

Algebra Seminar

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Wednesday, September 17
1 - 2 pm, HH-3017

A Subgroup Theorem for Homological Dehn Functions

Abstract:

An isoperimetric function of a space is a function $A=f(P)$ providing an upper bound for the area required to fill closed curves of length P . For example, the isoperimetric function of the Euclidean plane is a quadratic function. The n -th homological Dehn function of a space is a generalization of the isoperimetric function, it provides an upper bound for the minimal filling of an integral n -cycle by integral $(n+1)$ -chains. These functions can be used to define invariants of finitely presented groups. In this talk, I will describe an algebraic approach to homological Dehn functions, and then illustrate the use of these techniques to investigate relations between the homological filling functions of groups and their subgroups. This is joint work with Gaelan Hanlon, preprint available at [arXiv:1406.1046](https://arxiv.org/abs/1406.1046).

