SIGOPS Annual Report 2007

Fiscal Year July 2006 - June 2007
Submitted by Keith Marzullo, SIGOPS Chair

Overview

SIGOPS' main role, in sponsoring and co-sponsoring the many top-rate conferences, was sustained: Principles of Distributed Computing (PODC, held in July 2006 in Denver, Colorado), Embedded Network Sensor Systems (SenSys, November 2006, in Boulder, Colorado), Virtual Execution Environments (VEE, June 2007 in San Diego, California), Architectural Support for Programming Languages and Operating Systems (ASPLOS, October 2006 in San Jose, Ca), Networked Systems Design and Implementation (NSDI, April 2007 in Cambridge, Massachusetts), and Operating Systems Design and Implementation (OSDI, November 2006 in Seattle, Washington).

Awards

At PODC, the annual Edsger W. Dijkstra Prize was given to John Mellor- Crummey and Michael Scott for "Algorithms for scalable synchronization on shared-memory multiprocessors", ACM Transactions on Computer Systems 9(1), 1991. Quoting from the award statement, "Mellor-Crummey and Scott's paper introduced the MCS queue-based mutual exclusion lock: probably the most influential practical mutual exclusion algorithm of all time. The MCS lock is vastly superior to all previous mutual exclusion algorithms (and many proposed since!). It is fast, scalable, and fair in a wide variety of multiprocessor systems, and eliminates serious drawbacks of other algorithms, such as the need to pre-allocate memory for a fixed, predetermined number of threads. ... The key lesson this work has taught us is that one cannot underestimate the importance of reducing memory traffic in scalable synchronization algorithms. The "local spinning" technique used by the MCS algorithm has heavily influenced virtually all practical scalable synchronization algorithms since."

Chapters

European SIGOPS chapter continues to grow. In 2007 they held the second version of EuroSys in Lisbon, Portugal. This version sought papers that crossed the divide between different areas of computer systems.

Acknowledgements