Message from the HCW Steering Committee Chair

These are the proceedings of the 16th Heterogeneity in Computing Workshop, also known as HCW 2007. The title of the workshop has been changed from the original title of “Heterogeneous Computing Workshop” to reflect the breadth of the impact of heterogeneity, as well as to stress that the focus of the workshop is on the management and exploitation of heterogeneity. All of this is, of course, taken in the context of the parent conference, the International Parallel and Distributed Processing Symposium (IPDPS), and so explores heterogeneity in distributed and parallel computing systems. Arnold “Arny” Rosenberg, from the University of Massachusetts at Amherst, a past HCW Program Committee Chair and General Chair, suggested this name change, and it was approved by the HCW Steering Committee (listed elsewhere in these proceedings).

Heterogeneity in parallel and distributed computing systems is a very important research area with great practical impact for a large range of systems. A heterogeneous computing system may be a set of machines interconnected by a wide-area network and used to support the execution of jobs submitted by a large variety of users to process data that is distributed throughout the system. It may be a suite of high-performance machines tightly interconnected by a fast, dedicated network and used to process a set of production tasks, where the communicating subtasks of each task may execute on different machines in the suite. It may also be a special-purpose embedded system, such as a set of different types of processors working together to perform a particular application. In one extreme, it may consist of a single machine that can reconfigure itself to operate in different ways (e.g., in different modes of parallelism). All of these types of heterogeneous computing systems (as well as others, e.g., grids and clusters) are appropriate topics for this workshop series.

I hope you find the contents of these proceedings informative and interesting. I encourage you to look also at the proceedings of past and future HCWs.

Many people have worked very hard to make this year’s workshop happen. Henri Casanova, a well known and respected researcher from the University of Hawai`i, was this year’s Program Committee Chair. He worked diligently with the Program Committee (listed elsewhere in these proceedings) to assemble the excellent program for the workshop. José A. B. Fortes, from the University of Florida, was the General Chair. José has been a personal friend and colleague of mine for over 20 years, and I greatly respect him as person and as a professional. José was responsible for the overall organization and administration of this year’s workshop, and he did a fine job. Given his experience as the Program Chair of HCW 2006, he provided valuable guidance to Henri (as Henri will do as the General Chair for HCW 2008). I thank Henri, José, and the Program Committee for their efforts. I also thank the workshop Steering Committee for their oversight and assistance.

The workshop is once again cosponsored by the IEEE Computer Society and the US Office of Naval Research. I thank the Office of Naval Research for their support of this workshop’s proceedings. This workshop is held in conjunction with the International Parallel and Distributed Processing Symposium (IPDPS), which is a merger of the symposia formerly known as the International Parallel Processing Symposium (IPPS) and the Symposium on Parallel and Distributed Processing (SPDP). The Heterogeneity in Computing Workshop series is very appreciative of the cooperation and assistance we have received from the IPDPS/IPPS organizers for all of the workshop’s 16 years.

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