Computer Science Department

Presents

"Fault-Tolerant Runtime Environments"

Michael Spertus
Geodesic Systems

Friday, November 15, 2002
3:00 – 4:00 pm.
CS Classroom (room 381)
1890 Maple Avenue, 3rd floor

Abstract:

Studies show that nearly all large software programs are deployed with a substantial number of bugs, leaving users with the challenge of assuring availability while running fault-ridden programs. We describe Geodesic Runtime, a fault-tolerant runtime environment that automatically corrects many common types of errors, including most memory leaks, memory overwrites, premature frees, and a variety of multithreading issues in deployed programs. For faults that cannot be automatically corrected an execution history is captured, allowing the failure to be played back without need to reproduce or interfere with the production machines. This talk will cover both technical details of internal algorithms and both synthetic and practical benchmarks.

Biography:

Michael Spertus is the Chairman and Chief Technology Officer of Geodesic Systems. His areas of interest include software fault-tolerance and memory management. He founded Geodesic Systems in 1992 and is an author of one of the early commercial C compilers for the IBM PC. He has a B.S and M.S in mathematics from the University of Chicago and did graduate work at Princeton, Berkeley, UCSD, and Stanford.