Panel:

Arithmetic Interactions: from Hardware to Applications

Organized by:

David Hough, Sun Microsystems

The entire process of creating and executing applications that solve interesting problems with acceptable cost and accuracy involves a complex interaction among hardware, system software, programming environments, mathematical software libraries, and applications software, all mediated by standards for arithmetic, operating systems, and programming environments. This panel will discuss various issues arising among these various contending points of view, sometimes from the point of view of issues raised during the current IEEE 754R standards revision effort.

Panelists:

- Bill Hay, IBM: Compiler Issues.
- Jeff Kidder, Intel: Tightening 754's specifications: Underflow and NaN.
- Jason Riedy, University of California, Berkeley, Dept. of EECS: Language-neutral formal tools to specify floating-point semantics.
- Guy Steele, Sun Microsystems: Against modes, flags, and traps. In favor of overflow and underflow symbols. Why NaNs are inadequate.
- Jim Thomas, Hewlett-Packard: Floating point and language standards.