



# TOPOLOGY SEMINAR

## Bieberbach group and decomposing flat manifolds

By

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**Abstract:** An  $n$ -dimensional Bieberbach group is a discrete, cocompact torsion-free subgroup of the group of isometries of Euclidean  $n$ -space. In this talk, we will introduce the three Bieberbach theorems in order to understand the algebraic structure of Bieberbach groups. Such groups are interesting because they arise as fundamental group of compact flat Riemannian manifolds. In the second half of the talk, we will discuss the Vasquez invariant of finite groups which was introduced by A. T. Vasquez in 1970. This invariant is related to a decomposition theorem of sorts for compact flat Riemannian manifolds. We will discuss several results about such invariant.

**Date:** Mar 15, 2021

**Time:** 13:30 UTC+3

**Place:** Zoom

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