

B I - C O M A T H E M A T I C S C O L L O Q U I U M

**Ron Umble,
Barbara Nimershiem,
and Merv Fansle**
Millersville University

"Detecting the Linkage of an n-Component Brunnian Link"

Monday, November 30, 2015

Talk at 4:00 - H109

Tea at 3:30 - KINSC Math Lounge, H208

Abstract:

This talk is a report of current work in progress. The goal of this project is to algebraically detect linkage in an n -component Brunnian link. We begin with a review of cellular homology and construct a coproduct on homology that detects the Hopf link. We inductively define cell decompositions of the complements of certain Brunnian links. We conclude with a demonstration of software under construction that transfers a coalgebra structure on cellular chains to an A_∞ -coalgebra structure on homology.

We conjecture that the induced A_∞ -coalgebra structure detects the linkage.

HAVERFORD COLLEGE