Discrete Mathematics Seminar

Time: Friday, February 10, 2023, 1:00 - 2:00 PM
Title: On the maximal noncommuting sets in infinte groups
Speaker: Dr. Mohammad Zarrin, Department of Mathematics, Texas State University
Location: 328 Derrick Hall

Abstract:

A subset S of an arbitrary group G is a set of pairwise noncommuting elements if $ab \neq ba$ for any two distinct elements a and b in S. If $|X| \geq |Y|$ for any other set of pairwise noncommuting elements Y in G, then X is called a maximal subset of pairwise noncommuting elements and the cardinality of such a subset (if it exists) is denoted by $w(G)$. In this talk, we show that, for each positive integer n, there are only finitely many groups G, up to isoclinism, with $w(G) = n$, and we obtain similar results for groups with exactly n centralisers.