

The ISRO Veteran

The auditorium was packed beyond intended capacity. Though not unprecedented, given the stature of the man of the hour, the sheer sight of students willing to stand for an hour-long interaction was commensurate with the profundity of the night. The evening successfully harboured the very first speech by the newly-appointed Chief Mentor of the University. Dr. Kasturirangan received his Bachelor of Science with Honors and Master of Science degrees in Physics from Bombay University. Presently a Member of Planning Commission, he has steered the ISRO program gloriously for over 9 years as Chairman of the Indian Space Research Organization of Space Commission before laying down his office on August 27, 2003. It was under his leadership that ISRO witnessed the operationalization of the prestigious PSLV (Polar Satellite Launch Vehicle) and, the more recent, GSLV (Geosynchronous Satellite Launch Vehicle). Apart from publishing more than 240 papers in international and national journals in the areas of astronomy, space science and space applications, he is also the Chairman of the Governing Board of the UN Centre for Space Science and Technology Education, of the Board of Governors of IIT Chennai and the like.

The vast knowledge and experience he has attained through the years was evident in his elaborate and ardent speech. "ISRO is an integration of several disciplines," he said. Probably the most important point he stressed upon was multi-disciplinary integration being extremely vital for any technology to be conceived. Taking the obvious example of a space-craft, Dr. Kasturirangan spoke about the role of different engineers and scientists in its development. "A structural engineer needs to ensure that the structure is robust and withstands various forces and temperatures. A thermal engineer ensures the electronic components sustain the extreme temperatures. There needs to be a digital system in order to communicate

information back to Earth.”

“Can we produce a no-emission system?”

What with India grappling with a long term energy crisis, Dr.Kasturirangan rightfully raised the issue of energy in India. “For years India has been dependent on coal and hydel energy for electricity. While weather unpredictability causing uneven distribution of rainfall is affecting hydro power generation, the high hash content in Indian coal is leading to greenhouse gas emissions”. Impressed with the University’s understanding of the healthcare system, he was not diffident in his appreciation. “The country does need a better healthcare system,” he emphasized, “which also implies that we need to be self-sufficient as far as manufacturing the medical equipment is concerned”. He also dwelled upon agricultural automation being the key for increased crop outputs and efficiency. The use of laser technology, for example, would help in cultivating crops like rice- where precise alignment of seeds is.

Is ISRO mulling over prospective space tourism agenda in the future? Dr. Kasturirangan did manage to leave everyone in awe when he revealed he was also of the school of thought that space tourism is the way to go for increased revenue collection. “We spend around \$500/kg in sending our PSLV in space. Sending rockets farther up would mean an expenditure of \$20,000/kg, which is difficult to afford.” Placing the responsibility on the students in the auditorium, he requested them to rise up to the challenge of changing the future of space travel in the next fifty years. The nuclear energy debate in India has not always been in the favor of the same, which is evident from the fact that only 1-1.5% of our power comes from it. A strong advocate of the nuclear energy program, Dr. Kasturirangan also warned about problems like fuel security and its development in the next 30-40 years. During the question/answer session, he did blame the Fukushima disaster on the fact that the plant was old and lacked modern

technology. No modern reactor could have been involved in such an incident in this age.

“Space has taught us never to take anything for granted.”

It was no surprise that he subscribed to the thought that grooming research universities is the way to improve the research and development culture in India. Though, dissatisfied with the utilization of the country's resources for research activities, he was quick to state that Manipal University had the wherewithal to reach the highest level, not in the distant, but near future. Dr. Krishnaswamy Kasturirangan is the perfect example of how passion, ambition and a thirst for knowledge can propel one's career to great heights. With the honor of having him as our Chief Mentor, reaching the pinnacle of glory won't be as daunting a task anymore.