

## Discrete Mathematics Seminar

Time: Friday, February 28, 2020, 2:15 - 3:15 PM

Location: 330 Derrick Hall

Title: On the widths of finite groups

Speaker: Dr. Yong Yang, Department of Mathematics, Texas State University

**Abstract:** Let  $G$  be a finite group,  $\pi(G)$  the set of prime factors of  $|G|$  and  $\pi_e(G)$  the set of element orders in  $G$ . We call that  $d = |\pi(G)|$  the width of the order of  $G$ , and  $n = \max\{|\pi(k)| \mid k \in \pi_e(G)\}$  the width of the spectrum of  $G$ . In 1981, we discussed the case of  $n = 1$ , that is, the finite groups with elements of prime power orders ( $CP$ -groups) in a paper. After we review this article, we will prove some new results and pose some new interesting problems related to the Huppert's  $\rho$ - $\sigma$  conjecture.