As I am writing this letter, the United States has just begun its celebration of Black History Month, the aim of which is to highlight the “the too-often neglected accomplishments of black Americans in every area of endeavor throughout our history.” In previous years, the history of computing community has not had much to contribute to this celebration. Until recently, our discipline has paid little attention to questions of race and ethnicity. This year, I am happy to say, things are different. The triple Oscar-nominated film *Hidden Figures*, based on the book of the same name by Margot Shetterly, has brought welcome and widespread attention to the stories of Katherine Johnson, Dorothy Vaughn, Mary Jackson, and the many other African American women who worked as human computers and computer programmers at the National Advisory Committee for Aeronautics (NACA) and the National Aeronautics and Space Administration (NASA). The contributions of these women were essential to both the Space Race and the development of the computing disciplines, and have been shamefully neglected. But as the article by Arvid Nelsen on “Race & Computing: the Problem of Sources, the Potential of Prosopography, and the Lesson of *Ebony* Magazine” so clearly reveals, the story of these NASA computers is only the tip of the iceberg in terms of African-American contributions to computing. In his close study of both archival and popular sources Nelsen demonstrates that, despite their almost complete invisibility in most of the history of computing literature, people of color were omnipresent in the actual history of computing. In the years between 1959 and 1996, for example, *Ebony* Magazine alone published 57 profiles of African Americans working in the electronics and computer industry in a broad range of occupations from computer operator to systems analyst to manager of sales for time sharing computing at General Electric. For each of these named individuals, there are certainly many, many more whose mere identities, much less their larger histories, remain to be established. To give just one example, we know almost nothing about the two African American men featured on the cover of this issue of the *Annals*, other than that they worked (most likely as engineers) at the Burroughs Corporation in the early 1960s. Their anonymity is a poignant reminder of both their vital presence in this history and the enormous amount of work that remains to be done. And as Nelsen’s article reveals, there are formidable barriers—practical and methodological as well as theoretical and conceptual—associated with doing this research. Nelsen, who for many years served as the archivist of the Charles Babbage Institute for the History of Computing, is a skilled researcher with intimate familiarity with the available primary sources, but even for him the work was time-consuming and painstaking. But if our discipline is to come to terms with the critical category of race—beginning with the hidden histories of people of color, but including as well the role of “whiteness” in shaping the dominant narratives in much of our histories, then we are going to need to do pursue the difficult path that Nelsen has described for us. Think of the similar challenges that historians of computing faced while contemplating the incorporation of gender as an analytical category. This too was an effort that began slowly and took decades to realize, but which has culminated in a dramatic and productive reshaping of our very conception of what are the fundamental questions in the history of computing. Consider, for example, the recently published research by *Annals* associate editor Marie Hicks, which demonstrates the central role of gender in the promising origins of but ultimately disappointing ending to the British computer industry in the mid-20th century. For Hicks, gender is central to her analysis, not a secondary curiosity. Similarly, we can expect that as we begin to incorporate race and ethnicity into our scholarship, we will discover new insights, methods, and perspectives that will radically reshape the focus of our discipline.

In his article “MCM on Personal Software,” Zbigniew Stachniak argues that the origins of the personal computer industry ought to be pushed back before 1975 (the date of the publication of Microsoft BASIC). In 1972 the Toronto-based company Micro Computer Machines began work on an Intel 8008 micro-processor...
based system that would come to be known as the MCM/70, which included both a custom-designed operating system and an APL programming language interpreter. Although MCM/APL, as the latter was called, allowed users to develop their own software for the MCM/70, the company soon realized that in order to achieve anything beyond a niche-market success it had to provide a higher level of software support. By the end of 1975, it was providing its customers with an application-grade word processor called TEXT/700. While MCM was committed to its original focus on users/programmers, its expanding software applications offerings marked the start of a process of reconceptualization of the personal computer user from software developer to software consumer (and owner). In his analysis of this largely forgotten history of MCM, Strachniak provides novel insights into the history of software, which in recent years has been developing into an important and productive subfield of our larger discipline.

In “Screen History: The Haeff Memory and Graphics Tube,” a relative horde of historians/participants—Jack Copeland, Andre Haeff, Peter Gough, and Cameron Wright—recount the story of Russian-American inventor A. V. Haeff’s invention of the “Memory Tube,” a form of CRT-tube based storage that superficially resembled the much more widely adopted Williams Tube but which differed significantly from it. The Haeff memory tube was first revealed in 1957, and received significant attention within the burgeoning computing community, and was implemented successfully by Jay Forrester’s team as part of Project Whirlwind. By the mid-1950s Haeff had developed his idea into the Memo-tron, which could be used to both store and display data, and in 1962 the engineer Robert Anderson at Tektronix developed a Haeff-tube based system into a CRT graphics terminal that became a massive commercial success.

Reference

Nathan Ensmenger is the editor in chief of IEEE Annals and an associate professor in the School of Informatics and Computing at Indiana University. Contact him at nensmeng@indiana.edu.

2017 B. Ramakrishna Rau Award
Call for Nominations

Honoring contributions to the computer microarchitecture field

New Deadline: 1 May 2017

Established in memory of Dr. B. (Bob) Ramakrishna Rau, the award recognizes his distinguished career in promoting and expanding the use of innovative computer microarchitecture techniques, including his innovation in compiler technology, his leadership in academic and industrial computer architecture, and his extremely high personal and ethical standards.

WHO IS ELIGIBLE? The candidate will have made an outstanding innovative contribution or contributions to microarchitecture and use of novel microarchitectural techniques or compiler/ architecture interfacing. It is hoped, but not required, that the winner will have also contributed to the computer microarchitecture community through teaching, mentoring, or community service.

AWARD: Certificate and a $2,000 honorarium

PRESENTATION: Annually presented at the ACM/IEEE International Symposium on Microarchitecture

NOMINATION SUBMISSION: This award requires 3 endorsements. Nominations are being accepted electronically: www.computer.org/web/awards/rau.

CONTACT US: Send any award-related questions to awards@computer.org.

www.computer.org/web/awards/rau