



DEPARTMENT OF PHYSICS & ASTRONOMY

COLLOQUIUM SPEAKER SERIES



Physics Before the Universe

Dr. Faizal Mir,
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Tues, March 10, 2020
1:40-2:55PM
SA6010

Free. Everyone welcome.
No RSVP required.
Donuts and coffee.

The classical general theory of relativity predicts the universe started from the big bang singularity. However, singularities normally are viewed as the breaking down of an approximation, which has been used to describe a system beyond the point where such an approximation is valid.

I will argue why big bang singularity cannot be physical and how it can be removed using quantum gravitational effects.

I will summarize the works done using different approaches to quantum gravity for removing the big bang singularity.

This will include some of my own works on pre-big bang cosmology. Even though the topic is very technical, I will simplify it using simple examples so as to make it accessible to a wide range of people.

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