



Women Who Won the Turing Award: The Turing Award, recognized as the "Nobel Prize of Computing" is an annual award given by the Association for Computing Machinery (ACM) for "major contributions of lasting importance to computing." First awarded in 1966, the first woman to be awarded a Turing Award is France Allen in 2006. As of today of 72 Turing Award winners, three of them are women: France Allen (2006), Barbara Liskov (2008), and Shafi Goldwasser (2012, co-winner).

Source: AM Turing Award, [Website](#)

Nº1



**France Allen
2006 Winner**

"For pioneering contributions to the theory and practice of optimizing compiler techniques that laid the foundation for modern optimizing compilers and automatic parallel execution."

[Read more](#)

Recent News: Passed away in 2020 at the age of 88; [Obituary](#)

Nº2



**Barbara Liskov
2008 Winner**

"For contributions to practical and theoretical foundations of programming language and system design, especially related to data abstraction, fault tolerance, and distributed computing."

[Read more](#)

Recent News: [Interview](#) with Dr. Liskov in 2019

Nº3



**Shafi Goldwasser
2012 Co-winner**

"Along with Silvio Micali, for transformative work that laid the complexity-theoretic foundations for the science of cryptography, and in the process pioneered new methods for efficient verification of mathematical proofs in complexity theory."

[Read more](#)

Other Women Computer Scientists You Should Know About:

[Ada Lovelace](#) (1815-1852)
[Grace Hopper](#) (1906-1992)
[Katherine Johnson](#) (1918-2020)

[ENIAC Women Programmers](#)
[Jean E. Sammet](#) (1928-2017)
[Steve Shirley](#) (1933-)

[Margaret Hamilton](#) (1936-)
[Mary Allen Wilkes](#) (1937-)
[Adele Goldberg](#) (1945-)

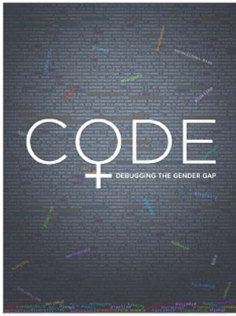
**...and many more! Check out the article
"The Secret History of Women in
Computing" (NYT Magazine, 2019)!**



Movies/Documentaries

-Source: IMDB

№1



CODE: Debugging the Gender Gap (2015)

"Women and girls in computing science discuss the lack of diversity and gender equality in the industry and strategies to change this."

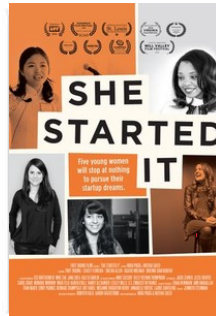
№2



Code Girl (2015)

"Join high school aged girls from around the world as they try to better their community through technology and collaboration in this thrilling, heartfelt documentary"

№3



She Started It: A Documentary on Women Tech Founders (2016)

"An award-winning documentary that provides a rare look in the lives of five ambitious young women entrepreneurs who will stop at nothing to pursue their startup dreams."

№4



The Queen of Code (2015)

"Tells the story of Grace Hopper: mathematics professor and US Navy Admiral....She was like an Edison or a Turing, yet she's not as widely known..."

Podcasts

№1



NPR Planet Money: When Women Stopped Coding (Episode 576)

Focuses on what happened in 1984 that made many women give up on computer science

№2



Women in Tech Podcast, hosted by Espree Devora (Website)

Features inspiring women in tech from engineers, founders, investors, UX/UI designers, and journalists

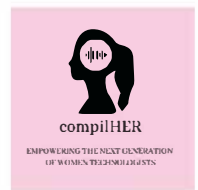
№3



Witty: Women in Tech Talk to Yaz (Website, Spotify)

A weekly podcast where women leaders in technology share their stories

№4



CompilHER: Empowering the Next Generation of Women Technologists (Website, Spotify)

A recently started podcast by and for women in tech; Run by college students!

Organizations

Nº1

Nº2

Nº3

Nº4



AnitaB.Org ([Website](#))

Annual Grace Hopper Celebration for Women in Computing; Scholarships available to cover conference fees

Read about Hamilton's attendance in [2013](#), [2017](#), and [2018](#).

Girls Who Code ([Website](#))

Internship and volunteer opportunities available for college students; Free summer immersion and after-school programs for teen girls

[Read](#) about a Hamilton alumni involvement.

Black Girls Code ([Website](#))

Workshops and hackathons for young and pre-teen girls of color opportunities to learn technical skills

CRA-WP ([Website](#))

[DREU](#) summer research opportunity for women and other underrepresented CS undergrads; Mentoring and scholarships available to encourage women computer scientists in research and academia

Check out more organizations [here](#). Other resources you can check out are "Women of Silicon Valley" ([Medium](#)) and "helloMayuko" ([YouTube Channel](#)).

**Hamilton Alumni in Perspective >>
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Hamilton Alumni in Perspective

Emily Tompsett '13, M.Ed.

