Speaker: Francis Adams

Title: The Loose Number of Topologically Presented Graphs

Abstract: Given a graph G on a topological space X, we define the loose number of G, a cardinal invariant which depends on both the graph-theoretic properties of G as well as the topology on the vertex set X. In the setting of separable metric spaces, we can relate the loose number to two well known graph invariants: the chromatic number and the coloring number. Evaluating this cardinal leads to interesting connections with forcing, infinitary combinatorics, descriptive set theory, and topology. We discuss these connections and provide many examples. Much of this work is joint with Jindrich Zapletal.