



# APPLIED MATHEMATICS SEMINAR

## Probing cosmic inflation via gravitational waves

by

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**Abstract:** In this talk, we will provide a short overview of cosmic inflation. We will explain the mechanisms by which density waves, responsible for the observed temperature fluctuations on the cosmic microwave background spectrum, and gravitational waves (GWs) emerge during the inflationary process. We will then explore how the new generations of GW detectors can provide us invaluable insights into inflation, inaccessible through cosmic microwave background radiation. Lastly, we will introduce a novel inflationary model capable of generating a significant amount of GWs.

**Date:** Tuesday, October 24, 2023

**Time:** 16:00-17:00, GMT+3

**Place:** ZOOM

To request the event link, please send a message to [yheydarzade@bilkent.edu.tr](mailto:yheydarzade@bilkent.edu.tr).