Plenary Talk I

The Parallel Computing Landscape: A Berkeley View

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Bio

David Patterson is the Pardee Professor of Computer Science at the University of California at Berkeley, which he joined after graduating from UCLA in 1977.

Dave's research style is to identify critical questions for the IT industry and gather inter-disciplinary groups of faculty and graduate students to answer them. The answer is typically embodied in demonstration systems, and these demonstration systems are later mirrored in commercial products. In addition to research impact, these projects train leaders of our field. The best known projects are Reduced Instruction Set Computers, Redundant Array of Inexpensive Disks, and Networks of Workstations. RISC led to the Arm architecture that is popular for embedded computers and to the Sun SPARC architecture for servers. RAID led to storage products from EMC, IBM, NetApp, and many other companies. NOW led to clusters for Internet service used by Inktomi and others.

A measure of the success of projects is the list of awards won by Patterson and as his teammates: the C & C Prize, the IEEE von Neumann Medal, the IEEE Johnson Storage Award, the SIGMOD Test of Time award, and the Katayanagi Prize. He is a fellow of ACM, IEEE, and the Computer History Museum and was elected to the American Academy of Arts and Sciences, the National Academy of Engineering, the National Academy of Sciences, and the Silicon Valley Engineering Hall of Fame.

In his spare time he coauthored five books, including two with John Hennessy, President of Stanford. Patterson also served as Chair of the Computer Science Division at UC Berkeley, Chair of the Computing Research Association, President of the Association for Computer Machinery, and as a member of the US President's Advisory Committee for Information Technology.

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