From the Editor's Desk

You might start reading this issue by turning to the Comments, Queries, and Debates department on the last page.[1] As described on the last page, an article published in these *Annals* in 2007[2] initiated a public discussion regarding the kinds of history different people like to read between one of our most venerated computer scientists, Donald Knuth, and one of our most venerated computing historians, Martin Campbell-Kelly. Knuth's recent lecture[3] also sparked a lively online discussion on the computing historians discussion list SIGCIS.org about who should be writing the kind of computing history Knuth likes to read.

The *Annals* seeks authors to write and publish both types of history mentioned by Campbell-Kelly—articles focusing on specific historic events or activities in computing history as well as broader articles examining the context and social impact of historic events and activities and how computer history has evolved. Our *Annals* authors include nonhistorian computing practitioners recounting observations and experiences from having lived through the events, professionally trained historians, and experienced amateur historians. The *Annals* has a mix of all these types, and this issue is a good example of that diversity.

One way to have more of the kind of history you like to read in the *Annals* is to submit a draft article or to suggest an article idea to us. The volunteer editors and reviewers will give you feedback that could help develop a draft into a piece published in the *Annals*. Over time, you might even join our volunteer community (we always need reviewers and authors). Some of our contributors were first noticed while in graduate school in history and related disciplines. Others, from the technical side of the computing world, started by submitting a draft anecdote to the *Annals*.

Speaking of volunteers, the *Annals* could not sustain itself without a dedicated and often long-serving team of volunteer editorial board members who work in conjunction with the IEEE Computer Society staff who execute the craft and mechanics of publishing. Martin Campbell-Kelly, who contributed the Comments article I mentioned earlier, has been a board member since the first *Annals* issue in 1979 (as has board member Brian Randell). The newest members of the board joined as of the immediately prior issue. With this issue, we bid goodbye to Alan Clements, who has retired from the board after long service. And members of the editorial board express appreciation to Lars Heide for his service as editor in chief.

David Walden is the acting EIC of IEEE Annals. *He retired from BBN in 1995 and has been an IEEE Computer Society volunteer in the area of computing history. See http:// walden-family.com/ieee/.*

About This Issue

In 1996 the Harvard historian of physics Peter Galison published what is generally considered to be one of the classic essays in the modern history of science. Its title was "Computer Simulation and the Trading Zone" and its subject the Monte Carlo techniques developed by John von Neumann for the purposes of studying the hydrodynamic phenomenon associated with thermonuclear explosions. But while the development of Monte Carlo techniques is widely regarded as a key moment in both the history of physics and computing, as well as a harbinger of a new mode of science based not on experimentation, but on computer simulation, very little was known about the details of the earliest implementation of the Monte Carlo algorithm.

In "Los Alamos Bets on ENIAC: Nuclear Monte Carlo Simulations, 1947–1948," Thomas Haigh, Mark Priestly, and Crispin Rope explore the development of the very first computer-based implementation of the Monte Carlo algorithm. Their article explores the evolution of the programming techniques that had to be developed to run this first example of what the authors call the "modern code paradigm" within the constraints of the original ENIAC hardware. Among other things, they highlight the crucial role of Klara von Neumann as a surprisingly central participant in what Peter Galison described as the "trading zone" of the early computer simulation laboratories.

Two of our other articles in this issue also deal with similarly unanticipated but ultimately influential uses of electronic computers. In his history of "COMIC: An Analog Computer in the Colorant Industry," David Hemmendinger explores the development of computational techniques for solving the problem of color matching. Although color matching might seem to the casual observer to be an obscure problem, it is in fact fundamental to a variety of industrial processes. The automation of color matching, first using special-purpose analog computers and then, by the late 1960s, general-purpose digital computers, was a key contribution of computer technology to seemingly unrelated areas of industrial manufacturing. Eduardo Perez Molina, in "The Technological Roots of Computer Graphics," uses patent records from the 1940s and 1950s to provide context for the revolution in computer graphics that began in the 1960s. Today, of course, the idea of the "graphical" interface is central to our understanding of what a computer is and is for, but this new paradigm required decades to develop and required the contributions of engineers and inventors at dozens of companies, from IBM to Eastman Kodak to RCA to ITT.

Finally, in our ongoing effort to expand the scope of the history of computing to encompass a truly

global perspective, the *Annals* is pleased to present Ramesh Subramanian's article on "Technology Policy and National Identity: The Microcomputer Comes to India." The emergence of India as a global power in computing is one of the most important developments of the late 20th century, and Subramanian's history of an indigenous microcomputer produced by the Hindustan Computers Limited in the late 1970s and early 1980s represents an important contribution to the literature.

In addition to these four articles, this issue includes a fascinating interview with Deborah Estrin, whose contributions to computer networking and mobile computing are widely recognized. Paul Ceruzzi in his Think Piece essay speculates about the missing histories of computing at the National Security Agency and other top secret agencies and provides a short review of the book *How to Wreck a Nice Beach* by Dave Tomkins. Former *Annals* EIC Tim Bergin performs a close reading of the March 1947 press release announcing the EDVAC II as a means of historicizing the perennial question, "What is a computer?"

Finally, *Annals* board member and noted historian of computing William Aspray reflects on the life and career of Michael Mahoney, one of the most influential and beloved scholars in our field. Mahoney, a historian of mathematics and computing at Princeton, was an erudite and insightful scholar and a kind and generous mentor and colleague. His presence in and contributions to our community are greatly missed.

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References and Notes

1. This department name was last used in the *Annals* in about 2002. We have brought it back for this issue.
2. M. Campbell-Kelly, "The History of the History of Software," *IEEE Annals of the History of Computing*, vol. 29, no. 4, 2007, pp. 40–51; www.computer.org/annals.
3. See http://kailathlecture.stanford.edu/2014KailathLecture.html. A more succinct statement of Knuth's view is available in an interview with him published last year, posted with permission of the publisher at http://computer.org/comphistory/othercs/k-d-histio.html.