

UMWIP

“Draco dormiens nunquam titillandus.”

Weekly meetings

- May 24 - Meeting
- May 30 - WiC-WiP Meeting
- June 14 - Coffee and Conversation
- June 15 - Social night
- June 20 - Women in STEM meeting

Upcoming events

- July 9 - STEM Camp for Boys
- July 16 - STEM Camp for Girls

Talks and awards

Congratulations to our 2018 graduates: Maryam Landi, Somayeh Taghizadeh, Sunethra Dayavansha, Chandrima Chatterjee, and Nilmini Karunarathne!



Caroline Lucretia Herschel

by Shrobana Ghosh

Caroline Lucretia Herschel was born in Hanover, Germany on March 16, 1750. Hailing from an era when female education was not particularly encouraged, she was naturally engaged in domestic chores. By the time she was 22, she went on to become the housekeeper of her brother, an established musician and astronomer by hobby, Sir William Herschel. This association of the two led to a wonderful brother-sister duo that went on to make several important discoveries in the field of astronomy.



Amalie Emmy Noether (1882-1935)

Emmy Noether was born in Erlangen, Germany in 1882 to Jewish parents. From an early age, she showed great mental creativity in the area of mathematics. Although her father, Max Noether, was a well-known mathematician, it was still surprising that Emmy herself went on to pursue mathematics since women were not accepted into universities at the time. Later, however, women were accepted and called "matriculated ladies." After earning her Ph.D. with the guidance of her advisor Paul Gordan (from the Clebsch-Gordan coefficients), she applied to receive the right to teach at a university, called *Habilitation*, Noether gave a lecture before the Mathematical Society in Göttingen. However, *Habilitation* could only be granted to male candidates. About 4 years later, she again spoke before them, and it was then that she was finally granted approval.

At the age of 53 she died after having an operation to remove a tumor in her pelvis. She is known as one of the creators of the field of abstract algebra and was described by Einstein as "the most creative mathematical genius thus far produced since the high education of women began."

The first discovery that Caroline made was a nebula that was not included in the Messier catalogue. She independently discovered Messier 110 (NGC 205), the second companion of the Andromeda Galaxy in 1783 and 14 other nebulae in subsequent years. On Aug. 1, 1786, she identified an object traveling slowly through the night sky. When she observed it again the next night, she immediately alerted other astronomers and informed them of its path so that they could study it. Caroline thus became the first woman to discover a comet. Over a span of 11 years, she identified 8 comets. Several of these comets bear her name. A lunar crater (C. Herschel) and an asteroid (Lucretia) were named after her to honor her memory.

In her later years, she catalogued all the discoveries made by her and William, and two of these catalogs are still in use. She was the first woman to be awarded a Gold Medal of the Royal Astronomical Society in 1828. She was named an Honorary Member of the Royal Astronomical Society in 1835 and of the Royal Irish Academy in 1838. To honor her contributions in science the King of Prussia awarded her the Gold Medal for Science in 1846. Her journey from a housekeeper to becoming arguably the first female astronomer is an inspiration to all aspiring scientists.

Photo description: Graduating class of 2018, left to right: Maryam Landi, Somayeh Taghizadeh, Sunethra Dayavansha, Chandrima Chatterjee, and Nilmini Karunarathne.

Photo credits: Bhaskar Roy Bardhan, visiting assistant professor of physics at State University of New York at Geneseo.

Woman in History book credits: Dick, Auguste. *Emmy Noether: 1882-1935*. Birkhauser, 1981