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## **Probing Leptogenesis using Gravitational Waves**

Thursday 23 September 2021 09:45 (15 minutes)

Breaking of a  $U(1)_{B-L}$  local symmetry, a feature that occurs in a wide variety of the Standard Model ultraviolet completions, can lead to generation of cosmic strings which can lead to an observable signal in gravitational waves (GWs). In this talk we will discuss how the GWs can be used to probe leptogenesis mechanism due to heavy neutrino decay. In particular, we will look into the impact of the cosmic string decay and the presence of a scalar field, that breaks the  $U(1)_{B-L}$  symmetry and can decay into heavy neutrinos, on the thermal leptogenesis parameter space in the context of a potential positive GW signal at the upcoming experiments.

## Do you wish to attend the workshop on-site?

no

**Summary** 

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