



## E-Newsletter | April 2016

### Nuclear Physicists

In the twenty-first century, we often hear how important it is for our country's youth, and young women in particular, to study and pursue careers in science, technology, engineering, and mathematics (STEM). Two women who pursued important scientific careers - as nuclear physicists - did so well before it was popular or of national interest. This month's enewsletter celebrates the significant contributions of Maria Goeppert-Mayer and Chien-Shiung Wu.

Nuclear physicist and Nobel Laureate, Maria Goeppert-Mayer came to the U.S. from Germany in 1930 after marrying Joseph Mayer, who was American. Also in 1930, Mayer earned her doctorate in theoretical physics from the University of Göttingen. Her husband was offered a job at Johns Hopkins University. Because of nepotism rules and the fact that no one would hire a woman during the Depression, Goeppert-Mayer worked at physics "for fun" as a volunteer.



Maria Goeppert-Mayer

When Joseph was offered a position at Columbia, Goeppert-Mayer taught at Sarah Lawrence University and worked at the Special Alloyed Materials Laboratory, a branch of the Manhattan Project (the secret U.S. effort to develop the atomic bomb). In 1946, she again served as a "volunteer" associate professor of physics at the University of Chicago; she worked as well at the Argonne National Laboratory.



Chien-Shiung Wu

Goeppert-Mayer began her work on the "magic numbers" related to atoms (for which she would receive the Nobel Prize in Physics) in 1948. Some atomic nuclei with specific numbers of protons and neutrons are particularly stable. Goeppert-Mayer developed the theory of shells around the nucleus; often referred to as spin-orbit coupling. In 1960, she finally became a

full professor of physics and, in 1963, Goeppert-Mayer received the Nobel Prize. She has been inducted into the National Women's Hall of Fame.

Like Goeppert-Mayer, Chien-Shiung Wu immigrated to the U.S. Wu earned her doctorate in physics from the University of California, Berkeley. After marrying a former classmate, they moved to the East Coast where she taught at Princeton University and Smith College. During World War II, Wu also worked on the Manhattan Project, also at Columbia University. Wu helped develop a process to enrich the uranium necessary to provide fuel for the bomb.

After the War, Wu stayed at Columbia as a research assistant. She performed the experiments that proved that the conservation of parity was not preserved in nature (the left side is not symmetrical with the right side). The two men who developed the theory received the Nobel Prize; Wu was not included. Her many awards included the National Medal of Science. She was also the first woman to receive the Comstock award from the National Academy of Science. The first living scientist to have an asteroid named after her, Wu has been inducted into the National Women's Hall of Fame.

Goeppert-Mayer and Wu are among the more than 850 women profiled in our book *Her Story: A Timeline of the Women Who Changed America*. Their significant but relatively unknown contributions to science remind us how important it is to continue to tell women's stories.

Follow Her Story on Facebook: <https://www.facebook.com/pages/Her-Story/237876923036693>

**Her Story: A Timeline of the Women Who Changed America**  
Charlotte S. Waisman and Jill S. Tietjen

**[www.herstoryatimeline.com](http://www.herstoryatimeline.com)**

8547 E. Arapahoe Rd, PMB J189  
Greenwood Villiage, Colorado 80112



Her Story A Timeline, 8547 E. Arapahoe Rd, PMB J189, Greenwood Villiage, CO 80112

[SafeUnsubscribe™ {recipient's email}](#)

[Forward email](#) | [Update Profile](#) | [About our service provider](#)

Sent by [jill@herstoryatimeline.com](mailto:jill@herstoryatimeline.com) in collaboration with

**Constant Contact** 

[Try it free today](#)