COLLOQUIUM

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Complex Cobordism of Quasitoric Orbifolds

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.

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