

# Harry Huskey

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Harry Huskey and late wife Nancy at the Sunshine Villa Winter Ball in Santa Cruz, CA Dec. 8, 2011

**Harry Douglas Huskey** (born January 19, 1916) is an American computer designer pioneer. Huskey was born in the Smoky Mountains region of North Carolina and grew up in Idaho. He received his Bachelor's degree at the University of Idaho. He gained his Master's and then his PhD in 1943 from the Ohio State University on *Contributions to the Problem of Geocze*. Huskey taught mathematics at the University of Pennsylvania and then worked part-time on the early ENIAC computer in 1945.

He visited the National Physical Laboratory (NPL) in the United Kingdom for a year and worked on the Pilot ACE computer with Alan Turing and others. He was also involved with the EDVAC and SEAC computer projects.

Huskey designed and managed the construction of the Standards Western Automatic Computer (SWAC) at the National Bureau of Standards in Los Angeles (1949–1953). He also designed the G15 computer for Bendix Aviation Corporation, which could perhaps be considered as the first "personal" computer in the world.<sup>[2]</sup> He had one at his home that is now in the Smithsonian Institution in Washington, D.C.

After five years at the National Bureau of Standards, Huskey joined the faculty of the University of California, Berkeley in 1954 and then University of California, Santa Cruz from 1966. While at Berkeley, he supervised the research of pioneering programming language designer Niklaus Wirth, who gained his PhD in 1963. During 1963-1964 Prof. Huskey participated in establishing the Computer Center at IIT Kanpur and convened a meeting there with many pioneers of computing technology.<sup>[3]</sup> Participants included Forman Acton of Princeton University, Robert Archer of Case Institute of Technology, S. Barton of CDC, Australia, S. Beltran from the Centro de Calculo<sup>[4]</sup> in Mexico City, John Makepeace Bennett of the University of Sydney, Launor Carter of SDC - author of the subsequent Carter Report on Computer Technology for Schools,<sup>[5]</sup> David Evans of UC Berkeley, Bruce Gilchrist of IBM-SBC, Clay Perry of UC San Diego, Sigeiti Moriguti of the University of Tokyo, Adriaan van Wijngaarden of the Mathematisch Centrum in Amsterdam, Maurice Wilkes of Cambridge University, and Gio Wiederhold, also of UC Berkeley.

Prof. Huskey is now Professor Emeritus at the University of California, after his retirement at the age of 70 in 1986. In 1994 he was inducted as a Fellow of the Association for Computing Machinery.

### **Personal life**

Harry Huskey (left) at an outing to temples in Khajuraho, Madhya Pradesh

Huskey married Velma Roeth (died 1991) and had four children. In 1994, he married Nancy Grindstaff (died in 2016). He lives in Santa Cruz, California.

Huskey appeared with a junk dealer as the third pair of contestants in the 10 May 1950 episode of Groucho Marx's radio show *You Bet Your Life*. He was described as the designer of an "electronic brain". They selected the "state category" and missed the final question when they failed to identify Iowa as the state North of Missouri.<sup>[6]</sup>

### **Selected works**

- Huskey, H. D. *Harry D. Huskey: His Story*. BookSurge Publishing, 2004.
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In Copeland, B. J., *Alan Turing's Automatic Computing Engine*, chapter 13, pages 281–295. Oxford University Press, 2005.

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- (with Huskey, Velma R). *Lady Lovelace and Charles Babbage*. 1980 *Annals of the History of Computing* (Volume:2 , Issue: 4 )

### **Awards**

In 2013, the Computer History Museum named him a Museum Fellow "for his seminal work on early and important computing systems and a lifetime of service to computer education."<sup>[7]</sup>

References[edit]

1 Harry D. Huskey 2013 Fellow

2 "G-15 and Harry Huskey at the SWAC". Retrieved 2012-02-08.

3 "IIT CS". Retrieved 2012-02-08.

4 <http://unesdoc.unesco.org/images/0015/001564/156454eb.pdf>

5 Launor Carter: Educational technology--computer-related and people-related, SDC Corporation, January 1, 1969

6 "You Bet Your Life | Old Time Radio". Retrieved Dec 31, 2013.

