

Multilevel Optimization in VLSICAD

Monday December 3, 2001

- 8:30–8:45 *Check-In/Light Breakfast (Hosted by IPAM)*
- 8:45–9:00 *Welcome and Opening Remarks*
- 9:00–10:00 **Jason Cong** (UCLA)
Computational Challenges in Gigascale VLSICAD
- 10:00–10:30 *Break*
- 10:30–11:30 **Achi Brandt** (Weizmann Institute of Science)
Multiscale Optimization Strategies
- 11:30–12:00 **Ding-zhu Du** (University of Minnesota)
Guillotine Cut in Approximation Algorithms
- 12:00–1:30 *Lunch (hosted by IPAM)*
- 1:30–2:30 **Chris Walshaw** (University of Greenwich)
Multilevel Refinement for Combinatorial Optimisation Problems
- 2:30–3:00 *Break*
- 3:00–3:45 **Jacob White** (Massachusetts Institute of Technology)
Multiscale Algorithms for Electrical Performance Analysis of Interconnect
- 3:45–4:30 **Stephen Nash** (George Mason University)
Multigrid Algorithms for Discretized Optimization Problems

Tuesday December 4, 2001

- 8:30–9:00 *Continental Breakfast*
- 9:00–10:00 **Chandu Visweswariah** (IBM Watson Research Center)
Optimization Challenges in Transistor Sizing
- 10:00–10:30 **Martin Wong** (University of Texas, Austin)
The Floorplan Design Problem
- 10:30–11:15 *Break*

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- 11:15–12:00 **Michael Lewis** (College of William & Mary)
Levels of Resolution and the Optimization of Systems Governed by Differential Equations
- 12:00–1:15 *Lunch (hosted by IPAM)*
- 1:15–1:45 **Stephan Hartmann** (TU Berlin/ Cap Gemini Ernst & Young)
New complexity issues and algorithms on channel and switchbox routing
- 1:45–2:45 **Majid Sarrafzadeh** (UCLA)
SPS Project: Strategically Reconfigureable Systems
- 2:45–3:00 *Break*
- 3:00–4:00 **Bruce Hendrickson** (Sandia National Laboratory)
A Survey of Multilevel Combinatorial Methods in Scientific Computing

Wednesday December 5, 2001

- 8:30–9:00 *Continental Breakfast*
- 9:00–9:45 **George Karypis** (University of Minnesota)
Multilevel Algorithms for Hypergraph Partitioning Single and Multiple Constraints
- 9:45–10:30 **John Lillis** (University of Illinois at Chicago)
Topics in Middle-Down Placement
- 10:30–10:45 *Break*
- 10:45–11:30 **Lieven Vandenberghe** (UCLA)
Applications of Convex Optimization in Power and Ground Network Design and Wire Sizing
- 11:30–12:00 *Panel Discussion*
- 12:00–1:30 *Lunch and discussion*

