

## **PANEL: HOT NEW TRENDS IN VERIFICATION**

**Chair:** James Rowson - Alta Group/Cadence Design Systems, Inc., Sunnyvale, CA

**Organizers:** N. Collins, R. Goering

Verification is an increasingly important design activity. As gate counts grow larger and integrated circuit complexity increases, design challenges are greater than ever. Traditional verification approaches -- logic simulation, specifically -- aren't effective or particularly accurate. For example, the time and effort required to perform functional and timing simulation is making it an impracticality. In addition, designers are utilizing more and more existing intellectual property which enables design reuse and helps reduce implementation time. Verifying existing intellectual property creates another problem -- the large number of simulation vectors.

Verification has now become the biggest obstacle to finishing a design.

Today's design teams are adopting new techniques, including cycle-based simulation, formal verification and logic emulation, to ensure design accuracy and time-to-market success. New design techniques require new design methodologies and design styles, which lead to fundamental changes in the way electronics products are being designed.

Following a short tutorial by Dr. Alberto Sangiovanni-Vincentelli, renowned expert and professor computer design at the University of California at Berkeley, this 90-minute panel will address hot new verification techniques, how they fit with existing tools, while contrasting the difference between these tools and more traditional design tools.

The panel, comprised of designers and EDA manufacturers, will describe how these new techniques are used in a real-world design environment and address where we go from here.

### **Panel Members:**

Anant Agarwal - Virtual Machine Works, Cambridge, MA

Willis Hendley - Sun Microsystems Computer, Chelmsford, MA

Isadore Katz - Chrysalis Symbolic Design, North Billerica, MA

Don McInnis - SpeedSim, Westford, MA

Patrick Scaglia - Cadence Design Systems, Inc., San Jose, CA

Alex Silbey - Silicon Graphics Inc., Mountain View, CA