



We are pleased to invite you to attend

# **A Joint IFC, C2S2, and FENA Workshop on Advances in Chip Level Power and Thermal Management**



Monday, May 7, 2007 – 8:00 am to 4:45 pm



Klaus Advanced Computing Building, Room 1456  
266 Ferst Drive, Atlanta, GA 30332

*“Thermal and Power Management are becoming critical issues for integrated circuits. The purpose of this workshop is to  
(i) better define the origin and scope of the problem and  
(ii) identify and review progress to new solutions.”*

## **PRELIMINARY AGENDA**

- 7:30 – 8:00 Registration and Breakfast  
8:00 – 8:15 Welcome (Paul Kohl, Rob Rutenbar, Bruce Dunn)

### **SESSION 1: ADVANCES IN POWER MANAGEMENT**

- 8:15 – 8:40 Ben Beker, AMD, Electrical aspects of power delivery  
8:40 – 9:05 Mark Horowitz, Stanford  
9:05 – 9:30 Ken Sheperd, Columbia  
9:30 – 9:55 Tanay Karnik, Intel, Power management  
9:55 – 10:20 David Perreault, MIT, Power management  
  
10:20 – 10:45 *Break*

### **SESSION 2: THREE-DIMENSIONAL ELECTRONICS**

- 10:45 – 11:10 Sung Kyu Lim, Georgia Tech, “3-D ”  
11:10 – 11:35 Brian Black or T.M. Mak, Intel  
11:35 – 12:00 Kenny Bernstein, IBM  
  
12:00 – 1:00 *Lunch*

### **SESSION 3: ELECTRO-THERMAL MODELING AND ENERGY EFFICIENT DESIGN**

- 1:00 – 1:25 Kaushik Roy, Purdue, Electrothermal modeling of novel devices  
1:25 – 1:50 Marek Turowski, CFD Research Corporation, Multi-scale thermal simulations of 3D ICs: from full chip to nanoscale phonon transport  
1:50 – 2:15 Rajeevan Amritharaj, UC Davis, Energy harvesting for computations

### **SESSION 4: HOT SPOT THERMAL MANAGEMENT CHALLENGES**

- 2:15 – 2:40 Hendrik Hamann, IBM T.J. Watson, Thermal Management of Hot Spots  
2:40 – 3:05 Theo Borca-Tasciuc, RPI, Thermal Management Through Nanoscale Engineering  
  
3:05 – 3:30 *Break*

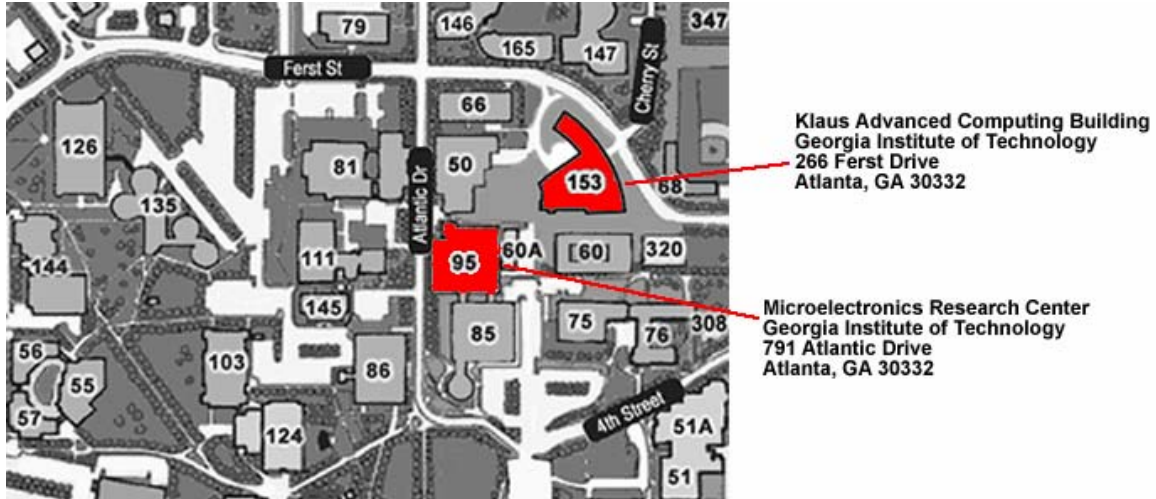
### **SESSION 5: EMERGING CHALLENGES**

- 3:30 – 3:55 Tom Kenney, Stanford/DARPA, Past programs and new directions  
3:55 – 4:20 Bruce Dunn, FENA, Embedded power generation  
4:20 – 4:45 Paul Kohl, Georgia Institute of Technology, Fuel cells

## MAPS AND DRIVING DIRECTIONS:

Click here for [Directions to Microelectronics Research Center](#).

Click here for [Directions to Klaus Advanced Computing Building](#)



## ACCOMMODATIONS:

GA Tech Hotel & Conference Center  
800 Spring Street NW  
Atlanta, GA, 30308  
Tel: (404) 347-9440 Fax: (404) 347-9088

Atlanta Renaissance Hotel  
590 W. Peachtree Street, NW  
Atlanta, GA 30308  
(404) 881-6000, (404) 815-5011, (404) 815-5010

For questions, please contact Leslie O'Neill, [leslie.oneill@mirc.gatech.edu](mailto:leslie.oneill@mirc.gatech.edu).

**We hope to see you there!**