I graduated from Hamilton in 2013 and have been teaching math and computer science since then. I currently teach precalculus, AP Computer Science, and a post-AP Data Structures class at Montclair Kimberley Academy. I also direct the a cappella group, coach the mock trial team and run our World Leadership in Tanzania program. I got my M.Ed. at Boston University in 2015. I took my first programming course during my first semester at Hamilton sort of on a whim. I planned to study Math and become a High School teacher but my advisor told me I might enjoy CS, so I tried it. I learned to enjoy it pretty quickly - but it was always a challenge to me. I definitely had moments where I felt like I didn't belong; I didn't learn everything as quickly as some of my classmates, or know as much about CS in general as they did. I made a decision that I was going to persevere and am glad I did. My proudest moment was when I finished my compiler for Professor Bailey's Compilers course my senior year. Getting to the end of that semester-long project with a thorough understanding of how a compiler works and with the knowledge to build one myself was thrilling.



I think back to that class every year when I teach about the Java compiler in AP Computer Science. I am now teaching the subjects that I struggled with as a student, I've worked hard to master the material and have helped countless students learn to persevere as well. The best piece of advice I can give is to persevere when you find something you are passionate about. But in order to be passionate about something you have to start, which is often the hardest part. There is a lack of representation in the computing fields and that can lead women and underrepresented students to feel like they won't or don't belong. There is a plethora of research in secondary and post-secondary education about the importance of belonging in the school community. It must extend to the subject as well! Students have to see themselves as a Computer Scientist, like students see themselves as Historians and Biologists. I've started targeted outreach at my school to women and students of color who would thrive in CS, and slowly, we are seeing progress. Mentorship and guidance are key, when someone feels seen and understood they are more likely to persevere and thrive.

If anyone is interested in pursuing a career in teaching CS and would like to chat, I'm happy to help!

Minh To '19

I am a Software Engineer at BlackRock, with a focus on front-end web development (React/Redux framework). I have always enjoyed problem solving and took Computer Science in high school. I thought I was just taking these classes for "fun". But it was not until my college counselor pointed out that I realized this was what I wanted to pursue in college and possibly for my career.

Transitioning to taking Computer Science in college was difficult because I was new to the setting. My first class at Hamilton was Data Structures. However, it was intimidating for my freshman self because I was surrounded by upperclassmen, who were much more comfortable and familiar with the curriculum and the classroom dynamic. I was one of the very few women of color (if not the only one) in the class. I didn't have the confidence in myself, and I thought I wasn't doing well enough compared to my classmates, which made it hard for me to keep up academically. What kept me going was my curiosity, passion for problem solving, and some encouragement from my professor. By the end of the semester, I had slowly built a momentum, and things started to click for me. I still face imposter syndrome whenever I transfer to a new environment. I overwork myself to "prove" that I deserve to be where I am, and that I am good enough. In a way, it pushes me to keep learning and growing. However, it can be taxing and anxiety-inducing for my mental health, so that's something I had to learn to manage.

So just take a step back, take a deep breath, and keep doing what you're doing, and over time, things will work themselves out. Experience is super important and relevant. Keep being active in CS-related activities. Participate in challenges and hackathons. Reach out to faculty members and peers for interview prep. Technical interviews can be daunting, but all it takes is practice.



Hamilton Alumni in Perspective

Leanne Hirshfield '02, Ph.D.

I am an Associate Research Professor at the Institute of Cognitive Science in University of Colorado Boulder. I am also a Senior Personnel and Co-lead of the NSF Institute on Student AI-Teaming at UC Boulder. I received my Ph.D. in Computer Science from Tufts University in 2009 after completing my undergraduate and M.S. degrees in Computer Science at Hamilton College and the Colorado School of Mines respectively.



My research explores the use of non-invasive brain measurement to passively classify users' social, cognitive, and affective states in order to enhance usability testing and adaptive system design. I focus my research on individual and team-level performance. I work primarily with functional near-infrared spectroscopy (fNIRS), a relatively new non-invasive brain imaging device that is safe, portable, robust to noise, which can be implemented wirelessly; making it ideal for research in human-computer interaction. The high density fNIRS equipment in my lab provides rich spatio-temporal data that is well suited as input into deep neural networks and other advanced machine learning algorithms. Feel free to check out my [lab website](#) and read about my role in the [new AI institute](#) that received a \$20 million investment from the National Science Foundation.

My advice to students would be to embrace your natural skillsets and always follow the topics and areas that excite and motivate you. Computer science is no longer a field composed primarily of single 'coders' sitting alone at their computers for hours/days at a time. It's no longer just about coding. Many of the most successful (and the most fulfilled) CSers that I know are those that embrace a number of skillsets (strengths in writing, public speaking, strengths working in teams, emotional intelligence) while drawing from an interdisciplinary knowledge-base.



Artists: Lidia Tomashevskaya, Thandiwe Tshabalala, Camila Rosa, Xu Hui, Karina Perez, Joana Neves, Genevieve B, Juliette Brocal
Feb 2019. Find more details about the poster [here](#)