Topology Seminar

Kirsten Wickelgren

of Duke will be speaking on

An excess intersection formula

on March 22 at 4:30 in
MIT Room Zoom

One expects the intersection of a d and n-d dimensional subscheme or submanifold of an n-dimensional one to be 0 dimensional. When this is not the case, such intersections are often called excess intersections, and arise when considering questions such as 'How many conics are tangent to 5 conics in the plane?' We consider cohomology classes in oriented Chow and Hermitian K-theory associated to excess intersections, and use some recent duality results of Eisenbud and Ulrich to give an excess intersection formula. We compute some examples giving arithmetic refinements of counts classically valid only over algebraically closed fields. This is joint work with Tom Bachmann.