Hot Chips presents the latest and most ambitious chip developments from the world's top chip makers and emerging startups. This year is the twentieth Hot Chips and while we look back on many of the most exciting developments in the microprocessor and chip industry, we also look forward to even more innovative developments. This year we have an outstanding program of tutorials, technical presentations, keynote speeches and a notable panel discussion.

The tutorials led off with "High Bandwidth Memory Technology and Systems Implications" chaired by Chuck Moore and featuring Jerry Bautista of Intel, Craig Hampel of Rambus and Fritz Kruger of AMD. The second tutorial, chaired by John Nickolls entitled "Scalable Parallel Programming with CUSA" featured authors Ian Buck, Michael Garland, Patrick Legresley and Massimiliano Fatica of nVidia and Wen-mei Hwu of the University of Illinois. The first technical session, "Multi-core Technologies" chaired by Will Eatherton showcases papers by 3Leaf Systems, UC Berkeley and IBM. The first keynote, chaired by Christos Kozyrakis is entitled "Cars that Drive Themselves" by Sebastian Thrun of Stanford. The afternoon session, "Video and Media", chaired by Pradeep Dubey includes papers by Toshiba, UC Davis, NXP Semiconductor and AMD. The "Mobile Media Processing" session, chaired by Forest Baskett, features papers by Telegent, Audience and nVidia. This is followed by the session on Supercomputing chaired by Ralph Wittig with papers from IBM and D.E. Shaw. Following dinner in Dohrman Grove will be our panel chaired by Nick Tredennick entitled "Ready, Fire, Aim – 20 years of hits and misses at Hot Chips" with our selection of outspoken panelists Nathan Brookwood, Dave Ditzel, John R. Mashey, David Patterson, Howard Sachs and Michael Slater.

Tuesday begins with the FPGA session chaired by Krste Asanovic with papers from Xilinx, Altera and Maxeler. Following that is the PC Chips session chaired by John Sell featuring presentations from AMD, the Institute of Computing Technology of the Chinese Academy of Sciences and Intel. The second keynote, chaired by Forest Baskett is entitled "SunPower's History and Technology" by Richard Swanson. The following session on Networking is chaired by Jose Renau with papers from DS2 and Cisco. The session entitled "Visual Computing", chaired by Marc Tremblay includes papers by nVidia and Intel. The last session of the conference, entitled "Server Chips" chaired by Alan Jay Smith promises to be especially interesting and features papers by Intel, Fujitsu and Sun.

This outstanding selection of tutorials and presentations is the result of much hard work by the Program Committee led by Christos Kozyrakis and Jan-Willem van de Waerdt. They have done a great job in soliciting the papers, evaluating and selecting the best from the many high-quality submissions and then working with the authors in the various sessions to get the presentations ready. We appreciate the contributions of Krste Asanovic, Forest Baskett, Pradeep Dubey, Will Eatherton, Matt Farrens, Chuck Moore, John Nickolls, Jose Renau, Mitsuo Saito, Alan Jay Smith, John Sell, Marc Tremblay and Ralph Wittig. Two of these members, Chuck Moore and Jose Renau have been stricken by serious illness. We salute them here for their great contributions and keep them in our thoughts, wishing them a complete recovery.

The conference presentations have been distributed on 1 GB flash drives to all attendees and printed copies

were available if ordered at signup. The presentations are sometimes updated just before the conference which adds to the up-to-the-minute nature of this conference. These presentation updates will be available for download from the website using a password to be given to the attendees. Similarly, the tutorial presentation will be mounted on the website and made available by password to the tutorial attendees. This year we are again making video recordings of the tutorials and all sessions including the panel. These will be available on DVDs from Hot Chips the on-line store. The complete set sells for $795 and individual sessions and keynotes for $195 each.

All of the presentations from the last 19 years of Hot Chips have been collected onto an archival DVD which is being given to each attendee.

The Hot Chips conference would not be possible without the outstanding contributions and hard work of the members of the Organizing Committee. I would like to acknowledge the following members for their valuable contributions: Yusuf Abdulghani for implementing new technology for the website, the registration and submission software, and organizing the video production; John Sell for setting up the caterers and taking care of all food organization; Alexis Cordova for maintaining the website; Mike Sobelman for managing registration and dealing with the many questions that come up as attendees register; Lily Jow for maintaining finances and putting together the budget; Gordon Garb and Randall Neff for gathering all the presentations and getting them printed, and for making the archival DVD; Keith Diefendorff as vice chair, working across lines to make the conference successful; Lance Hammond for working with Stanford to reserve the Memorial Auditorium and providing the facilities, especially difficult this year due to renovation; Charlie Neuhauser for programming the flash drives and organizing the onsite volunteers, and to the volunteers themselves who provide so much assistance during the conference itself; Kevin Krewell for handling the publicity and providing an interface to the press to provide pre-conference publicity; Gail Sachs who acquired the shirts for committee members and the bags for attendees; Amr Zaky who worked with the sponsors to support the conference; and Allen Baum who along with Slava Mach produced the advertising for email and printed distribution. I also want to give thanks to the Steering Committee, Don Alpert, Lily Jow, Allen Baum, Pradeep Dubey, John Mashey, Howard Sachs and Alan Jay Smith and to our Founder, Bob Stewart.

We especially appreciate the contributions made by our sponsors, AMD, Intel, Rambus, Warthman Associates, Arithmatica, Berkeley Design Technology, Silminds, MicroMagic, the Multicore Association, Circuit Cellar, and the Embedded Microprocessor Benchmark Consortium. In addition to these our technical sponsors are the Technical Committee on Microprocessors and Microcomputers of the IEEE computer Society and the IEEE Solid State Circuits Society.

And last, I thank all of you, the attendees who support our conference. So we can continue to bring you the best program and conference experience, we solicit your feedback. Please fill out the evaluation forms and make your opinions known.

I hope you have a stimulating and enjoyable conference!

Don Draper