Performance Bugs

A performance bug is a minor glitch that does not alter the correctness of a program but does cause it to consume excessive resources. This talk begins with sketches of two tiny such bugs in large software systems. The next part of the talk surveys a variety of little mistakes that had big consequences in run time, memory usage or communication volume. Along the way, we examine experimental techniques for measuring the performance of software. The talk concludes with a systematic view of the topic, and suggestions for avoiding these insidious bugs.

Jon Bentley is a computer scientist at Avaya Labs Research. His research interests include programming techniques, algorithm design, and the design of software tools and interfaces. He is the author of three books: *Writing Efficient Programs*, *Programming Pearls* (two editions), and *More Programming Pearls*. He has written articles on a variety of topics, ranging from the theory of algorithms to software engineering. He received a B.S. from Stanford in 1974 and an M.S. and Ph.D. from the University of North Carolina in 1976, then taught Computer Science at Carnegie Mellon for six years. He joined Bell Labs Research in 1982, and retired in 2001 to join Avaya. He has been a visiting faculty member at West Point and Princeton, and has been a member of teams that have shipped software tools, telephone switches, telephones and web services.

Date: Thursday, December 15, 2011, 8:00 pm.
             (Refreshments and networking at 7:30 pm.)
Place: Small Auditorium, Room CS 105
             Computer Science Building, Princeton University
Information: Dennis Mancl (908) 582-7086, Jan Buzydlowski (610) 902-8343
On-line info: **www.acm.org/chapters/princetonacm**

All Princeton ACM / IEEE-CS meetings are open to the public. Students and their parents are welcome. There is no admission charge, and refreshments are served.

A pre-meeting dinner is held at 6:00 p.m. at Ruby Tuesday's Restaurant on Route 1. Please send email to **princetonacm@acm.org** in advance if you plan to attend the dinner.