Born in Erlangen, Germany, on 23 March of 1882, Emmy Noether, considered like the creator of modern algebra, was a mathematical and physicist German of Jewish origin, she was known for her groundbreaking contributions to abstract algebra and theoretical physics.

Her first name was Amalie, but she was known by her middle name of Emmy. Her mother, Ida Amalia Kaufmann Noether, came from a wealthy family in Cologne. Her father, Max Noether, a professor at the University of Erlangen, was an accomplished mathematician who worked on the theory of algebraic functions. Two of her three younger brothers became scientists - Fritz was a mathematician and Alfred earned a doctorate in chemistry.
She studied German, English, French, arithmetic, and gave piano lessons. In 1900, he became a teacher of girls in schools in Bavaria. Instead she decided to take the difficult route for a woman of that time and study mathematics at university. Noether obtained permission to study at the University of Erlangen where she stayed between 1900 and 1902. In 1903 she went to the University of Göttingen. She attended lectures by Blumenthal, Hilbert, Klein and Minkowski in 1903 and 1904.

She completed her dissertation entitled "On Complete Systems of Invariants for Ternary Biquadratic Forms", receiving her Ph.D., *summa cum laude*, on July 2, 1908.

In 1915, Klein and Hilbert invited Noether to join them at the Mathematical Institute in Göttingen. They were working on the mathematics of the newly announced general theory of relativity, and they believed Noether’s expertise would be helpful.

Considered by Albert Einstein and others as the most important woman in the history of mathematics, Emmy was a great algebraist, beyond having worked with abstract algebra, with special attention to rings, groups and bodies, also worked in the theory of the ideals and the noncommutative algebra.

Noether was capable to prove two theorems that are essential for the theory of relativity solved the problem of the conservation of the energy and is known by the physicists as “theorem of Noether”.

But her success was not to last long. In 1935, she developed complications from an operation to remove a uterine tumor, and she died shortly after, on 14 April 14, with 53 years old.
“Her significance for algebra cannot be read entirely from her own papers, she had great stimulating power and many of the suggestions took shape only in the works of her pupils and co-workers” – Weyl in the Memorial Address

“In the judgment of the most competent living mathematicians, Fräulein Noether was the most significant creative mathematical genius thus far produced since the higher education of women began. In the realm of algebra, in which the most gifted mathematicians have been busy for centuries, she discovered methods which have proved of enormous importance in the development of the present-day younger generation of mathematicians” - Albert Einstein, in The New York Times.
Sources


Available books in the Mathematical Library


CAVE-15-03/NOE


RH.10.07-09


01A70/DIC


58G/KOS


01A70/BLA


01A70/TEN