

## **TOPOLOGY SEMINAR**

## Effective homology and perturbation theory for computations in algebraic topology

By

## **Ana Romero**

(Universidad de la Rioja)

**Abstract:** In this talk we will present the theory of effective homology, a technique which can be used for computing homology and homotopy groups of complicated spaces. We will also present some perturbation lemmas, which are the main ingredient to determine the effective homology of many spaces. Both techniques are implemented in the computer algebra system Kenzo, which has made it possible to determine homology and homotopy groups of spaces of infinite type. We will finish the talk with some examples of calculations.

**Date:** May 3, 2021 **Time:** 13:30 UTC+3

Place: Zoom

To request the event link, please send a message to <a href="cihan.okay@bilkent.edu.tr">cihan.okay@bilkent.edu.tr</a>