



HACETTEPE UNIVERSITY MATHEMATICS GENERAL SEMINAR
HACETTEPE ÜNİVERSİTESİ MATEMATİK BÖLÜMÜ GENEL SEMİNERİ

Characterizations and Examples of Arf Rings

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Commutative ring theorists have mainly concentrated in the study of Cohen-Macaulay rings and modules in the last fifty years. Understanding Cohen-Macaulay rings are important since they lie within the intersection of algebraic geometry, algebraic topology, and commutative algebra. There are many Cohen-Macaulay rings which are not Gorenstein, but sufficiently good next to Gorenstein rings; for example, *almost Gorenstein rings* and *generalized Gorenstein rings*. These naturally cover the class of Gorenstein rings and fill the gap in between Cohen-Macaulay and Gorenstein properties.

In 1971 Lipman studied a class of local rings called *Arf rings*; these rings were initially introduced by Arf in 1949 pertaining to a certain classification of curve singularities. Although the definition of an Arf ring is technical, examples of such rings are abundant in the literature, for example, a one-dimensional local domain of multiplicity two is Arf.

In this talk we discuss several examples and motivations for studying Arf rings that are almost Gorenstein and generalized Gorenstein, and give a characterization of such rings.

This talk is based on the joint work with Olgur Celikbas, Shiro Goto, and Naoki Endo.

Zoom Bağlantısı (Zoom Link)

<https://zoom.us/j/96851893273?pwd=YWYzZUpyY1Rod2YwQmx3MStZWtVUTo9>

Toplantı Kimliği (Meeting ID): 968 5189 3273

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