

AT THE HELM OF INDIA'S SPACE RESEARCH

Relevant for: Science & Technology | Topic: Space Technology & related matters

He grew up in an era when, kindling the imagination of an entire nation, the first sounding rockets were smartly lifting off from what was once a nondescript beach in southern Kerala. So it should come as no surprise when S. Somanath, the new chief of the Indian Space Research Organisation (ISRO), says his interest in space technology was first piqued as a young student; an interest which would quickly evolve into a lifelong passion.

Armed with a degree in engineering, he joined the Vikram Sarabhai Space Centre (VSSC) — the leading unit of ISRO for launch vehicles — in 1985. The eclectic eighties was a happening decade on many counts for fledgling space scientists such as Mr. Somanath. More so because the space agency was right in the middle of one of its biggest undertakings; building the Polar Satellite Launch Vehicle (PSLV), an elegant, 44-metre tall rocket that would eventually come to be dubbed the “reliable workhorse” of ISRO.

The young engineer from a small village near Cherthala in Alappuzha district was assigned to the PSLV project, where he quickly honed his skills. It was also at this time when he was first noted by his immediate bosses as “one of the bright boys” who was destined for bigger things. Time, it appears, has proved them right. In 2015, ISRO chose him to head its Liquid Propulsion Systems Centre (LPSC), Valiamala, and in 2018, the VSSC. On Friday, he once again proved his mentors right when he took over as the new Chairman of ISRO. New Delhi had issued orders appointing him as Secretary, Department of Space, and the Chairman, Space Commission, on January 12, Wednesday, for a “combined tenure of three years”.

At 58, Mr. Somanath comes across as a smiling, outspoken man who is quite at ease in a crowd. Younger colleagues at Thumba (VSSC) describe him as someone who is confident about his craft and willing to adapt and innovate. They also draw attention to his aptitude for learning new things, a trademark trait of many of the leading ISRO lights. Senior scientists of the space agency, many of them now retired, say he is “the right person” to lead the agency which is at a crossroads. He is also lauded for his management and diplomatic skills. What is obvious is that Mr. Somanath, who succeeds K. Sivan as Chairman, would have to draw extensively on all these qualities to address the formidable challenges that await the country's space sector, which, poised for reforms on the one hand, also wants to see its pandemic-hit mission schedules back on track.

Born in July 1963 — incidentally the same year the first sounding rocket, an American-made Nike-Apache, made its way into the blue skies from Thumba — Mr. Somanath grew up in Thuravoor, a village near Cherthala. The son of Sreedhara Panicker, a teacher of Hindi, and Thankamma, Mr. Somanath was a bright student, excelling in the science subjects. He obtained his BTech degree in Mechanical Engineering from the TKM College of Engineering, Kollam. After joining the VSSC, he also took his Masters in Aerospace Engineering from the Indian Institute of Science (IISc), Bengaluru, with specialisation in Dynamics and Control.

Mr. Somanath joined the PSLV team at the VSSC when G. Madhavan Nair, who would go on to become Chairman, ISRO, was the project director. “Developing the PSLV was one of the important projects of ISRO at the time. We had noticed the spark in him even in those days,” recalls Mr. Nair, who led the space agency from 2003 to 2009. Later, as project manager of PSLV, Mr. Somanath handled mechanisms, pyro systems, integration and satellite launch service management.

GSLV project

In 2003, he joined the Geosynchronous Satellite Launch Vehicle Mk-III (GSLV Mk-III) project, serving as the deputy project director responsible for overall design of the vehicle, mission design, structural design and integration, according to an ISRO profile on him.

From 2010 to 2014, he was project director of GSLV Mk-III. "His contributions in PSLV and GSLV Mk-III were in their overall architecture, propulsion stages design, structural and structural dynamics designs, separation systems, vehicle integration and integration procedures development," says ISRO. After a stint as deputy director, VSSC, he moved to the LPSC as director in June 2015. He played a key role in the development and qualification of the CE-20 cryogenic engine and the C25 cryogenic upper stage of the GSLV. Mr. Somanath has had a role in all the major missions undertaken by ISRO in recent decades, but which one is the most memorable for him personally? "I would say the LVM3-X/CARE mission," he said on Saturday. This first, suborbital, experimental flight of the GSLV Mk-III took place at Sriharikota on December 18, 2014. On January 22, 2018, he was back at the VSSC, this time as the director.

Mr. Somanath has taken over as the Chairman, ISRO, at a time when the Central government is pushing for sweeping space sector reforms. From a decades-old, purely government-run affair, the sector is set to see a larger role played by the private sector and start-ups. The prevailing philosophy is that production should be left to the industry, and ISRO should focus on research. With this in mind, NewSpace India Ltd, responsible for enabling Indian industries to take up space-related activities and promote and commercially exploit products and services arising from the space programme, was incorporated in 2019. A year later, the Indian National Space Promotion and Authorisation Centre was announced as "an independent nodal agency under the Department of Space (DoS) for allowing space activities and usage of DoS-owned facilities by non-government private entities."

List of priorities

Mr. Somanath has made it clear that space sector reforms and spurring the growth of India's space economy find top billing in his list of priorities. Forging a lasting and meaningful collaboration between ISRO and the relatively younger private players in India's space sector is one of the challenges awaiting the new chairman, point out ISRO veterans. On another, equally important front, the space agency would also want to get on with ongoing projects which have been delayed by the outbreak of COVID-19.

The pandemic hit the day-to-day operations of ISRO, forcing critical facilities such as VSSC, LPSC and the Satish Dhawan Space Centre, Sriharikota, to adapt to the new normal. Under Mr. Somanath, the VSSC was actively engaged in combating the virus by producing hand sanitisers and developing mechanical ventilator models for COVID-19 care.

In December 2019, speaking to *The Hindu* ahead of the 50th mission of the PSLV, Mr. Somanath had commented that the first 50 missions had taken 26 years, but the next 50 would not take even half as long. It reflected the bubbling enthusiasm in ISRO circles in the immediate months preceding the pandemic as the space agency was gradually pushing up the frequency of launches. But as he shoulders the task of helming the organisation, the challenge of putting aright a schedule that has skittered off the tracks awaits Mr. Somanath.

One of his top priorities will be the 'Gaganyaan', India's ambitious push to put a human crew in space. ISRO hopes that the mission would help lay the robust foundation for a sustainable human space flight programme in the long run. Development of a Reusable Launch Vehicle, the semi-cryogenic engine and the keenly-awaited Chandrayaan-3 and Aditya-L1 missions are

some of the projects awaiting his immediate attention.

In September 2019, giving away prizes at a function in Thiruvananthapuram, Mr. Somanath had opined that finding solutions to problems is the essence of engineering. On the occasion, he has also emphasised that for a country like India, the solutions also need to be cost-effective besides being efficient. Mr. Somanath is now at the helm of one organisation which the nation has traditionally looked up to for such solutions.

In Focus

Armed with a degree in engineering, he joined the Vikram Sarabhai Space Centre, the leading unit of the ISRO for launch vehicles, in 1985

The young engineer from a small village near Cherthala in Alappuzha district was assigned to the PSLV project, where he quickly honed his skills

In 2015, ISRO chose him to head its Liquid Propulsion Systems Centre, Valiamala, and in 2018, the Vikram Sarabhai Space Centre

Forging a lasting collaboration between ISRO and the relatively younger private players in the space sector is one of the challenges awaiting the new chairman

[Our code of editorial values](#)

END

Downloaded from **crackIAS.com**

© **Zuccess App** by crackIAS.com