# Boğaziçi Math Seminar

# Racks from the viewpoint of finite group theory

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**Abstract:**

A rack is a (possibly empty) set with a binary operation such that left multiplications are the automorphisms of the set and a quandle is a rack satisfying a certain condition. One of the motivating themes of those algebraic objects is that they axiomatize group conjugation operator. Although racks and quandles have appeared in literature from time to time under various names, they are not treated comprehensively from the viewpoint of finite group theory. In this talk, after reviewing the basic algebraic structure of racks we present a group theoretical approach that shares common elements with an already established area in literature known as "subgroup complexes". If time permits we discuss some of the results that are obtained in this direction.

**Date** : Wednesday, October 1, 2025
**Time**: 13:30
**Place**: TB 130, Boğaziçi University