



Speaker: Nicholas Switala
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Wednesday, November 15, 2017
3:00 PM
258 Hurley Hall

Title: The injective dimension of F -finite F -modules and holonomic D -modules

Abstract:

If M is an F -module over a regular Noetherian ring of positive characteristic, or a D -module over a formal power series ring with coefficients in a field of characteristic zero, Lyubeznik showed that the injective dimension of M is bounded above by the dimension of its support. If M is F -finite (respectively, holonomic), we show that the injective dimension of M is bounded below by one less than the dimension of its support, and therefore can take only two possible values. We do this by studying the last term in the minimal injective resolution of M . (This is joint work with Wenliang Zhang.)