

Pieces of Iowa's Past, published by the Iowa State Capitol Tour Guides monthly, features historical facts about Iowa, the Capitol, and the early workings of state government. All italicized text/block quotes in this document are taken directly from historical publications with the actual spelling, punctuation, and grammar retained.

Iowa: Birthplace of the Computer



The birthplace of the world's first electronic digital computer was the basement of the physics building at Iowa State University. Iowa State University photo.

John Vincent Atanasoff invented the first electronic digital computer in the 1930s at Iowa State College (now known as Iowa State University).



Atanasoff was born on October 4, 1903, in Hamilton, New York, and raised in Brewster, Florida. John's father was an electrical engineer, and his mother was a mathematics teacher. Influenced by his parents, Atanasoff received his Bachelor of Science degree in electrical engineering from the University of Florida and earned a master's degree in mathematics at Iowa State

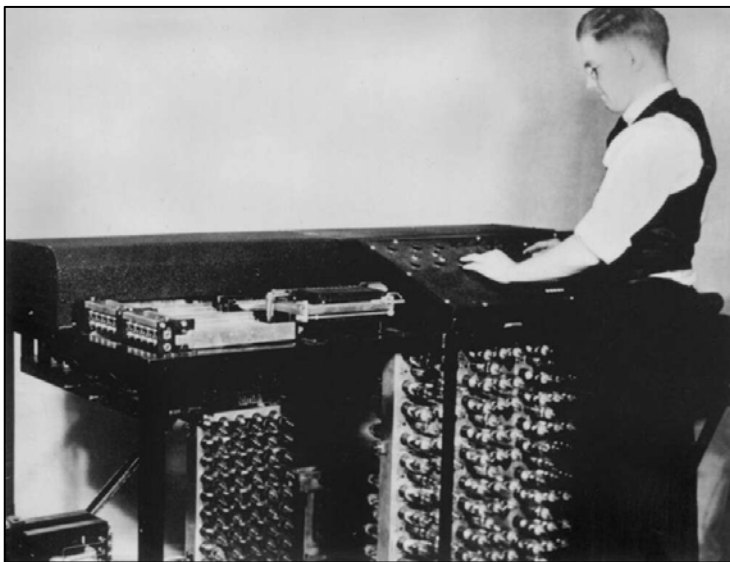
[John Vincent Atanasoff](#)

College. Upon completion of his doctorate in 1930 from the University of Wisconsin, Atanasoff accepted an assistant professorship at Iowa State College in mathematics and physics.

It was while working on his doctoral thesis that Atanasoff began to search for a faster method of computation to assist in his writing. With a grant of \$650 received from Iowa State College in September 1939 and the assistance of his graduate student, Clifford Berry, the Atanasoff–Berry Computer (ABC) was prototyped in November 1939. In 1940, Atanasoff left Iowa State for a wartime assignment with the U.S. Navy, turning away from the computer he invented. Neither he nor Iowa State College officials pursued a patent.



Young John Vincent Atanasoff standing in front of the blackboard. Iowa State University. Special Collections and University Archives photo.



Clifford Edward Berry stands next to the Atanasoff-Berry Computer (ABC). Berry worked with John Vincent Atanasoff to create the first digital electronic computer in 1939. Photo circa 1942. Iowa State University. Special Collections and University Archives photo.

In December 1940, Atanasoff met John Mauchly, an American physicist, at the American Association for the Advancement of Science in Philadelphia. In June 1941, Mauchly visited Atanasoff in Ames. Atanasoff and Mauchly discussed the prototype ABC, examined it, and reviewed Atanasoff's design manuscript. Mauchly visited Atanasoff multiple times and discussed computing theories but did not mention that he was working on a computer project himself. The Electronic

