Student Research Talks (StReeTs)

Mason Experimental Geometry Lab (MEGL)

Generalized Depth and associated primes in the Perfect Closure R^∞

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Abstract

Let $(R, \mathfrak{m})$ be a reduced Noetherian local ring of characteristic $p > 0$. If we consider a finitely generated R-module M, we can study the notions of depth and associated primes of both M and its Frobenius iterates $F^e(M)$. We can then extend R to its perfect closure R^∞, which will in general no longer be Noetherian. These notions then become more subtle when we extend scalars to the R^∞-module $R^\infty \otimes_R M$.

In this talk, we will define and study these more subtle measures of $R^\infty \otimes_R M$ over R^∞, and establish some relationships with depth and associated primes of the iterates $F^e(M)$ over R.

Date: Friday, April 21, 2017
Time: 2:30pm–3:30pm
Place: Exploratory Hall 4106

Pizza and soda will be served at the presentation.

For further information or for special accommodations, please contact Sean Lawton via email at `seanlawton@gmail.com` or drop by the MEGL.