











Cameroon, 1967

PRIMARY FIELD

App Development

CONTRIBUTIONS

She founded AppsTech, a US based global provider of app solutions with customers in over 40 countries. As a strong advocate for technology in Africa, she is also the founder and chairperson of the non-profit Africa Technology Forum.

INTERESTING FACTS

In 2013, she was named one of 10 female tech founders to watch in Africa by Forbes Magazine.

OPTICA Advancing Optics and Photonics Worldwide OSA

BORN-

United States, 1942

PRIMARY FIELD

Medicine

CONTRIBUTIONS

She became the first African-American woman to receive a patent for a medical purpose when she invented, the Laserphaco Probe, a surgical tool that uses lasers for safer, more accurate, less invasive cataract removal. She became the first African-American woman to receive a patent for a medical purpose.

INTERESTING FACTS

Known for her humanitarian work promoting eye health in poor communities, and persuaded her professors to operate on blind patients for free.

OPTICA Advancing Optics and Photonics Worldwide OSA

BORN —

United Kingdom, 1934

PRIMARY FIELD -

Anthropology

CONTRIBUTIONS -

Her groundbreaking fieldwork on the behavior of chimpanzees proved that humans are not the only animals to make and use tools.

INTERESTING FACTS

She founded the Alligator Society at age 11 and has studied chimpanzee families and social groups for over 60 years.

OPTICA Advancing Optics and Photonics Worldwide OSA

- BORN -

Canada, 1959

PRIMARY FIELD

Physics

CONTRIBUTIONS

She pioneered the field of ultrafast lasers which enable and advance the fields of material processing, medicine, and communications. She was also the third woman to win the Nobel Prize in Physics.

INTERESTING FACTS

She spent her summers camping and has been a fierce advocate for women in STEM.

OPTICA Advancing Optics and Photonics Worldwide OSA

BORN-

United Kingdom, 1815

PRIMARY FIELD

Mathematics

CONTRIBUTIONS -

When she realized that an early computer prototype could be used to carry out operations beyond simple computations, she wrote and published an algorithm in the early 1800's, becoming, perhaps, the first computer programmer.

INTERESTING FACTS

In the 1940's, Alan Turing used her notes to build the first actual computers. The programming language Ada is named for her.

OPTICA Advancing Optics and Photonics Worldwide OSA

BORN -

Iran, 1977

PRIMARY FIELD -

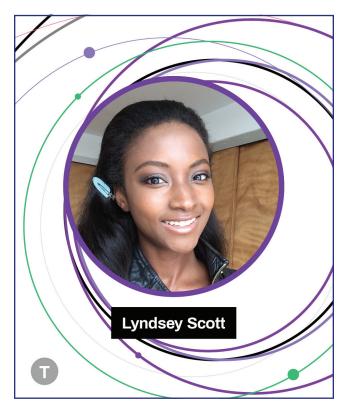
Mathematics

CONTRIBUTIONS

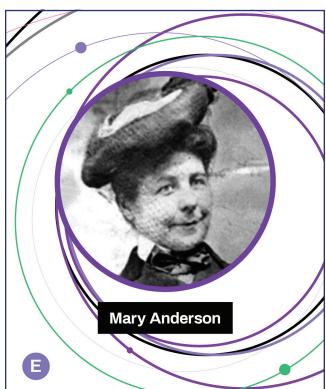
A brilliant mathematician who worked on the theory of topology of complicated 3D shapes; The first woman to be awarded Fields Medal — often called Nobel Prize in Mathematics.

INTERESTING FACTS

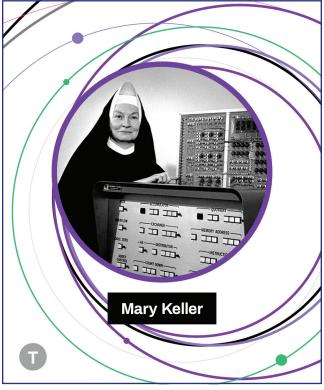
She did not grow up wanting to become a mathematician — as a child, she loved to read and make up stories and thought she might be a writer.













United States, 1866

PRIMARY FIELD -

Mathematics

CONTRIBUTIONS —

In 1903, she was awarded a patent for what eventually became the modern windshield wiper. However, by the time the auto industry picked up the device, her patent had run out and she was never compensated for its success.

INTERESTING FACTS

Not only an inventor, she was also a real estate developer, rancher and viticulturist who grew her own grapes.

OPTICA Advancing Optics and Photonics Worldwide OSA

BORN-

United States, 1918

PRIMARY FIELD -

Mathematics

CONTRIBUTIONS -

As a mathematician at NASA in the 1950's and 60's, she calculated the first space flights' trajectories by hand, helping to send the first Americans into space.

