

## ‘Codebreaker’: The tragic life of the man who founded computer science

By [Maria Santos](#)  
October 10, 2014

Alan Turing is a legend among scientists, and a tragic hero for gay rights activists. But often scientists know little of his personal history, while activists may not quite grasp the breadth of his contributions to science.

This fact, according to Patrick Sammon, executive producer of the award-winning drama-documentary on Turing’s life, “[Codebreaker](#),” inspired his vision for the documentary: a comprehensive look at an extraordinary life too few fully appreciate.

In 1936, while only in his twenties, Turing developed the concept that underlies every computer. He posited the idea of a machine—now known as a “Turing machine”—that could solve any problem, expressing them as symbols on a tape.

Time Magazine, when they [named](#) Turing one of their 100 people of the 20<sup>th</sup> century, wrote, “The fact remains that everyone who taps at a keyboard, opening a spreadsheet or a word-processing program, is working on an incarnation of a Turing machine.”

Turing went on to break the critical naval Enigma code used by German U-boats in World War II, facilitating the defeat of the Nazis. He pioneered the concept of artificial intelligence, and is often credited with developing chaos theory.

But, for Turing’s native England at the time, all these contributions to his country could not absolve him from the crime of his sexuality.

When Turing reported a robbery in his home, a police investigation ended up uncovering his affair with a young man. They arrested and prosecuted Turing for gross indecency, under the [same law](#) for which Oscar Wilde had been arrested years before.

While it was a dangerous time for all gay men in England, the documentary also references the British government’s fear that a homosexual person who knew as much classified information from the war as Turing did was a dangerous liability. Turing had worked at England’s secretive [Bletchley Park](#) during the war—in fact, some government files regarding Turing and his work remain classified.

Turing was ultimately given a choice between a year in prison, and chemical castration. For reasons still unknown—perhaps because he did not understand the consequences of the relatively new procedure—Turing chose castration.

The castration, which amounted to taking large amounts of estrogen and eliminating his testosterone, would have produced intense physical and mental alterations in the scientist, including growing breasts.

Within a year, Turing killed himself by cyanide poisoning. He left an apple by his side, but no note. He was forty-one years old.

Sammon's film, which was screened at the Cato Institute Tuesday evening, does an excellent job of balancing the weight of Turing's personal tragedy with the significance of his professional accomplishments. It is told partly through interviews with people who knew or studied Turing and his work, and partly through dramatized conversations between Turing and his psychologist and close friend, Franz Greenbaum.

The documentary interweaves acted scenes, interviews with Turing's coworkers and family, commentary from technology experts, and touching personal anecdotes from people like the daughters of Greenbaum, recalling the troubled last days of their father's friend.

After the screening, Sammon took questions from the audience. He remembered how, ten years ago, he saw Turing's name in a Smithsonian exhibit on the history of computers and was immediately drawn to his story, despite his lack of scientific background.

The documentary leaves you with a sense of the great loss of Turing's life, and the cruel policies that contributed to it. And whichever aspect draws you primarily to his story—his science or his downfall—both are worth remembering.

Codebreaker is available on [iTunes](#), and may be shown at screenings for [academic institutions](#) and [other venues](#).

A dramatized movie about Turing starring Benedict Cumberbatch, "[Imitation Game](#)," will also hit U.S. theaters in November.