

# Science Day: Institute Lecture

## String Theory and Cosmology: Tying the Two Ends

**Professor Ashoke Sen**

Professor, Harish-Chandra Research Institute, Allahabad

3rd March 2016, Time: 3.30 PM, Venue: L-17



### Abstract

String theory is the study of the laws of the universe at small scales, while cosmology is the study of the universe at large scales. Nevertheless the two subjects are intimately related. We shall describe the origin of this relationship.

### About the speaker

Professor Ashoke Sen is one of the leading theoretical physicists in the world and an internationally acclaimed academician for his seminal contributions towards the unification of the fundamental forces within the framework of string theory. He is a Distinguished Alumnus and the recipient of the honorary Doctor of Science (D.Sc) degree from IIT Kanpur in 2013. He obtained his B.Sc. (Honours) Physics in 1975 from the Presidency College, Kolkata and his M.Sc. (Physics) from the Dept. of Physics, IIT Kanpur in 1978. In 1982, he received his Ph.D. (Physics) from the State University of New York at Stony Brook. He was a post doctoral associate at the Fermi National Accelerator Laboratory (Fermilab) from 1982 to 1985 and at the Stanford Linear Accelerator Centre (SLAC) from 1985 to 1988. In 1988, he joined the Tata Institute of Fundamental Research (TIFR), Mumbai as a faculty of physics and moved to the Harish Chandra Research Institute, Allahabad in 1997 where he is currently a Distinguished Professor. His pioneering and pathbreaking work on the duality symmetries in String Theory in 1993 and his fundamental contribution towards understanding the microscopic structure of black holes and their entropy in 1995 are acclaimed worldwide and are cornerstones of progress in the discipline. For his exceptional contributions to science, Professor Sen has been conferred with numerous international and national awards and honours. He received the Yukawa Prize from the Abdus Salam International Centre for Theoretical Physics (ASICTP), Trieste, Italy in 1989 and the Third World Academy of Sciences Prize in 1997. In 1998, he was elected a Fellow of the Royal Society (FRS) and as a Fellow of the Third World Academy of Sciences (TWAS) in 2004. His contributions to physics were recognized in 2012 with the prestigious Fundamental Physics Prize (FPP) from the Yuri Milner Foundation and also the Dirac Medal in 2014. His national recognitions include the S.S.Bhatnagar Prize in 1994 and the B.M. Birla, G.D Birla and the R.D Birla Prizes in 1995, 1996 and 1997 respectively and the Infosys Prize in 2009 and the M P Birla Memorial Prize in 2013. Professor Sen is a fellow of all the three Indian science academies and in 2001, he was honoured with the Padma Shree in 2001 and with the Padma Bhushan in 2013.

Tea at 3.15 PM

All interested are welcome.

Amalendu Chandra

Dean of Research and Development, IIT Kanpur