- INTERESTING FACTS -

Awarded the US Presidential Medal of Freedom in 2015 and was one of the women portrayed in the book/movie Hidden Figures.

OPTICA Advancing Optics and Photonics Worldwide OSA

BORN ---

United States, 1984

PRIMARY FIELD -

App Development

CONTRIBUTIONS -

A mobile app developer and programmer since age 12, she invented SPEAK2SCROLL, an app that scrolls text in time with spoken words.

INTERESTING FACTS

She is a model for prestigious fashion houses, a mentor at Girls Who Code, and has a black belt in Taekwondo.

OPTICA Advancing Optics and Photonics Worldwide OSA

- BORN -

Nigeria, 1956

PRIMARY FIELD

Physics

CONTRIBUTIONS

Her research on ion currents in the upper atmosphere has contributed to the world's understanding of climate change and dramatic weather phenomena such as tsunamis.

INTERESTING FACTS-

While raising six children, she published over 100 articles and became the first female Dean of the Faculty of Physical Sciences at the University of Nigeria.

OPTICA Advancing Optics and Photonics Worldwide OSA

BORN-

United States, 1913

PRIMARY FIELD

Computer Science

CONTRIBUTIONS

The first woman to receive a PhD in Computer Science, her pioneering work contributed to the development of the BASIC computer programming language.

INTERESTING FACTS

She was a nun and founder of the computer science department at Clarke College in Iowa who empowered other women to enter STEM fields.

OPTICA Advancing Optics and Photonics Worldwide OSA

BORN-

Israel, 1978

PRIMARY FIELD

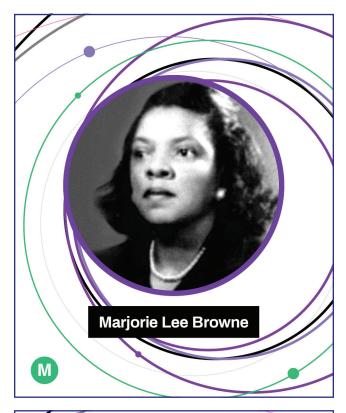
Nanotechnology

CONTRIBUTIONS -

Her work in nano-technology has produced antimicrobial packaging that extends the shelf life of food and reduces food waste, optical biosensors, and materials that advance therapeutics for cancer, Alzheimer's and more.

- INTERESTING FACTS -

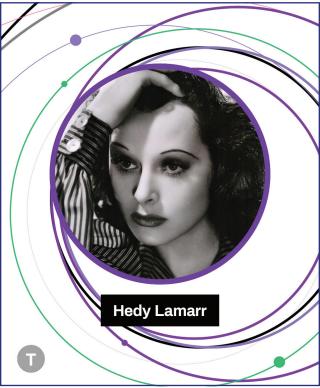
She has been recognized with the Excellence in Teaching Award at the Technion every year since 2009; in 2015 she was awarded with the prestigious Yanai Prize for Excellence in Academic Education.













United States, 1883

PRIMARY FIELD

Electrical Engineering

CONTRIBUTIONS

In what would later be recognized as the first steps towards smart grid technology, she developed the Clarke calculator that allowed engineers and analysts to understand long transmission lines.

INTERESTING FACTS

A pioneer in the field, she was the first female professor of electrical engineering and the first woman to deliver a paper at the American Institute of Electrical Engineers.

OPTICA Advancing Optics and Photonics Worldwide OSA

BORN-

Poland, 1867

PRIMARY FIELD -

Physics and Chemistry

CONTRIBUTIONS -

For her discoveries of radium and polonium, she became the first woman to win a Nobel Prize in Science and the only person to win Nobel Prizes in two science fields: Physics (1903) and Chemistry (1911).

INTERESTING FACTS

She spent most of her life in France, developed a mobile x-ray machine for use in field hospitals and drove an ambulance in WW1.

OPTICA Advancing Optics and Photonics Worldwide SA

BORN —

United States, 1914

PRIMARY FIELD -

Mathematics

CONTRIBUTIONS —

In 1949, she became only the third African-American woman to earn a doctorate in the field of mathematics. An early advocate for computer science, she brought the first computer to an historically black college.

INTERESTING FACTS

Prior to securing a university position, she worked with secondary school mathematics teachers, with a primary focus on encouraging math education for minorities and women.

OPTICA Advancing Optics and Photonics Worldwide SA

- BORN -

Italy, 1711

PRIMARY FIELD

Mathematics

CONTRIBUTIONS

An early proponent of Newtonian Physics, she was the first woman to receive a PhD in sciences and the first woman ever to hold a university chair in a scientific field at a European university.

INTERESTING FACTS

There is a 31 km crater on Venus named for her.

