Abstract
In this talk prepared for a general audience, we briefly mention the shortcomings of the standard model of the universe. We then focus on the late time inconsistency of the model dubbed age crisis whose resolution requires the presence of a repulsive effect that could be sourced either by dark energy or by a large-scale modification of gravity. By and large, our description is based upon Newtonian cosmology which is simple and elegant despite its limitations. On heuristic grounds, we explain how a tiny mass of graviton could account for late-time cosmic acceleration. We then try to answer a long standing question that was traditionally answered by theology: What is our origin or where do we come from? It seems that we resulted from quantum fluctuations generated during inflation; these primordial perturbations via gravitational instability have grown into the structure we see in the universe today.

About the speaker
Prof. M. Sami completed his Ph.D. in 1983 from Moscow State University with the renowned theoretical physicist V. Ya. Fainberg and joined the Poona University and later shifted to Jamia Millia University as lecturer in 1985. In the year 2002, he was invited to IUCAA, Pune as a visiting scientist for a period of three years. In 2006, he established the Centre for Theoretical Physics at Jamia Millia University, New Delhi and was its founding director. He was a senior associate of ICTP, Trieste, Italy and elected Fellow of National Academy of science and Fellow of Indian academy of Science. His research interest lies in the field of modern cosmology including topics such as dark energy, modified theories of gravity, brane world cosmology and massive gravity.