



## Distinguished Lecture Series

# The Multicore Evolution and Operating Systems



Wednesday, June 8<sup>th</sup>, 2011 10:00am  
Auditorium 106 at New IIS Building

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### Abstract

Multicore chips with hundreds of cores will likely be available soon. Although many applications have significant inherent parallelism (such as a mail server), their scalability on many cores can be limited by the underlying operating system. In five years, will we need a new operating system design to support such applications or can we engineer existing designs to scale well? This talk answers this question based on our experience with scaling seven system-intensive applications (memcached, Apache, Exim, PostgreSQL, gmake, Psearchy, and MapReduce) on Linux running on a 48-core computer, and making predictions about what will happen beyond 48 cores.

Joint work with: S. Boyd-Wickizer, A. Clements, Y. Mao, A. Pesterev, R. Morris, and N. Zeldovich

For more information: <http://www.iis.sinica.edu.tw/>

