

APPOLO STUDY CENTRE

SCIENTISTS

K. SIVAN

Dr.Kailasavadivoo Sivan is the chairperson of the Indian Space Research Organization (ISRO).

He was born in Sarakkalvilai, in Kanyakumari district of Tamil Nadu. Sivan graduated with a bachelor's degree in Aeronautical Engineering from Madras Institute of Technology in 1980.

Then he got his master's degree in Aerospace Engineering from Indian Institute of Science, Bangalore in 1982, and started working in ISRO. He completed his doctoral degree in Aerospace Engineering from Indian Institute of Technology, Bombay in 2006.

He was appointed as Chairman of ISRO from 10th January 2018. Sivan is popularly known as the 'Rocket Man' for his significant contribution to the development of cryogenic engines for India's space programs.

The ability of 'ISRO' to send 104 satellites in a single mission is a great example of his expertise.

MYLSAMY ANNADURAI

Dr. Mylsamy Annadurai was born on 2nd July 1958, at Kodhavadi, a small village near Pollachi in Coimbatore district.

He pursued his B.E. degree course at Government College of Technology, Coimbatore. In 1982, he pursued his higher education and acquired an M.E. degree at PSG College of Technology, Coimbatore.

In the same year he joined the ISRO as a scientist. And later, he got his doctorate degree from Anna University of Technology, Coimbatore. Annadurai is a leading technologist in the field of satellite system.

He has served as the Project Director of Chandrayaan-1, Chandrayaan-2 and Mangalyaan. He has also made significant contributions to the cost effective design of Chandrayaan.

Nel Jayaraman

Nel Jayaraman: Mr. Jayaraman, hails from Adirangam village in Tiruvarur district. He was a disciple of Dr. Nammalvar and state co-ordinator of 'Save our rice campaign, Tamil Nadu. He strived hard for conservation of traditional rice varieties.

He had trained a team of farmers and regularly update them on the current issues that affect them.

In 2005, he organized a first ever traditional paddy seed festival in his farm as an individual. The seed festival in May 2016 at Adhirangam was 10th in a row and in which 156 different traditional varieties were distributed to more than 7000 farmers across Tamil Nadu.

He was invited by the Philippines Government to give a talk at the International Rice Research Institute (IRRI) on his work and mission. In 2011, he received the State Award for best organic farmer for his contribution to organic farming, and in the year 2015, he received the National Award for best Genome Savior.

Dr. M. S. Swaminathan:

Dr. M. S. Swaminathan: He is pioneer mutation breeder. He has produced Sharbati Sonora, is the amber grain coloured variety of wheat by mutation, which is responsible for green revolution in India. Dr. Swaminathan is called “Father of green revolution in India”.

The M S Swaminathan Research Foundation (MSSRF) was established in 1988 as a not-for-profit trust. MSSRF was envisioned and founded by Professor M S Swaminathan with proceeds from the First World Food Prize that he received in 1987.

Dr. Verghese Kurein

Dr. Verghese Kurein, was the founder of National Dairy Development Board (NDDB) and was called the **Architect of India’s Modern Dairy Industry** and the **Father of White Revolution**. NDDB designed and implemented the world’s largest dairy development programme called **OPERATION FLOOD**.

Chandrasekhara Venkata Raman

Sir CV Raman was born in 1888 in Thiruvanaikaval near Trichy in Tamil Nadu. As he was initially interested in music, he published an article on suras and vibration of Mritangam and Tabla. His search for physics was long buried in music until his final days. He also started a separate journal (Indian Journal of Physics) to publish his thesis.

Raman, who investigated the blue color of the sea, proved and explained that the reason for this is light scattering and that it is not due to particles but molecules in sea water. Continuing to investigate various dimensions of light scattering, Raman in 1923 observed that when light rays pass through a medium, they are scattered and the wavelength of the scattered light rays increases. He also found that they lose energy by colliding with an electron in the atom.

When light enters through a transparent medium, the light is scattered and its wavelength changes. That phenomenon is called the Raman Effect. February 28, the day of the discovery of the Raman Effect by CV Raman, is celebrated annually by the Government of India as National Science Day.

Subramanian Chandrasekhar

He was born in Lahore, Pakistan (1910). He published several articles on the structure of stars. A computational study revealed that after a star runs out of fuel, it becomes a dense halo. He found that a star more than 1.4 times the mass of the Sun would lose its stability. This specific mass is known as the 'Chandrasekhar Limit'. The foundation of his research is still guiding research on the birth, growth and disappearance of stars. He compiled all his researches and published it as a book called 'System of Stars'. He was awarded the Nobel Prize in Physics in 1983 along with William A. Fowler for his study of stars.

Har Gobind Khorana

American-based Indian molecular biologist Har Govind Khurana. He was born on January 9, 1922 in Raipur under Multan district in the then state of Punjab, India. In 1959, he produced a chemical called coenzyme-A, which is essential for some processes in the human body. In the 1960s, his research with Marcel Norenburg led to the discovery that some inherited diseases could be cured. Khurana, Norenburg and Halley were awarded the Nobel Prize in Anatomy and Medicine in 1968. His work on the genetic code at the Massachusetts Institute of Technology in 1970 became world famous. Escherichia coli is a micro-organism found in the intestinal tract of humans and animals. Khurana and his team were involved in the genetic engineering of this microbe. They gradually tried and artificially created about 207 genes of this micro-organism.

Venkatraman Ramakrishnan

Sir Venkatraman Ramakrishnan, an American Indian born in Tamil Nadu, also worked as a senior scientist at the Medical Research Institute in Cambridge, England. He was awarded the 'Nobel Prize' in Chemistry in 2009 for studies of the structure and function of the ribosome. From 1983 to 1995, he along with Thomas Stites, and Ada Yonatz, were involved in research on the production of proteins within cells called "ribonucleic acid" and the complex structure of proteins called the "ribosome". Through this study, he explained how the ribosomes in the genes that play an important role in the movement of our body produce proteins and how the basic functions of life work. He was awarded the Nobel Prize in Chemistry in 2009 by the Royal Swedish Academy of Sciences in recognition of his outstanding research on the ribosome, the cell's smallest molecule. The prize money was divided equally among the three contributors to the study, Sir Venkatraman Ramakrishnan, Thomas Stides, and Ada Yonets.

Sir Jegadish Chandra Bose

Jagadish Chandra Bose is the one who spread the wisdom that plants have life like humans. Jagadish was born on November 30, 1858 in a town called Vikramapuram in Paritapur district (Bengal).

He also conducted many experiments on electromagnetic waves and proved that sound waves can be stretched and shortened.

He was the inventor of wireless telegraphy before Marconi. But, it was left unnoticed.

He proved to the world that plants are capable of sensing heat, light and sound and that like humans, it can eat, sleep, feeling pleasure and pain.