

The String Theory Landscape and Models of Cosmological Inflation

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The talk will start by motivating string theory as a theory of quantum gravity. Then the resulting 10-dimensional effective field theory and its compactification to 4 space-time dimensions will be discussed. It turns out that this leads to a very large number of possibilities - the "string theory landscape". This landscape is populated through eternal inflation, creating the so-called multiverse. To describe our observed cosmology, eternal inflation has to be supplemented by slow-roll inflation which leaves its imprint on the cosmological microwave background, measured e.g. by the Planck satellite. Recent progress in the string-theoretical understanding of this inflationary period of our universe will be briefly discussed at the end.