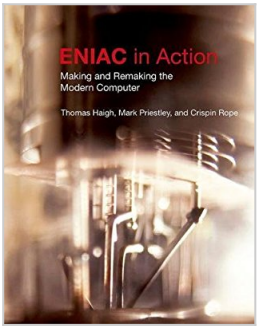

ENIAC in Action: Making and Remaking the Modern Computer (History of Computing)

By Thomas Haigh, Mark Priestley, Crispin Rope

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Conceived in 1943, completed in 1945, and decommissioned in 1955, ENIAC (the Electronic Numerical Integrator and Computer) was the first general-purpose programmable electronic computer. But ENIAC was more than just a milestone on the road to the modern computer. During its decade of operational life, ENIAC calculated sines and cosines and tested for statistical outliers, plotted the trajectories of bombs and shells, and ran the first numerical weather simulations. *ENIAC in Action* tells the whole story for the first time, from ENIAC's design, construction, testing, and use to its afterlife as part of computing folklore. It highlights the complex relationship of ENIAC and its designers to the revolutionary approaches to computer architecture and coding first documented by John von Neumann in 1945.

Within this broad sweep, the authors emphasize the crucial but previously neglected years of 1947 to 1948, when ENIAC was reconfigured to run what the authors claim was the first modern computer program to be executed: a simulation of atomic fission for Los Alamos researchers. The authors view ENIAC from diverse perspectives -- as a machine of war, as the "first computer," as a material artifact constantly remade by its users, and as a subject of (contradictory) historical narratives. They integrate the history of the machine and its applications, describing the mathematicians, scientists, and engineers who proposed and designed ENIAC as well as the men -- and particularly the women who -- built, programmed, and operated it.

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Editorial Review

Review

This is a fascinating historical recollection of the struggles, setbacks and triumphs inherent in the ENIAC project. The authors also give credit where credit is due, specifically to the women who were so critical to the success of the project. The first six professional programmers were all women. It is in no way an exaggeration to say that if you see a picture of the ENIAC that includes a man and a woman, the man is a prop and the woman is running the thing.
--Charles Ashbacher (*Mathematical Association of America Reviews,* April 7 2016)

ENIAC in Action:Making and Remaking the Modern Computer is a nuanced, engaging and thoroughly researched account of the early days of computers, the people who built and operated them, and their old and new applications....[It] sheds new light on women's role in the emergence of the new discipline of computer science and the new practice of corporate data processing. It turns out that history (of the accurate kind) can be more inspirational than story-telling driven by current interests and agendas....
--Gil Press (*Forbes.com*, April 2016)

Understanding how new technologies come about, and the creation of abstract ideas and design principles that far outlive rusting hardware, takes an understanding of history and context alongside technical material, admirably combined in *ENIAC in Action: Making and Remaking the Modern Computer* (MIT Press) by Thomas Haigh, Mark Priestley and Crispin Rope.

--Times Higher Education Supplement: "Summer Read 2016" choice by Ursula Martin, Professor of Computer Science, Oxford University

A particularly important, thorough, and balanced account, a major contribution to the history of early computing, and certainly required reading for any student of the subject.... *ENIAC in Action* is striking for the extreme care and thoroughness with which the authors have collected and interpreted historical evidence, and their effort both to avoid letting hindsight drive interpretation and to comprehend how the people involved understood the ENIAC and their relation to it at the time.
--Ernest Davis, Professor of Computer Science, New York University's Courant Institute. (*SIAM News*, October 2016)

"[ENIAC in Action is]...a more accurate, informative, and contextual history; a more historicallysignificant and important tale.... Ultimately, ENIAC in Action is an engagingly written andwell-organized revisionist history that also puts the technologyinto the history of computing. It is an essential contribution to theMIT Press History of Computing Series."
--*IEEE History Center* #102, November 2016

I have a shelf full of books about the ENIAC, the electronic computer whose completion in 1945 heralded the birth of the Information Age. But until now, none have captured the many facets of that machine and its place in history. Basing their book on a wealth of archival research, Haigh, Priestley, and Rope for the first

time tell this story in its fullest measure.

(Paul E. Ceruzzi, Chairman, Division of Space History, National Air and Space Museum, Smithsonian Institution)

ENIAC in Action delivers a breathtakingly original, approachable, and at times even funny reinterpretation of the dawn of computing. More than the story of one hugely important machine, told from technical, institutional, and personal perspectives, it illuminates the invention of the modern computer, the development of programming, the transformation of scientific practice around new technology, and the transition from the mathematical technology of World War II to the simulations culture of the early Cold War.

(Joseph November, Associate Professor of History, University of South Carolina)

This book should be read by anyone who wants to understand the initial evolution of our modern abstraction of what a computer is. The authors weave a convincing account of how ENIAC's architecture was originally developed and then continued to evolve. They combine a careful reading of the documentation and lab notebooks generated during ENIAC's development with a deep understanding of the architectural issues behind competing possible implementations.

(Mitch Marcus, RCA Professor of Artificial Intelligence, Department of Computer and Information Science, University of Pennsylvania)

Bad history makes false claims about firsts. Good history makes true claims about firsts. Great history, however, doesn't primarily concern itself with firsts at all (though it may necessarily deal with them as part of the subject matter), but redirects us to ask deeper, more meaningful questions. Great history, like the work of Tom Haigh, Mark Priestley, and Crispin Rope, goes beyond the baseline of facts, the high-school textbook version, into a whole new realm of interpretation.

(*Computer History Museum*)

...a particularly important, thorough, and balanced account, a major contribution to the history of early computing, and certainly required reading for any student of the subject.

(*SIAM News*)

About the Author
Thomas Haigh is Associate Professor of Information Studies at the University of Wisconsin--Milwaukee and Visiting Professor of History of Computing at Siegen University.

Users Review

From reader reviews:

Brandon Li:

In this 21st century, people become competitive in each and every way. By being competitive today, people

have do something to make these survives, being in the middle of the actual crowded place and notice by means of surrounding. One thing that oftentimes many people have underestimated the idea for a while is reading. Yes, by reading a guide your ability to survive raise then having chance to stay than other is high. For you personally who want to start reading any book, we give you this particular ENIAC in Action: Making and Remaking the Modern Computer (History of Computing) book as nice and daily reading publication. Why, because this book is greater than just a book.

Marcus Laws:

The actual book ENIAC in Action: Making and Remaking the Modern Computer (History of Computing) has a lot info on it. So when you make sure to read this book you can get a lot of gain. The book was published by the very famous author. Tom makes some research ahead of write this book. That book very easy to read you can get the point easily after reading this article book.

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That book can make you to feel relax. This particular book ENIAC in Action: Making and Remaking the Modern Computer (History of Computing) was colourful and of course has pictures on there. As we know that book ENIAC in Action: Making and Remaking the Modern Computer (History of Computing) has many kinds or category. Start from kids until adolescents. For example Naruto or Private investigator Conan you can read and believe that you are the character on there. Therefore , not at all of book tend to be make you bored, any it offers up you feel happy, fun and relax. Try to choose the best book for yourself and try to like reading that.

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