Speaker: Mr. Brian P Frazier (MTSU)

Title: Lattice Structures on Finite Graph Topologies

Time: 2:10pm-3:00pm on November 12

Location: KOM 162

**ABSTRACT:** In a 2006 paper by Antoine Vella, a topological space built from hypergraphs is introduced that translates graph isomorphism to topological homeomorphism. These topological spaces allow for a translation of any combinatorial concept into a purely topological language. When we look at finite graphs (there is no requirement for the graph to be simple), the structure of the resulting topological spaces is difficult to characterize, so we use Stone duality to create open set lattices on these spaces and we will characterize the structure of these lattices entirely.