Panel: DA Algorithms in Non-EDA Applications: How Universal Are Our Techniques?

Chair: Patrick C. McGeer - Cadence Berkeley Labs., Berkeley, CA
Organizer: Steve Trimberger - Xilinx, Inc., San Jose, CA

Many electronic design automation algorithms and techniques are concerned with solutions to intractable optimization problems. However, the world of intractable optimization problems is hardly limited to EDA. These algorithms and techniques are applicable in other areas as well. In this panel, electronic CAD people talk about new applications for the algorithms and techniques they used in electronic DA. The panel will begin with a full paper on Biological CAD (the problem of using CAD techniques for the design of pharmaceutical molecules, especially peptides), and will then continue with a survey of other areas, including railway scheduling and various optimization problems in finance. This panel will describe specific uses of these algorithms and will explore the larger question of the general applicability of the techniques currently in use in EDA. Most importantly, panelists will address the following question: do our algorithms for hard problems work efficiently because we understand ICs, or because we understand optimization problems?

Panel Members:

Erik Carlson - Prudential Bache Prudential Securities, New York, NY
Dave Hightower - AutoGate Logic, Inc., Fremont, CA
Ulrich Lauther - Siemens, Munich, Germany
Alberto Sangiovanni-Vincentelli - Univ. of California, Berkeley, CA