OPTICA Advancing Optics and Photonics Worldwide SA

BORN-

Austria, 1914

PRIMARY FIELD

Encryption, Entrepreneurship

CONTRIBUTIONS

With no formal engineering training, she invented the wireless technology that is the foundation for modern Bluetooth and WI-FI technology.

INTERESTING FACTS -

Best known as an actress and film producer, she acted in over 30 films; her frequency hopping patent expired before the cyber-security method was widely adopted.

OPTICA Advancing Optics and Photonics Worldwide OSA

BORN -

China, 1930

PRIMARY FIELD -

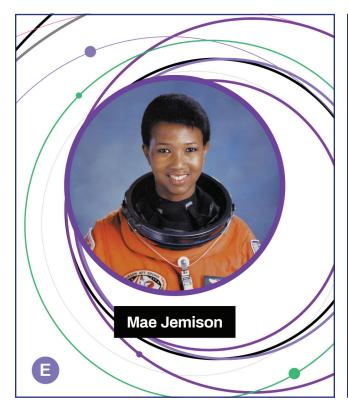
Chemistry

CONTRIBUTIONS -

50 years after her discovery of the malaria drug artemisinin, which has saved millions of lives, she became the first Chinese woman to win a Nobel Prize in physiology and medicine in 2015.

INTERESTING FACTS

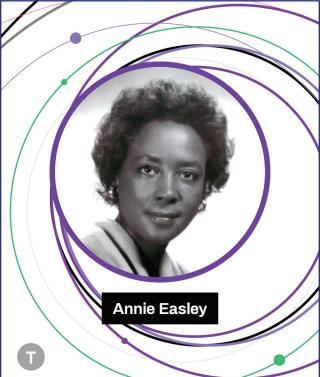
At the age of 16, after spending 2 years unable to go to school because of tuberculosis, she decided to become a scientist and find cures for diseases.

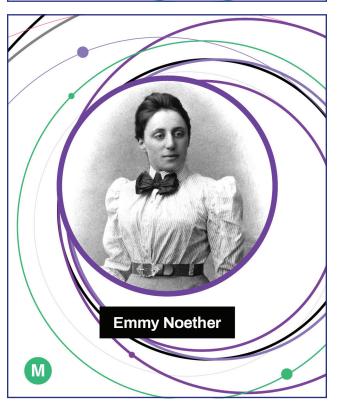












Slovenia, 1950

PRIMARY FIELD -

Astrophysics

CONTRIBUTIONS -

She developed an autonomous system for optical navigation that is used in most all modern commercial aircraft, satellites, and many spacecraft, including the NASA Cassini Mission to Saturn.

INTERESTING FACTS

She has proposed methods for the construction of an observatory on the far side of the moon for extrasolar planetary detection.

OPTICA Advancing Optics and Photonics Worldwide OSA

BORN-

France, 1776

PRIMARY FIELD -

Philosophy

CONTRIBUTIONS

With very little formal education, her work in number theory and elasticity proved foundational for later developments in the field.

INTERESTING FACTS

She studied against the wishes of her family, reading books and corresponding with famous mathematicians, and published under the male pseudonym Monsieur LeBlanc.

OPTICA Advancing Optics and Photonics Worldwide OSA

BORN —

United States, 1956

PRIMARY FIELD -

Engineering

CONTRIBUTIONS -

An american engineer, physician and NASA Astronaut, she became the first black woman to travel into space as a mission specialist aboard the Space Shuttle Endeavor.

INTERESTING FACTS

She was the first real astronaut to appear on Star Trek, and choreographed and produced modern jazz and African dance performances.

OPTICA Advancing Optics and Photonics Worldwide SA

- BORN -

Germany, 1882

PRIMARY FIELD

Mathematics

CONTRIBUTIONS

The mathematical theorem named after her uses symmetry and conservation laws, and helped guide the development of modern physics.

INTERESTING FACTS

Her theorem has been called the most beautiful theorem in the world. Despite her work and recognition, she frequently had unpaid positions.

OPTICA Advancing Optics and Photonics Worldwide SA

BORN-

United States, 1933

PRIMARY FIELD

Computer Engineering

CONTRIBUTIONS

First as a human computer, and later as a computer programmer, her work contributed to making both modern space flight and battery systems for vehicles possible.

INTERESTING FACTS

Of 2,500 employees at NASA at the time, she was the only African American woman.

OPTICA Advancing Optics and Photonics Worldwide OSA

BORN-

India, 1917

PRIMARY FIELD

Organic Chemistry

CONTRIBUTIONS

As an organic chemist, she studied medicinal properties of Indian plants; her work contributed to developing drugs that treat epilepsy and malaria.

INTERESTING FACTS

She was the first woman to receive a PhD from an Indian university as well as the first woman appointed as the general president of the Indian Science Congress.