



Department of Mathematics Seminar

Structures and stable ranges in representation stability

By

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Abstract: Let FI be the category of finite sets and injections. A functor $V: \text{FI} \rightarrow \text{Abelian groups}$, i.e. an FI -module, encodes a sequence $\{V_n\}$ of $\text{Sym}(n)$ -representations for various n and transition maps between them. Homological finiteness properties of V then strongly restricts the eventual behavior of the sequence. I will discuss several such homological invariants of V whose vanishing in a range of degrees manifest in concrete stabilization patterns for the sequence, with examples from topology. I will discuss improvements to these "stable ranges" of V , some valid very generally, and some as a result of V possessing extra functorial structure extending the FI -action.

Date: 11 July 2023, Tuesday

Time: 14:30

Place: Zoom

This is an online seminar. To request the event link, please send a message to f.atay@bilkent.edu.tr