



Philadelphia Section

# GRACE HOPPER

## IEEE COMPUTER SCIENCE ACHIEVEMENT AWARD

**Invention of the computer compiler, COBOL Language and Standards, 1952**

**Grace Brewster Murray Hopper** was an American Computer Scientist, (b 12/09/1906 - d 01/01/1992). She was a pioneer of computer programming and was one of the first programmers of the Harvard Mark I computer, Grace invented a tool she coined a **COMPILER**. She popularized the idea of machine-independent programming languages, which led to the development of COBOL, an early high-level programming language still in use today. She developed the implementation of standards for testing computer systems and components, most notably for early programming languages such as FORTRAN and COBOL. Grace Hopper coined the expression computer "bug" for program glitches. She retired from the Navy as a Rear Admiral. Grace worked on many committees and was often referred to as "Amazing Grace".



COMPUTER SCIENCE

April 2021



IEEE Philadelphia Affinity Group

THE MATHEMATICS, CIVICS AND SCIENCES  
CHARTER SCHOOL OF PHILADELPHIA, INC.  
*Science & Japan, Science and Civics, Mathematics & Civics*

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## GRACE HOPPER

188 COMPUTER SCIENCE ACHIEVEMENT AWARD

awarded to those computer scientists, engineers, technologists and students who

Grace Brewster Murray Hopper was an American computer scientist, mathematician, and a pioneer in the field of computer science. She was the first to coin the term "debugging" in reference to a malfunction in the Mark II computer. She was also the first to use the term "computer virus" in reference to a program that can replicate itself. She was the first to use the term "computer network" in reference to a system of computers that can communicate with each other. She was the first to use the term "computer security" in reference to the protection of computer systems from unauthorized access. She was the first to use the term "computer ethics" in reference to the moral principles that govern the use of computing technology. She was the first to use the term "computer law" in reference to the legal issues that arise from the use of computing technology. She was the first to use the term "computer education" in reference to the teaching of computer science to students. She was the first to use the term "computer research" in reference to the investigation of new computer technologies. She was the first to use the term "computer development" in reference to the creation of new computer programs. She was the first to use the term "computer application" in reference to the use of computer technology in a specific field. She was the first to use the term "computer innovation" in reference to the development of new computer technologies. She was the first to use the term "computer progress" in reference to the advancement of computer science. She was the first to use the term "computer achievement" in reference to the accomplishments of computer scientists. She was the first to use the term "computer excellence" in reference to the highest quality of computer science. She was the first to use the term "computer greatness" in reference to the most significant contributions to computer science. She was the first to use the term "computer legacy" in reference to the lasting impact of computer science on society. She was the first to use the term "computer future" in reference to the potential of computer science in the years ahead. She was the first to use the term "computer hope" in reference to the optimism that computer science will continue to advance and improve the world. She was the first to use the term "computer dream" in reference to the vision of a world where computer science is used to solve the most pressing problems of humanity. She was the first to use the term "computer vision" in reference to the ability to see the world through the eyes of a computer. She was the first to use the term "computer vision" in reference to the ability to see the world through the eyes of a computer.

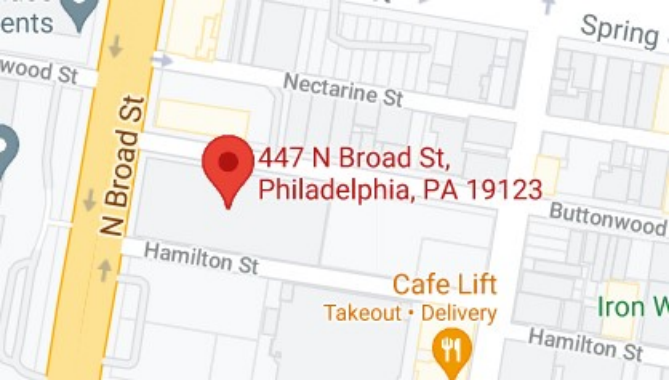
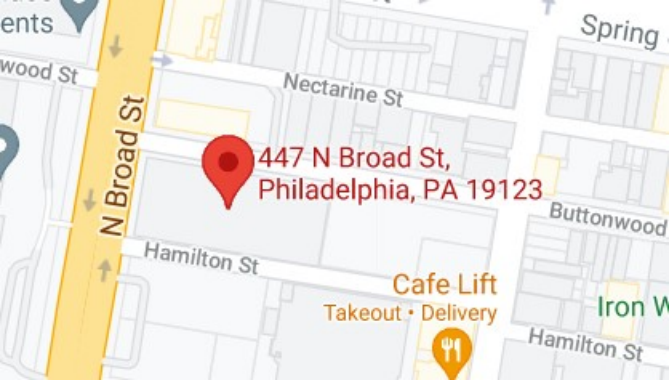


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## **Project Proposal**

Created from email and remote meeting with Kate McDevitt on 6/30/21

Submitted by the Institute of Electrical and Electronics Engineers, Philadelphia Section

### **Achievement Recognition Sidewalk Plaque**

Grace Murray Hopper invented the Compiler in 1952 which is a computer program that translates computer code written in our programming language into another language.

In 1949, she joined the Eckert–Mauchly Computer Corporation located at Broad and Spring Garden Streets. She was part of the team that developed the *UNIVAC I* computer.

The proposed sidewalk plaque will recognize her work and is fitting to be placed in front of the Mathematics, Civics, and Sciences Charter School along North Broad Street. The location is also near where she once worked.

### **Location Details**

The encroachment location is the sidewalk 447 North Broad Street, Philadelphia, PA 19123 (GPS coordinates 19123, 39.9613671,-75.1609546). The plaque will be inset into the sidewalk concrete, flush with the surface.