# ALGEBRA SEMINAR

# On the source-algebra equivalence class of cyclic blocks

**By**

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**Abstract:** The source algebra equivalence class of a p-block B of a finite group G with cyclic defect group D is parametrized by three parameters: the plannar embedded Brauer tree of B, a type function on the vertices of the latter, and an endo-permutation module W(B) of D.
Brauer trees have been investigated intensively over the past decades, in particular through reductions to quasi-simple groups.
The type function can easily be read off one character value of one ordinary irreducible character of the block, whereas not much is known in the literature about the 3rd parameter W(B). The aim of this talk is to bring information about show how W(B) can be detected from the character table of G. Given a finite cyclic p-group D, we also work out those endo-permutation modules of D that occur as W(B) for p-blocks B with defect group D in quasi-simple groups, thus filling in one of the main outstanding gaps in the general knowledge of blocks with cyclic defect groups.
This is joint work with Gerhard Hiss.

**Date:** Monday, February 20, 2023
**Time:** 15:30 – 16:30 (UTC+3)
**Place:** ZOOM. This is an online seminar. To request the event link, please send a message to d.yilmaz@bilkent.edu.tr