



## Topology Seminar at Texas State

When: Tuesday, 2019, September 3, 12:30-1:50 p.m.,

Where: MCS 478

Speaker: Dr. David Snyder

Topic: *The Bing-Borsuk Conjecture*

### ABSTRACT

This talk gives a brief survey of the Bing-Borsuk conjecture of 1965, that every  $n$ -dimensional homogeneous, euclidean neighborhood retract is a manifold. Bing and Borsuk proved that, if  $n = 1$  or  $2$ , the conjectured statement is true. The case for  $n > 5$  was announced by Bryant and Ferry to be false in that they had found counterexamples, by modifying the construction (in Bryant, Ferry, Mio, & Weinberger's 1995 Annals paper) of non-resolvable generalized manifolds of dimension 6 and greater. This still leaves the conjecture unresolved in dimensions 3, 4 and 5. The talk exposes tools that have proven useful to study this problem, such as approximate fibrations, mapping cylinder neighborhoods, and the Leray sheaf.