

Workshop  
**IEEE 2005 Vail Computer Elements**

**Vail, Colorado**  
**June 26-29, 2005**

Sponsored by  
**IEEE Computer Society**

The following is the outline of sessions for the Vail 2005 workshop.

If you are interested in making a presentation, please contact the session chair.

For further information please contact:

Jim Hughes  
Phone: (763) 424-1676  
FAX: (763) 424-1776  
Email: [james\\_hughes@storagetek.com](mailto:james_hughes@storagetek.com)

## **Future Visions**

Program Chair: Allan Knies, Intel, [allan.knies@intel.com](mailto:allan.knies@intel.com)

Program Co-Chair: Tom Conte, NC State University, [conte@ncsu.edu](mailto:conte@ncsu.edu)

*[Sunday, June 26](#) - Social hour followed by dinner & Keynote Presentation.*

### **Intelligent DRAM - Challenges & Opportunities**

Speaker: Peter Hsu, Consultant, [peterhsu@cs.wisc.edu](mailto:peterhsu@cs.wisc.edu)

Keynote Chair: Bill Mangione-Smith, UCLA, [billms@ucla.edu](mailto:billms@ucla.edu)

*[Monday, June 27](#)*

Session 1

POWER & PACKAGING

Chair: Ray Barrett, Maxim, [rlb@design.mxim.com](mailto:rlb@design.mxim.com)

Chair: Bradley McCredie, IBM, [mccredie@us.ibm.com](mailto:mccredie@us.ibm.com)

1.1 Thermal Design: Workstations & Servers, [Andy Delano](#), HP

1.2 3D Packaging Trends, [Bob Patti](#), Tezzaron

1.3 Military & Space Power, [Jack McGirr](#), AKE

1.4 System Power & Cooling, [Mike Nealon](#), IBM

Session 2

Panel: BEYOND MOORE'S LAW

Chair: Carl Anderson, IBM, [cja@us.ibm.com](mailto:cja@us.ibm.com)

Chair: James Hughes, StorageTek, [James\\_Hughes@storagetek.com](mailto:James_Hughes@storagetek.com)

2.1 CMOS Technology Perspective, [Emmanuel Crabbe](#), IBM

2.2 Design Perspectives, [Stefan Rusu](#), Intel

2.3 Future Systems Perspective, [Rich Oehler](#), AMD

2.4 LP CMOS via Probabilistic Computing, Krishna Palem, GA Inst. of Tech

### Session 3

#### EMBEDDED PROCESSORS

Chair: Jim Slager, SuperH, [jslager@iname.com](mailto:jslager@iname.com)

Chair: Tom Conte, NC State University, [conte@ncsu.edu](mailto:conte@ncsu.edu)

3.1 New NAND Gate: Xtensa Processor, [Bill Huffman](#), Tensilica

3.2 PowerPC Architectural Advancements, [Pete Wilson](#), Freescale

3.3 3D Media Processor, [Gerrit Slavenburg](#), NVIDIA

*[Tuesday, June 28](#)*

### Session 4

#### CONSUMER ELECTRONICS

Chair: Michinori Nishihara, IBM, [michi@jp.ibm.com](mailto:michi@jp.ibm.com)

Chair: Yoshiaki Hagiwara, Sony, [yoshiaki.hagiwara@jp.sony.com](mailto:yoshiaki.hagiwara@jp.sony.com)

4.1 10 Gbps Wireless Millimeter Waves, [Takao Nagatsuma](#), NTT

4.2 Imager Sensor Technology, [Hirofumi Sumi](#), Sony

4.3 Next Generation DVD Codec, [Tetsuya Hara](#), Renesas Technology

4.4 Cell Processor Programming Features, [Barry Minor](#), IBM

### Session 5

#### PETAFLUPS SYSTEM TRADEOFFS PANEL

High Productivity Computing Systems

Chair: Alan Charlesworth, Sun, [alan.charlesworth@sun.com](mailto:alan.charlesworth@sun.com)

Chair: Robert Guernsey, IBM, [guernsey@us.ibm.com](mailto:guernsey@us.ibm.com)

5.1 IBM HPCS Panelist, [Balaram Sinharoy](#)

5.2 Cray HPCS Panelist, [Mike Parker](#)

5.3 Sun HPCS Panelist, [Brian O'Krafka](#)

5.4 SGI HPCS Panelist, [Steve Miller](#), SGI

5.5 IBM HPCS Panelist, [Jeff Burns](#), IBM

*[Wednesday, June 29](#)*

### Session 6

#### LOW POWER WIRELESS COMMUNICATIONS

Chair: Ed Callaway, Motorola, [ed.callaway@motorola.com](mailto:ed.callaway@motorola.com)

Chair: Bob Montoye, IBM, [montoye@us.ibm.com](mailto:montoye@us.ibm.com)

6.1 LP Rad Tolerant CPU, [Jody Gambles](#), U. of Idaho

6.2 LP via Scaling, [Leland Chang](#), IBM

6.3 Energy Scavenging Technologies, [Rajeevan Amirtharajah](#), UC Davis

6.4 Space Flight Telecommunications

[Chris Haskins](#) & [Wes Millard](#) , Johns Hopkins Univ.

## Contacts

### **Steering Committee:**

Jerry Merckel, University of North Florida

Jim Hughes, StorageTek

Frank Mikalauskas, Hewlett-Packard

John Polhemus, Consultant

Ron Bell, Math Star

Michinori Nishihara, IBM

### **Technical Committee Chair**

James Hughes

StorageTek

7600 Boone Avenue North

Minneapolis, MN 55428

763-424-1676

FAX: 763-424-1776

[james\\_hughes@storagetek.com](mailto:james_hughes@storagetek.com)

### **Technical Committee Vice Chair:**

Jerry Merckel

University of North Florida

College of Computing Sciences & Engineering

4567 St. Johns Bluff Road South

Jacksonville, FL 32224

904-620-1354

[gmerckel@unf.edu](mailto:gmerckel@unf.edu)

### **Program Past Chair & Co-chair:**

Tom Conte

NC State University

Campus Box 7911

Raleigh, NC 27695-7911

919-515-5067

[conte@ncsu.edu](mailto:conte@ncsu.edu)

### **Asia Pacific Chair:**

Michinori Nishihara

IBM

800 Ichimiyake, Yasu-cho

Ysu-gun, Shiga-ken, 520-2392, Japan

0775-87-4551  
FAX: 0775-87-0458  
[michi@computer.org](mailto:michi@computer.org)

**Finance Chair:**

John T. Polhemus  
Consultant  
3115 South York Street  
Englewood, Colorado 80110  
303-781-6190  
FAX: 303-781-9405  
[jtpolhemus@msn.com](mailto:jtpolhemus@msn.com)

**Registration Chair:**

Ron Bell  
Math Star  
5900 Green Oak Drive  
Minneapolis, MN 55343  
952-746-2224  
[ron.bell@mathstar.com](mailto:ron.bell@mathstar.com)

**Arrangements Chair:**

John M. Polhemus  
Lockheed Space Systems  
P.O. Box 179  
Denver, CO 80201  
303-971-7215  
[john.m.polhemus@lmco.com](mailto:john.m.polhemus@lmco.com)

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If you have any comments or suggestions regarding the Computer Elements web page, please send an e-mail to [gmerckel@unf.edu](mailto:gmerckel@unf.edu).