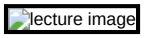

IT Eminent Lecture Series

Recovery Oriented Computing

Dr. David Patterson
Professor of Computer Science, U.C. Berkeley
Coates Hall 152
February 13, 2004 - 03:00 pm

Abstract:
It is time to broaden our performance-dominated research agenda. A four order of magnitude increase in performance over 20 years means that few outside the CS&E research community believe that speed is the only problem of computer hardware and software. If we don't change our ways, our legacy may be cheap, fast, and flaky. By concentrating on Mean Time to Repair rather than Mean Time to Failure, ROC reduces recovery time and thus offers higher availability. Since a large portion of system administration is dealing with failures, ROC may also reduce total cost of ownership. ROC principles include design for fast recovery, extensive error detection and diagnosis, systematic error insertion to test emergency systems, and recovery benchmarks to measure progress.

Speaker's Bio:
David Patterson has been a Professor of Computer Science at U.C. Berkeley since 1977. He is one of the pioneers of both Reduced Instruction Set Computers (RISC) and Redundant Arrays of Inexpensive Disks (RAID), which are widely used. He co-authored five books, including two with John Hennessy, that have been popular in graduate and undergraduate courses since 1990. He served as chair of the Computer Science Department at U.C. Berkeley, the ACM SIG in computer architecture, and the Computing Research Association. He currently serves on the Presidential Information Technology Advisory Committee, Microsoft's Trusted Computing Academic Advisory Board, and IBM's Autonomic Computing Advisory Board. His current research project, Recovery Oriented Computing (ROC), assumes that human mistakes, software bugs, and hardware failures are facts to be coped with rather than problems to be solved. It explores measuring and improving speed of recovery to cope with these facts.

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