From the Editor in Chief

A Solid Past, A Vital Future

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...David Albonesi leaves IEEE Micro in great shape as he hands off the mantle of Editor in Chief to me. Indeed, I think that my main mission may be, “Don’t screw it up.” Under Dave’s leadership and that of his predecessor, Pradip Bose, IEEE Micro has addressed topics of importance to the community with a depth sufficient to be of interest to experts and a breadth sufficient to draw broad readership.

Objective evidence about IEEE Micro’s increasing import is provided by its impact factor, a “measure of the frequency with which the average article in a journal has been cited in a particular year or period.” IEEE Micro has seen a steady improvement in impact factor over the last few years and is now ranked #1 among the IEEE Computer Society magazines and #10 among all 125 IEEE periodicals. (For more detailed information on impact factor, please see http://thomsonreuters.com/products_services/science/academic/impact_factor.)

I think that the current Top Picks issue will continue IEEE Micro’s impact, with revised versions of the best papers from the major microarchitecture conferences. Guest editors Yale Patt and Onur Mutlu and their program committee have done a wonderful job in selecting 11 excellent papers on a variety of topics including voltage noise, accelerators, memory, caches, scheduling, and on-chip networks. These papers are not only interesting in themselves, but cover key topics and allow quick cramming for readers who have not been able to attend or keep up with all of the conferences. I must add that I had little to do with producing this issue. In addition to Yale, Onur, and the committee, David Albonesi very kindly kept the pipeline of issues in excellent shape while I have been coming up to speed. Indeed, the March/April issue on Hot Chips will also bear Dave’s imprimatur. I am grateful to Dave not only for managing these issues, but for his very patient and wise counsel in bringing me under his wing and involving me in many discussions and decisions.

As such, I am happy to report that both Dave and Pradip have agreed to remain on the Advisory Board, so IEEE Micro will continue to benefit from their wisdom. I am grateful to have both of them, along with an outstanding set of additional members on both the Advisory and Editorial Boards and an excellent publications team at the IEEE Computer Society.

A big part of keeping IEEE Micro important to the community is not only to recognize articles and topics of importance but also to recognize when topics are becoming important and to recruit leaders and visionaries to address those topics. Following in the Micro tradition, we will have three (nonconference) theme issues this year, with an outstanding team of guest editors.

For the May/June issue, guest editors Natalie Enright Jerger and Mikko Lipasti will examine “Systems for Very Large Scale Computing” with a set of articles examining microarchitectural characteristics of large-scale systems such as cloud computing, high-performance computing, and distributed computing, including very loosely coupled distributed systems like SETI@Home.

For the July/August “Big Chips” issue, Andrew Kahng and Vijayalakshmi Srinivasan will be guest editors for an issue examining increasing chip sizes—from CPUs to GPUs and other chips. The issue will feature articles that examine the impact of such big chips on a number of factors, including how chip area is allocated, and issues of power, density, packaging, cooling, reliability, system architecture, and more.

In September/October, David Brooks will be the guest editor for an issue on “CPU, GPU, and Hybrid Computing.” Such hybrid systems have become increasingly common in recent years, but appropriate architectural and programming models, ratios of computing elements, and the most appropriate computing elements (CPU, GPU [graphics processing unit], FPGA [field-programmable gate array], and so on) are still evolving, as are the workloads making use of such systems.

Please note that the Big Chips issue and CPU, GPU, and Hybrid Computing issue are still accepting submissions. For more information or to submit, please visit IEEE Micro at http://www.computer.org/micro.

In addition to all of these special issues, it is important that the broad community see IEEE Micro as a valuable
place to publish important work. With *IEEE Micro*’s growing stature and with the increasing selectivity of major conferences, I hope that we will be receiving submissions from many of you reading this.

However, we want to rely on more than hope and longer-term measures like impact factor to make sure that we are serving you well. To that end, we have developed a brief and anonymous 10-question survey (see http://www.surveymonkey.com/s/WZ2292C). This survey contains both questions specific to this issue (such as which of the Top Picks articles is your favorite) to broader questions about *IEEE Micro* and its direction. It should take less than a minute, and I encourage you to complete it.

We will post survey results on *IEEE Micro*’s new auxiliary site (https://sites.google.com/site/ieeemicro). This auxiliary site will also host additional surveys on future issues and topics. For example, there are many possibilities for future theme issues. One possibility is to revisit some of the historic themes. Another is to try different themes, such as memory technologies, speculative parallelism, security, virtualization, programming models, evaluation methodologies, IT views of microarchitecture, and others. I have ideas on these things, but would also like broader input from a survey.

The auxiliary *IEEE Micro* site with surveys will provide additional information as well. For example, the site provides historic themes via a history of all *IEEE Micro* issues since 2000, along with links to these historical issues in the IEEE Computer Society Digital Library. The site also hosts calls for papers, author information, short messages about recent *IEEE Micro* happenings, and more. Please visit early and often.

As suggested by the set of issues for 2011 and the myriad possibilities for future themes, our field remains vibrant, and the mission of *IEEE Micro* remains vital: as stated right on the cover, that mission is to be “the magazine for chip and silicon systems designers.” For that vitality to continue, we need continued strong input from the community in the form of papers, reviews, ideas, editing, and more. I look forward to serving as Editor in Chief and to working with and hearing from you.

Erik R. Altman
Editor in Chief
*IEEE Micro*