

# ***HOT Chips V***

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*Stanford University, August 8-10, 1993*

## **Message from the General Chair of HOT Chips V**

In July 1989 the first Hot Chips Symposium was held. Inspired by the vision of Bob Stewart, this conference has grown in popularity and importance at a rate that few of us (Bob Stewart excepted) would have guessed. It is now among the most popular technical conferences in existence and one of the most fun.

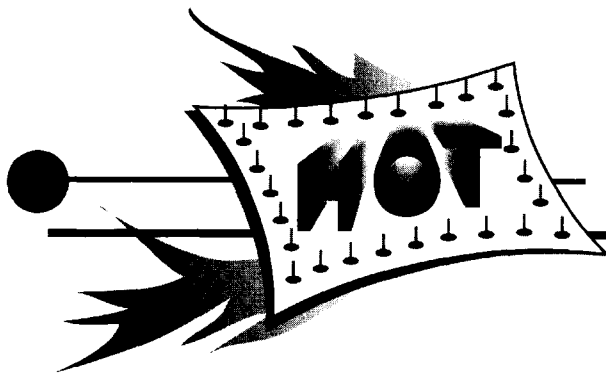
The conference attracts an incredible audience ranging from pioneers in the field (Maurice Wilkes and Gordon Moore, for example) to many of the hottest young designers in the country. The Hot Chips culture has encouraged interaction among speakers and attendees, and even permits (as Forest Baskett pointed out in 1991) booing. The excitement of new breakthroughs in chip design, good speakers, a great audience, and the open atmosphere has made Hot Chips into a conference unlike any other.

This year, Ruby Lee and Teresa Meng, the Program Co-chairs, together with the Program Committee have put together an outstanding set of talks. In addition to the usual contingent of processor talks, the committee worked hard to solicit a strong set of presentations in the video arena. The Monday night panel also promises to be special with Dave Liddle leading a discussion of what will the hot applications be for hot chips in the year 2000; this panel features some of the best visionaries around and should be exciting. As usual there will be a reception dinner between the last afternoon session and the panel; the Local Arrangements Chair promises an outstanding feast.

In addition to the Program Committee, several other people have given generously of their time to make Hot Chips V a success. Nam Ling handles publications, and makes sure that we have proceedings even though the speakers are late with their slides. Andy Goforth handles publicity getting the ads to appear, so the attendees know what dates to reserve. Martin Freeman watches over the books making sure that Hot Chips remains the best conference bargain in existence. This year, Cary Kornfeld has taken over local arrangements with Bob Stewart's assistance. Hasan AlKhatib, Glen Langdon, and Alan Smith have served as a helpful committee of advisors at large. Finally, all the participants of Hot Chips owe their gratitude to Bob Stewart whose inspiration for this conference and continued dedication are critical to keeping the unique spirit of Hot Chips alive and kicking.

Of course, we are always looking for people who will contribute to keeping Hot Chips such a great conference. If you'd like to help out on a committee or if you simply have a suggestion, let us know. We are always looking for new ideas to improve the conference.

John Hennessy  
General Chair  
HOT Chips V, 1993



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## **Message from the Program Co-Chairs of HOT Chips V**

Interest in the design and development of high-performance, highly-integrated chips continues unabated. While there is a constant roll-out of higher performance microprocessors, there is an increasing interest in more highly integrated chips, communications and multimedia information processing. This reflects current trends in the merging of computers with communications and entertainment, and in mobile distributed information processing.

There were many more abstracts submitted than we could possibly accept. This indicates an increasing interest in the conference, and it was difficult for the program committee to have to reject some excellent submissions. As usual, we encouraged designers to submit their latest chip and chip-related developments and tried to ascertain their degree of readiness for a Hot Chips presentation. However, life near the edge means that some talks may have to be withdrawn at the last minute.

This year's program starts with single chip RISC processor-systems from the Alpha, MIPS and PA-RISC lines. These combine into one chip what used to take several chips just a few years ago. Board-level integration was also the goal of the Pentium PCI chip-set. High-end processors are represented by both commercial projects like the PowerPC, SGI's TFP, Hitachi's PA-RISC, and MasPar's MP-2 chip, as well as some "glowing hot" bipolar and GaAs processor chips. In the multimedia processing arena, there are several very exciting chips in video processing, graphics processing and portable communications. These represent huge advances in performance, integration, or low power and cost. This year, we are pleased to have a session on design validation, acknowledging the essential efforts of often unsung heroes in complex chip developments. We also present a sample of interesting technological developments in areas like asynchronous design, low-power design, wave-pipelining and neural-net processing.

Many people have contributed to the success of this conference. First, we thank everyone who submitted an abstract to Hot Chips. We thank the speakers, panel moderator and panelists for their enthusiastic participation. As program chairs, we especially want to thank the program committee members for their hard work in soliciting, reviewing and selecting the papers. We also thank the organization committee, especially Martin Freeman, for their hard work in taking care of the details of the conference, so that we could concentrate on the program. Last but not least, we thank you the audience for your interest, and hope that you will have a great time at Hot Chips V!

Ruby Lee and Teresa Meng  
Program Committee Co-Chairs  
HOT Chips V, 1993