I want to let you know of some changes we have ahead for IEEE Micro. Since taking over as editor in chief, I’ve been mainly concerned with maintaining the high standards set by my predecessor, Pradip Bose. When I arrived, the magazine was undergoing extensive changes (including the outsourcing of some major tasks previously performed by the IEEE Computer Society staff), which delayed the Top Picks issue of 2007 by about five months. We’ve worked out the kinks in the new process, played catch-up, and are now delivering issues pretty much on time (although we are working to shave off another month in our delivery).

With that out of the way, we are ready to focus on improving our content. Micro is well positioned within the IEEE Computer Society, scoring high on the most important metrics, and we continue to deliver a mix of interesting articles on topics ranging from industry chips to far-reaching research ideas. However, we cannot stand still and must continually work to improve. One new development within the IEEE Computer Society is Computing Now (http://computingnow.computer.org), the web portal for the society’s 14 peer-reviewed magazines. Very soon, this site will feature some interesting content related to advanced processor design by IEEE Micro editorial board member Kevin Rudd, who is working hard as our representative on the Computing Now advisory board.

More and more online Micro-related content will appear in the year ahead. In terms of print issues, we have— with some hesitation—slightly changed the selection criteria for Top Picks, one of our most popular issues. We have incorporated “potential for long-term impact” as a factor, in order to capture those papers that we expect to influence the work of computer architects for years to come. We don’t expect this to make a huge difference in which papers get selected; we are still looking for those most likely to influence the computing industry. But perhaps a few bright ideas whose industry relevance is not immediately obvious but will take some time to germinate will be selected, exposed to industry architects through the issue, and ultimately have broad impact.

We have several other changes in the works, including some new departments to augment the excellent columns that have been running in Micro for many years, and the addition of new board members. We have excellent special issues coming and some strong general-interest articles in the queue. You, the reader, can contribute to Micro by submitting an article, proposing a special issue topic, or e-mailing me about what you think is best about Micro and what needs improvement.

Now here’s a brief introduction to the diverse set of articles in this general-interest issue. The first article, by Eric Li and his Intel colleagues, describes how video-mining applications (such as extracting highlights from a lengthy sports video) can be accelerated via a large-scale multicore architecture comprising 64 simple in-order cores with SIMD support and a banked shared L2 cache. The next article, by Avinash Karanth Kodi and Ahmed Louri, describes Optisim, a detailed system simulation methodology that permits performance and power optimization of optical interconnects in high-performance computing systems. Next, Shubhajit Roy Chowdhury and Hiranmay Saha describe the design of a fuzzy processor that they have implemented in an FPGA to provide early diagnosis of potentially critical medical conditions in patients—a function that will be especially useful in the rural areas of third-world countries, where physicians are scarce. Finally, the article by Junji Sakai and his colleagues at NEC presents a multitasking parallel method that uses asymmetric multiprocessing to provide performance guarantees for applications in high-end embedded appliances.

I always welcome your feedback at albonesi@cs.cornell.edu.

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