

Cup products in bounded cohomology of the free group via aligned cochains

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Abstract: Despite its wide range of applications, bounded cohomology is hard to compute in general. In fact, it is an open problem whether the bounded cohomology of the non-abelian free group with trivial coefficients vanishes in higher degrees.

In this talk, we discuss an approach to this problem using cup products and explain how to use Delta-decompositions (due to Heuer) and aligned cochains (due to Bucher and Monod), to generate examples of trivial cup products in bounded cohomology of arbitrary degree greater than 3.

This is joint work with Michelle Bucher.