

IEEE Computer Society
2009 VAIL Computer Elements Workshop
June 21-24, 2009

The Next 40 Years

Program Chair: Bill Huffman, Tensilica, huffman@tensilica.com
Program Co-Chair: Steve Miller, NetApp, scm@netapp.com

Sunday June 21 5 PM Registration, Dinner and Keynote Presentation, **8:00 PM – 9:15 PM**

"IEEE Vail – The Last 40 Years"

John Polhemus, jtpolhemus@msn.com, & Ron Bell, ron.bell@brin.com

Monday June 22

Session 1: Processors
8:30 AM – 12:00 noon

- 1.1 Godson 3
- 1.2 Nhm-EX
- 1.3 Fusion Processor Challenges
- 1.4 Rainbow Falls

Chairs Yahya Sotoudeh, Intel, & Allan Knies, Intel

yahya.sotoudeh@intel.com allan.knies@intel.com
Weiwu Hu, ICT, www@ict.ac.cn
Jeff Baxter, Intel, jeff.baxter@intel.com
Sebastien Nussbaum, AMD, sebastien.nussbaum@amd.com
Ricky Hetherington, Sun, ricky.hetherington@sun.com

Session 2: Heterogeneous Multi-core & Graphics **Chairs Damir Jamsek, IBM, & Jay Fleischman, AMD**

1:00 PM – 4:30 PM

- 2.1 Anton Machine
- 2.2 Accelerated Computing
- 2.3 AMD Stream™ – Parallel Computing
- 2.4 Video/Graphics Computing

jamsek@us.ibm.com jay.fleischman@amd.com
Marty Deneroff, Deshaw Research, Marty.Deneroff@DEShawResearch.com
Chuck Moore, AMD, chuck.moore@amd.com
Michael Mantor, AMD, Michael.mantor@amd.com
Steve Parker, Nvidia, sparker@nvidia.com

Session 3: Disruptive Technology

8:00 PM – 10:15 PM

- 3.1 Silicon Photonics Interconnects
- 3.2 Moore's Law Means Multi-core
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- 3.3 Multi-core API & Compiler Technology

Chairs Kevin Kissell, Paralogos SARL & Jim Mitchell, Sun

kevink@paralogos.com jim.mitchell@sun.com
Ashok Krishnamoorthy, Sun, ashok.krishnamoorthy@sun.com
Niraj Srivastava, Interactive Supercomputing
nsrivastava@interactivesupercomputing.com
Hironori Kasahara, Waseda Univ, kasahara@waseda.jp

Tuesday June 23

Session 4: Consumer Electronics

8:30 AM – 12:00 noon

- 4.1 NHK Super Camera Technology
- 4.2 TOMBO x, y, z, t, λ Resolution
- 4.3 Low Power Mobile Multi-core
- 4.4 Real-world Robot Audition

Chairs Fumio Arakawa, Renesas & Hirofumi Sumi, Sony

arakawa.fumio@renesas.com Hirofumi.Sumii@jp.sony.com
Hiroshi Shimamoto, NHK Eng., shimamoto@nes.or.jp
Keiichiro Kagawa, Osaka Univ, kagawa@ist.osaka-u.ac.jp
Fumio Arakawa, Renesas Technology, arakawa.fumio@renesas.com
Kazuhiro Nakadai, Honda Research, nakadai@jp.honda-ri.com

Planning Session: IEEE Vail 2010, 4PM – 5:30 PM

All invited to participate.

Session 5: Green Systems & Power

8:00 PM – 10:15 PM

- 5.1 Open Source IP - Disruptive Innovation
- 5.2 Power Management for Green Computing
- 5.3 "Green" Computing

Chairs Ray Barrett, Allegro Micro, & Jesse Edwards, Global Cooling

raybarrett@comcast.net jedwards@globalcooling.com
Steve Wald, Acuitus, steve@acuitusengineering.co
Ray Barrett, VLSI Consultant, raybarrett@comcast.net
Frank Drews, Ohio State Univ., drews@ohio.edu

Wednesday June 24

Session 6: Multi-core, Safety & Security SW

8:00 AM – 12:00 noon

- 6.1 Itanium RAS Via Lockstep
 - 6.2 Transparent Multi-Core Crypto
 - 6.3 FireFly – New RISC ISA
 - 6.4 Fujitsu SPARC64 VII RAS
- Arrangements Chair **John M. Polhemus**
John.m.polhemus@lmco.com

Chairs Jim Hughes, Huawei N. America, & Yoshiaki Hagihara, AIP Labs

jhughes@huawei.com hagihara-yoshiaki@aiplab.com
Cameron McNairy, Intel, Cameron.mcnaury@intel.com
Christoph Schuba, Sun, christoph.schube@sun.com
Dave Baker, dbaker@alumni.utexas.net
Tsuyoshi Motokurumada, Fujitsu, motokurumada@jp.fujitsu.com
Registration Chair **Ron Bell** Finance Chair **John T. Polhemus**
ron.bell@brin.com jtpolhemus@msn.com