

# 6<sup>th</sup> S CHANDRASEKHAR MEMORIAL LECTURE

Date

6<sup>th</sup> February 2025

Time

04:00 PM

Venue Silver Jubilee Hall

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TITLE

## The Quantum Universe

ABSTRACT

I will discuss the recent progress in cosmology, namely, the robust theoretical predictions made back in the 80s and how they were confirmed in the Cosmic Microwave Background fluctuations measurements during the last 20 years.

SPEAKER

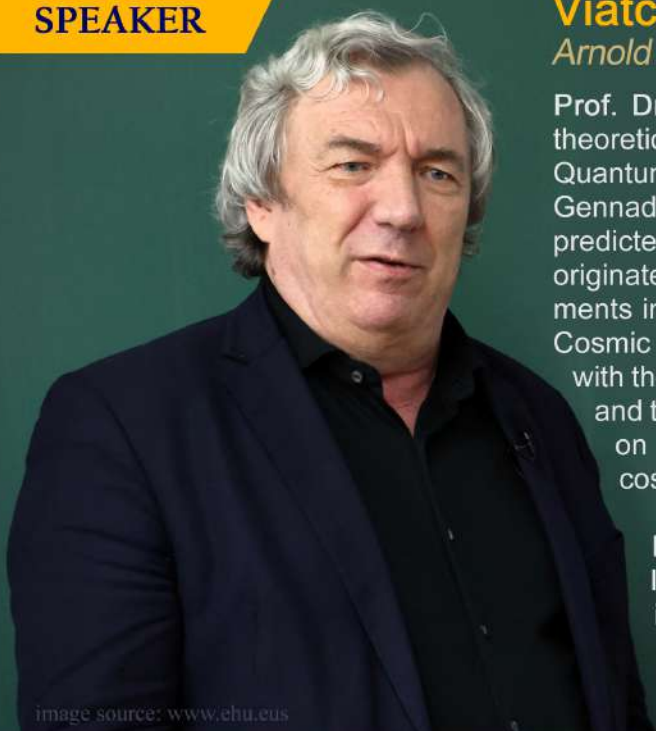


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### Viatcheslav Fyodorovich Mukhanov

*Arnold Sommerfeld Center for Theoretical Physics, Germany*

Prof. Dr. Viatcheslav Fyodorovich Mukhanov is a renowned German theoretical physicist and cosmologist. He is best known for the theory of Quantum Origin of the Universe Structure. Working in 1980-1981 with Gennady Chibisov in the Lebedev Physical Institute in Moscow, he predicted the spectrum of inhomogeneities in the Universe, which are originated from the initial quantum fluctuations. The numerous experiments in which they were measured, the temperature fluctuations of the Cosmic Microwave Background Radiation are in excellent agreement with the theoretical prediction he made, thus confirming that the galaxies and their clusters originated from the initial quantum fluctuations. Later on he also went on to develop the general consistent quantum cosmological perturbation theory.

He has won numerous prestigious awards. Among them are the ICTP Dirac Medal in 2019, Max Planck Medal in 2015, Gruber Prize in cosmology in 2013, Oskar Klein Medal, Stockholm University Sweden in 2006, Gold Medal of the Academy of Sciences of the USSR, USSR (1988).

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