

## ODTU-Bilkent Algebraic Geometry

## Higher structures of Einstein gravity

By

## Kadri İlker Berktav

Abstract: This is a talk on a recent investigation about higher structures in the theory of General Relativity. The talk essentially features higher categorical constructions and their consequences in various Einstein's gravity theories. In this talk, for the sake of completeness, we shall begin with a summary of key ideas from moduli theory and derived algebraic geometry. We, indeed, overview the basics of derived algebraic geometry and its essential role in encoding the formal geometric aspects of moduli problems in physics. With this spirit, we will then investigate higher spaces and structures in various scenarios and present some of our works in this research direction.

Date: 24 December 2021, Friday

**Time:** 15:40 (GMT+3)

Place: Zoom

To request the event link, please send a message to sertoz@bilkent.edu.tr