. This year's HPC-Asia 2004 is expected to be the best yet, I am excited to be able to participate, and congratulate the local organizers for their efforts.

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