MANIPAL ACADEMY of HIGHER EDUCATION
(Institution of Eminence Deemed to be University)

Manipal Centre for Natural Sciences
Centre of Excellence

Online Mode **National Science Day Week**

21–28 Feb 2022

Public Talks of the Day

26 February 2022 – Saturday

Time	5 PM - 6 PM; 26 February 2022
Title	**Chitra TTK valves - a triumphant repeat of Bhagiratha Yagna**
Speaker	**Prof. M. S. Valiathan**
Abstract	Four in number, valves ensure that blood flows only in one direction in the heart. But they are more than mere check valves because they are always immersed in blood and open and close 100,000 times day without stop till death. If they are damaged by disease, they need to be replaced by man-made valves which are lifesaving. Until Chitra -TTK valves appeared in 1990, valves had to be imported at high cost and we're unaffordable for average patients. The development of the Chitra- TTK valve at the Chitra Institute in 1980s was a triumphant repeat of the Bhageeratha story. It beats in the hearts 1.8 lakh patients today in India and elsewhere.
About the Speaker	• World renowned cardiac surgeon • Was awarded Padma Vibhushan – India's second highest civilian award • Former Vice Chancellor, MAHE • Former President of the Indian National Science Academy 

Time	3.30 PM – 4.30 PM; 26 February 2022
Title	**Nuclear energy in India: why Thorium?**
Speaker	**Dr V. Gopalakrishnan**
Abstract	Fossil fuels (coal, petrol, natural gas, etc.) becoming increasingly scarce as energy sources, the importance of nuclear source of energy has been recognised in India. While uranium is the most prevalent nuclear fuel, the long-term sustenance of nuclear energy production is said to depend on utilizing thorium. Why? The talk will address this question based on nuclear properties and availabilities of fuel materials. The topic is very relevant to the theme of this year's Science Day.
About the Speaker	• Consultant Professor, Sr. Data Physicist & Academic Coordinator. • Retd. Head, Nuclear Data Section, IGCAR, Kalpakkam. • Interested in: Nuclear reaction data for reactor applications