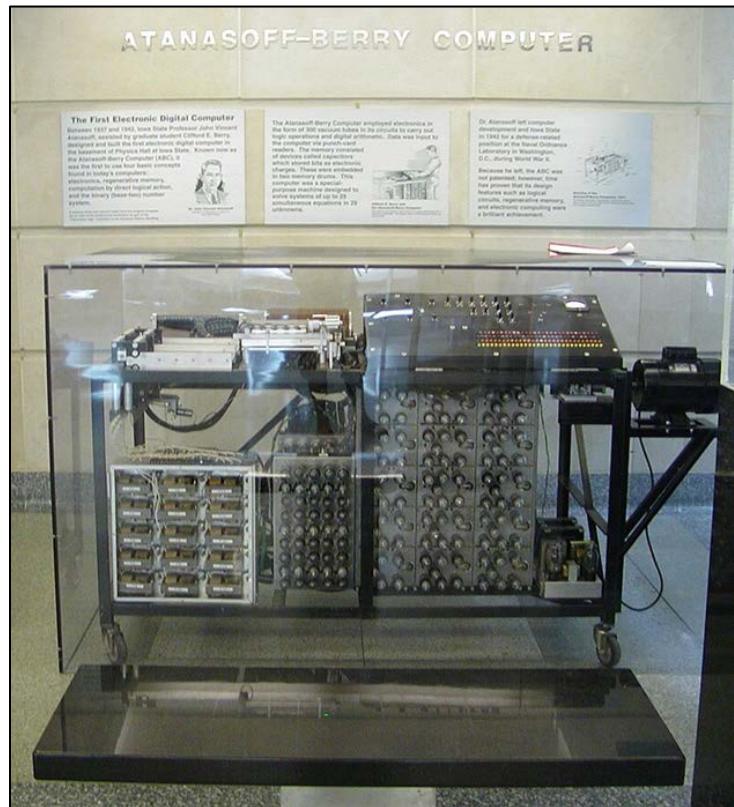
Numerical Integrator and Computer (ENIAC) was built in 1945 by John Mauchly and J. Presper Eckert of the University of Pennsylvania. Mauchly and Eckert patented the ENIAC as the first electronic digital computer.

Between 1954 and 1973, Atanasoff was a witness in numerous legal disputes being contested by the fast-growing computer industry to invalidate electronic computing patents issued to Mauchly and Eckert, stating that the ABC's revolving capacitor memory drum may have constituted prior art.

In the 1973 decision of *Honeywell v. Sperry Rand*, the judge found that "Eckert and Mauchly did not themselves first invent the automatic electronic digital computer, but instead derived that subject matter from one Dr. John Vincent Atanasoff." The federal judge named Atanasoff the inventor of the electronic digital computer.

In 1990, President George H. W. Bush awarded Atanasoff the United States National Medal of Technology, the highest U.S. honor conferred for achievements related to technological progress.

Atanasoff died at the age of 91 on June 15, 1995. He is buried in Pine Grove Cemetery in Mount Airy, Maryland.



Built in 1997, a replica ABC is on display in the lobby of the Durham Center at Iowa State University. Wikipedia photo.



In 1969, the newly built computer science building is named Atanasoff Hall, home to Iowa State's computer science department. Iowa State University photo.

Excerpt from Atanasoff Today:
Iowa State University's computer science department newsletter

ATANASOFF *history*

1930

John Atanasoff came to Iowa State as an Assistant Professor of Mathematics and Physics.

1939

Atanasoff, with his Ph.D. student Clifford Berry, built the first electronic digital computer, the ABC.

1940

Atanasoff leaves ISU to work with the Naval Ordnance Laboratory in Washington D.C.

1945

Ph.D. student and future founding Chair of the Computer Science Department, Robert Stewart, dismantled the ABC in the basement of the Physics Building to make room for new research projects.

1956

The Cyclone Computer was built and was intended to be a more general purpose computing machine. It was 10 feet tall, 12 feet long, 3 feet wide, and contained over 2,700 vacuum tubes.

1969

ISU establishes undergraduate major in Computer Science. The first class included 75 students enrolled in 17 courses.

1969

The computer science building is built and later named Atanasoff Hall.

1972

After a lengthy legal battle, Atanasoff gets credited with inventing the first electronic digital computer.

