June 26, 1989 — Kresge Auditorium, Stanford University

HOT Chips

8:45–9:00 **Welcome and Opening Remarks**
Robert G. Stewart, General Chair

9:00–10:45 **New SPARC CPUs**
Chair: Dave Ditzel, Sun Microsystems

- **Cypress SPARC Program Overview**
  Raju Vegesna, Ross Technology
- **ECL SPARC Chip Set**
  Anant Agrawal, Sun Microsystems/Bipolar Integrated Technology
- **The Architecture of the P1—A 250 MHz SPARC in GaAs**
  Pete Wilson, Prisma

10:45–11:00 **Coffee Break**

11:00–12:30 **RISC CPU Updates**
Chair: Forest Baskett, Silicon Graphics

- **Fujitsu SPARC Chip Set Update**
  Rolando Carreras, Fujitsu Microelectronics, Inc.
- **L64815 MCT Overview**
  Douglas Grundman, LSI Logic
- **88K Family Update**
  Mitch Alsup, Motorola
- **MIPS RISC Architecture**
  John Mashey, MIPS Computer
- **Clipper Update**
  Harlan McGhan, Intergraph

12:30–1:30 **Lunch & Walkabout Stanford Campus**

1:30–2:15 **Invited Speaker: Professor W. Kahan, UC Berkeley**
"Bumps on the Path to Floating Point Progress"

2:30–3:30 **New Processor Architectures**
Chair: Jack Grimes, MASS Microsystems

- **Intel i860 Million Transistor 64-bit Microprocessor**
  Les Kohn, Intel Corporation

3:30–4:00 **Soda Break**

4:00–5:30 **Floating Point Processors**
Chair: Dave Goldberg, Xerox Corporation

- **ABACUS 3170/3171 Single Chip FP Coprocessor for SPARC**
  Allen Samuels & Mark Birman, Weitek
- **The TMS390C602 SPARC FPU**
  Merrick Darley, Texas Instruments
- **L64814: LSI Logic's SPARC Floating Point Coprocessor**
  Peng Ang, LSI Logic
- **The MIPS R3010 FPU**
  Earl Killian, MIPS Computer

6:00–8:30 **Reception in Bowman Oak Grove near Tresidder Union**

Organizing Committee for the HOT Chips Symposium:

Dr. Robert G. Stewart, General Chair, Stewart Research Enterprises

Hasan Alkhatib, Registraton
Santa Clara University

Dave Ditzel, Program
Sun Microsystems

Martin Freeman, Treasurer
Philips Research Lab

Jack Grimes, Program
MASS Microsystems

Robert Hatch
Kaiser Electronics

Glen Langdon, TC Chair
University of California, SC

HOT CHIPS USA

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8:45–10:30 **New CISC CPUs**
Chair: Mark Horowitz, Stanford University

- **Motorola 68040 Introduction**
  Motorola Semiconductor
- **Intel's I486 Processor Architecture**
  John Crawford, Intel Corporation
- **Pipeline Control for a Single-Cycle VLSI Implementation of a Complex Instruction Set Computer**
  David R. Stiles & Harold L. McFarland, NexGen

10:30–10:45 **Coffee Break**

10:45–12:30 **Embedded CPUs**
Chair: John Wakerly, Stanford University

- **Intel's 960 RISC Family**
  Steve McGeady, Intel Corporation
- **Meeting the Embedded Challenge: National's NS32GX32, The New Generation**
  Jonathan Levy, National Semiconductor
- **AMD 29000 Update**
  Brett Stewart, AMD

12:30--1:30 **Lunch & Walkabout Stanford Campus**

1:30--3:00 **Graphics Coprocessors**
Chair: Jack Grimes, MASS Microsystems

- **The TMS34020 Graphics System Processor and the TMS34082 Floating Point Co-Processor**
  Mike Asal, Texas Instruments
- **Sun GX Graphics Workstations, The Standard for Graphics Performance from the Desktop to Powerful Deskside Systems**
  Curtis Priem, Sun Microsystems

3:00--3:30 **Soda Break**

3:30--5:00 **Panel Session: Compiler Issues with HOT Chips**
Chair: John Mashey, MIPS Computer

- **Tom Pennello, MetaWare**
- **Steve Johnson, Ardent Computer**
- **Steve Glanville, Silicon Valley Software Trio**
- **Michael Tiemann, Stanford University**

5:00 **Adjourn**

Program Committee for the HOT Chips Symposium:

Dave Ditzel and Jack Grimes, Co-Chairmen

Forest Baskett
Silicon Graphics, Inc.
Dave Goldberg
Xerox PARC
Mark Horowitz
Stanford University
John Mashey
MIPS Computer Systems
John Wakerly
Stanford University