The multicore evolution and operating systems

Frans Kaashoek

Amphi Durand

4, place Jussieu
75005 Paris
Metro Jussieu

18 Avril 2013 - 18h00

Multicore chips with hundreds of cores will likely be available soon. Although many applications have significant inherent parallelism (e.g., mail servers), their scalability on many cores can be limited by the underlying operating system. We have built or modified several kernels (Corey, Linux, and x86) to explore OS designs that scale with increasing number of cores. This talk will summarize our experiences by exploring questions such as what is the impact of kernel scalability on application scalability, is a revolution in kernel design necessary to achieve kernel scalability, and what limits kernel scalability.

M. Frans Kaashoek is a professor at MIT, where he coleads the parallel and distributed operating systems group.