

# TATA INSTITUTE OF FUNDAMENTAL RESEARCH

Homi Bhabha Road, Mumbai-400 005

July 6, 2018

## ASET Colloquium

**Speaker** : **Dr. Lalit Varshney** (*Head, RTDD, BARC, Mumbai*)

**Title** : **Radiation Technology for Cleaner India**

**Date & Time** : **Friday 06 July 2018 at 16:00 hrs.**

**Venue** : **Lecture Theater (AG-66.)**

### Abstract :

In India about 40 billion litres of Sewage is generated every day and it is discharged into water bodies after treatment at sewage treatment plants (STPs). The thickened sludge from the STP is sun dried or filter pressed to form dry sludge, which is used as land fills or supplied to farmers. This practice results in spread of diseases and ground water contamination. A 1.5 MCi 60Co Dry Sewage Sludge Hygienisation Facility has recently been established in Ahmedabad. This facility has paved the way for tackling sludge menace in populated cities using Radiation Technology. Here, the dry sludge is irradiated to 10 kGy radiation dose and then sprayed with Bio-NPK micro-organisms to make it into a bio-fertilizer. Another major problem is the contamination of water by dyes, Arsenic, Fluoride and Chromium. Radiation technology can produce advanced materials which can pick up these contaminants and clean thousands of litres of ground water every day.

### About the Speaker:

Dr. Lalit Varshney joined Isotope Division, Bhabha Atomic Research centre in 1982 after completing 25th batch training school of BARC. He obtained M.Sc. from University of Delhi and Ph.D from Mumbai University. He has more than 125 international publications, three patents and 4 technology transfers to his credit. Dr Varshney is recipient of prestigious National Award for Technology Innovation in Polymeric Materials, 2015, Indian Nuclear Society award 2004 and BARC Technical Excellence award-2003 and recently DAE Group Achievement Award 2016.



Dr. Satyanarayana Bheesette  
(Coordinator, ASET Forum)