

# COLLOQUIUM

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## Complex Cobordism of Quasitoric Orbifolds

The logo for Mathematics and Statistics features a large orange circle in the center. Inside the circle, the words "Mathematics" and "Statistics" are stacked vertically in a bold, black, sans-serif font. The circle is set against a background of four blue squares, one in each corner, which together form a larger square shape around the circle.

**Mathematics  
and  
Statistics**

Date: October 3

Time: 3:30 - 4:30 PM

Room: RIC 209

**Abstract:** In this talk I will construct manifolds and orbifolds with quasitoric boundary. I'll show that these manifolds and orbifolds with boundary has a stable complex structure. These induce explicit (orbifold) complex cobordism relations among quasitoric manifolds and orbifolds. In particular, we show that a quasitoric orbifold is complex cobordant to some copies of fake weighted projective spaces. The famous problem of Hirzebruch is that which complex cobordism classes contain connected nonsingular algebraic varieties? I'll give some sufficient conditions to show when a complex cobordism class may contain an almost complex quasitoric manifold. Andrew Wilfong give some necessary condition of this problem up to dimension 8.