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# **Santa Cruz computer pioneer Harry Huskey visits MakersFactory on 99th birthday**



By **Kara Guzman**, *Santa Cruz Sentinel*  
01/20/15

Makers Factory worker cuts birthday cake for computer pioneer Harry Huskey on his 99th birthday Monday. Earlier in his career, Huskey worked with Alan Turing, the designer of the machine that broke the German code during World War II and the subject of the movie, *The Imitation Game*. (Dan Coyro -- Santa Cruz Sentinel)

APTOS— Nearly 70 years after he helped design the first programmable computer in the country, Harry Huskey said he has only recently begun reflecting on his work.

“We didn’t have time to think,” said Huskey, now a resident at Santa Cruz’s Sunshine Villa retirement home, working on his autobiography. “We were just getting the current thing we were working on done. It just gradually grew on me, I guess, from the minor beginnings.”

During World War II, Huskey worked on the top secret ENIAC project at the University of Pennsylvania, designing a computer to calculate angles to fire artillery in specific weather conditions. In the 1950s, he helped design another early computer in England, with the mathematician Alan Turing, who is featured in the film “*The Imitation Game*.”

Now in a wheelchair, the UC Santa Cruz professor emeritus has slowed due to Parkinson’s, but is still passionate about technology’s frontiers. Monday, Huskey spent his 99th birthday touring Cabrillo College’s MakersFactory, a 3-D learning company.

Surrounded by family, including his wife, Huskey witnessed a 3-D printer create a life-sized plastic frog from a computer design.

“Something new in this world is what you saw. I think it represents a future in computing,” said Huskey, who was presented with a miniature 3-D printed model of the Bendix G15 computer he designed in 1954, the world’s first personal computer. For decades, Huskey kept a Bendix, which is the size of two refrigerators, in his Santa Cruz garage, before donating it to Washington’s Smithsonian Institution in 1988.

Dave Britton, MakersFactory president, said he was excited to have a visit from a revolutionary giant. Huskey created things completely new to the world, Britton said, and the “Makers Movement” is part of that.

To get to the next level, you stand on your predecessor’s shoulders, such as Huskey and Turing, Britton said. Technology now allows the creation real-life objects from virtual designs, and vice versa — scanning objects into computer data.

“You get a lot of arrows in your back if you’re doing something that’s never been done before, but there’s no greater joy than accomplishing that and pushing the boundaries,” Britton said.

Linda Retterath, Huskey’s daughter who lives in Santa Clara, was one of several family members who attended the celebration.

Her father was raised on an Idaho ranch and was the first in his family not only to attend college, but also receive a doctorate. She has learned from her father that the key to success is grit, she said.

“I remember my dad saying, there were a lot of people that were smarter than him, but he worked really hard,” Retterath said.

Huskey said turning failure to opportunity has been a common theme in his career. For example, while in graduate school, he initially failed his doctorate exam, forcing him to retool and examine deeper research. His new topic was so well-received, it earned him a fellowship and his first job with ENIAC, he said.

“Having that jump in career building turned me onto more important things later on and probably would not have had the opportunity if I had easily passed that test,” Huskey said.

As he moved between universities and labs in his 43-year career, Huskey said he’s watched a sea change in computing.

“It’s such a fast moving field that you don’t have time to take your breath, so to speak,” he said.

### **Harry Huskey**

1943: Earns doctorate in math from Ohio State University

1945: Works on top-secret ENIAC project at University of Pennsylvania, designing the U.S.’s first programmable computer.

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1947: Begins work at England’s National Physical Laboratory, building a test computer with famed mathematician Alan Turing.

1948: Begins designing and building the Standards Western Automatic Computer at the National Bureau of Standards in Los Angeles.

1954: Designs the Bendix G15, the world’s first personal computer, at UC Berkeley.

1963: Spends a year in India, bringing the country its first computer and teaching computing courses.

1966: Joins faculty at UC Santa Cruz, where he established the UCSC Computer Center.

1986: Huskey retires from UCSC at the age of 70.

2013: Huskey honored for lifetime contribution by Mountain View’s Computer History Museum.

For details: To read an oral history of Harry Huskey conducted by the Computer History Museum in 2006, visit [www.ittybittyurl.com/U9j](http://www.ittybittyurl.com/U9j).